

YMPO AUDIT CHECKLIST NO. REECO 89-5

N-QA-044  
12/88

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8910020/84 Part 3 of 3	NNWSI/88-9, Rev. 2 "Organization" Para. 1.0	<p>The organizational structure, lines of communication, authority and duties of persons and organizations performing activities affecting quality shall be clearly established and delineated in writing.</p> <ol style="list-style-type: none"> <li>1. Verify that organizational structure of persons or organizations performing activities affecting quality has been delineated in writing and is current.</li> <li>2. Verify that lines of communication between the YMP Quality Assurance Manager and other Senior Management Personnel have been established.</li> <li>3. Verify that the authority and duties of persons or organizations performing activities, which affect quality, is clearly established in writing.</li> </ol>			
				(9) Auditor Signature	
				(10) Date	

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1-2	NNWSI/88-9, Rev 2 "Organization" Para. 2.0	The persons and organizations performing QA functions shall have sufficient authority, access to work areas, and organizational freedom to identify quality problems; to initiate, recommend or provide solutions through designated channels; to verify implementation of the solutions; and to assure that further processing, delivery, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred. This includes the ability to stop (or cause to be stopped) unsatisfactory work through established channels. Such persons or organizations shall have direct access to responsible management at a level where appropriate action can be effected and shall report to a management level at which this required authority and organizational freedom are provided, including sufficient independence from cost and schedule.			
	QP 1.0, "Organization" Rev. 6, Para. 6.2.5	Verify procedure (s) provide (s) QA personnel with the above stated responsibilities.			
	QP 1.2, "Stop Work Order", Rev. 1	Verify if any "Stop Work Orders" have been used.			
	QP 1.0, Para. 6.2.4.5	Verify the PQAM has the authority to stop (or cause to be stopped) unsatisfactory work through established channels.			
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1-3	NNWSI/88-9, Rev. 2 Sec. 1, Para. 2.1	The person responsible for directing and managing the overall NNWSI Project Participant QA program shall be identified and have appropriate organizational position, responsibilities, and authority to exercise proper control over the QA program.			
	QP 1-0, Para. 6.2.4	Verify the PQAM is responsible for directing and managing the REECO QA Program.			
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1-4	NNWSI/88-9, Rev. 2 Sec. I, Para. 2.1	<p>This person shall have appropriate management and QA knowledge and experience and shall be at the same or highest line manager responsible for performing activities affecting quality and sufficiently independent from cost and schedule.</p> <p>Verify the PQAM is at the same of higher organization level as the highest line manager responsible for performing activities affecting quality.</p>			
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1-5	NNWSI/88-9, Rev. 2 Sec. I, Para. 2.1	<p>Personnel in this position shall have responsibility for approval of (1) QAPPs, changes thereto, and interpretations thereof and (2) implementing procedures and all changes thereto.</p> <p>Verify the PQAM has approved the QAPP, changes thereto.</p>			
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1-6	NNWSI/88-0, Rev. 2 Sec. 1, Para. 2.1  (QAPP) 568-DOC-115 Rev. 7, Para. 2.1	<p>Full-time dedicated QA positions are to be established by the Nevada Test Site (NTS) Support Contractors.</p> <p>The management position that retains overall considered to be "full-time dedicated" shall not be assigned duties that would prevent full attention to NNWSI Project QA responsibilities or that would conflict with the reporting and resolution of QA issues and problems related to the NNWSI Project.</p> <p>Verify full-time QA positions have been established by REECO.</p>			

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1-7	NNWSI/88-9, Rev. Para 2.2  QA 1.1 "Resolution of Disputes", Rev. 3	Authority for the resolution of disputes involving quality arising from a difference of opinion between QA personnel and others shall be identified. This authority shall include the ability of QA personnel to elevate the resolution of disputes to progressively higher organization levels through established channels including the YMPO PQM, if the dispute cannot be resolved within the organization.  Verify that QA personnel have an established channel to elevate the resolution of disputes to progressively higher organization levels, if the dispute cannot be resolved within the organization.			
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1-8	NNWSI/88-9, Rev. 2 Rev. 2, Sec. I, Para. 2.3  (QAPP) 568-DOC-115 Rev. 7, Sec. I, Para. 2.3	Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations at which the activities are to be performed, the organizational structure for executing the QA program may take various forms provided that the persons and organizations assigned the QA functions have the required authority and organizational freedom. The QA responsibilities of all organizational elements depicted on organization charts shall be described.  Verify that the QA responsibilities of all the organizational elements depicted on organization charts are described.			
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1-9	NNWSI/88-9, Rev. 2 Sec. I, Para. 4.1  (QAPP) 568-DOC- 115 Rev. 7, Sec. I, Para. 4.1	The external interface between organizations and the internal interfaces between organizational units and changes thereto shall be documented. All interface responsibilities shall be defined and documented. Interfaces between the YMPO, the Participating Organizations, and the NTS Support Contractors shall be described in the QAPPs of the respective organizations.  1. Verify that external and internal interfaces between organizational units are documented.  2. Verify interface responsibilities are defined and documented.  3. Verify that interfaces between the YMPO, and the QAPP's of the respective organizations.			
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1-10		Review and verify implementation of remedial and investigative actions to close SDR No. 193			
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2-1	NNWSI/88-9, Rev. 2 Section IV, "Quality Assurance Program", Para. 1.0	<p>The NNWSI Project Office will submit this QAP and the YMPO QAPP to the OCRWM Director, Office of Quality Assurance for approval. Pending receipt of this approval, QA Plans may be issued by YMPO for interim use. When any QA plan is issued for interim use, the transmittal record shall be appropriately marked to indicate that it is for interim use. Final QA plans will include a signature block for approval by the Director, Office of Quality Assurance.</p> <ol style="list-style-type: none"> <li>1. Verify if the OCRWM Director has approved the REECO QAPP.</li> <li>2. If the QA Plan was issued for interim use, verify the transmittal record has been appropriately marked to indicate that it is for interim use.</li> <li>3. Verify final QA Plans include a signature block for approval by the Director, Office of Quality Assurance.</li> </ol>			
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2-2	NNWSI/88-9, Rev. 2 Sec. II, Para 1.0  (QAPP) 568-DOC-115 Rev. 2, Sec. II Para 1.0	Management shall perform readiness reviews, as deemed appropriate. Readiness reviews shall apply to major scheduled/planned activities which could affect quality. Readiness reviews shall be used in verifying that specified prerequisites and programmatic requirements have been identified prior to starting a major activity.  Verify Readiness Reviews are used to verify that specified prerequisites and programmatic requirements have been identified prior to starting a major activity.							
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2-3	NNWSI/89, Rev. 2 Sec. II, Para 1.2           QP 5.1, Para. 5.2	The Quality Assurance Program of each organization shall consist of the QAPP plus appropriate implementing procedures required to provide and implement control over activities affecting quality. The control shall be consistent with the importance of the activity. These procedures shall be developed by qualified personnel and be reviewed and approved by the cognizant QA organization prior to implementation to assure that they meet all the requirements of their QAPP.  Verify that implementing procedures have been reviewed and approved by the cognizant QA Organization. (Check with auditor responsible for Section 5).			
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2-4	NNWSI/88-9, Rev. 2 Sec. II, Para. 1.3  QP 1.0, Para. 6.2.4.2 (QAPP) 568-DOC-115, Rev. 7, Sec. II Para. 1.3	The Participating Organizations and NTS Support Contractors' management shall also monitor their respective QAPPs through internal audits to assess the adequacy of their program and assure its effective implementation.  Verify that REECO management has monitored their QAPP through internal audits to assess the adequacy of their program and assure its effective implementation. (Check with auditor responsible for Section 18).			
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2-6	<p>NNWSI/88-9, Rev. 2 Sec. II, Para. 1.7</p> <p>QP 2.4, Rev. 1 "Indoctrination and Training"</p>	<p>The program shall provide for indoctrination and, as necessary, training of personnel performing activities that affect quality to assure that suitable proficiency is achieved and maintained. Verify that an indoctrination and training program is in place.</p>			
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2-7	NNWSI/88-9, Rev. 2 Sec. II., Para. 2.2.4	<p>The requirements contained in this document apply to Quality Assurance Levels I and II items and activities unless otherwise noted herein. The requirements imposed for QA Level III items and activities are those managerial, administrative, scientific, engineering, commercial, and laboratory practices that are commonly used by the organizations participating in the NNWSI Project.</p> <p>Verify if REECO has performed any QA Level I or II activities.</p>			
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2-8	NNWSI/88-9, Rev. 2 Sec. II, Para. 3.1  QF 10.1, Para 6.3.1 QP 2.0, Para. 6.4 QP 18-0 Para. 6.5.3.1	Each NNWSI Project Participant shall perform overview of the QA activities of all organizations (including sub-contractors doing supportive work) under their purview. Overview is to include the following as appropriate: <ul style="list-style-type: none"> <li>o The review and approval of QAPPs.</li> <li>o Surveillance of activities affecting quality to verify compliance with requirements.</li> <li>o Performance of quality audits to verify the adequacy and compliance of QA programs.</li> </ul> 1. Verify that surveillances supplement the Audit Program and may be conducted on any quality affecting item or activity pertinent to the project.  2. Verify audits are scheduled in a manner to provide coverage of all applicable elements of the QAPP or the organizations QA manual commensurate with on going activities.			
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2-9	NNWSI/88-9, Rev. 2, Sec. II, Para. 3.2  (QAPP) 568-DOC-115 Rev. 7, Sec. II Para. 3.2	<p>Procedures are to be established by each NNWSI Project Participant for the review of QA program documentation of those organizations under their purview for adequacy, completeness and relevance.</p> <p>The procedures shall identify the types of documents to be submitted for review and approval, assign responsibility for review, and identify the methods for documenting review and approval action. Reviews for QA program documentation shall be recorded on checklists or other forms that specify the criteria for acceptability and indicate conformance or non-conformance.</p> <ol style="list-style-type: none"> <li>1. Verify that procedures exist for review of QA program documentation, for adequacy, completeness and relevance.</li> <li>2. Verify that procedures identify document type for review and approval, responsibility for review and identification methods for documenting review and approval action.</li> <li>3. Verify that reviews are recorded on checklists that specify criteria for acceptability and indicate conformance or nonconformance.</li> </ol>			
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2-11	NNWSI/QAP 88-9, Rev. 2, Sec. II Para., 5.1  QP 2.2, Para. 1.2 and 1.3	<p>All NNWSI Project participants shall establish requirements for the selection, indoctrination, and training of personnel performing or verifying activities that affect quality. The requirements shall establish position descriptions that set forth minimum personnel qualifications and provide for appropriate indoctrination or training or both, prior to initiation of activities that affect quality. In addition to the following requirements for indoctrination and training, personnel performing activities that specifically require certification by applicable codes and standards (e.g., lead auditors, inspectors, testers, nondestructive examiners, etc.) shall be certified in accordance with the detailed requirements specified in Appendix C, D, or F, as applicable.</p> <ol style="list-style-type: none"> <li>1. Verify the requirements have been established for the selection, indoctrination, and training of personnel performing or verifying activities that affect quality.</li> <li>2. Verify that the requirements establish position descriptions that identify personnel qualifications and provider for indoctrination and training, prior to performing activities that affect quality.</li> <li>3. Verify that personnel requiring certification have been certified in accordance with requirements specified.</li> </ol>			
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2-12	NNWSI/QAP 88-9 Rev. 2, Sec. II Para. 5.1.1  QP 2.2 Para. 6.1.1	Minimum education and experience requirements shall be established and documented in position descriptions for each position involved in the performance of activities that affect quality.  Verify minimum education and experience requirements have been established and documented in position descriptions for each position involved in the performance of activities that affect quality.			
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2-13	NNWSI/QAP 89-9, Rev. 2, Sec. II Para 5.1.2	Personnel selected shall have education and experience commensurate with the minimum requirements specified in the position description. Relevant education and experience shall be verified. This verification shall be documented.			
	QP 2.2, Para. 5.2	Verify that relevant education and experience have been verified and documented.			
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2-14	<p>NNWSI/QAP 88-9, Rev. 2, Sec. II Para. 5.1.3</p> <p>QP 2.4, Para. 6.1.1</p>	<p>Prior to assigning personnel to perform activities affecting quality, they shall be indoctrinated as to the purpose, scope, methods of implementation, and applicability of the following documents (including changes thereto), as a minimum, as they relate to the work to be accomplished. Indoc- trination may be accomplished by the use of a man- datory reading list, by group classroom presenta- tions, by video presentation, or other instruction- al methods.</p> <ul style="list-style-type: none"> <li>o QAPP's</li> <li>o Implementing Procedures and Work Instructions (applicable to the individual's responsibilities).</li> <li>o Regulations</li> <li>o Project level Documents</li> </ul> <p>Verify that prior to assigning personnel to perform activities affecting quality, they shall be indoctri- nated as to the purpose, scope, methods of implemen- tation, and applicability of the documents listed above as a minimum, s they relate to the work to be accomplished.</p>			
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2-15	NNWSI/QAP 88-9, Rev. 2, Sec. II Para. 5.1.5  QP 2.2, Para. 6.2.1 and 6.2.1.1	<p>After the initial personnel qualification evaluation, the job proficiency of personnel who perform activities affecting quality shall be evaluated and documented at least annually. Proficiency evaluations may be performed in conjunction with periodic or day-to-day employee performance evaluation. Proficiency evaluations shall be performed by managers or supervisors who have responsibility for the activities being performed or verified.</p> <ol style="list-style-type: none"> <li>1. Verify that the job proficiency of personnel performing activities affecting quality is evaluated and documented at least annually.</li> <li>2. Verify that proficiency evaluations are performed by Managers or supervisors having responsibility for activities being performed or verified.</li> </ol>			
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2-16	NNWSI/QAP 88-9 Rev. 2, Sec. II Para. 5.1.6	<p>RECORDS</p> <p>Records o the personnel qualification evaluations, indoctrination, training, and proficiency evaluations be retained a lifetime QA records. These records shall include, as a minimum, the items listed below:</p> <p>Personnel Qualification Evaluation Records</p> <p>Records of the verification and evaluation of a candidate's education, experience, and training, compared to those required for the position.</p> <p>Indoctrination Records</p> <p>Records of indoctrination which include the objective and content of the indoctrination, date or dates of indoctrination and other applicable information.</p>			
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2-16	(Continued)          QP 2.4, Para. 7.1	<p>Training Records</p> <p>Records of training which include the objective (s) and content of the training, name of the instructor, attendees, dates of attendance, and result of proficiency evaluations (where applicable), and other applicable information.</p> <p>Proficiency Evaluation Records</p> <p>Records of proficiency evaluation shall include, as a minimum, the name of the evaluated employee, the evaluator, evaluation results, date of evaluation, and the activities covered by the evaluation.</p> <p>Verify that personnel records are retained as lifetime QA records and include at least the above items listed.</p>			
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3-1	YMP-Administrative Procedure AP-3.3.Q Rev. 0, Para. 5.2.1           REECO/QP 3.2 Rev. 1, Para. 6.1	Section III - Change Control  5.2 INITIATION OF CHANGES  5.2.1 Proposed changes to Project items or documents, or changes to the Project CCB Register, are initiated by the Project Office or partici- pating organization staff members who identify the need for change. Proposed changes are originated in accordance with procedures governing the item or document being changed (e.g. Engineering Change Requests (ECRs) for ESF design changes).  Verify the effective date of QP 3.2, Revision 1 covering the above procedures.  Effective Date: _____			
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-2	YMP-Administrative Procedure AP-3.3Q Rev. 1, Para. 5.2.2  REECO/QP 3.2 Rev. 1, Para. 6.2	5.2.2 Preliminary assessment of the change, prepara- tion, review, concurrence, and approvals are performed in accordance with Project Office or Project participant procedures that govern the item or document being changed. Technical and Quality Assurance reviews and approvals shall be accomplished in accordance with applicable procedures.  6.2 Processing REECO/YMP Originated CRs  1. Verify the availability of Change Request Forms, Y-AD-055.  2. Verify the existence of the Change Request Log with spaces for minimum information.  3. Verify that the contents of any existing Change Request Packages include Change Directive Forms and DCN forms.			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-3	YMP-Administrative Procedure AP-3.3Q Rev. 1, Para. 5.2.3 & 5.4.5  REECO/QP 3.2 Para. 5.3 & 6.2.1	5.2.3 Document approval authorities shall, prior to approving documents or document changes, determine if the change is (1) a non-baseline change, (2) a change to the Program or Project baselines, or (3) a change to a selected non-baseline document under Project CCB Control. Changes shall be classified in accordance with Section 5.3  "Project Engineer is responsible for initiation, PQAM review, and approval for affected quality. CRs shall be prepared following Project AP-3.3Q".  For processed CRs and CRs in process, verify that:  1. Signatures of TPO or Designee are present,  2. Signatures of CDM, P.E., and PQAM are present,  3. Change request packages meeting AP-3.3Q, Section 5.4, were prepared that include CR Form (Y-AD-055).  4. CR numbers were obtained prior to transmittal to T&MSS CMO.			
(9) Auditor Signature		(10) Date			

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3-4	<p>YMP Administrative Procedure AP-3.3Q Para. 5.7.5</p> <p>QP-3.2, Rev. 1 Para. 6.3.4</p>	<p>The participating organizatin shall transmit copies of approved Class 4 CRs and the associated CR disposition to the T&amp;MSS CMO for configuration management record and log update.</p> <p>Verify that implementing procedures are available to control transmittal of copies of approved Class 4 Change Requests and that QA Records are retained.</p>			
			(9) Auditor Signature	(10) Date	



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-6	YMP/QMP-02-08 Rev. 0, Para. 5.2.1  REECO/QP 3.3 Rev. 1, Para. 6.1.4	<p>The Technical Assessment Review Chairperson ensures that assigned Review Team Members are trained to QMP-02-08.</p> <p>Each Review Team Member shall complete training by the T&amp;MSS in QMP-02-08 prior to the initiation of the Technical Assessment Review Process.</p> <p>Verify that training on QMP-02-08 took place for all REECO personnel participating in Technical Assessment Reviews.</p>			
			(9) Auditor Signature	(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-7	YMP/QMP-02-08 Rev. 0 Para. 5.2.2  REECO/QP 3.3 Rev. 1, Para. 6.2.3	<p>The Technical Assessment Review Chairperson requests the following information for each of the review team members: name of the person and a statement that the review team member meets the education, experience, and independence qualifications established for the review. This information is to be provided by the employer of the review team member.</p> <p>At the same time, a check will be made to verify that a "YMP Qualification Record," RE-7229 (signed by the TPO designee) and a YMP Qualification Record Statement, (signed by the REECO Recruiting and Employment Administrator), has been completed and is in the REECO Project files.</p> <p>Verify the existence of the above two items for all personnel participating in Technical Assessment Reviews.</p>			
				(9) Auditor Signature	(10) Date

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3-8	NNWSI/88-9, Rev. 0 Sec. XVII, Para. 1.2.2  REECO/QP 3.3 Rev. 1, Para. 7.0	Sufficient records shall be specified, prepared, and maintained...._including results of reviews_  7.0 QA RECORDS  Technical Assessment Review Record and Proficiency Review Reports generated by the implementation of this procedure shall be considered as QA Records and shall be handled and maintained in accordance with QP 17.0  Verify that such QA Records exist for all Technical Assessment Reviews performed.			
				(9) Auditor Signature	



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3-10 <sup>12</sup>	88-9 rev. 2 Section III paragraph 3.1.14	<p>Computer programs developed and/or modified shall be documented in accordance with the applicable elements of NUREG-0856, Final Technical Position on Documentation of Computer Codes for High Level Waste Management.</p> <p>Verify the development or modification of any software used to perform analysis in support of the license application of the geologic repository or to perform direct design analysis.</p>			

(9) Auditor Signature \_\_\_\_\_ (10) Date \_\_\_\_\_





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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED	
<p>11 3-9</p>	<p>88-9 rev. 2 Section III Paragraph 3.1</p>           <p>paragraph 3.1.8</p>	<p>"For a geologic repository, computer software used to perform analysis in support of the license application shall be controlled to the same level of requirements as software used to perform direct design analysis."</p> <p>"Where commercial auxiliary software is used, all available documentation from the software supplier shall be obtained."</p> <p>"Existing software shall be qualified for use."</p> <p>Verify the use of any software (existing, commercial, auxiliary) to perform analysis in support of the license application for the geologic repository, or to perform direct design analysis.</p>				
		(9) Auditor Signature _____		(10) Date _____		



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(1) AUDIT ITEM NO.	(2) QUALITY ELEMENT & REFERENCE	(3) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(4) RESULTS S. X. N/A	(5) SUMMARY OF INVESTIGATION	(6) PERSON CONTACTED
3-9	N/MSI/88-9, REV 2 SECT. III, P 2.6  AP-519Q, REV. 0 P 5.3  QP 3.2, REV. 1 P 6.2.5 AND 6.2.7	<p>STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES</p> <p>2.6 DESIGN INTERFACER CONTROL</p> <p>... INTERFACER CONTROLS SHALL INCLUDE THE ASSIGNMENT OF RESPONSIBILITY AND THE ESTABLISHMENT OF PROCEDURES AMONG AND WITHIN RESPONSIBLE DESIGN ORGANIZATIONS FOR THE REVIEW, AND APPROVAL, RELEASE, DISTRIBUTION, AND REVISION OF DOCUMENTS INVOLVING DESIGN INTERFACES.</p> <p>... CHANGES TO INTERFACE CONTROL DOCUMENTATION... SHALL BE SUBMITTED TO THE ICRA PRIOR TO BEING SUBMITTED TO THE C.C.B.</p> <p>... "CR PACKAGE IS SENT TO CMD, ... "FURTHER PROCESSING IN ACCORDANCE WITH AP-3.3 Q".</p> <p>(NOTE: AP-519Q IS NOT CITED.)</p> <p>VERIFY HOW INTERFACER CONTROL CHANGES ARE <del>THEY</del> HANDLED.</p>			

(7) Auditor Signature

(8) Date



WAPCO AUDIT CHECKLIST NO. 89-5

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3-10	MUNSI/85-9, REV. 2 SECT. III, P. 24.1	24 DESIGN INTERFACE CONTROL  INTERNAL AND EXTERNAL DESIGN INTERFACES SHALL BE IDENTIFIED AND CONTROLLED BY DESIGN REPORTS SHALL BE COORDINATED AMONG AND WITHIN RESPONSIBLE DESIGN ORGANIZATIONS.  FIELD CHANGES PROCESSED UNDER AP-3.30 THAT AFFECT AN INTERFACE MUST BE PRESENTED BEFORE THE ICG THE NEXT WORK DAY AFTER THE FIELD CHANGE IS APPROVED.  WHETHER PROCESSING..... IS PERFORMED BY CMQ.  VERIFY THAT THE ABOVE "NEXT DAY" REQUIREMENT IS COVERED IN QP 3.2, SINCE AP-5.19Q IS NOT EXPLICITLY INVOKED.			
	AP-5.19Q, REV. 0 P. 5.4				
	QP 3.2, Rev. 1				

(9) Auditor Signature \_\_\_\_\_ (10) Date \_\_\_\_\_

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
4-1	NNWSI/QAP 88-9 Rev. 2, Sec. IV Para. 1.1          QP 4.0, Rev. 6 Para. 1.0	Measures shall be established to ensure that applicable regulatory requirements, design or site investigation bases, and other requirements that are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services utilized on the Nevada Nuclear Waste Storage Investigations (NNWSI) project. To the extent necessary, procurement documents of Participating Organizations and Nevada Test Site (NTS) Support Contractors, shall require sub-tier contractors to provide a Quality Assurance (QA) program that is consistent with the pertinent provisions of this NNWSI Quality Assurance Plan as required for the specified Quality Assurance Level.  1. Verify that QA Level I or II procurement documents have been issued for material equipment. Components/items or services.			
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
4-1	(Continued)	2. Verify that such QA Level I or II procurement documents include or reference applicable requirements, i.e. regulatory, design, or site investigation to assure the items, material, or services are usable and responsive to the requestors needs, without a change in the procurement documents or specifications.  Such requirements would include, but not be limited to:  <ul style="list-style-type: none"> <li>o Work Order</li> <li>o WBS Number</li> <li>o QA Level</li> <li>o Identifiable to the YMP</li> <li>o Sub-tier Contractor QA Program Per 88-9, Rev. 2</li> </ul>			
			(9) Auditor Signature	(10) Date	

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4-2	NNWSI/QAP 88-9 Rev. 2, Sec. IV Para. 2.0        QP 4.0, Rev. 6 Para. 6.2	2.0 ADDITIONAL REQUIREMENTS FOR QA LEVEL I ACTIVITIES  2.1 CONTENT OF PROCUREMENT DOCUMENTS  Procurement documents issued at all tiers of procurement shall include provisions for the items listed below, as deemed necessary by the purchaser:  <ul style="list-style-type: none"> <li>o Scope of Work</li> <li>o Technical Requirements</li> <li>o QA Requirements</li> <li>o Right-of-Access (for purpose of inspection or audit)</li> <li>o Documentation Requirements</li> <li>o Nonconformance</li> <li>o Spare and Replacement Parts</li> </ul> 1. Verify that QA Level I purchase documents include the above referenced additional requirements.			
			(9) Auditor Signature		(10) Date

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4-3	NNSI/QAP 88-9 Rev. 2, Sec. IV Para 2.2	<p>A review of the procurement documents and changes thereto shall be made to assure that documents transmitted to the prospective supplier or suppliers include appropriate provisions to assure that items or services will meet the specified requirements. The review shall be performed and documented prior to contract award. Procurement document reviews shall be performed by personnel who have access to pertinent information and who have adequate understanding of the requirements and intent of the procurement documents. The review shall include, as a minimum, the cognizant technical organization and QA organization. The review by the QA organization shall assure that the following requirements are met:</p> <ul style="list-style-type: none"> <li>o QA requirements are correctly stated, inspectable, and controllable.</li> <li>o There are adequate acceptance and rejection criteria.</li> <li>o Procurement documents have been prepared, reviewed, and approved in accordance with this QA Requirements document.</li> </ul> <p>1. Verify that procurement document and changes are reviewed by both technical and QA personnel.</p>			
		(9) Auditor Signature (10) Date			

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4-3	(Continued)	2. Verify that QA reviews of purchase documents include verification of : <ul style="list-style-type: none"> <li>o QA Requirements</li> <li>o Acceptance/Rejection Criteria</li> <li>o Procurement Document Review and Approved</li> </ul> 3. Verify that issued procurement documents reflect the original requirement of the purchase request document.			
				(9) Auditor Signature	



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4-4	NNWSI/QAP 88-9 Sec. IV, Para. 2.3  QP 4.0, Rev. 6 Para. 6.5	Procurement document changes shall be subject to the same degree of control as utilized in the preparation of the original documents. Changes that are made as a result of the bid evaluation or pre-contract negotiations shall be incorporated into the procurement documents. The review of such changes and their effects shall be completed and documented prior to contract award.  1. Verify that change resulting from bid evaluation or pre-contract negotiations are reflected in procurement documents.							
								(9) Auditor Signature	(10) Date

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4-5	NNWSI/QAP 88-9 Rev. 2, Sec. IV Para. 2.4  QP 4.0, Rev. 6 Para. 6.4.11	<p>2.4 DISTRIBUTION OF PROCUREMENT DOCUMENTS</p> <p>Participating Organizations and NTS Support Contractors shall forward to the SAIC/T&amp;MSS Project QA Department (QA Verification Division Manager), a copy of purchase documents, and changes thereto, as issued, when purchases involve Quality Assurance Level I items or services. Only those purchase documents which identify the vendor, describe the scope of work, and detail when work is to start are required to be submitted to the SAIC/T&amp;MSS Project QA Department.</p> <p>1. Verify that copies of QA Level 1 Purchase Order and Change are forwarded to SAIC/T&amp;MSS QA Department (QA Verification Division Manager)</p>			
				(9) Auditor Signature	(10) Date

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4-6	N/A	Verify that REECO QA 4.0, Revision 6, dated 5/26/89 satisfies NNWSI 88-9, Revision 2, Section IV.			
(9) Auditor Signature				(10) Date	

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4-7	N/A	Verify that YMP Administrative Procedure AP-4.1Q Procurement Requirements are satisfied by REECO imple- menting procedures.  Note: Use attached outline.			
			(9) Auditor Signature	(10) Date	

AUDIT ITEM NO. 4-7 (CONTINUED)

REQUIREMENT

- 4.1 Develop and maintenance of internal procedures to comply with QAPP.
- 4.1 Develop and maintenance of procurement tracking systems to maintain traceability of procurement documentation of items and services.
- 4.7 Procuring Organization  
Soliciting, qualifying and selecting suppliers capable of meeting requesting organization technical. Ensuring procurement activities meet purchasing organization's QAPP requirements. Procure the item or services filing final document packages per AP-17Q. Procuring organization does receiving inspection, proper handling. Receiving arrangement when items shipped to Project Participants.
- 5.2.2 Procuring organization review technical requisition package and prepares a solicitation package. Coordinates required reviews of solicitation packages incorporate revisions.
  - 5.2.2.1 Procuring organization submits solicitation package to contracting officer if required.
  - 5.2.4 Issue solicitation package.
  - 5.2.5 Receive and review submittals for completeness.
  - 5.2.6 Procuring organization coordinate evaluation of proposals with requesting organization.
  - 5.2.7 Procuring organization will conduct supplier pre-award qualification of facilities and capabilities. Procuring organization ensures selected supplier has or will commit implement approved QA Program.

- 5.3.1 Prepare and coordinate reviews of award package submittal to contracting officer.
- 5.3.3 Procuring organization makes award to selected supplier and distributes documents per participants QAPP.
- 5.4.1 Procuring organization will ensure required verification activities are performed (who develops required verification points).
- 5.4.2 Procuring organization coordinates review and approval and disposition of NCR and submittals with requesting organization and other as required.
- 5.5. Changes same controls as original.
- 5.6.2.1 Procuring organization ensures acceptance of received items in accordance with approved inspection plans and procedures.

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5-1	NNWSI/QAP 88-9 Rev. 2, Sec. V Para. 1.0	1. Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings, of a type appropriate to the circumstances except as noted in paragraph 3.0 of this Section.  2. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished.  3. Instructions and procedures shall include a section which identifies the QA records which are generated during implementation of the document.  4. If plans are used in lieu of procedures, then these plans shall also include or reference appropriate acceptance criteria and identify the QA records which are generated.  5. These documents, including drawings, shall be controlled as required in Section VI of this document.			
(9) Auditor Signature				(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-1 (Con: 'd)	REECo/WP 5.0, Rev. 5 Para. 6.0	1. Verify that activities which affect quality are identified, and that the activities are controlled by procedures, instructions, or drawings.  2. Verify that procedures, instructions, or drawings include or reference appropriate acceptance criteria for determining if prescribed activities have been satisfactorily accomplished.  3. Verify that QA Records are identified in the controlling procedures or instructions.  4. Verify that the procedures or instructions are controlled per the requirements of Criteria VI.			
5-1	REECo/QP 5.0 Rev. 5, Para. 6.1.4	5. Verify that QP 5.1; 5.2 and 5.3 have been implemented for QP, WP, & IP.  Note: Use latest Rev. for Audit Purpose.			
			(9) Auditor Signature	(10) Date	



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5-2	NNWSI/QAP 88-9 Rev. 2, Sec. V Para. 2.0           REECO/QP 5.0, Rev. 5 Para. 6.3	1. An independent review of all instructions, procedures, plans and drawings shall be performed by the originating organization to assure technical adequacy and inclusion of appropriate quality requirements.  2. If applicable, this review shall consider whether the activities are not repeatable, have the potential to impact the waste isolation capability of the site or interfere with other site characterization activities.  1. Verify that instructions procedures and drawings are reviewed for technical adequacy and quality requirements by the originating organization.			
				(9) Auditor Signature	

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6-1	NNWSI/88-9, Rev. 2 Sec. V. Para 1.2 OP 6.0, Rev. 5 Para. 6.1, 6.3	Implementation of document control shall provide for the following: <ul style="list-style-type: none"> <li>o Identification of documents to be controlled.</li> <li>o Identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents.</li> <li>o Review of documents for technical adequacy, completeness, correctness, and inclusion of appropriate quality requirements, prior to approval and issuance.</li> <li>o A method for the removal or marking of obsolete or superseded documents to prevent inadvertent use.</li> <li>o A method for assuring that the correct and applicable documents are available at the location where they are to be used.</li> <li>o A master list or equivalent to identify the correct and updated revision of documents.</li> <li>o Coordination of interface documents.</li> </ul> 1. Verify that the above is available.			
			(9) Auditor Signature	(10) Date	



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6-3	NNWSI 88/9, Rev. 2 Sec. VI, Para. 2.2  QP 6.0, Rev. 5 Para. 6.5	Minor changes to documents, such as inconsequential editorial corrections, shall not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a decision shall be clearly delineated.  1. Verify that minor changes are handled in an acceptable manner as stated above.			
				(9) Auditor Signature	(10) Date



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-1	NNWSI/QAP 88-9 Rev. 2, Sec. VII Para. 1.0	<ol style="list-style-type: none"> <li>1. Measures shall be established to ensure that purchased material, equipment, and services conform to the procurement documents.</li> <li>2. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, audit, and examination of products upon delivery.</li> <li>3. Where required by code, regulation, or contract requirement, documentary evidence that material and equipment conform to the procurement requirements shall be available at the location where the material or equipment is to be used prior to installation or use of such material and equipment.</li> <li>4. This documentary evidence shall be retained under the control of the Waste Management Project Office (WMPO) QA Records Management System (QARMS) and shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, that are to be met by the purchased material and equipment. Specific requirements for the control of purchased items and services are listed below.</li> </ol>			
	REECO/QP 7.0, Rev. 6 Para. 1.0	<ol style="list-style-type: none"> <li>1. Verify that QA Level I or II material, equipment, and/or services have been purchased for YMP application by REECO.</li> <li>2. Verify that REECO QP 7.0, Revision 6 dated 5/26/89 complies with the requirements of NNWSI/88-9 Revision 2, Section VII.</li> </ol>			
				(9) Auditor Signature	(10) Date

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7-2	NNWSI/QAP 88-9 Rev. 2, Sec. VII Para. 1.1	<p>Procurement activities shall be planned and documented to ensure a systematic approach to the procurement process. Procurement planning shall result in the documented identification of procurement methods and organizational responsibilities. Appropriate Quality Assurance (QA).</p> <p>1. Verify that a procurement plan has been implemented for QA Level I and II item or services i.e., each procurement.</p> <p>2. Verify that procurement planning determines the following:</p> <ul style="list-style-type: none"> <li>o What</li> <li>o Who</li> <li>o How</li> <li>o When</li> </ul>			
				(9) Auditor Signature	(10) Date

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7-2	(Continued)	3. Verify planning involves PQA, Engineering and Originator and integrates the following:  Procurement document preparation, review, and change control.  Selection of procurement sources.  Purchaser control of supplier performance.  Verification (surveillance, inspection, or audit) activities by purchaser, including notification for hold-and-witness points.  Control of nonconformances.  Corrective action.  Acceptance of item or service.  QA records.			
				(9) Auditor Signature	(10) Date



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7-3	NNWSI/QAP 88-9 Rev. 2, Sec. VII Para. 1.2          REECO/QP 7.0, Rev. 6 Para. 6.2 & 6.3	Measures for evaluation and selection of procurement sources, and the results thereof, shall be documented and shall include one or more of the following items: <ul style="list-style-type: none"> <li>o Evaluation of the supplier's history of providing an identical or similar product that performs satisfactorily in actual use. The supplier's history shall reflect current capability.</li> <li>o Supplier's current quality assurance records supported by documented qualitative and quantitative information that can be objectively evaluated.</li> <li>o Supplier's technical and quality capability as determined by a direct evaluation of their facilities and personnel and the implementation of his QA program.</li> </ul> 1. Verify that suppliers selections are based upon one or more the above methods, and determine the following. <ul style="list-style-type: none"> <li>o Capability to provide items and services.</li> </ul> 2. Determine if QL I or II items or services have been deficient based upon suppliers inadequate technical or QA abilities.			
				(9) Auditor Signature	(10) Date

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7-4	NNWSI/QAP 88-9, Rev. 2, Sec. VII Para. 1.3	Bid evaluation shall determine the extent of conformance to the procurement documents. This evaluation shall be performed by individuals or organizations designated to evaluate the following subjects, as applicable to the type of procurement: <ul style="list-style-type: none"> <li>o Technical considerations.</li> <li>o QA requirements.</li> <li>o Supplier's personnel.</li> <li>o Supplier's production capabilities.</li> <li>o Supplier's past performance.</li> <li>o Alternates.</li> <li>o Exceptions.</li> </ul>			
	REECO/QP 7.0 Para. 6.2.3	Verify that bid evaluation considers the items listed above and is controlled by procedures.			
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7-5	NNWSI/88-9, Rev. 2 Sec. VIII, Para. 1.3.2  QP 7-0, Rev. 6 Para. 6.3.8	<p>RESOLUTION OF UNACCEPTABLE QUALITY ASSURANCE CONDITIONS</p> <p>Before the award of the contract, the purchaser shall resolve or obtain commitments to resolve unacceptable quality assurance conditions resulting from the bid evaluation.</p> <p>1. Verify that unacceptable Quality Assurance conditions are resolved prior to award of contracts.</p> <p>2. Verify that this resolution is controlled by a procedure.</p>			
				(9) Auditor Signature	

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7-6	NNWSI/88-9, Rev. 2 Sec. VII Para. 1.4.1	<p align="center">INTERFACE MEASURES</p> <p>The purchaser of items and services shall establish measures to interface with the supplier. The measures shall include the following:</p> <ul style="list-style-type: none"> <li>o Documentation of the understanding between purchaser and supplier of the provisions and specifications of the procurement documents.</li> <li>o Requiring the supplier to identify planning techniques and processes to be utilized in fulfilling procurement document requirements.</li> <li>o Reviewing supplier documents that are generated or processed during activities fulfilling procurement document requirements.</li> <li>o Identifying and processing necessary change information. Measures to control changes in procurement documents shall be established, implemented and documented in accordance with the requirements of this QA Plan.</li> <li>o Establishing methods of document information exchange between purchaser and supplier.</li> </ul> <p>1. Verify that the Procurement Department established interface methods with supplier.</p> <p>2. Verify that these measures include the items listed above.</p>			
					(9) Auditor Signature

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7-7	NNWSI/88-9, Rev. 2 Sec. VII Para. 1.4.2.1	EXTENT OF VERIFICATION  The purchaser of items and services shall establish measures to verify supplier's performance. The measures shall establish the extent of source surveillance and inspection activities.			
	QP 7.0, Rev. 6 Para. 6.4.4	1. Verify that methods are established for verification of supplier's performance.  2. Verify that these methods include:  o Qualified individuals in inspection surveillance or audit or witness.  o Source surveillance and inspection activities.  o QA Planning  o Documentation Requirements			
				<sup>(9)</sup> Auditor Signature	<sup>(10)</sup> Date

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7-8	NNWSI/88-9, Rev. 2 SEC. VII, PARA. 1.5          QP 7.0, Rev. 6 Para. 6.5	<b>CONTROL OF DOCUMENTS GENERATED BY SUPPLIERS</b>  Documents that are generated by suppliers shall be controlled, handled, and approved in accordance with documented procedures. Means shall be implemented to ensure that the submittal of these documents is accomplished in accordance with the procurement document requirements. These measures shall provide for the acquisition, processing, and recorded evaluation of technical, inspection, and test data against acceptance criteria.  1. Verify that supplier documentation submittal is controlled by implementing procedures and these procedures include:  o Verification of submittal against Procurement Requirements.  o Evaluatin of submittal documents against technical inspection and test data acceptance criteria.			
				<sup>(9)</sup> Auditor Signature	<sup>(10)</sup> Date

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7-9	NNWSI/88-9, Rev. 2 Sec. VII Para. 1.6.1           QP 7.0, Rev. 6 Para. 6.6	ACCEPTANCE OF ITEM OR SERVICE  METHODS FOR ACCEPTANCE  Methods shall be established for the acceptance of an item or service being furnished by the supplier. Prior to offering the item or service for acceptance, the supplier shall verify that the item or service being furnished complies with the procurement requirements. Purchaser methods used to accept an item or related service from a supplier shall be either a supplier certificate of conformance, a source verification, a receiving inspection or post-installation test at the facility site, or a combination thereof. Requirements applicable to these methods of acceptance are listed below.  1. Verify that implementing procedures provide established method to control the acceptance of item or services.				
						(9) Auditor Signature

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7-10	NNWSI/88-9, Rev. 2 Sec. VII, Para 1.7            QP 7.0, Rev. 6 Para. 6.6.6	ACCEPTANCE OF SERVICES ONLY  PROCUREMENT OF SERVICES ONLY  In certain cases involving procurement of services only, such as third party inspections, engineering, and consulting; and installation, repair, overhaul, or maintenance work, the purchaser shall accept the service by any or any combination of the following methods:  o Technical verification of data produced.  o Surveillance, audit, or both, with regard to the activity.  o Review of objective evidence for conformance to the procurement document requirements such as certifications, stress reports, etc.  1. Verify procedures are establish for acceptance of services only procurements.  2. Verify these procedures include 1) Technical verification 2) Surveillance 3) Audit or 4) Review of objective evidence for conformance.			
				(9) Auditor Signature	(10) Date



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7-11	NNWSI/88-9, Rev. 2 Sec. VII, Para. 1.8  QP 7.0, Rev. 6 Para. 6.7	<p>CONTROL OF SUPPLIER NONCONFORMANCES</p> <p>The purchaser and supplier shall establish and document methods for disposition of items and services that do not meet procurement document requirements. These methods shall include the following provisions:</p> <p>1. Verify that suppliers NCR's are controlled in accordance with implementing procedures.</p>			
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7-12	NNWSI/88-9, Rev. 2 Sec. VII, Para. 2.0           QP 7.0, Rev. 6 Para. 6.8	<p align="center"><b>COMMERCIAL-GRADE ITEMS</b></p> <p>If a design requires commercial-grade items, then the following requirements are an acceptable alternative to other requirements of this section, except as noted in Paragraph 2.1.2 below and the requirements of Section IV of this QAP. If a scientific investigation requires commercial-grade items they may be controlled by the use of the following requirements (except Paragraph 2.1.1) and Section IV of this QAP.</p> <p>1. Verify that REECO has established procedures to implement the requirements for commercial grade items.</p>						
				(9) Auditor Signature				(10) Date

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8-1	General	Verify that all personnel involved with the identification and control of items have been properly trained in the requirements of QP 8.0, Revision 4.			
			(9) Auditor Signature	(10) Date	

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8-2	General	Verify that work is being accomplished on QA Level I and/or Level II items.			
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8-3	YMP/88-9, Rev. 2 Sec. VIII, Part A Para. 1.0	Items shall be identified to assure that only correct and accepted items are used or installed. The identification shall be verified prior to installation or use. Identification shall be maintained either on the item, their containers, or in documents traceable to the item from receipt until installed.			
	QP 8.0, Rev. 4 Para. 6.1.3	Verify that identification is maintained on the item, its container, or in documents traceable to the item.			
	QP 8.0, Rev. 4 Para. 6.1.3.1	Verify that these identifiers are traceable to the final "end use" documentation.			
	QP 8.0, Rev. 4 Para. 6.1.4	Verify that items, when receipt inspected, are identified by the inspecting agent to assure that only correct and accepted items are used or installed.			
	QP 8.0, Rev. 4 Para. 6.1.5	Verify that the identification shall be verified prior to installation or use by the user.			
	QP 8.0, Rev. 4 Para. 6.1.9	Verify that items of production (batch, lot, component, part) are identified from initial receipt and fabrication of the items up to and including installation and use.			
				(9) Auditor Signature <span style="float:right">(10) Date</span>	

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8-4	YMP/88-9, Rev. 2 Section VIII, Part A Para. 1.1	Items of production (batch, lot, component, part) shall be identified from the initial receipt and fabrication of the items up to and including installation and use. This identification shall relate an item to an applicable design or other pertinent specifying document.			
	QP 8.0, Rev. 4 Para. 6.1.2	Verify that the identification relates to applicable design or specifying document.			
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8-5	YMP/88-9, Rev. 2 Sec. VIII, Part A Para. 1.1.1	Physical identification shall be used to the maximum extent possible. Where physical identification on the item is either impracticable or insufficient, physical separation, procedural control, or other appropriate means shall be employed.			
	QP 8-0, Rev. 4 Para. 6.1.7.1	Verify that where physical identification on the item is either impractical or insufficient, identification shall be by physical separation or other appropriate means.			
	QP 8.0, Rev. 4 Para. 6.1.11	Verify that where the item is too small or cannot be marked for other reasons, the identification marking is made on the container or package.			
	QP 8.0, Rev. 4 Para. 6.1.12	Verify that identification markings are not covered by coatings of any form while identification is required.			
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8-6	YMP/88-9, Rev. 2 Sec. VIII, Part A Para 1.1.2  QP 8.0, Rev. 4 Para. 6.1.3.2  QP 8.0, Rev. 4 Para. 6.1.6  QP 8.0, Rev. 4 Para. 6.1.8	Identification markings, when used, shall be applied using materials and methods which provide a clear and legible identification and do not detrimentally affect the function or service life of the item. Markings shall not be obliterated or hidden by surface treatment or coatings unless other means of identification are substituted.  Verify that the identification markings, when used, are clear, legible, and not detrimental to the life of the item.  Verify that identification markings are applied using materials and methods which provide a clear and legible identification and are located on the item and clearly visible whenever possible.  Verify that when physical separation of an item is required the subdivision of the item meets the following provisions:  6.1.8.1 The identification markings are transferred to all subsections, and verified by inspection personnel, prior to the separation.  6.1.8.2 Identification includes as a minimum the heat number, batch/lot number, part number, or serial number.			
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8-7	YMP/88-9, Rev. 2 Sec. VIII, Part A Para 1.1.3	When specified by codes, standards or specification that include specific identification or traceability requirements (such as identification or traceability of the item to applicable specification and grade of material; heat, batch, lot, part or serial number; or specified inspection, test or other records) the program shall be designed to provide such identification and traceability control.			
	QP 8.0, Rev. 4 Para 6.1.1	Verify that items requiring special identification marking or control are marked by the supplier, user, or other authorized individuals in accordance with requirements documentation provided.			
			(9) Auditor Signature	(10) Date	

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8-8	YMP/88-9, Rev. 2 Sec. VIII, Part A Para 1.1.4  QP 8-0, Rev. 4 Para 6.1.14.1	Where specified, items having limited calendar or operating life or cycles shall be identified and controlled to preclude use of items whose shelf life or operating life has expired.  Verify that where the life of materials or items is limited the expiration dates are clearly marked and visible.			
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9-1	General	Verify that all personnel involved with special processes have been properly trained in the requirements of: QP 9.0 Revision 4, QP 9.1, Revision 3, QP 9.2, Revision 3.			
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9-2	General	Verify tht work is being accomplished on QA Level I and/or Level II items.			
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9-3	YMP/88-9, Rev. 2 Sec. IX Para 2.2.1	It is the responsibility of the Participating Organization and Nevada Test Site (NTS) Support Contractor that is performing the work to identify which portions of its activities involve the use of special processes. A special process is a process in which the results are highly dependent on either the control of the process or the operator's skill, or both and in which the specified quality cannot be readily determined by inspection or testing of the item.			
	QP 9.0, Rev. 4 Para. 5.1	Verify that the Responsible Organization (the organization performing the work) has identified which portions of its activities involve the use of special process as well as identifying other processes to be controlled.			
	QP 9.0, Rev. 4 Para, 5.2	Verify that Project Quality Assurance has reviewed all controlled process documentation for compliance with YMP QA requirements.			
					(9) Auditor Signature

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9-4	YMP/88-9, Rev. 2 Sec. IX, Para. 2.2.2  QP 9.0, Rev. 4 Para. 6.1.3	The necessary requirements for qualifications of personnel, procedures, or equipment shall be specified or referenced in the procedures or instructions either for processes that are not covered by existing codes standards or for processes where the quality requirements for an item or test exceed those of existing codes or standards.  Verify that the necessary requirements for qualifications of personnel, or procedures are specified or referenced in the procedures or instructions either for processes that are not covered by existing codes and standards or for processes where the quality requirements for an item or text exceed those of existing codes or standards.			
				(9) Auditor Signature	(10) Date

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9-5	YMP/88-9, Rev. 2 Sec. IX, Para. 2.2.3	Conditions necessary for accomplishment of the special process shall be included in procedures or instructions. These conditions shall include proper equipment, controlled parameters of the special process and calibration requirements.			
	QP 9.0, Rev. 4 Para. 6.1.4	Verify that conditions necessary for accomplishment of the processes or special process are included in procedures or instructions.			
	Note: These conditions shall include proper equipment, calibration requirements, and controlled parameters of the process.				
	(9) Auditor Signature	(10) Date			





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S-7	YMP/88-9, Rev. 2 Sec. IX Para, 2.3.1	Procedures shall be qualified in accordance with applicable codes, standards or other specifications. The program for qualification of procedures shall be specified in documents prepared by the cognizant technical organization. The responsible QA organization shall provide appropriate reviews to assure compliance with these requirements.			
	QP 9.0, Rev. 4 Para. 6.3.1	Verify that process and special process procedures are qualified in accordance with the applicable codes, standards or other specifications.			
	Note: The program for qualification of procedure shall be specified in documents prepared by the cognizant technical organization.				
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9-7 (cont'd)	QP 9.1, Rev. 3 Para. 6.1	<p><b>WELD PROCEDURE QUALIFICATION</b></p> <p>Verify that the welding Operations Support Facility of Quality Operations provides for the following:</p> <p>6.1.1 Works in conjunction with the applicable implementing group on approved projects to identify and secure representative samples of the material and equipment to be used in the project.</p> <p>6.1.2 Prepares a sample weld using the project representatives material and equipment under the supervision of the welding engineer who records the welding data at the time of welding.</p>			
	QP 9.1, Rev. 3 Para. 6.2	<p>Verify that the Welding Engineer:</p> <p>6.2.1 Records all applicable data at the time of welding.</p> <p>6.2.2 Visually examines the sample weld and evaluate based upon criteria of the applicable code (i.e., AWS D1.1, ASME IX, etc.)</p> <p>6.2.3 When required by the applicable code, arranges for nondestructive testing of the sample (i.e. ultrasonic, radiographic, etc.) and attaches a copy of the nondestructive evaluation report to the original PQR for retention.</p>			
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9-7	(Continued)	<p>6.2.4 When required by the applicable code, arranges for destructive testing (i.e., bend testing, tensile testing, etc.) of sample welds found acceptable by nondestructive testing and attaches a copy of the destructive evaluation report to the original PQR for retention.</p> <p>6.2.5 Prepares the WPS from the completed PQR, listing the applicable welding data variables for the particular project that are to be used by the qualified welders assigned to the project.</p> <p>NOTE: More than one WPS may be based upon a single PQR, provided that all aspects of the applicable code are met and the welding data on the WPS (s) does not exceed the limits of the essential variables for the PQR. WP's are open for revision and may be updated or changed within the limits of the essential variables of the correspondence PQR (s).</p>			
			(9) Auditor Signature	(10) Date	

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9-8	YMP/88-9, Rev. 2 Sec. IX, Para	Personnel shall be trained, qualified, and certified in accordance with written procedures. The training and qualification, and certification shall be the responsibility of the organization that is performing the work. These procedures shall be reviewed by the responsible Quality Assurance (QA) organization for compliance with requirements.			
	QP 9.0, Rev. 4 Para. 6.4.1	Verify that personnel are trained, qualified and certified in accordance with written procedures.			
	QP 9.2, Rev. 3 Para. 6.1	Verify that the WOS works in conjunction with applicable implementing groups on approved projects to secure and maintain adequate material and equipment necessary for the performance of welding tests identified as necessary for YMP operations			
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9-9	YMP/88-9, Rev. 2 Sec. IX, Para. 2.4.2	Qualification shall utilize the actual working procedure, to the extent possible.			
	QP 9.0, Rev. 4 Para 6.4.1.1	Verify that qualification uses actual working procedures, to the extent possible.			
	QP 9.2, Rev. 3 Para. 6.2	Verify that the WOS conducts test of individuals submitted for certification to determine their capability to perform within the requirements of the specified welding operation.			

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9-10	YMP/88-9, Rev. 2 Sec. IX, Para 2.4.3	Qualification of personnel shall incorporate the personnel qualification requirements of the applicable codes, standards, or specifications.			
	QP 9.0, Rev. 4 Para. 6.4.3	Verify that the qualification of personnel incorporate the personnel requirements specified in the applicable codes, standards and specifications.			
	QP 9.2, Rev. 3 Para. 6.3	Verify that the WOS stamps all individual's test plates for identification prior to beginning the tests (s).			
	QP 9.2, Rev. 3 Para. 6.4	Verify that the WOS witnesses all welding tests.			
	QP 9.2, Rev. 3 Para. 6.5	Verify that the WOS visually examines and tests, or arranges for the testing of all coupons prepared from the candidates test plates.			
	QP 9.2, Rev. 3 Para. 6.6	Verify that the WOS records all applicable information concerning the candidates' tests on the Welder Certification Test Record, form RE-8111 and maintain a file of such records to be processed in accordance with QP 17.0.			

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9-10	QP 9.2. Rev. 3 Para. 6.9	Verify that the WOS maintains controls, issues, and retrieves welder stamps.			
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9-11	YMP/88-9, Rev. 2 Sec. IX, Para. 2.6	Records shall be maintained for the currently qualified personnel, procedures, and equipment of each special process and the requirements for maintenance of these records shall be specified. Special process verification methods and criteria shall also be documented and retained.			
	QP 9.0, Rev. 4 Para. 6.5.1	Verify that records are maintained for the currently qualified personnel, procedures and equipment of each process.			
	QP 9.2, Rev. 3 Para. 6.7	Verify that the WOS maintains a history and recall systems of employee certification by Department and Craft.			
	QP 9.2, Rev. 3 Para. 6.8	Verify that the WOS notifies the welder's Department Manager when his certification is due to expire.			
	QP 9.2, Rev. 3 Para. 6.10	Verify that the WOS maintains, provides, and revises as necessary the Welder Qualification Certificate, form RE-0005, card for each qualified welder or welding operator.			
(9) Auditor Signature		(10) Date			



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10-1	NNWSI/88-9, Rev. 2 Sec. 10, Para. 2.1           QP 10.1, Rev. 5 Para. 6.3.1.4  Para. 6.3.1.4.1	Section X  INSPECTION  Inspections shall be performed by personnel who do not report directly to the immediate supervisor (s) who is/are responsible for performing the activity being inspected. If these personnel are not part of the formal QA organization, they shall have sufficient authority, access to work areas, and organizational freedom to (1) identify quality problems; (2) initiate, recommend, or provide solutions to quality problems through designated channels; (3) verify implementation of solutions; and (4) assure that further processing, delivery, installation or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred. When these persons or organizations who perform the inspection activities are not part of the formal QA organization (i.e., part of line management), then the quality assurance organization shall overview and monitor the inspection activity.  1. Verify that personnel performing inspections do not report directly to immediate supervisors who are responsible for performing the work being inspected.  2. Verify that personnel have sufficient authority, access to work areas, and organizational freedom to:			
				(9) Auditor Signature	(10) Date

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10-1	(Continued)	a. Identify quality problems;  b. Initiate, recommend, or provide solutions to quality problems, through designated channels;  c. Verify implementation of solutions;  d. And assure that further processing, delivery, installation or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred.			
			(9) Auditor Signature	(10) Date	

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10-2	NNWSI/88-9, Rev. 2 Sec. 10, Para. 2.2  QP 10.1, Rev. 5 Para. 6.3.1.5	Each person who verifies conformance of work activities for purposes of acceptance shall be qualified to perform the assigned inspections or tests. The qualification of personnel performing inspection and test activities shall be certified in writing. Personnel selected to perform inspection and test activities shall have the experience or training commensurate with the scope, complexity, or special nature of the activities. Personnel shall also be indoctrinated as to the technical objectives and requirements of the applicable codes and standards and the QA program elements that are to be employed.  Verify that each person who verifies conformance of work activities for purposes of acceptance has been certified to perform such assigned inspection task.			
				(9) Auditor Signature	(10) Date

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10-3	NNWSI/88-9, Rev. 2 Sec. 10, Para. 3.0           QP 10.1, Rev. 5 Para. 6.3.1.6	<p>Mandatory inspection or witness hold-points shall be established as necessary. When such hold or witness points are established, work may not proceed without the specific consent of the responsible representative. These hold or witness points shall be indicated appropriate documents controlling the activity. Consent to waive any specified hold or witness point shall be documented before work can be continued beyond the designated hold or witness point.</p> <ol style="list-style-type: none"> <li>1. Verify that mandatory inspection or witness hold-points are required beyond which work shall not proceed without consent of the designated representative.</li> <li>2. Verify that specific hold-points are indicated in appropriate documents.</li> </ol>			
				(9) Auditor Signature	(10) Date

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10-4	NNWSI/88-9, Rev. 2 Sec. 10, Para. 4.0	Planning for inspection activities shall be accomplished and documented via inspection procedures, instructions, or checklists. Inspection procedures, instructions, or checklists shall provide for following: <ul style="list-style-type: none"> <li>a. Identification of characteristics and activities to be inspected.</li> <li>b. A description of the method of inspection.</li> <li>c. Identification of the individuals or groups responsible for performing the inspection operation.</li> <li>d. Acceptance and rejection criteria.</li> <li>e. Identification of required procedures, drawings, and specifications and revisions.</li> <li>f. Recording inspector or data recorder and the results of the inspection operation.</li> <li>g. Specifying necessary measuring and test equipment including accuracy requirements.</li> </ul>			
	QAPP, Rev. 7 Sec. 10, Para. 4.0	<ul style="list-style-type: none"> <li>1. Verify that planning for inspection activities is accomplished and documented via inspection procedures, instructions, or checklists.</li> <li>2. Verify that inspection procedures, instructions, or checklists provide for the above listed items.</li> </ul>			
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10-5	NI...83-9, Rev. 2 Sec. 10.0, Para. 4.1  QAPP, Rev. 7 Sec. 10, Para. 4.1	When sampling is used to verify acceptability of a group of items, the sampling procedures shall be based on recognized standard practices.  Verify that the sampling procedures are based on recognized practices when determining acceptability.			
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10-6	NNWSI/88-9, Rev. 2 Sec. 10, Para. 5.0	Inspection of items in-process or under construction shall be performed for work activities where necessary to verify quality. If inspection of processed items is impossible or disadvantageous, indirect control by monitoring of processing methods, equipment, and personnel shall be provided.			
	QAPP, Rev. 7 Sec. 10, Para. 5.0	Verify that inspection of items in-process or under construction is performed for work activities where necessary.			
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10-7	NNWSI/88-9, Rev. 2 Sec. 10, Para. 6.0	Final inspection shall include a records review of the results and resolution of nonconformances identified by prior inspections. The final inspection shall be planned to reach a conclusion regarding conformance of the item to specified requirements.			
	QAPP, Rev. 7 Sec. 10, Para. 6.0	Verify that final inspection includes a records review of the results and resolution of nonconformances identified by inspections.			
(9) Auditor Signature				(10) Date	



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10-8	NNWSI/88-9, Rev. 2 Sec. 10, Para. 6.1  QAPP, Rev. 7 Sec. 10, Para. 6.1	Completed items shall be inspected for completeness, markings, calibration, adjustments, protection from damage, or other characteristics as required to verify the item's quality and conformance to specified requirements. If not previously examined, then quality records shall be examined for adequacy and completeness.  Verify the inspected item's quality and conformance to specified requirements.			
			<sup>(9)</sup> Auditor Signature	<sup>(10)</sup> Date	

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10-9	NNWSI/88-9, Rev. 2 Sec. 10, Para. 6.2	The item's acceptance shall be documented and approved by identified authorized personnel.			
	QAPP, Rev. 7 Sec. 10, Para. 6.2	Verify that the item's acceptance is documented and approved by authorized personnel.			
	(9) Auditor Signature	(10) Date			

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10-10	NNWSI/88-9, Rev. 2 Sec. 10, Para. 7.0	Required in-service inspection of structures, systems, or components shall be planned and executed by or for the organization responsible for operation.			
	QAPP, Rev. 7 Sec. 10, Para.7.0	Verify that in-service inspection is planned and executed as required.			
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10-11	NNWSI/88-9, Rev. 2 Sec. 10, Para. 9.1	<p>As a minimum, inspection records shall identify the following:</p> <ol style="list-style-type: none"> <li>a. Item or activity.</li> <li>b. The date of the inspection.</li> <li>c. Name of individual performing the inspection.</li> <li>d. Name or names of personnel contacted during the inspection.</li> <li>e. A description of the type of observation (method of inspection).</li> <li>f. Inspection criteria including identification of drawing, specification, etc. (and applicable revision).</li> <li>g. Equipment used during the inspection.</li> <li>h. Evidence as to the acceptability of the results.</li> <li>i. Acceptance statement.</li> <li>j. References to information on action taken in connection with conditions adverse to quality, nonconformances and/or actions taken to resolve any discrepancies.</li> </ol>			
	QAPP, Rev. 7 Sec. 10 Para. 9.1	Verify that inspection records identify the items listed above.			

(9) Auditor Signature (10) Date

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10-12	NNWSI/88-9, Rev. 2 Sec. 10, Para. 9.2  QAPP, Rev. 7 Sec. 10, Para. 9.1	Records of personnel qualification shall be established and maintained by the employer. The actual examinations used to qualify personnel shall also be retained as part of the record files.  Verify that personnel qualifications records are established and maintained by the employer (including actual examinations).			
			(9) Auditor Signature	(10) Date	



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10-13	NNWSI/88-9, Rev. 2, SECT. XVIII, P 2.0  QP 10.1, Rev. 5 P 1.0, 6.2.3 (5/26/89)	<p>2.0 SURVEILLANCES</p> <p>THE NNWSI Project Audit activities shall be supplemented by independent surveillance activities. . . . .</p> <p>Verify that surveillances have been conducted by examining the Surveillance Report Log and randomly selecting several for package reviews.</p> <p>(NOTE: DETERMINE HOW SURVEILLANCES ARE SCHEDULED.)</p>			
				(9) Auditor Signature _____ (10) Date _____	



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				ITEM NUMBER					
				SURV. No.	1	2	3	4	
10-14	<p>NNWSI/88-9, REV.2 SECT. XVIII, P 2.1</p> <p>QP 10.1, REV.5 P 6.2.2</p>	<p style="text-align: center;">2.1 PLANNING</p> <p>SURVEILLANCES ARE TO BE PERFORMED TO WRITTEN CHECKLISTS OR SURVEILLANCE PLANS WHENEVER PRACTICAL, . . . . .</p> <p>A SURVEILLANCE PLAN SHALL BE COMPLETED FOR EACH SURVEILLANCE AND AS A MINIMUM INCLUDE THE FOLLOWING:</p> <ol style="list-style-type: none"> <li>1. SCOPE OF SURVEILLANCE</li> <li>2. REQUIREMENT(S), ACCEPTANCE CRITERIA, AND ACCURACY OF ANY EQUIPMENT REQUIRED FOR THE ACTIVITY TO BE SURVEILLED.</li> <li>3. DATE OF THE SURVEILLANCE.</li> <li>4. PERSONNEL PERFORMING SURVEILLANCE.</li> </ol> <p>(NOTE: THE FORM FOR THE PLAN DOES NOT EXPLICITLY CALL FOR ACCEPTANCE CRITERIA AND EQUIPMENT ACCURACY.)</p>							
(9) Auditor Signature				(10) Date					



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(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-15	NNWSI/88-9, REV. 2 SECT. XVIII P 2.0  QP 10.1, REV. 5 P 6.4	.... ALL DEFICIENCIES, NONCONFORMANCES AND POTENTIAL QUALITY PROBLEMS IDENTIFIED DURING SURVEILLANCES ARE TO BE DOCUMENTED AND MONITORED UNTIL VERIFICATION OF EFFECTIVE CORRECTIVE ACTION IS MADE. ....  6.4 REPORTING 6.4.1 Upon completion of the surveillance, THE SURVEILLANCE SHALL BE DOCUMENTED ON THE SURVEILLANCE REPORT.  PS 6.4.2-6.4.8 - DEFICIENCY IDENTIFICATION, CAR'S, NCR'S, ACCEPTABLE RESPONSE, AND (6.5) FOLLOW-UP CLOSURE			
			(9) Auditor Signature	(10) Date	



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11) AUDIT ITEM NO.	14) QUALITY ELEMENT & REFERENCE	15) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	16) RESULTS S. X, N/A	17) SUMMARY OF INVESTIGATION	18) PERSON CONTACTED
10-16	WNW-SI/88-9, REV. 2, SET, XVIII PP 2.3  QP 10.1, REV. 5 P 7.0	2.3 RECORDS  AS A MINIMUM, SURVEILLANCE RECORDS SHALL IDENTIFY THE FOLLOWING: (9 BULLETS)  7.0 QA RECORDS  7.1 SURVEILLANCE PLANS, SURVEILLANCE REPORTS, AND SURVEILLANCE REPORT LOGS GENERATED BY THE IMPLEMENTATION OF THIS PROCEDURE SHALL BE CONSIDERED QA RECORDS AND HANDLED IN ACCORDANCE WITH QP 17.0.			

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18) Auditor Signature

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(11) AUDIT ITEM NO.	(14) QUALITY ELEMENT & REFERENCE	(15) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(16) RESULTS S, X, N/A	(17) SUMMARY OF INVESTIGATION	(18) PERSON CONTACTED
10-17	MNWSI/88-9, Rev.2 SECT. XVIII, para.2  QP 10.1, REV.5 PARA. 6.1.3	MEASURES FOR THE SURVEILLANCE OF SITE INVESTIGATION ACTIVITIES SHALL BE ESTABLISHED AND EXECUTED IN ACCORDANCE WITH PROCEDURES PREPARED BY THE ORGANIZATION PERFORMING THE ACTIVITY.  WHETHER SCHEDULED OR UNSCHEDULED SURVEILLANCES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS PROCEDURE BY PERSONNEL QUALIFIED IN ACCORDANCE WITH QP 2.2  VERIFY THAT SURVEILLANCE PERSONNEL HAVE BEEN QUALIFIED,			
			(19) Auditor Signature _____		(19) DATE _____

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-1	NNWSI/88-9, Rev. 2 Sec. II, Para. 2.0  QP 11.0, Rev. 5 Para. 6.2.1  Sec. 11, Para. 6.2.2	Section XI  Test Control  Test requirements and acceptance or rejection criteria, including required levels of precision and accuracy, shall be provided or approved by the organization responsible for the design of the item to be tested unless otherwise designated. Required tests, including, as appropriate, prototype qualification tests, production tests, proof tests prior to installation construction tests, pre-operational tests, and operational tests shall be controlled. Test requirements and acceptance or rejection criteria shall be based upon specified requirements contained in applicable design or other pertinent technical documents.  1. Verify that test requirements and acceptance criteria are provided and approved by the Participating Organization or NTS Contractor responsible for the design of the item to be tested unless otherwise designated.  2. Verify that required tests identified above are controlled.			
				(9) Auditor Signature	(10) Date

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11-2	NNWSI/88-9, Rev. 2 Sec. 11, Para. 3.1	Instructions, procedures, and drawings for tests shall be prepared in accordance with the requirements of Section V of this document. Test procedures or instructions shall contain criteria for determining when a test is required and how the test is performed.			
	QP 11.0, Rev. 5 Para. 6.3.1.1	Verify that instructions, procedures, and drawings for required tests are prepared in accordance with specified requirements.			
<sup>(9)</sup> Auditor Signature		<sup>(10)</sup> Date			

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11-3	NNWSI/88-9, Rev. 2 Sec. 11, Para. 3.2	<p>Test procedures shall include or reference test objectives and provisions for assuring that prerequisites for the given test have been met, that adequate instrumentation is available and used, that necessary monitoring is performed, and that suitable environmental conditions are maintained. Prerequisites shall include the following, as applicable: (1) calibrated instrumentation, (2) appropriate equipment, (3) completeness of item to be tested, (4) trained or appropriately qualified personnel, (5) condition of test equipment and the item to be tested, (6) suitable and controlled environmental conditions, and (7) provisions for data acquisition and storage.</p>			
	QP 11.0, Rev. 5 Para. 6.3.2.1	<p>1. Verify that test procedures reference objectives and provisions for assuring that prerequisites for the given test have been met, that adequate instrumentation is available and used, that necessary monitoring is performed, and that suitable environmental conditions are maintained.</p>			
	QP 11.0, Rev. 5 Para. 6.3.2.2	<p>2. Verify that prerequisites include the above listed items as applicable.</p>			
		(9) Auditor Signature		(10) Date	

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11-4	NNWSI/88-9, Rev. 2 Sec. II, Para. 3.3	Test plans and procedures shall be reviewed in accordance with the verification requirements defined in Paragraph 2.4 of Section III of this document. They shall prescribe mandatory inspection hold-points (as required), methods of documenting test data and results, and methods of data analysis.			
	QP 11.0, Rev. 5 Para. 6.3.3.1.1	1. Verify that control measures are applied to determine the adequacy of test plans and procedures.			
	Para. 6.3.3.1.2	2. Verify that the verification method used, the results of the verification, and the verifiers are identified and controlled.			
			(9) Auditor Signature	(10) Date	

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11-5	NNWSI/88-9, Rev. 2 Sec. 11, Para. 4.0	Test results shall be documented and their conformance with acceptance criteria evaluated by a responsible authority to assure that test requirements have been satisfied.			
	QP 11.0, Rev. 5 Para. 6.3.6.1	Verify that test results are documented and evaluated by a responsible authority to ensure that requirements have been satisfied.			
	(9) Auditor Signature			(10) Date	

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11-6	NNWSI/88-9, Rev. 2 Sec. 11, Para. 5.0  QP 11.0, Rev. 5 Para. 6.3.7.1	Test records shall, as a minimum, identify the following:  a. Item tested.  b. Date of test.  c. Tester or data recorder identification.  d. Type of observation.  e. Results and acceptability.  f. Action taken in connection with any deviations noted.  g. Person evaluating results.  Verify test records identify, as a minimum, the above items listed.			
				(9) Auditor Signature	(10) Date



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12-1	NNWSI/QAP 88-9 Rev. 2, Sec. XII Para. 2.1   QP 12.0, Rev. 6 Para. 6.2.2.1	Each device shall have a unique identification number. This number shall be recorded on the data sheet, log, etc., along with the measurement taken, to ensure traceability to the measurement of the device that was used to take the measurement.   Verify that each device has a unique identification number.			
			(9) Auditor Signature	(10) Date	

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12-2	NNWSI/QAP 88-9 Rev. 2, Sec. XII,  QP 12.0, Rev. 6 Para. 6.2.3, 6.4.1.1 & 6.4.1.2	Measuring and test equipment shall be calibrated against certified equipment having known valid relationships to the National Bureau of standards or other nationally recognized standards and shall be calibrated, adjusted, and maintained at prescribed intervals. If no nationally recognized standards exist, the basis for calibration shall be documented.  Verify that measuring and test equipment have been calibrated against certified equipment having no valid relationship to the NBS or other nationally recognized standards and maintained at prescribed intervals.			
			(9) Auditor Signature	(10) Date	

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12-3	NNWSI/QAP 88-9 Rev. 2, Sec. XII Para. 2.3	Measuring and test equipment must be labeled, tagged, or otherwise documented in a fashion which indicates the due date of the next calibration and to provide traceability to calibration data.			
	OF 12.0, Rev. 6 Para. 6.2.4	Verify that measuring and test equipment has been labeled, tagged, or otherwise documented which indi- cates the due date of the next calibration.			
(9) Auditor Signature				(10) Date	

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12-4	NNWSI/QAP 88-9 Rev. 2, Sec. XII Para. 2.3  QP 12.0, Rev. 6 Para. 6.3.4, 6.3.5 & 6.3.5.1	If measuring and test equipment is found to be out of calibration, an evaluation shall be made and documented of the validity of previous results obtained and of the acceptability of items previously inspected, tested or data gathered since the last calibration. Devices that are out of calibration shall be tagged or segregated and shall not be used until they have been recalibrated.  1. Verify that when measuring and test equipment is found to be out of calibration an evaluation shall be made of previous results.  2. Verify devices that are out of calibration are tagged or segregated and are not used until they have been recalibrated.							
				(9) Auditor Signature				(10) Date	

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12-5	NNWSI/QAP 88-9 Rev. 2, Sec. XII Para. 2.6  (QAPP) 568-DOC-115 Rev. 7, Sec. XII Para. 2.6	Records shall be maintained and equipment shall be marked suitably to indicate calibration status. Calibration records shall identify the calibration procedure (including revision) utilized to perform the calibration.  Records shall be maintained and equipment shall be marked suitably to indicate calibration status. Calibration records shall identify the calibration procedure (including revision) utilized to perform the calibration.  QP 12.0, Rev. 6, does not address the requirement that calibration records shall identify the calibration procedure (including revision) utilized to perform the calibration.			
			(9) Auditor Signature		
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12-6	REECO "Calibration Procedure - General" Rev. 1, Para. 2.0	<p>RESPONSIBILITY. Quality Assurance is responsible for calibration through the Calibration Laboratory, under the authority of the Quality Assurance Section Chief, Services.</p> <p>Verify the Quality Assurance Section Chief, Services is responsible for calibration through the Calibration Laboratory.</p>			
(9) Auditor Signature				(10) Date	

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12-7	REECO "Calibration Procedure - General" Rev. 1, Para. 3.0	<p>CALIBRATION RANGES AND ACCURACIES. The Calibration Laboratory can calibrate mechanical measuring devices within the below listed ranges.</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Item</td> <td style="text-align: center;">Range</td> </tr> <tr> <td>A. Torque</td> <td>0-2,000 ft.-lbs.</td> </tr> <tr> <td>B. Weight</td> <td>0-6,500 lbs.</td> </tr> <tr> <td>C. Pressure</td> <td>0-10,000 psi</td> </tr> <tr> <td>D. Vacuum</td> <td>0-26 in. Hg</td> </tr> <tr> <td>E. Optics</td> <td>--</td> </tr> <tr> <td>F. Temperature</td> <td>to +2,200°F</td> </tr> <tr> <td>G. Dimensional (linear &amp; angular)</td> <td>--</td> </tr> </table> <p>Verify the Calibration Laboratory can calibrate mechanical measuring devices within the above listed ranges.</p>	Item	Range	A. Torque	0-2,000 ft.-lbs.	B. Weight	0-6,500 lbs.	C. Pressure	0-10,000 psi	D. Vacuum	0-26 in. Hg	E. Optics	--	F. Temperature	to +2,200°F	G. Dimensional (linear & angular)	--			
Item	Range																				
A. Torque	0-2,000 ft.-lbs.																				
B. Weight	0-6,500 lbs.																				
C. Pressure	0-10,000 psi																				
D. Vacuum	0-26 in. Hg																				
E. Optics	--																				
F. Temperature	to +2,200°F																				
G. Dimensional (linear & angular)	--																				
				(9) Auditor Signature	(10) Date																

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12-8	REECO "Calibration Procedure - General" Rev. 1, Para. 4.1	<p>All standards used in the Calibration Program shall be supported by certified reports attesting to the accuracy of the item, with actual results, and including the National Bureau of Standards Test Number, when applicable, or traceability to the NBS Test Number.</p> <p>Verify that all standards used in the Calibration Program can be supported by certified reports attesting to the accuracy of the item, with actual results, and including the National Bureau of Standards Test Number, when applicable, or traceability to the NBS Test.</p>			
(9) Auditor Signature				(10) Date	



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12-9	REECO "Calibration Procedure - General" Rev. 1, Para 4.2	<p>Those standards not traceable to the National Bureau of shall be derived from accepted values of natural physical constants when possible, or derived from the ratio type of self-calibration techniques.</p> <p>Verify if there are any standards not traceable to the National Bureau of Standards.</p>			
(9) Auditor Signature				(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
12-10	REECO "Calibration Procedure - General" Rev. 1, Para. 4.3	Standards that are selected solely on the basis of manufacturer's specifications shall be monitored, and the readings recorded until a history of stability is established through successive calibrations.  Verify if there are any standards that have been selected solely on the basis of the manufacturer's specifications.			
				(9) Auditor Signature	(10) Date



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12-12	REECO "Calibration Procedure - General" Rev. 1, Para. 5.4	<p>The Scheduled Instrument Calibration by Department Report (Exhibit 2), shall be used to notify organizations that a device requires calibration, and when its calibration is due. This report shall be transmitted to the using organization one month prior to the calibration due date to enable scheduling the device for calibration.</p> <p>Verify the Scheduled Instrument Calibration by Department Report has been used to notify organizations that a device required recalibrations, and when its calibration is due.</p> <p>Verify the report has been transmitted to the using organization one month prior to the calibration due date to enable scheduling the device for calibration.</p>			
				<sup>(9)</sup> Auditor Signature	

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12-13	REECO "Calibration Procedure - General" Rev. 1, Para. 6.0	<p>IDENTIFICATION OF MEASURING AND TEST EQUIPMENT. Each item of measuring or test equipment shall be identified by a control number. A log shall be maintained by the Calibration Laboratory identifying each piece of equipment to its control number.</p> <p>Verify each item of measuring or test equipment has been identified by a control number.</p> <p>Verify a log has been maintained by the Calibration Laboratory identifying each piece of equipment to its control number.</p>			
(9) Auditor Signature				(10) Date	



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12-15	REECO "Calibration Procedure - General" Rev. 1, Para. 6.2	<p>Each piece of measuring or test equipment shall also be marked, stamped, tagged, or labelled in accordance with 6.1 with the following as a minimum: the date its calibration is due, and the identification of the individual who performed the most recent calibration.</p> <p>Verify each piece of measuring or test equipment also contains the above stated information as a minimum.</p>			
				(9) Auditor Signature	(10) Date

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12-16	REECO "Calibration Procedure - General" Rev. 1, Para. 7.0	<p>SUBCONTRACTED CALIBRATION SERVICE. Selection of a sub-contracted calibration service shall comply with Company internal procedures.</p> <p>Verify/determine if there has been any subcontracted calibration services.</p>			
(9) Auditor Signature				(10) Date	



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12-17	REECO "Calibration Procedure - General" Rev. 1, Para. 8.0	<p>FREQUENCY OF CALIBRATION. The intervals between calibrations shall be defined in specific terms in the Calibration Procedure for each measuring or test device.</p> <p>Verify intervals between calibrations has been defined in specific terms in the Calibration Procedure for each measuring or test device.</p>			
			(9) Auditor Signature	(10) Date	

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12-18	REECo "Calibration Procedure - General" Rev. 1, Para. 10.0	<p>The accuracy required for each type of measuring and equipment shall be as specified in each Calibration Procedure, and may be based on the manufacturer's specifications, or on established industry practice.</p> <p>Verify the accuracy required for each type of measuring and test equipment is specified in each Calibration Procedure.</p>			
			(9) Auditor Signature	(10) Date	

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12-19	REECO "Calibration Procedure - General" Rev. 1, Para. 12.0	<p>DISCREPANT EQUIPMENT. When measuring or test equipment cannot be adjusted to within its designated tolerances a Reject Tag (Exhibit 4) shall be attached, and it shall be returned to the using organization who shall remove the item from service until it has been adjusted or repaired. Those items that cannot be repaired shall be scrapped.</p> <p>Verify/determine if any measuring or test equipment has had a Reject Tag attached.</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
12-20	REECO "Calibration Procedure - General" Rev. 1, Para. 12.1	<p>Those measuring or test equipment items found to be out of calibration tolerances during calibration shall be adjusted as necessary to bring them into tolerance. A memorandum shall be prepared by the calibration technician notifying the using organization that a possible nonconforming condition exists detailing the item's identification number, and its out-of-calibration condition. The using organization shall make and document an evaluation of the validity of previous measurements or tests made with the item since its last valid calibration.</p> <p>Verify if any measuring and test equipment has been found out of calibration, if so, a memorandum has been prepared by the calibration technician notifying the using organization that a possible nonconforming condition exists.</p>			
			<b>(9) Auditor Signature</b>		<b>(10) Date</b>

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12-21	REECO "Calibration Procedure - General" Rev. 1, Para. 13.0	<p>RECORD KEEPING. Records identifying the calibration procedure number and revision, the equipment, standards used, user, calibration date, as found conditions, date of next scheduled calibration, and individual performing the calibration shall be made and maintained, and the equipment shall be marked to indicate the calibration status, and to be traceable to its calibration records. Whenever a calibration is performed by REECO personnel, data shall be recorded on the Calibration Report, RE-8615 (Exhibit 3); a copy shall be provided to the using organization under the circumstances described in paragraph 9.1.</p> <p>Verify if REECO has performed any calibrations if so, the data is recorded on the Calibration Report.</p>			
				(9) Auditor Signature	(10) Date

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12-22	REECO "Calibration Procedure - General" Rev. 1, Para. 13.1	<p>A copy of the Calibration Report shall be maintained on file by the Calibration Laboratory for a period of two (2) years.</p> <p>Verify copies of the Calibration Report are maintained on file by the Calibration Laboratory for a period of two (2) years.</p>			
			(9) Auditor Signature	(10) Date	

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12-23	REECO "Calibration Procedure - General" Rev. 1, Para. 13.2	<p>The Calibration Laboratory shall maintain an Equipment Inventory File, listing items by their identification numbers, including each department, updated monthly.</p> <p>Verify the Calibration Laboratory is maintaining an Equipment Inventory File.</p>			
(9) Auditor Signature				(10) Date	

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13-1	General	Verify that all personnel involved with the handling storage and shipping of items have been properly trained in the requirements of QP 13.0, Revision 5.			
				(9) Auditor Signature	(10) Date



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13-2	General	Verify that work is being accomplished on QA Level I and/or Level II items.			
(9) Auditor Signature				(10) Date	

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13-3	YMP/88-9, Rev. 2 Sec. XIII Para. 1.0	<p>Measures shall be established to control the packaging, handling, storage, shipping, cleaning, and preservation of material and equipment to prevent damage, loss, or deterioration. Handling, storage, and shipping of items shall be conducted in accordance with established work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents or procedures specified for use in conducting the activity. Specific requirements are listed below.</p>			
	QP 13.0, Rev. 5 Para. 6.1.1	<p>Verify that after proper receipt and identification of equipment and/or materials have been performed, the GSS provides for proper handling as specified in the procurement documents or manufacturers recommendations; otherwise good commercial practice shall be used.</p>			
	<p>(How is this information transmitted to Warehouse Personnel?)</p>				
(9) Auditor Signature	(10) Date				

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13-3 (Cont'd)	QP 13.0, Rev. 5 Para. 6.2.1	Verify that storage requirements or considerations are indicated on the Purchase Order.			
	QP 13.0, Rev. 5 Para. 6.2.5	Verify that storage areas are removed from the construction area.			
	QP 13.0, Rev. 5 Para 6.5.1	Verify that handling, shipping, and storage areas are kept sufficiently clean and orderly to permit efficient execution of handling, shipping and storage requirements and minimize fire hazards.			
	QP 13.0, Rev. 5 Para. 6.6.6	Verify that the Project Quality Assurance Manager provides inspections/surveillances for the verification of CMI Performance.			
				(9) Auditor Signature	(10) Date

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13-4	YMP/88-9, Rev. 2 Sec. XIII Para. 1.1	When required for particular items, special equipment (e.g., containers, shock absorbers, and accelerometers) and special protective environments (e.g., an inert gas atmosphere, specific moisture content levels, and temperature levels) shall be specified and provided, and their existence shall be verified.			
	QP 13.0, Rev. 5 Para. 6.3.2	Verify that the marking and labeling of items includes the indication of the presence of special environments or the need for special controls.			
	QP 13.0, Rev. 5 Para. 6.4.1.1	Verify that items in storage have all covers, caps, plugs or other required closures intact. Covers removed for internal access shall be immediately replaced when access is no longer required.			
	QP 13.0, Rev. 5 Para. 6.4.1.3	Verify that preservation of perishable items is commensurate with manufacturers recommendations.			

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13-5	YMP/88-9, Rev. 2 Sec. XIII Para. 1.2  QP 13.0, Rev. 5 Para. 6.1.3  QP 13.0, Rev. 5 Para. 6.2.4  QP 13.0, Rev 5 Para. 6.6.2  QP 13.0, Rev. 5 Para 6.6.2.1  QP 13.0, Rev. 5 Para. 6.6.3	When they are required for critical, sensitive, perishable, or exceptionally expensive articles, specific procedures for handling, storage, packaging, shipping, and preservation shall be used.  Verify that items requiring special handling because of weight, size, susceptibility to shock damage, or any other conditions that warrant special requirements are in accordance with approved procedures which incorporate the requirements of established codes, e.g., OSHA H-18.  Verify that critical, sensitive, or perishable items are stored in accordance with manufacturers recommendations.  Verify that the CEDM identifies the care and maintenance requirements from the review of a manufacturers and/or supplier recommendations.  Verify that the CEDM generates and maintains , CMI's, Exhibit I, including instructions, performance frequency and the Care and Maintenance Instruction Log, (CMI Log), Exhibit II.  Verify that the CEDM generates the Equipment/Material Summary Maintenance Form (EMSF), Exhibit III, informing informing the appropriate parties of upcoming required maintenance performance.			
			(9) Auditor Signature	(10) Date	

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13-6	YMP/88-9, Rev. 2 Sec. XIII Para. 1.3	Special handling tools and equipment shall be utilized and controlled as necessary to ensure safe and adequate handling. Special handling tools and equipment shall be inspected and tested in accordance with procedures and at specified time intervals to verify that the tools and equipment are maintained adequately.			
	QP 13.0, Rev. 5 Para 6.1.2.1	Verify that special handling tools and equipment or hoisting and rigging apparatus are inspected prior to use and properly maintained in accordance with approved procedures.			
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13-7	YMP/88-9, Rev. 2 Sec. XIII Para. 1.4  QP 13.0, Rev. 5 Para. 6.1.2	Operators of special handling and lifting equipment shall be experienced or trained to use the equipment.  Verify that any handling processes requiring the use of special handling tools and equipment or hoisting and rigging apparatus are accomplished by operators experienced or trained in the use of the equipment.			
(9) Auditor Signature				(10) Date	

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13-8	YMP/88-9, Rev. 2 Sec. XIII, Para. 1.5  QP 13.0, Rev. 5 Para. 6.2.2  QP 13.0, Rev. 5 Para. 6.3.1	Instructions for marking and labeling for packaging, shipment, handling, and storage of items shall be established as necessary to adequately identify, maintain, and preserve the item, including indication of the presence of special environments or the need for special controls.  Verify that identification remains with the item, traceable to the item, throughout the storage period in accordance with QP 8.0.  Verify that the GSS provides for marking and labeling of items, material, and components while in storage so as to adequately identify, maintain, and preserve the item.			
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14-1	QAP/88-9, Rev. 2 Sec. 14, Para. 2.0  QP 14.0, Rev. 5 Para. 6.1.1 and 6.1.2	<p>Status shall be maintained through indicators, such as physical location and tags, markings, travelers, stamps, inspections records, or other suitable means. Procedures describing status indicators and their use shall contain current actual examples of each type indicator.</p> <ol style="list-style-type: none"> <li>1. Verify the status of inspection and test activities are performed as described above.</li> <li>2. Verify that example of each type indicator are found in the pertinent procedure.</li> </ol>			
			(9) Auditor Signature	(10) Date	

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14-2	QAP/88-9, Rev. 2 Sec. 14, Para. 3.0  QP 14.0, Rev. 5 Para. 6.3.1	The authority for application and removal of status indicating tags, markings, labels, and stamps shall be specified in procedures governing inspection, test, and operating status.  1. Verify authority for application and removal of status indicator tags is specified in the governing procedure.			
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15-1	QAP/88-9, Rev. 2 Para. 1.1.1 and 1.1.2  QP 15.0, Rev. 6 Para. 6.2.2, 6.2.2.2 & 6.2.3	Identificatin of nonconforming items shall be made by marking, tagging, or other methods that shall not adversely affect the end use of the item. The identification shall be legible, easily recognizable, and shall contain the nonconformance report number.  If identification of each nonconforming item is not practical, the container, package, or segregated storage area, as appropriate, shall be identified.  1. Verify if nonconformance, are tagged in the manner described above.  2. Verify that when it is not possible to tag the item special measures are taken to identify it as an NCR condition.			
				(9) Auditor Signature	(10) Date

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15-2	QAP/88-9, Rev. 2 Para. 1.1.3  QP 15.0, Rev. 6 Para. 6.2.1.2 & 6.2.1.3	If work on a nonconforming item must be continued (conditional release) prior to implementation of the disposition, the Waste Management Project Office (WMPO) shall approve such continuance. Requests for conditional releases on nonconforming items shall include documented justification that the following conditions are met: <ul style="list-style-type: none"> <li>o The nonconforming item can be removed or corrected at a later date without damage to, or contamination of the associated permanent facility equipment or structures.</li> <li>o The nonconforming item remains accessible for inspection.</li> <li>o The nonconforming item is evaluated and limitation (s) for use of the equipment or system is established.</li> <li>o Traceability and identification of the nonconforming item are maintained.</li> </ul> 1. Verify that conditional releases of nonconforming items are controlled and processed as described above.			
				(9) Auditor Signature	(10) Date

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15-3	QAP/88-9, Rev. 2 Para. 1.2.1          QP 15.0, Rev. 6 Para. 6.1.2 & 6.1.3	Each NNWSI Project participant shall maintain a non-conformance control log to track nonconforming items. This log shall contain the following information: <ul style="list-style-type: none"> <li>o The nonconformance report number.</li> <li>o A brief description of the nonconforming condition.</li> <li>o Identification of the person or organization responsible for determining and carrying out the nonconformance disposition.</li> <li>o The status of each nonconformance report (open or closed).</li> </ul> 1. Verify that QA control the NCR log. 2. Verify that required information is recorded in the NCR log.			
				(9) Auditor Signature	(10) Date

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15-4	QAP/88-9, Rev. 2 Para. 1.4.4 & 1.4.5	<p>The person or organization assigned the responsibility of dispositioning the NCR shall ensure the following:</p> <ul style="list-style-type: none"> <li>o Appropriate justification for the disposition has been documented. In the case of use-as-is or repair dispositions, technical justification is required. The as-built records, if such records are required, shall reflect the accepted deviation.</li> <li>o If a change to reflect the as-built condition is appropriate, then the disposition addresses action to change the existing design documents, test plans or procedures, reports, etc. Any documents changed shall also be cross referenced on the NCR.</li> </ul> <p>In those cases where the responsible organization proposes a disposition of "repair", WMPO shall approve the proposed disposition prior to implementation. In the case of a proposed disposition of "use-as-is", the NCR shall be forwarded to WMPO for approval after all actions necessary to support technical justification of the disposition have been completed. The appropriate WMPO Branch Chief and the WMPO PQM shall approve NCR dispositions involving "repair" or "use-as-is" determinations and conditional release recommendations.</p>			
				(9) Auditor Signature	(10) Date

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15-4 (cont'd)	QP 15.0, Rev. 6 Para. 6.1.6.2, 6.1.6.7 & 6.1.9	1. Verify that NCR dispositioned use-as-is are processed or described above.  2. Verify that as-built conditions for an NCR are dispositioned in accordance with the above requirements.			
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15-5	QAP/88-9, Rev. 2 Para. 3.0	Nonconformance reports shall be periodically analyzed by the QA organization to show quality trends and to help identify root causes of nonconformances. Results shall be reported to upper management for review and assessment.			
	QP 15.0, Rev. 6 Para. 6.4.1 & 6.4.2	1. Verify that trend analyses are performed periodically on NCR reports.			
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15-6	QAP/88-9, Rev. 2 Para. 4.0	Copies of nonconformance reports for items shall be sent to the WMPO PQM and the SAIC/T&MSS Project QA Department (QA Engineering Division Manager) by the originating organization upon issuance and upon closure. The original nonconformance reports shall be sent to the WMPO for approval.  1. Verify that copies of NCR reports are sent to Project Office PQM upon issuance and upon closure.			
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16-2	NNWSI/88-9, Rev. 2 Sec. XVI, Para. 1.1  QAPP 568-DOC-115 Rev. 7, Sec. XVI Para. 1.1	For significant conditions adverse to quality, the identification, cause, and corrective action taken to prevent recurrence shall be documented and reported to immediate management and upper levels of management for review and assessment.  1. Verify that REECO ensures that: <ul style="list-style-type: none"> <li>o Immediate actions have been taken to remedy the specific conditions (s).</li> <li>o Causative factors have been determined.</li> <li>o Controls have been reviewed, implemented, monitored and revised, if necessary.</li> <li>o Affected managers at all levels have been notified of adverse conditions (s) and of lessons to be learned to improve conditions or avoid similar occurrences.</li> </ul>			
				(9) Auditor Signature	(10) Date

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16-2 (Cont'd)	QP 16.0, Rev. 6 Para. 6.2.3	2. Verify that for significant conditions adverse to quality PQA. <ul style="list-style-type: none"> <li>o Initiates CAR and obtains PQAM approval.</li> <li>o Records the CAR in the Corrective Action Request Log (CARL).</li> <li>o Forwards the CAR to the organization responsible for performing the actions necessary to correct the adverse condition.</li> <li>o Sends a copy to SAIC/T&amp;MSS QA.</li> <li>o Enters data from the CAR into the tracking and trending data base.</li> </ul>							
				(9) Auditor Signature				(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
16-2 (Cont'd)	QP 16.0, Rev. 6 Para. 6.3	3. Verify that the responsible organization takes immediate actions to remedy the adverse conditions by taking the following actions: <ul style="list-style-type: none"> <li>o Perform an evaluation of the adverse condition of completed work.</li> <li>o Determines the root cause of the condition.</li> <li>o Document on the CAR the root cause, impact on completed work, actions to be taken to correct the existing conditions and measures to be taken to prevent recurrence.</li> <li>o Forward a copy of CAR to all affected managers at all levels.</li> <li>o Respond to the CAR within five days from date of receipt.</li> </ul>			
				(9) Auditor Signature	(10) Date

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16-3	NNWSI/88-9, Rev. 2 Sec. 16, Para. 1.2  QAPP 568-DOC-115 Rev. 7, Sec. 16 Para. 1.2  QP 16.0, Rev. 6 Para. 6.4	The QA organizatin shall document concurrence of the adequacy of proposed corrective actions to assure that QA requirements will be satisfied.  Verify that the PQA evaluates the proposed corrective action of the CAR to ensure that it properly defines the root cause of the condition and that it is adequate to resolve the condition to prevent recurrence.			
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED				
16-4	NNWSI/88-9, Rev. 2 Sec. XVI, Para. 1.2  QAPP 568-DOC-115 Rev. 7  QP 16.0, Rev. 6 Para. 6.5	Follow-up action shall be taken by the QA organization to verify proper implementation of this corrective action and to close out the corrective action.  1. Verify that when proposed corrective action is acceptable, PQA performs verification of corrective action implementation and obtain PQAM approval to close CAR.  2. Verify that closed CARs are distributed SAIC/T&MSS Project QA and the appropriate OCRWM Associate Director.							
				(9) Auditor Signature				(10) Date	

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16-5	NNWSI/88-9, Rev. 2 Sec. XVI, Para. 1.1  QAPP 568-DOC-115 Rev. 7, Sec. XVI Para. 1.3  QP 16.2, Rev. 2 Para. 6.1.1  QP 16.2, Rev. 2 Para. 6.2.2	Corrective action reports shall be periodically analyzed by the QA organization to show quality trends and the results reported to upper management for review and assessment.  1. Verify that deficiency reporting documents are reviewed by the PQAM to detect and analyze possible adverse trends.  2. Verify that PQA issues a monthly trend analysis report showing the status of open items and results of the trend analysis activity to the TPO and other cognizant REECO/YMP management.							
				(9) Auditor Signature				(10) Date	



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17-1	NNWSI/88-9, Rev. 2 Sec. 17, Para. 1.2.1  QAPP 568-DOC-115, Rev. 7, Sec. XVII Para. 1.2.1	The record system shall be defined, implemented, and enforced in accordance with written procedures, instructions, or other documentation prepared in accordance with Section V of this document.  Verify that a records management system has been implemented in accordance with written procedures.			

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(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES

(6) RESULTS S, X, N/A

(7) SUMMARY OF INVESTIGATION

(8) PERSON CONTACTED

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NNWSI/88-9, Rev. 2  
Sec. 17, Para. 2.1  
  
AP 1.7Q, Rev. 2  
Para 5.1  
  
QAPP 568-DOC-115,  
Rev. 7, Sec. XVII  
Para. 1.2.2  
  
QP 17.0, Rev. 4,  
Para. 6.1.1

The applicable design specifications, procurement documents, implementing procedures, operational procedures, or other documents shall specify the records to be generated, supplied or maintained by or for the WMPO (YMP).

Verify that implementing procedures identify the QA records to be generated during activities.

(9) Auditor Signature

(10) Date

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17-3	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 2.1.1	Documents that are designated to become records shall be legible, identifiable, accurate, complete, reproducible, microfilmable, and appropriate to the work accomplished.			
	QAPP 568-DOC-115 Rev. 7, Sec. XVII, Para. 2.1.1	Verify that records are legible, reproducible, microfilmable, and appropriate to the work accomplished.			
	QP 17.0, Rev. 4 Para. 6.1.3				
	IM-LRC-IP-01 Rev. 0, Para. 5.7.9, 6.1.1.12.3				
				(9) Auditor Signature	(10) Date

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17-4	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 3.1 AP 1.7Q, Rev. 2 Para. 5.5.1.1	Documents shall be considered valid records only if stamped, initialed, or signed and dated by authorized personnel, or otherwise authenticated in accordance with approved procedures. These records may be originals or reproduced copies.			
	QAPP 568-DOC-115 Sec. XVII, Para. 3.1	Verify that documents considered valid records are stamped, initialed, or signed and dated by authorized personnel.			
	QP 17.0, Rev. 7 Para. 6.1.4				
	IM-LRC-IP-01, Rev. 0 Para. 6.1.1.1				
			(9) Auditor Signature	(10) Date	

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17-5	NNWSI/88-9, Rev. 2 Sec. XVII Para. 3.2  AP 1.7Q, Rev. 2 Para 5.1.3 QAPP 568-DOC-115 Sec. XVII, Para. 3.2  QP 17.0, Rev. 4 Para. 5.7.2 & 6.1.5	Each organization shall maintain a list which contains the signature and initials of the personnel authorized to authenticate records .  1. Verify that a list is maintained which contains the signature and initials of personnel authorized to authenticate records.  2. Verify that the list is updated as appropriate and updates are provided to the LRC at least annually.			
			(9) Auditor Signature	(10) Date	

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17-6	NNWSI/38-9, Rev. 2             QAPP 563-DOC-115, Rev. 7, Sec. XVII, Para. 4.1, QP 17.0, Rev. 4, Para. 6.2 IM-LRC-IP-01, Rev. 0 Para. 6.3	Each organization that is responsible for the receipt of records shall designate a person or organization to be responsible for receiving the records. The designee shall be responsible for organizing and implementing a system of receipt control of records for permanent and temporary storage in accordance with approved procedures. Each receipt control system shall be structured to permit a current and accurate assessment of status of records during the status of records during the receiving process. As a minimum, the receipt control system shall include the following:  a. A method for designating the required records. b. A method for identifying the records received. c. Procedures for receipt and inspection of incoming records. d. A method for submittal of completed records to the storage facility without unnecessary delay.  1. Verify that REECO has Records Management staff responsible for collecting and receiving YMP records, and organizing and implementing a documented system of receipt control for permanent and temporary storage.			
				(9) Auditor Signature	(10) Date

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17-7	NNWSI 88-9, Rev. 2 Sec. XVII, Para. 5.1 AP 1.7Q, Rev. 2 Para. 5.5.1.2 & 5 5.2.2  QAPP 568-DOC-115, Rev. 7, Sec. XVII Para. 5.1  QP 17.0, Rev. 4 Para. 6.2.4	Records or indexing systems, or both, shall provide sufficient information to permit identification between the record and the items or activities to which it applies. Records shall be clearly identified by a unique number or other designation, which is directly traceable to controlling programmatic information (e.g., project, contract number, task number, preparing organization, author, date, title, subject, etc.).  Verify that specified indexing parameters are included on each record.							
								(9) Auditor Signature	(10) Date

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17-8	NNWSI/88-9, Rev. 2 Sec. XVII Para. 5.2	The records shall be indexed and the indexing system or systems shall include, as a minimum, the location of the records system or systems.			
	QAPP 568-DOC-115 Rev. 7, Sec. XVII Para. 5.2	Verify that the record indexing systems provide sufficient information for location of records within the system, and subsequent retrieval from the storage system.			
	QP 17.0, Rev. 4 Para. 6.2.4				
	IM-LRC-IP-01, Rev. 0 Para. 6.8.1				
			(9) Auditor Signature	(10) Date	



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17-9	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 6.2  QAPP 568-DOC-115, Rev.7, Sec. XVII Para. 6.2  QP 17.0, Rev. 4 Para 6.3	<p>Before the records are stored, a written storage procedure shall be prepared and responsibility assigned for enforcing the requirements of that procedure.</p> <p>a. A description of the storage facility.</p> <p>b. The filing system to be used.</p> <p>c. The method for verifying that the records received are legible and are in agreement with the transmittal document.</p> <p>d. The method of verifying that the records are those designated (see Paragraph 4.1 of this section).</p> <p>e. The rules governing access to and control of files.</p> <p>f. The method for maintaining control of and accountability for records removed from the storage facility.</p> <p>g. A method for filing supplemental information (see Paragrah 9.0 of this section).</p> <p>Verify that a procedure records storage was prepared and that it included the above requirements.</p>			
				(9) Auditor Signature	(10) Date

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17-10	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 7.0  QAPP 568-DOC-115 Sec. XVII, Para. 7.0  QP 17.0, Rev. 4 Para. 6.2.2 IM-LRC-IP-01, Rev. 0 Para. 6.4.1	Records shall be stored in a manner approved by the organization or organizations responsible for storage. In order to preclude deterioration of records, the following requirements shall apply:  a. Provisions shall be made in the storage arrangement to prevent damage from moisture, temperature, and pressure.  b. Records shall be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers.  c. Provisions shall be made for special processed records (e.g., radiographs, photographs, negatives, microfilm, magnetic material, etc.) to prevent damage from excessive light, stacking, electro-magnetic fields, temperature, and humidity.  1. Verify that records are stored in an approved manner by the responsible organization.  2. Verify that the requirements above are followed to prevent deterioration.			
			(9) Auditor Signature	(10) Date	

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17-1;	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 8.1 AP 1.7Q, Rev. 2 Para. 5.10  QAPP 568-DOC-115, Rev. 7, Sec XVII Para. 8.1  IM-LRC-IP-01, Rev. 0 Para. 6.5.1 & 6.5.2	Measures shall be established to preclude the entry of unauthorized personnel in the storage area. These measures shall guard against larceny and vandalism.  Verify that an access list is maintained for entry to the REECO Local Records Records Center.			
			(9) Auditor Signature	(10) Date	

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17-12	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 8.2  QAPP 568-DOC-115 Rev. 7. Sec. XVII, Para. 8.2  QP 17.0, Rev. 4 Para. 6.6	Measures shall be taken to provide for replacement, restoration, or substitution of lost or damaged records. These measures shall be accomplished within 90 days following determination that either a record has been lost, or a record has been damaged to a degree that it is no longer complete or legible.  Verify that replacement, restoration, or substitution of lost or damaged records has been accomplished within 90 days following determination that a record is lost or damaged.			
				(9) Auditor Signature	(10) Date

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17-13	NNWSI/88-9, Rev. 2 Sec. XVII, Para. 9.2  QAPP 568-DOC-115 Rev. 7, Sec. XVII Para. 9.0  IM-LRC-IP-01, Rev. 0 Para. 6.1.3	The correction shall include the date and the identification of the person authorized to issue such correction and shall not obliterate the corrected data.  1. Verify that records do not have any information scratched out or obliterated.  2. Verify that corrections are made by a single line through the change portion with the initials and date of the person making the correction.			
				(9) Auditor Signature	(10) Date

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17-14	NNWSI/88-9, Rev. 2 Sec. XVIII Para. 10.1  QAPP-568-DOC-115 Sec. XVII, Para. 10.0  IM-LRC-IP-01, Rev. 0 Para. 6.4.2.1 6.4.2.2, 6.4.2.3 & 6.4.2.4	Records shall be stored in facilities constructed and maintained in a manner that minimized the risk of damaged or destruction from natural disasters, such as winds, floods, or fires; environmental conditions such as high and low temperatures and humidity; and infestation of insects, mold or rodent. Verify that records are stored in facilities that minimize deterioration, loss, or damage.			

(9) Auditor Signature

(10) Date

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17-15	NNWSI/88-9, Rev. 3 Sec. XVII Para. 11.1  QAPP, 568-DOC-115 Rev. 7, Sec. XVII Para. 11.1  IM LRC-1P-01, Rev. 0 Para. 6.1.1.5, 6.1.1.6, 6.1.2.3 6.5.4 & 6.5.5	<p>Storage systems shall provide for retrieval of information in accordance with planned retrieval times based upon the record type. Final reports shall contain a listing by unique number or other designation, that enables prompt retrieval of all documents used, peer review of other review documents, computer codes, data sheets, procedures and test plans. All documents referenced by final reports, except readily available references such as encyclopedias, dictionaries, engineer's handbook, etc., shall be retrievable from the Records Management System (RMS).</p> <ol style="list-style-type: none"> <li>Verify that the storage system provides for retrieval of information in accordance with planned retrieval times.</li> <li>Verify that final reports contain a listing enabling prompt retrieval and include all referenced documents.</li> <li>Verify that all documents referenced by final reports are retrievable from the Records Managment System (RMS).</li> </ol>				
						(9) Auditor Signature

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17-16	AP 1.7Q, Rev. 2 Para. 5.5.4.1  IM-LRC-IP-01 Rev. 0, Para. 6.1.4	<p>Completed, individual records shall be forwarded to the LRC no later than 10 working days after the date of completion or receipt. A transmittal form may be attached to individual records, but unless the individual record has to be identified as the best copy available (Section 5.5.1.12), a transmittal form shall not be required. All individual QA records must be properly authenticated before they shall be processed by the LRC.</p> <p>Verify that completed records are forwarded to LRC no later than 10 working days after the date of completion or receipt, properly authenticated and listed on YMP Records Administrator Submittal Form, RE-7200/7201, Exhibit V/Exhibit VI.</p>			



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17-17	AP 1.7Q, Rev. 2 Para. 5.5.4.2              IM-LRC-IP-01, Rev. 0 Para. 6.1.4.2	<p>A transmittal form and a Table of Contents shall be attached to the front of each Record Package. A record package description shall be included that indicates a title or other descriptive data, the number of pages, record date, any identifying numbers, and any special instructions/remarks. Upon completion of the transmittal form, the completed record package, along with the transmittal form and the Table of Contents, shall be transmitted to the LRC within 10 working days after the closeout of the record package. The Table of Contents to all QA record packages must contain a statement of authentication before they shall be processed by the LRC.</p> <p>Verify that a transmittal form and Table of Contents are attached to the Record Package and transmitted to the LRC within 10 working days after the closeout of the record package. Table of Contents must contain a statement of authentication.</p>			
				(9) Auditor Signature	(10) Date

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17-18	AP 1.7Q, Rev. B Para. 5.5.4.3  IM-LRC-IP-01, Rev. 0 Para. 6.1.4.3	Interim record packages (data) shall be compiled and submitted to an LRC at 45 day intervals to ensure that all records are protected, accessible, and retrievable for Project use. Records (data) submitted as interim record packages shall be resubmitted to the LRC with the completed activity package. Interim packages and completed record packages shall reference, by accession number, any previous record package submittals related to that activity (see Section 5.5.2.1 of this procedure). Any exceptions to the 45-day records (data) submittal requirement must be approved in writing by the Manager, Project Office, before the end of the first 45-day period of data acquisition.  Verify that interim record packages are compiled and submitted to LRC at 45-day intervals.			
				(9) Auditor Signature	

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17-19	AP 1.7Q, Rev. 2 Para. 5.1.4  IM-LRC-IP-01, Rev. 0 Para. 6.9	Training of records management personnel shall include the requirements for managing QA records as delineated in this procedure.  The Project participants responsible for developing and conducting the training shall retain accurate and complete documentation of the training. These records shall contain the following elements: (1) qualification statements and position descriptions, (2) date of training sessions, (3) training attendance record, (4) names of instructors, (5) instructors lesson plan, (6) list of course objectives, (7) record of the actual training received, (8) and hardcopy of any material distributed during the course. These records shall be submitted to the LRC as individual or course record packages.			
				(9) Auditor Signature	(10) Date

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18-1	NNWSI/QAP 88-9 Rev. 2, Sec XVIII Para. 1.1.2 & 1.2	<p>Each Participating Organization and NTS Support-Contractor shall conduct internal (covering their entire QAPP, on an annual basis) and external (direct subcontractor) audits of activities under its direct control, but they will not conduct audits of each other. These audits will be scheduled, planned, conducted, and reported as described in their respective QAPPs and this Quality Assurance Plan (QAP). External and internal audit schedules, dates, and changes thereto, shall be sent to the SAIC/T&amp;MSS Project QA Department (QA Verification Division Manager). Audit schedules shall identify the date of the audit, the activities to be audited, and the requirements to which the activities are to be audited.</p> <p>Internal and external QA audits, shall be scheduled in manner that shall provide coverage and coordination with ongoing QA program activities. Audits shall be scheduled at a frequency commensurate with the status and importance of the activity and shall be initiated early enough to assure effective QA. Each NNWSI Project Participant shall perform or arrange for annual evaluations of suppliers. This evaluation shall be documented and shall take into account, where applicable, (1) review of supplier furnished documents and records such as certificates of conformance, nonconformance notices, and corrective actions; (2) results of previous source verifications, audits, and receiving inspections; (3) operating experience of identical or similar products furnished by the same supplier; and (4) results of audits from other sources, e.g., customer, ASME, or NRC audits.</p>			
				(9) Auditor Signature	(10) Date

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18-1 (Cont'd)	REECO/QP 18.0 Rev. 6 Para. 6.1.1, 6.1.2, & 6.1.4	<ol style="list-style-type: none"> <li>1. Verify that applicable elements of the QAPP 568-DOC-115 are audited at least annually or at least once during the life of the activity, whichever is shorter for internal audits.</li> <li>2. Verify that elements of external organizations QA program are audited at least annually or once during the life of the activity whichever is shorter. Except if activity is shorter than four months and justification is documented.</li> <li>3. Verify that performance evaluation for suppliers shall be performed annually and shall take into account, where applicable, the followings:                             <ul style="list-style-type: none"> <li>o Review of suppliers furnished.</li> <li>o Documents and records such as certificates of conformance, nonconformance notices, and corrective actions.</li> <li>o Results of previous source verifications, audits, and receiving inspections.</li> <li>o Operating experience of identical or similar products furnished by the same supplier.</li> <li>o Results of audits from other sources, e.g., customer, ASME, or NRC audits.</li> </ul> </li> </ol> <p>Evaluations shall be documented on the Evaluation Report, Exhibit VI.</p> <ol style="list-style-type: none"> <li>4. Verify that Audit Schedules and their revisions are submitted to SAIC/T&amp;MSS Project QA Department (QA Verification Division Manager).</li> </ol>			
			(9) Auditor Signature	(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-2	NNWSI/QAP 88-9 Rev. 2, Sec. XVIII Para. 1.3.1  REECO/QP 18.0 Rev. 6 Para. 6.4.3	The auditing organization shall develop and document an audit plan for each audit. This plan shall identify the audit scope, requirements, audit personnel, activities to be audited, organizations to be notified, applicable documents, schedule, and written procedures or checklists.  1. Verify that the Lead Auditor completes the Audit/Survey Plan which shall contain the following: <ul style="list-style-type: none"> <li>o Audit Number,</li> <li>o Audited organization,</li> <li>o Persons contacted,</li> <li>o Lead Auditor's name,</li> <li>o Audit team members,</li> <li>o Audited Organization's Manager and title,</li> <li>o Method of notification confirmation,</li> <li>o Date of audit Plan,</li> <li>o Scheduled Audit date (s),</li> <li>o Audit/Survey Checklist number,</li> <li>o Scope of Audit/Survey,</li> </ul>			
				(9) Auditor Signature	(10) Date



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-3	NNWSI/QAP 88-9 Rev. 2 Sec. XVIII Para. 1.3.2          Rev. 6 Para. 6.3.1	<p>The auditing organization shall select and assign auditors who are independent of any direct responsibility for the performance of the activities that they are to audit. If the audit is to be an internal one, then the personnel who have direct responsibility for performing the activities to be audited shall not be involved in the selection of the audit team. Audit personnel shall have sufficient authority and organizational freedom to make the audit process meaningful and effective. Appendix F defines the requirements for the qualification of QA audit personnel.</p> <p align="center">REECO/OP 18.0                      1. Verify the following:</p> <ul style="list-style-type: none"> <li>o The PQAM shall appoint a Lead Auditor and request, as appropriate, organizational elements (AE, Procurement, etc.) to provide specialists for the audit team.</li> <li>o The Lead Auditor shall select and assign qualified auditors.</li> </ul> <p>Qualification of audit personnel shall be in accordance with Appendix F of QAPP 568-DOC-115.</p> <ul style="list-style-type: none"> <li>o Multi-discipline audit teams shall be employed when activities to be audited involve more than a single technical area.</li> </ul>			
				(9) Auditor Signature	(10) Date





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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-4	NNWSI/QAP 88-9 Rev. 2., Sec. XVIII Para. 1.4	Audits shall be performed in accordance with written procedures using checklists as early in the life of the activity as practical and shall be continued at intervals consistent with the schedule for accomplishing the activity. Elements that have been selected for audit shall be evaluated against specified requirements including a review of corrective actions taken on deficiencies in the area being audited that were identified during previous audits. Objective evidence shall be examined to the depth necessary to determine if these elements are adequate for effective control and to determine whether or not they are being implemented effectively. The audit results shall be documented by audit personnel and shall be reviewed by management having responsibility for the area audited. Conditions that require prompt corrective action shall be reported immediately to the management of the audit organization. Audit findings will be reviewed with the audited organizations at a closing meeting.			
			(9) Auditor Signature	(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED				
18-4 (Cont'd)	REECO/QP 18.0 Rev. 6 Para. 6.5	<ol style="list-style-type: none"> <li>1. Verify that the Lead Auditor conducts a pre-audit meeting with management and/or supervisory personnel, the audit team and, as applicable, supplier personnel of the audited organization.</li> <li>2. Verify that audits are performed in accordance with established checklists and/or procedures.</li> <li>3. Verify that the auditor (s) document the objective evidence reviewed on the checklist.</li> <li>4. Verify that the audit team shall, at the conclusion of the audit, conduct a post-audit meeting with cognizant management and/or supervisory personnel of the audited organization to present the audit results, findings, and observations and to discuss comments and clarify misunderstandings.</li> </ol>							
				(9) Auditor Signature				(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-5	NNWSI/QAP 88-9 Rev. 2 Sec. XVIII Para. 1.5	<p>The audit report shall be signed by the audit team leader and should be issued within 30 calendar days. This report shall include the following information, as appropriate:</p> <ul style="list-style-type: none"> <li>o Description of the audit scope.</li> <li>o Identification of the auditors.</li> <li>o Identification of persons contacted during audit activities.</li> <li>o Summary of audit results, including a statement of the effectiveness of the QA program elements that were audited.</li> <li>o Description of each reported adverse audit finding in sufficient detail to enable corrective action to be taken by the audited organization.</li> </ul>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-5 (Cont'g)	REECO/QP 18.0 Rev. 6, Para. 6.6	<p>1. Verify the following:</p> <p>The audit team, upon completion of an internal audit, shall complete a QA Audit/Survey Report, Exhibit III, Findings shall be document on Audit Finding Reports, (AFR) Exhibit IV.</p> <p>The audit report shall consist of the QA Audit/Survey Plan, QA Audit/Survey Report and Audit Finding Reports, as applicable.</p> <p>The PQAM shall issue the Audit Report under an audit report memo within thirty (30) calendar days of completion of the audit.</p> <p>The Audit Report will be issued to management of both the audited and auditing organizations.</p> <p>For Audit Reports which contain AFR's 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.</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-5	(Continued)	<p>The response shall identify on the AFR the following.</p> <ul style="list-style-type: none"> <li>o The root cause that led to the condition reported in the finding;</li> <li>o The steps which will be taken to correct the condition reported in the finding, including action to preclude recurrence.</li> <li>o The date when corrective action was or will be completed.</li> <li>o For Audit Reports containing observations, the report cover memo shall specify that the audited organizations must address the observations in the same manner as a finding.</li> </ul> <p>2. Verify the following for external audits:</p> <p>The PQAM shall review the audit report and determine whether or not the supplier should remain on the Qualified Suppliers List (QSL).</p> <p>The PQAM shall notify Procurement of the status.</p> <p>Supplier post-audit status will be one of the following:</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-5	(Continued)	<ul style="list-style-type: none"> <li>o Satisfactory - Supplier will be retained on QSL;</li> <li>o Conditional - The supplier will be conditionally retained on the QSL. This status will be granted only when the audit finding (s) will not adversely affect product quality; /</li> <li>o Not Approved - A stop work order will be issued in accordance with QP 1.2. The stop work order shall remain in effect until the supplier completes the corrective action and follow-up is accomplished. As an option, the supplier may be removed from the QSL.</li> </ul>			
(9) Auditor Signature _____ (10) Date _____					

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-6	NNWSI/QAP 88-9 Rev. 2 Sec. XVIII Para. 1.7  REECo/QP 18.0 Rev. 6 Para. 6.8	<p>Follow-up action shall be taken to determine whether or corrective action has been accomplished as scheduled and shall be verified by the auditing organization. An analysis of audit results shall be performed by the QA organization to identify quality trends. The results of the analysis shall be reported to responsible management for review, assessment, and appropriate action.</p> <p>1. Verify that the Lead Auditor evaluates responses to audit findings to determine if satisfactory and following on closeout.</p> <ul style="list-style-type: none"><li>o Unacceptable responses will be noted on the AFR together with the cause for rejection.</li><li>o The Lead Auditor, upon receipt of satisfactory proposed corrective action, shall so note the acceptance on the AFR and coordinate the time for verification of corrective action with the audited organization.</li><li>o The Lead Auditor shall track open audits by checking the Audit Log a minimum of every 30 days.</li></ul>			
			(9) Auditor Signature	(10) Date	



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-6	(Continued)	<ul style="list-style-type: none"> <li>o The Lead Auditor shall assure that verification of corrective action is accomplished and document the results on the AFR.</li>   <li>o Upon completion (close-out) of all AFR's the PQAM (Procurement for external audits) shall notify the audited organization that actions complete and have been approved.</li>   <li>o The Lead Auditor shall note the close-out of audits in the Audit Log.</li>   <li>o An analysis of audit results shall be performed by the PQA organization to identify quality trends in accordance with QP 16.2</li> </ul>			
<p>(9) Auditor Signature <span style="float: right;">(10) Date</span></p>					

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-7	NNWSI/QAP 88-9 Rev. 2 Sec. XVIII Para. 1.8  REEC0/QP 18.0 Rev. 6, Para. 7.0	As a minimum, audit records shall include the following: <ul style="list-style-type: none"><li>o Identification of the organization (s), activities, or items audited and the individual (s) contacted during the audit (s).</li><li>o Description of any deficiencies, nonconformances, and potential quality problems identified.</li><li>o Audit plans, audit reports, written replies, and the record of completion of corective action, and close-out of the audit.</li></ul> Verify that the Audit/Survey Plan, Audit/Survey Check-list, 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) Auditor Signature

(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED			
18-8	NNWSI/QAP 88-9 Rev. 2 Sec. XVIII Para. 1.8.2  Para. 6.3.2.1	Records of personnel qualifications for Auditors and Lead Auditors performing audits shall be established and maintained by the employer. Records for each Lead Auditor shall be maintained and updated annually.  1. Verify the following records of personnel qualifications for auditors and Lead Auditors shall be completed and maintained in the PQA files. Records for each Lead Auditor shall be maintained and updated annually.						
				(9) Auditor Signature				(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-1	NNWSI QAP-88-9, Rev. 2, Appendix F, Para. 1.1	<p>The responsible auditing organization shall establish the audit personnel qualifications and the requirements for the use of technical specialists to accomplish the auditing of Quality Assurance programs. Personnel selected for Quality Assurance auditing assignments shall have experience or training commensurate with the scope, complexity, or special nature of the activities to be audited. Auditors either shall have or shall be given appropriate training or orientation to develop their competence to perform required audits. The competence of personnel to perform the various auditing functions shall be developed by one or more of the methods listed below.</p> <p>Orientation to provide a working knowledge and understanding of this document and the auditing organization's procedures for implementing audits and reporting results.</p> <p>Training programs to provide general and specialized training in audit performance. General training shall include fundamentals, objectives, characteristics, organization, performance, and results of quality auditing. Specialized training shall include methods of examining, questioning, evaluating, and documenting specific audit items and methods of closing audit findings.</p> <p>On-the-job training, guidance, and counseling under the direct supervision of a Lead Auditor. Such training shall include planning, performing, reporting, and follow-up action involved in conducting audits.</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-2	NNWSI QAP-88-9, Rev. 2, Appendix F, Para. 1.2	<p>An individual shall meet the requirements listed below before being designated a Lead Auditor:</p> <ol style="list-style-type: none"> <li>1. The prospective Lead Auditor shall have the capability to communicate effectively, both orally and in writing. These skills shall be attested to in writing by the Lead Auditor's employer.</li> <li>2. Prospective Lead Auditors shall have training to the extent necessary to ensure their competence in auditing skills. Training in the following areas shall be given based upon management evaluation of the particular needs of each prospective Lead Auditor:                             <ul style="list-style-type: none"> <li>o Knowledge and understanding of this document, 10 CFR Part 60, and other nuclear and/or DOE related codes, standards, regulations, and regulatory guides, as applicable to the NNWSI Project.</li> <li>o General structure of Quality Assurance programs and applicable elements as defined in this document.</li> </ul> </li> </ol>			
				(9) Auditor Signature	
				(10) Date	



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-2	(Continued)	<p>3. The prospective Lead Auditor shall have participated in a minimum of five Quality Assurance audits within a period of time not to exceed three years prior to the date of qualification. One of the audits shall be a nuclear Quality Assurance audit that shall be made within the year prior to qualification.</p> <p>4. The prospective Lead Auditor shall pass an examination that shall evaluate his comprehension of and ability to apply the body of knowledge identified in Paragraph 1.2.2 above. The test may be oral, written, practical, or any combination of the three types. If any portion of the examination is oral, written documentation of the oral examination questions/ content shall be maintained. The development and administration of the examination shall be in accordance with Paragraph 1.4 of this section.</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-3	NNWSI CAP-88-9,	<p>Lead Auditors shall maintain their proficiency through regular and active participation in the audit process; review and study of codes, standards, procedures, instructions, and other documents related to quality assurance program and program auditing; and participation in training programs. Based on annual assessment, management may extend the qualification, require retraining, or require requalification. These evaluations shall be documented.</p> <p>Lead Auditors who fail to maintain their proficiency for a period of two years or more shall require requalification. Requalification shall include retraining in accordance with the requirements of Paragraph 1.2.2 of this section, reexamination in accordance with Paragraph 1.4.2, and participation as an Auditor in at least one nuclear Quality Assurance audit.</p>			



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-4	NNWSI QAP-88-9, Rev. 2, Appendix F, Para. 1.4	<p>Training of auditors shall be the responsibility of the employer. The responsible auditing organization shall select and assign personnel who are independent of any direct responsibility for the performance of the activities that they will audit. The Lead Auditor shall, prior to commencing the audit, concur that assigned personnel collectively have experience or training commensurate with the scope, complexity, or special nature of the activities to be audited.</p> <p>The development and administration of the examination for a Lead Auditor required by Paragraph 1.2.4 is the responsibility of the employer. The employer may delegate this activity to an independent certifying agency, but shall retain responsibility for conformance to this document of the examination and its administration. Integrity of the examination shall be maintained by the employer or certifying agency through appropriate confidentiality of files and, where applicable, proctoring of examinations. Copies of the objective evidence regarding the type or types and content of the examination or examinations shall be retained by the employer.</p>			
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
F-5	NNWSI QAP-88-9, Rev. 2, Appendix F, Para. 1.5	Each Lead Auditor shall be certified by his employer as being qualified to lead audits. As a minimum, this certification shall document the following: <ul style="list-style-type: none"> <li>o Employer's name</li> <li>o Lead Auditor's name</li> <li>o Date of certification or recertification</li> <li>o Basis of qualification (i.e., education, experience, communication skills, training, examination, etc.)</li> <li>o Signature of employer's designated representative who is responsible for such certification</li> </ul>			
(9) Auditor Signature				(10) Date	



## Department of Energy

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

WBS #1.2.9.3  
"QA"

JAN 06 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

YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) AUDIT  
88-07 OF REYNOLDS ELECTRICAL & ENGINEERING CO., INC. (REECO) SUPPORT OF THE  
YUCCA MOUNTAIN PROJECT (NN1-1989-0832)

Reference: Letter, Blaylock to Pritchett, dtd. 9/12/88

Enclosed is the report of QA Audit 88-07, which was conducted by the Project  
Office at Mercury and Las Vegas, Nevada, on August 23, 1988, through  
August 26, 1988.

The audit reviewed sufficient objective evidence related to the REECO Quality  
Assurance Program Plan (QAPP) to confirm the QA Program is in compliance with  
the Yucca Mountain Project QA Plan, NVO-196-17, Revision 5, except in the  
areas cited. Deficiencies are described in Section 6.0 of this report.

During the course of the audit, the audit team generated eight Standard  
Deficiency Reports (SDRs), No. 187 through 194, five observations, and four  
recommendations.

The SDRs were previously transmitted under a separate cover letter (see  
referenced letter). Written responses to the five observations contained  
within this report are required. These responses are due within 20 working  
days of the transmittal date of this report. Please address your responses  
to me and concurrently send a copy of each observation response to  
Nita J. Brogan, Science Applications International Corporation (SAIC),  
Las Vegas, Nevada.

The recommendations contained in this audit report are submitted for your  
staff's consideration during the implementation of your QAPP and technical  
activities in support of the Yucca Mountain Project.

If you have any questions, please contact Wendell B. Mansel of my staff at  
794-7945 or Stephen P. Hans of SAIC at 794-7165.

*James Blaylock*  
James Blaylock  
Project Quality Manager  
Yucca Mountain Project Office

YMP:JB-1377

Enclosure:  
Audit Report 88-07

PROJECT OFFICE QUALITY ASSURANCE AUDIT REPORT  
YUCCA MOUNTAIN PROJECT AUDIT OF  
REYNOLDS ELECTRICAL & ENGINEERING CO., INC.

AUDIT NUMBER 88-07

CONDUCTED: AUGUST 22 - 29, 1988

Prepared By: *Stephen P. Hans* Date: 12-29-88  
Stephen P. Hans  
Lead Auditor

Approved By: *H. H. Caldwell* Date: 29 Dec 88  
H. H. Caldwell  
Division Manager, Audits

Approved By: *James Blaylock* Date: 5 Jan 89  
James Blaylock  
Project Quality Manager

EXECUTIVE SUMMARY

PROJECT OFFICE AUDIT REPORT NO. 88-07

REYNOLDS ELLECTRICAL AND ENGINEERING CO., INC.

NEVADA TEST SITE

AUGUST 22 - 29, 1988

It is the opinion of the Project Office audit team that REECo is not ready to initiate QA level I work activities for the Yucca Mountain Project. While specific organizations within REECo have implemented QA measures compliant with YMP requirements, other orgnizations equally critical to the site characterization effort are not prepared to initiate YMP activities. The overall conclusion of the audit team is that REECo currently cannot execute their assigned YMP activities in a manner that would successfully support a licensing review. The implementation of the following QA criteria were considered to be ineffective:

1. Organization (Matrix Management)
2. QA Program (Indoctrination and Training)
5. Control of Instructions, Procedures and Drawings
6. Document Control
18. QA Audits

Eight deficiencies were identified during the course of the audit. The audit team also generated five observations and four recommendations.

1.0 INTRODUCTION

This report contains the results of a Quality Assurance Audit of Reynolds Electrical & Engineering Co., Inc. (REECO), Yucca Mountain Project (YMP) Organization at the Nevada Test Site (NTS) and Las Vegas, NV. The audit was conducted at the REECO facilities in Mercury, NV. and at Las Vegas Nv. on Aug 22 thru 29, 1988. It was performed in accordance with the requirements of the Yucca Mountain Project Office (Project Office) Quality Assurance Program Plan (QAPP), WMPO/88-1, Rev. 0, and Quality Management Procedure QMP - 18-01, "Audit System for the Waste Management Project Office", Rev. 2.

2.0 AUDIT SCOPE

The scope of this audit includes the REECO, YMP work activities, that are classified as QA Level I or II and which have been accomplished since the last Project Office audit conducted August 19, 1987. The work activity level during the time period of interest has been low. Therefore, the Project Office QA decided to include an "evaluation of capability" as part of the audit process. The criteria audited or evaluated were divided into the following criteria. "Audit" and "Evaluation" is indicated below:

1. Organization (Matrix Management)	Audit/Evaluate
2. QA Program (Indoctrination and Training)	Audit/Evaluate
4. Procurement	Audit/Evaluate
5. Control of Instructions, Procedures and Drawings	Audit
6. Document Control	Audit
7. Control of Purchased Items	Evaluate
12. Control of Measuring and Testing Equipment	Evaluate
13. Storage Control	Audit/Evaluate
17. Control of QA Records	Audit
18. Audits	Audit/Evaluate

The REECO Matrix Management organization for Project Office work is subdivided into 4 divisions. These divisions provide support for accomplishing YMP Project tasks. The following organizational areas were included in the audit:

1. Operations and Maintenance Division
  - a. Yucca Mountain Project Organization
  - b. Operations Equipment
2. Quality Assurance Division
  - a. Measuring & Testing Equipment Lab
  - b. Weld Lab
3. Administrative Division
  - a. Procurement
  - b. Administration Services (QA Records)
4. Technical and Support Services Division
  - a. Power Electronics and Communications
  - b. Supply and Property Management

### 3.0 AUDIT TEAM PERSONNEL

This audit team consisted of the following members:

<u>Lead Auditor:</u>	Stephen P. Hans	SAIC, Las Vegas, NV
<u>Auditors:</u>	James E. Clark	SAIC, Las Vegas, NV
	Stephen R. Dana	SAIC, Las Vegas, NV
	Catherine M. Thompson	SAIC, Las Vegas, NV
<u>Observers:</u>	James Donnelly	NRC, Washington, DC
	John Gilray	NRC, Washington, DC
	Paul Prestholt	NRC, Washington, DC
	Dale Hedges	DOE/HQ, Washington, DC
	Craig Walenga	DOE/HQ, Washington, DC
	Susan Zimmerman	State of Nevada
	Wendell Mansel	YMP, Las Vegas, NV
	Royce Monks	YMP, Las Vegas, NV
	Catherine Hampton	YMP, Las Vegas, NV

### 4.0 SUMMARY OF AUDIT RESULTS

#### 4.1 Statement of Program Effectiveness

While specific organizations within REECO have implemented QA measures compliant with YMP requirements (i.e., the physical standards lab; the welding lab; procurement and records management), other organizations equally critical to the site characterization effort are not prepared to initiate YMP activities. The overall conclusion of the audit team is that REECO currently cannot execute their assigned YMP activities in a manner that would successfully withstand a licensing review.

#### 4.2 Analysis of the REECO QA Program

The most apparent impediment to implementation and effectiveness of the QA Program is the REECO matrix management system. Instead of employing a project management system where there is a dedicated organization staffed with personnel from REECO parent organizations for YMP activities, REECO uses a system wherein the YMP work activities are assigned to parent organizations. These organizations perform work to varying quality provisions, most of which are less stringent in planning, performance control and documentation requirements than those established for the NRC licensing environment; as evident by the attached SDRs. Among the consequences of this approach are the lack of control for activity performance (i.e., no direct line management control within the Project Office), and the necessity to replicate measures for the required training, document control, procedure control, and procurement control systems within each department. Additionally, the interface problems created by this approach were evident by the inconsistent application of the REECO QAPP among the departments.

4.0 SUMMARY OF AUDIT RESULTS

4.2 Analysis of the REECo QA Program (continued)

Additionally, the influence/control of DOE/NTSO upon YMP activities was established at the REECo parent organization. Individual managers interviewed, expressed the idea that NTSO desired cost control measures to be implemented within the REECo parent organization. Also, direct NTSO control of YMP work was noted in the procurement process (i.e., REECo must receive authorization from NTSO to procure YMP items and services).

4.3 Summary of Results

Eight Standard Deficiency Reports (SDRs) and five observations were identified during the course of the audit. These are delineated in Section 6.0.

Within the scope of this audit, five audited areas were found to be generally in compliance. They were:

Criteria 4, 7, 12, 13, and 17.

The following program elements were identified as deficient:

Element No. 1 - Organization

The TPO is not dedicated solely to the YMP. He is also the Operations and Maintenance Division Assistant Manager. The QA Manager for the YMP does not report at the same or higher organization level as the highest line manager responsible for performing activities affecting quality.

Element No. 2 - Program [Indoctrination and Training]

No procedure is currently in place for performing indoctrination and training activities or to document and verify that required training has taken place.

The current REECo QA Program does not include YMP-specific Position Descriptions and the associated required training that forms the basis of the certification to perform activities that affect quality.

Element No. 5 - Control of Instructions, Procedures and Drawings

The current implementing procedures for the YMP QA Program (i.e., the NQPs) do not meet the definition of procedures, in that, they do not specify or describe the way in which activities are to be performed. Additionally, they do not contain or reference qualitative or quantitative acceptance criteria to determine that activities are satisfactorily performed. The NQPs do not specify the QA records that will be generated as a result of implementation of the procedure.



4.0 SUMMARY OF AUDIT RESULTS

4.3 Summary of Results - Element No. 5 (continued)

This element is especially important in light of the current matrix management practices, which will require each parent organization within REECO to develop its own YMP-specific procedures. If this philosophy prevails, the number of REECO implementing procedures requiring review and approval by the Project Office will quadruple at a minimum.

Element No. 6 - Document Control

No documented method was identified during the audit for implementing the specified requirements of document control. Because of the current matrix management practice of allowing each parent organization to develop its own procedures and control them, this finding has increased in importance for the Yucca Mountain Project.

Element No. 18 - QA Audits

No objective evidence was available for examination of the audit program. The current Lead Auditor was certified during the week of this audit; therefore, no audits had been performed since the last Project Office Audit in August 1987.

In addition, the surveillance program is judged to be ineffective in its purpose to "verify operational compliance with the REECO YMP Project QAPP" (NQP 10.0). Of the six surveillances performed in FY-88, those that assessed document control compliance identified deficiencies in practices, but failed to identify the larger problem of a non-integrated, non-uniform implementation of the QAPP. The root problem is apparently a lack of procedural requirements for scoping, planning, conducting, documenting and reporting audits and surveillances.

The absence of audits and the inability of the surveillance program to identify programmatic deficiencies leads the audit team to conclude that the audit and surveillance programs are ineffective.

4.4 Criteria Not Audited

The following programmatic elements were not within the scope of this audit:

3.0 Design Control

8.0 Identification and Control of Items, Samples and Data

9.0 Control of Processes

4.0 SUMMARY OF AUDIT RESULTS

4.4 Criteria Not Audited (continued)

10.0 Inspection

11.0 Test Control

14.0 Inspection, Test and Operating Status

15.0 Control of Nonconforming Items

16.0 Corrective Action

5.0 AUDIT MEETINGS

5.1 Pre-Audit Conference

An opening meeting was held to outline the purpose and scope of the audit and to establish further audit activities and a tentative time for the closing meeting. This pre-audit meeting was held on August 23, 1988, at 9:00 a.m.

5.2 Audit Status Meeting

An audit status meeting was held with the REECo TPO and his staff at the conclusion of each days auditing. This meeting was held at 4:30 P.M. in the offices of REECo. A status of how the audit was progressing was presented.

5.3 Post-Audit Conference

A closing meeting was conducted to discuss the detailed audit results and resolve any possible misunderstandings prior to completion of the final audit report. This meeting was held on August 29, 1988, at 2:00 p.m.. A list of attendees for all meetings is provided in Enclosure 1.

6.0 SYNOPSIS OF SDRS, OBSERVATIONS AND RECOMMENDATIONS

6.1 Standard Deficiency Reports (SDRs)

There is no procedure for performing indoctrination and training activities or documenting and verifying that required training has taken place. Refer to SDR No. 187, Severity Level 2.

The QA administrative procedures (NQPs) governing REECo's quality affecting work do not include or reference the appropriate quantitative or qualitative acceptance criteria for determining that activities have been satisfactorily accomplished. Refer to SDR No. 188, Severity Level 1.

6.0 SYNOPSIS OF SDRS, OBSERVATIONS AND RECOMMENDATIONS

6.1 Standard Deficiency Reports (SDRs)

NQPs have not been reviewed by the originating organization. Refer to SDR No. 189, Severity Level 2.

NQPs do not identify the QA records generated during the implementation of the procedure. Refer to SDR No. 190, Severity Level 2.

REECo YMP QA Manager is not at the same or higher organizational level as the highest line manager responsible for performing activities affecting quality. Refer to SDR No. 191, Severity Level 1.

REECo has no procedure for performing management assessments. Refer to SDR No. 192, Severity Level 3.

REECo has not established position descriptions specific to all REECo positions involved in YMP activities that affect quality. Refer to SDR No. 193, Severity Level 2.

There is no documented method for implementing the specific Document Control requirements. Refer to SDR No. 194, Severity Level 2.

6.2 Observations

Observations 88-07-01 through 88-07-05 are enclosed and summarized below.

Observation No. 88-07-01

REECo procedure #630 in Ops Equipment Department does not include a requirement to establish packaging, handling and shipping as required in purchase orders.

Observation No. 88-07-02

No procedure was identified to ensure a uniform application of development of special handling instructions when necessary.

Observation No. 88-07-03

NQP 4.0 and BH 6131 contain conflicting statements relative to implementation of the procurement process.

Observation No. 88-07-04

NQP 7.0 does not reflect all of the QAPP requirements.

6.0 SYNOPSIS OF SDRS, OBSERVATIONS AND RECOMMENDATIONS

6.2 Observations (continued)

Observation No. 88-07-05

The resolution of disputes is not clearly and accurately depicted in QAPP page 9, Figure 2.

6.3 Recommendations

The following recommendations were made by the audit team.

1. Records of personnel qualifications, indoctrination, training and proficiency evaluations are maintained by the individual department managers. Records were reviewed in the Personnel, Procurement, Welding and Project Office Departments. The records are maintained by the event rather than for the individual. To determine the qualification status of an individual, several files must be searched and lists of names scanned. It is recommended that a central qualification file be developed for each individual performing or verifying activities affecting quality, thus providing for easy verification of an individual's status.
2. REECO Quality Procedures NQP 7.2 (Procurement Document Review) and NQP 7.3 (Supplier Evaluation) were reviewed and the following recommendations are provided:
  - a. NQP 7.2 should be deleted and the requirements for procurement document review added to NQP 4.0 (Procurement Document Control).
  - b. NQP 7.3 should be deleted and the requirements for supplier evaluation added to NQP 7.0 (Control of Purchased Materials, Equipment, and Services).

Deletion of these procedures will add continuity to existing procedures NQP 4.0 and NQP 7.0 (i.e., not having to reference an additional procedure to implement an activity) and may preclude conflicting information from one procedure to another relating to the same subject.

3. Prior to REECO procuring QA Level I and II items for the YMP, the audit team recommends that REECO establish a full-time dedicated QA position in the procurement organization. The individual would report functionally to the Project QA Manager and administratively to the Procurement Manager. Responsibilities would include review and approval of all procurement documents, procurement surveillances, indoctrination and training, and supplier evaluations and reevaluations. Establishment of this position would reduce the work load of the Project QA Manager in the procurement area and assure the quality of the procurement process is maintained.

6.0 SYNOPSIS OF SDRs, AND OBSERVATIONS

6.3 Recommendations (continued)

4. REECO should increase efforts to identify the types of items, materials and services that may be required during any construction operation for YMP work. Even general understanding of what may be required will allow potential suppliers to be identified. The qualification of supplies may then be initiated, since this qualification process may involve a long lead time to achieve qualified suppliers. The qualification process should be started as early as possible in order to avoid a schedule delay and better facilitate the procurement of acceptable item materials and services.

7.0 RECOMMENDED ACTION

A written response is required for each SDR and observation delineated in Section 6. Copies of these documents have been forwarded by mail to your TPO. A response is due within 20 working days of the date of the transmittal letter. Upon satisfactory verification of the completion of all remedial and corrective actions, the SDR will be closed and the Yucca Mountain Project participant will be notified by letter of the SDR closure.

AUDIT REPORT 88-07  
ENCLOSURE 1

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TITLE</u>	<u>PRE-AUDIT CONFERENCE</u>	<u>DURING AUDIT</u>	<u>POST-AUDIT CONFERENCE</u>
Blichfield, B.					
Burnett, Doris M.	REECO	Procurement Dept. Mgr.	X	X	
Cladwell, Henry H.	SAIC	Manager, Audits ATL		X	
Clark, James E.	SAIC	QA Engineer	X		X
Dana, Stephen	SAIC	QA Engineer	X		X
Davis, Kathryn B.	REECO	RM Supervisor	X		X
Donnelly, James	US/NRC	Observer	X		X
Flanga, W. G.	REECO	Manager/OPS Division			X
Fluckiger, Jeff T.	REECO	Senior Engineer	X	X	
Fraser, D. L.	REECO	General Manager			X
Fouts, John T.	REECO	Superintendent	X		X
Fowkes, A. K.	REECO	Chief, QA Services	X		X
Fox, M. A.	REECO	Project QA	X	X	X
Gilray, John	US/NRC	Site Resident	X		X
Goodman, Dennis A.	REECO	Supervisor		X	X
Gorby, Oliver L.	REECO	Supply Manager			X
Hampton, Catherine	YMP	DOE/Project Office QA	X		X
Hans, Stephen	SAIC	QA Engineer	X	X	X
Hedges, Dale	CER	Director, QA			X
Hughes, S.				X	
Johnson, Donald	REECO	Section Chief, P&C			X
Knowles, A.				X	
Koss, Dan	REECO	Project Manager	X	X	X
Riland, Richard	REECO	AM Div. Manager			X
Lykens, R.	REECO	Lead Auditor	X	X	
Mansel, Wendell	YMP	QA Engineer-DOE/P.O.	X		X
Maridoris, J. R.	REECO	Senior Engineer			X
McDaniel, J. C.	REECO	OP Supervisor			X
Mendon, Joseph R.	REECO	Senior Engineer	X		
Miller, B.				X	
Monks, Royce E.	YMP	DOE/Project Office QA	X		X

AUDIT REPORT 88-07  
ENCLOSURE 1

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TITLE</u>	<u>PREAUDIT CONFERENCE</u>	<u>DURING AUDIT</u>	<u>POSTAUDIT CONFERENCE</u>
Oldo, J.				X	
Pregmire, W.				X	
Prestholt, P. T.	US/NRC	Onsight Representative			X
Pritchett, R.	REECo	TPO	X	X	X
Pugmire, W. C.	REECo	Senior Engineer	X		
Rommel, Robert	REECo	Project Engineer	X	X	
Salaegier, Frank	REECo	Asst. Division Manager			X
Snodgrass, D. B.	REECo	QA Manager	X		X
Thompson, C. M.	SAIC	QA Engineer	X		X
Toth, Shirley	REECo	Assistant	X		
Veloso, Andres R.	DOE/NTSO	PE	X		
Walenga, C.	DOE/HQ	Observer	X		
Warriner, D				X	
Wolak, Walter T.	REECO	Sec. Chief Engineer	X		X
Ziehna, Susan A.	REECo	Adm. Records Coordinator	X		X
Zimmerman, Susan	NWPO	QA Manager	X		

Noted During:  
Audit 88-07

Identified By:  
James E. Clark

Date:  
9/1/88

Organization:  
REECO

Person(s) Contacted:  
M. Fox

Response Due Date is  
30 Days from Date of  
Transmittal

Discussion:

Section XIII-1.0 of 568-DOC-115, Rev. 5, states in part:

"Measures shall be established to control the packaging,  
handling, storage, shipping, cleaning and preservation of  
material and equipment to prevent damage, loss or  
deteriorization...."

QAE/Lead Auditor

Date

*[Signature]*

10-13-88

Branch Manager

Date

*[Signature]*

13 Oct 88

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed By Originating QA Organization

Completed By Responder

Completed By QA Org.



Procedure No. 630 in the Operations Equipment Department, which was developed to specify the review of purchase requisitions, omits the requirement to ensure methods are established for packaging, handling and shipping. This is identified as an observation rather than a deficiency because no YMP Project work has been performed to the procedure; however, damage to the mine hoist may have been precluded if the receiving organization (REECO) had been permitted to specify handling and shipping controls.

WMPO OBSERVATION NO. 88-07-02

N-QA-012  
8/88

Noted During:  
Audit 88-07

Identified By:  
James E. Clark

Date:  
9/1/88

Organization:  
REECO

Person(s) Contacted:  
M. Fox

Response Due Date is  
30 Days from Date of  
Transmittal

Discussion:

Section XIII-1.0 of 568-DOC-115, Rev. 5, states in part:

"Handling storage, and shipping of items shall be conducted in accordance with established work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents or procedures specified for use in conducting the activity."

QAE/Lead Auditor

Date

Branch Manager

Date

*[Signature]*

10-13-88

*[Signature]*

13 Oct 88

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

PAGE

1 OF 2

Completed by Originating QA Organization

Completed by Responder

Completed by QA Org.

Although the personnel in the Operations Equipment Department have an unwritten practice of developing special handling procedures when deemed appropriate, there is no procedure ensuring uniform, consistent application of the practice. A procedure or equivalent document should specify how Section XIII-1.2 of the QAPP is implemented and controlled, including assignment of personnel to make determinations as to when special procedures are required.

Noted During:  
Audit 88-07

Identified By:  
Stephen Dana

Date:  
9/1/88

Organization:  
REECO

Person(s) Contacted:  
M. Fox

Response Due Date is  
30 Days from Date of  
Transmittal

Discussion:

REECO procedures NQP 4.0 (Procurement Document Control) and BH-6131 (Project Procurement) were reviewed and found to contain conflicting statements relative to implementation of the procurement process. The following examples are provided:

QAE/Lead Auditor

Date

Branch Manager

Date

*Mans*

10-13-88

*AM Caldwell*

13 Oct 88

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed by Originating QA Organization

Completed by Responder

Completed by QA Org.

1. NQP 4.0

Responsibilities, Section D.1.3

Delineates that activities such as the vendor survey for qualification and the vendor audit for adequacy of performance will be performed by REECO PQA and the originating organization, if required.

NOTE: NQP #7.0 states that for evaluation of suppliers, REECO procurement will organize a team which includes representatives from REECO Project QA, REECO Procurement, the originating organization, YMPO and other technical and departmental representatives.

BH-6131

Section II.C.4

Delineates that for the evaluation of suppliers, REECO Procurement will organize a team which includes representatives from REECO PQA and Procurement, the originating organization, YMPO and other technical representatives when deemed appropriate.

Section IV.C.1

Delineates that supplier Performance Evaluations are conducted by the PQA in accordance with the originating organizations approved procedures.

2. NQP 4.0

Responsibilities, Section E

Delineates additional requirements for QA Level I activities.

BH-6131

Section III.C

Delineates additional requirements for QA level I and II activities.

3. NQP 4.0

Responsibilities, Section E.2

Delineates that a review of the procurement document and changes there to should be made by the cognizant technical organization and Project QA.

BH-6131

Section II.C.5

Delineates that any amendments to the solicitation requirements must be approved by the requisitioner and the PQA.

In addition to the above, NQP 4.0 does not clearly delineate the QA organization's responsibilities during the procurement document process.

Procedures NQP 4.0 and BH-6131 should be reviewed (in conjunction with NQP 7.0) to resolve any discrepancies or conflicting statements between the procedures.

Noted During:  
Audit 88-07

Identified By:  
Stephen Dana

Date:  
9/1/88

Organization:  
REECO

Person(s) Contacted:  
M. Fox

Response Due Date is  
30 Days from Date of  
Transmittal

Discussion:

NQP 7.0 (Control of Purchased Materials, Equipment, and Services) and the REECO QAPP Section VII were reviewed to determine whether the requirements of the QAPP are contained in the NQP. The following anomalies were identified during the review:

QAE/Lead Auditor

Date

Branch Manager

Date

*Adams*

10-13-88

*R. Caldwell*

13 Oct 88

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

PAGE

1 OF 2

Completed by Originating QA Organization

Completed by Responder

Inspected by QA Org.

1. The NQP does not address the QAPP, paragraph 1.1, "Procurement Planning."
2. The NQP does not adequately address the QAPP, paragraph 1.2.3, "Measures for Evaluation and Selection of Procurement Sources."
3. The NQP does not adequately address the QAPP, paragraph 1.7, "Acceptance of Services Only."
4. The NQP does not adequately address the QAPP, paragraph 1.4.1, "Interface Measures."
5. The NQP does not adequately address the QAPP, paragraph 1.4.2.1, "Extent of Verification", (e.g., surveillances performed by REECO and responsibilities of the QA Organization).
6. The NQP does not adequately address the QAPP, paragraph 1.8, "Control of Supplier Nonconformances."
7. The NQP does not adequately address the QAPP, paragraph 2.0, "Commercial-Grade Items", (e.g., responsibilities of the QA Organization and responsibility for receipt inspection).
8. The NQP requires YMPO involvement in evaluation of suppliers and evaluation of bids; however, this is not a QAPP requirement nor does the procedure detail how the interface between REECO and YMPO will take place.

The QAPP requirements identified above should be incorporated in the NQP. In addition, a review of the NQPs versus the QAPP should be performed to determine whether additional requirements of the QAPP have not been addressed in the NQPs. Objective evidence of the review should be provided with the observation response.



Noted During:  
Audit 88-07

Identified By:  
Stephen Dana

Date:  
9/1/88

Organization:  
REECO

Person(s) Contacted:  
M. Fox

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

REECO NQP 1.1, "Resolution of Disputes", page 2, Section C, states, "If the QA Managers resolution is not satisfactory to the parties of the dispute, the WMPO NWSI Project QA Manager shall provide a resolution based on input from all parties".

Completed by Originating QA Organization

QAE/Lead Auditor

Date

Branch Manager

Date

*Stans*

10-13-88

*H. A. Caldwell*

13 Oct 88

Response:

Completed by Responder

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed by QA Org.

The REECO QAPP, page 9, Figure 2 (REECO Organizational Structure NWSI Project) does not show the external interface between the REECO Project QA Manager and the WMPO PQM relative to resolution of disputes. The QAPP, page 6, paragraph 2.2 states in part, "The WMPO PQM may be utilized to resolve disputes between participants"; however, the aforementioned paragraph does not delineate the REECO Project QA Manager as the interface with the WMPO PQM.

The REECO QAPP, page 9, Figure 2 should be revised to clearly show the REECO Project QA Managers interface with the WMPO PQM relative to resolution of disputes.

In addition, NQP 1.1 should be expanded to discuss the following items:

- o How the Project QA Manager resolves the dispute.
- o How the Project QA Manager will interface with the WMPO PQM.
- o How the Project QA Manager reports resolution of disputes to the department that originated the dispute and whether concurrence is or is not obtained and if not, what action(s) is taken.
- o How the dispute and resolution is documented.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization

1 Date \_\_\_\_\_ 2 Severity Level  1  2  3 Page 1 of 2

3 Discovered During AUDIT 88-7 3a Identified By C. Thompson/S. Dana 3b Branch Chief Concurrence Date \_\_\_\_\_ 4 SDR No. 187 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)  
(Reference Audit Checklist Item No. 2-6). The REECo QAPP, Rev. 5, Section V, paragraph 1.0, states "Activities affecting quality shall be prescribed by and performed in accordance with documented...procedures, plans...of a type

9 Deficiency  
Contrary to the above requirement, there is no documented procedure or plan for performing training activities. Section II of the QAPP identifies some training requirements; however, with no documented training plan or procedure

10 Recommended Action(s):  Remedial  Investigative  Corrective  
1) Prepare and issue a training plan/procedure.

Aprvl.

11 QAE/Lead Auditor Date *Steph Davis 9/6/88* 12 Branch Manager Date *For A. Cabell SEP 06 1988* 13 Project Quality Mgr. Date *Royce > Monda 9/9/88*

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	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended Response	QAE/Lead Auditor/Date	Branch Manager/Date
20 Amended Response	<input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	Branch Manager/Date
21 Veri- fication	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	Branch Manager/Date

22 Remarks \_\_\_\_\_

23 QA CLOSURE QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_ PQM/Date \_\_\_\_\_

ENCLOSURE



WMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

SDR No. 187

Rev. 0

Page 2 of 2

8 Requirement ( continued )

appropriate to the circumstances.

9 Deficiency ( continued )

in place, there is no system for identifying, documenting, or verifying that appropriate training has been performed for individuals.

10 Recommended Actions ( continued )

- 2) Investigate to determine if this required training has been initiated for personnel performing or verifying quality related activities.
- 3) Assure the training plan/procedure is adhered to and that required training is performed prior to assigning personnel to perform quality affecting activities.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization

1 Date		2 Severity Level <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
3 Discovered During AUDIT 88-7		3a Identified By S. Dana/J. Clark	3b Branch Chief Concurrence Date		4 SDR No. 188 Rev. 0
5 Organization REECo		6 Person(s) Contacted Bob Lyken		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) (Audit checklist item N/A) REECo QAPP 568-DOC-115, R5, Section V-1.0 states in part, "Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, plans or drawings, of					
9 Deficiency Contrary to the requirements stated above, the QA administrative procedures (NQPs) governing REECos performance of NNWSI Project quality affecting work do not include or reference appropriate quantitative or qualitative acceptance					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1) Develop an NQP governing the preparation, review, approval and issuance of NQPs which establishes a flow sequence for actions and assigns					

Aprvl.

11 QAE/Lead Auditor Date <i>Sheela Khan 9/6/88</i>		12 Branch Manager Date <i>Bob Lyken SEP 06 1988</i>		13 Project Quality Mgr. Date <i>Raymond [Signature] 9/9/88</i>	
---	--	--	--	---	--

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 <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
				PQM/Date	



WPMO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

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Rev. 0

Page 2 of 2

8 Requirement ( continued )

a type appropriate to the circumstances. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished....These documents, including drawings, shall be controlled as required in Section VI of this document [QAPP]."

Section VI-1.1 states in part, "The preparation, review, approval and issuance of documents...shall be controlled through the implementation of methods that assure that only correct documents are used."

Section VI-1.2 states in part, "Implementation of document control shall provide for the following:

- \* Identification of assignment of responsibility for preparing, reviewing, approving and issuing documents.

9 Deficiency ( continued )

criteria for determining that prescribed activities have been satisfactorily accomplished. In fact, the NQPs do not specify or describe the way in which the activities are to be performed, as required by the definition of "procedure" in Appendix A of the REECo QAPP.

10 Recommended Actions ( continued )

responsibilities for those actions.

- 2) Establish review criteria for NQPs to ensure that a method for conducting the activity exists within the NQP before its approval.
- 3) Revise all NQPs as necessary to specify or describe a method for performing the activity which is compliant to requirements in the QAPP.
- 4) Evaluate lower tier implementing procedures for all REECo departments performing NNWSI Project work and ensure that procedures comply with the governing NQP.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization

1 Date	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2
3 Discovered During AUDIT 88-7	3a Identified By S. Dana	3b Branch Chief Concurrence Date	4 SDR No. 189 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) (Audit Checklist Item No. 5-2) REECo NNWSI QA Program Plan, 568-DOC-115, Rev. 5, Section V, "Instructions, Procedures and Drawings", paragraph 2.0, states, "An independent technical and QA review of all instructions, procedures,			
9 Deficiency Contrary to the above requirement, a review of the REECo NQPs has not been performed by the originating organization. The NQPs are prepared by the REECo NNWSI Project QA Manager and the only review identified during the audit was			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1) Revise the appropriate NQPs to clearly delineate those responsible for the review and approval of NQPs.			

Apr 11

11 QAE/Lead Auditor Date <i>Sheila Lane</i> 9/4/88	12 Branch Manager <i>A. A. DeWitt</i> SEP 06 1988	13 Project Quality Mgr. Date <i>Roger M. ...</i> 9/2/88
---	--	--

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	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended Response	QAE/Lead Auditor/Date	Branch Manager/Date
20 Amended Response	<input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	Branch Manager/Date
21 Verification	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	Branch Manager/Date
22 Remarks				
23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date	



WMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
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Page 2 of 2

8 Requirement ( continued )

plans, and drawings shall be performed by the originating organization".

9 Deficiency ( continued )

performed by the Project Office.

10 Recommended Actions ( continued )

- 2) Subject all NQPs to review by the originating organization.
- 3) Investigate to determine if other REECo NNWSI implementing procedures have been subjected to an independent technical review by the originating organization. For those procedures identified without a proper review, follow the actions identified in Para. 2.0. Provide a list of those procedures with the response to this SDR.
- 4) Reinstruct appropriate personnel in accordance with the revised procedural requirements. Provide objective evidence of the reinstruction with response to this SDR.



# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization 88290  
Aprvl.  
Completed by Organization in Block 5  
Comp. by Orig. QA Org.

1 Date		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
3 Discovered During AUDIT 88-7		3a Identified By S. Dana	3b Branch Chief Concurrence Date		4 SDR No. 190 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) (Audit Checklist Item 5-5) REECO NNWSI QA Program Plan, 568-DOC-115, Rev. 5, Section V, "Instructions, Procedures, and Drawings", states in part, "Instructions, procedures, and plans shall include a section which identifies					
9 Deficiency Contrary to the above requirement, REECO NNWSI Quality Procedures (NQPs) do not identify the QA records generated during implementation of the procedure. The procedures have incorporated a section entitled "QA Records"; however, the					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1) Revise applicable NQPs to identify all QA records generated during implementation of the procedures.					
11 QAE/Lead Auditor Date <i>Steve Dan</i> 9/4/88		12 Branch Manager <i>W. A. D. D.</i> SEP 06 1988		13 Project Quality Mgr. Date <i>Roger S. Monds</i> 9/9/88	
14 Remedial/Investigative Action(s)					
15 Effective Date _____					
16 Cause of the Condition & Corrective Action to Prevent Recurrence					
17 Effective Date _____					
18 Signature/Date					
19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
21 Verification <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
22 Remarks					
23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date		



WMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

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Page 2 of 2

8 Requirement ( continued )

the QA records which are generated during implementation of the document."

9 Deficiency ( continued )

section does not identify the specific QA Records.

10 Recommended Actions ( continued )

- 2) Review all other implementing procedures applicable to NNWSI Project activities to determine whether QA records have been identified. If a similar problem as described in Block 8 is found, revise the procedures accordingly.
- 3) After identifying the QA records in items 1 and 2 above, assure that completed QA records are processed and maintained in accordance with the REECO QAPP, Section XVII.
- 4) Instruct appropriate personnel to revised procedural requirements. Provide objective evidence of the reinstruction with response to this SDR.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization

1 Date	2 Severity Level <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2
3 Discovered During AUDIT 88-7	3a Identified By S. Dana	3b Branch Chief Concurrence Date	4 SDR No. 191 Rev. 0
5 Organization REECO	6 Person(s) Contacted R. Pritchett/M. Fox		7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item 2-3) REECO NNWSI QA Program Plan, 568-DOC-115, Revision 5, Section I, "Organization", paragraph 2.1 states, "Full-time dedicated QA positions have been established by REECO. The person responsible for			
9 Deficiency Contrary to the above requirement, the REECO NNWSI Project Quality Assurance Manager is not at the same or higher organization level as the highest line manager responsible for performing activities affecting quality. The REECO			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1) The REECO NNWSI organizational structure should be revised to show the NNWSI Project QA Manager reporting functionally to the General Manager and			

11 QAE/Lead Auditor Date <i>Steve Dana 9/4/88</i>	12 Branch Manager <i>R. Pritchett</i>	Date SEP 06 1988	13 Project Quality Mgr. Date <i>Roger Marks 9/1/88</i>
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14 Remedial/Investigative Action(s)	15 Effective Date _____
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16 Cause of the Condition & Corrective Action to Prevent Recurrence	17 Effective Date _____
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18 Signature/Date
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Comp. by Orig. QA Org.

19 Response	<input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject	QAE/Lead Auditor/Date	Branch Manager/Date
20 Amended Response	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	QAE/Lead Auditor/Date	Branch Manager/Date
21 Verification	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	QAE/Lead Auditor/Date	Branch Manager/Date
22 Remarks			
23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date

WMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

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8 Requirement ( continued )

directing and managing the overall QA program is identified and has appropriate organizational position, responsibilities, and authority to exercise proper control over the QA program. These positions are occupied by individuals with appropriate management and QA knowledge and experience. They shall be at the same or higher organization level as the highest line manager responsible for performing activities affecting quality and sufficiently independent from cost and schedule.

9 Deficiency ( continued )

NNWSI Project QA Manager reports directly to the NNWSI Technical Project Officer (TPO), who reports directly to the General Manager. When the Matrix support organizations are included in the REECo NNWSI support organizational structure, the highest line manager responsible for performing activities affecting quality would be the applicable Division Managers. When performing activities related to the NNWSI Project, the Division Managers report directly to the NNWSI TPO, otherwise, the Division Managers report directly to the General Manager. The YMPO Quality Assurance Organizational reporting relationship relative to the OCRWM and the Project Office Project Manager is an example that meets the above requirement (i.e., the Project Office Project Quality Manager (PQM) reports functionally to the OCRWM Director of Quality Assurance and administratively to the Project Office Project Manager.

It should be noted the TPO is not a dedicated position as the TPO (R. Pritchett) is also the Operations and Maintenance Division Assistant Manager, reporting directly to the Operations and Maintenance Division Manager. A review of the REECo "organization charts," "Operations and Maintenance Division" shows the NNWSI TPO reporting directly to the Operations and Maintenance Division Manager. See attached organization charts.

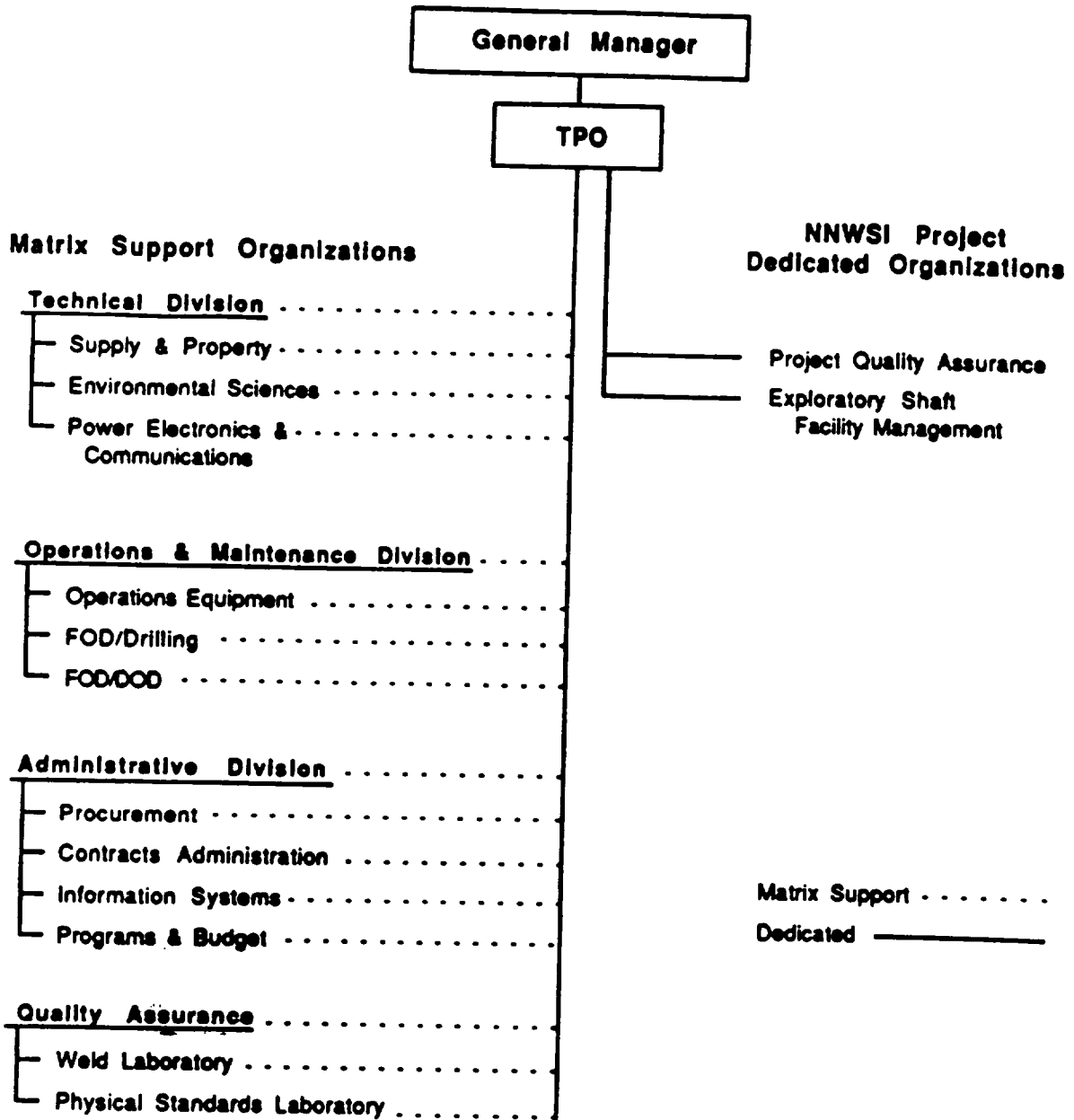
10 Recommended Actions ( continued )

administratively to the NNWSI TPO. This should include a revision to the QAPP and applicable implementing procedures.

- 2) Investigate to determine what impact the reporting relationship (i.e., the REECo PQAM not at the same or higher organization level as the highest line manager) may have had on the REECo NNWSI Quality Assurance Program.

FIGURE 2

# REECo ORGANIZATIONAL STRUCTURE NNWSI PROJECT



Total .....1000  
Salaried ..... 104  
Hourly .....1716

**OPERATIONS & MAINTENANCE DIVISION (1000)**  
 1 - OPERATIONS & MAINTENANCE DIVISION MANAGER (8)  
 W. G. Flanagan  
 2 - OPERATIONS & MAINTENANCE DIVISION ASSISTANT MANAGER (8)  
 F. J. Botteggi  
 R. F. Pritchett (Dues)  
 1 - EXECUTIVE SECRETARY (8)  
 1 - SENIOR SECRETARY (8)

**NNMB TECHNICAL PROJECT OFFICE (4)**  
 NNMB TECHNICAL PROJECT OFFICER (8)  
 R. F. Pritchett (Dues)

**ADMINISTRATIVE STAFF (2)**  
 1 - SENIOR PLANNING COORDINATOR (8)  
 J. W. Florer  
 1 - PRINCIPAL STAFF ASSISTANT (8)  
 R. V. Bush

**NNMB PROJECT**  
 1 - PROJECT MANAGER (8)  
 D. L. Koss  
 1 - EMPLOYEE - *Sec II* (8)  
*1 - Proj ENG*  
*1 - STRENGTH*

**NNMB QUALITY ASSURANCE**  
 1 - QUALITY ASSURANCE SECTION CHIEF (8)  
 W. A. Fox  
 1 - SENIOR ENGINEER (8)  
 R. L. Lykens

**FIELD OPERATIONS DEPARTMENT (DRILLING) (194)**  
 FIELD OPERATIONS DEPARTMENT MANAGER (DRILLING)  
 L. R. Hesse

**FIELD OPERATIONS DEPARTMENT (DOD) (832)**  
 FIELD OPERATIONS DEPARTMENT MANAGER (DOD)  
 H. D. Edwards

**FIELD OPERATIONS DEPARTMENT (LAN/L/L/M) (482)**  
 FIELD OPERATIONS DEPARTMENT MANAGER (LAN/L/L/M)  
 E. P. Davis  
 ASSISTANT FIELD OPERATIONS DEPARTMENT MANAGER (LAN/L/L/M)  
 W. H. Lloyd

**OPERATIONS EQUIPMENT DEPARTMENT (189)**  
 OPERATIONS EQUIPMENT DEPARTMENT MANAGER  
 C. G. Lawson  
 ASSISTANT OPERATIONS EQUIPMENT DEPARTMENT MANAGER  
 W. J. Cook

**SITE MAINTENANCE DEPARTMENT (109)**  
 SITE MAINTENANCE DEPARTMENT MANAGER  
 J. P. Mathis

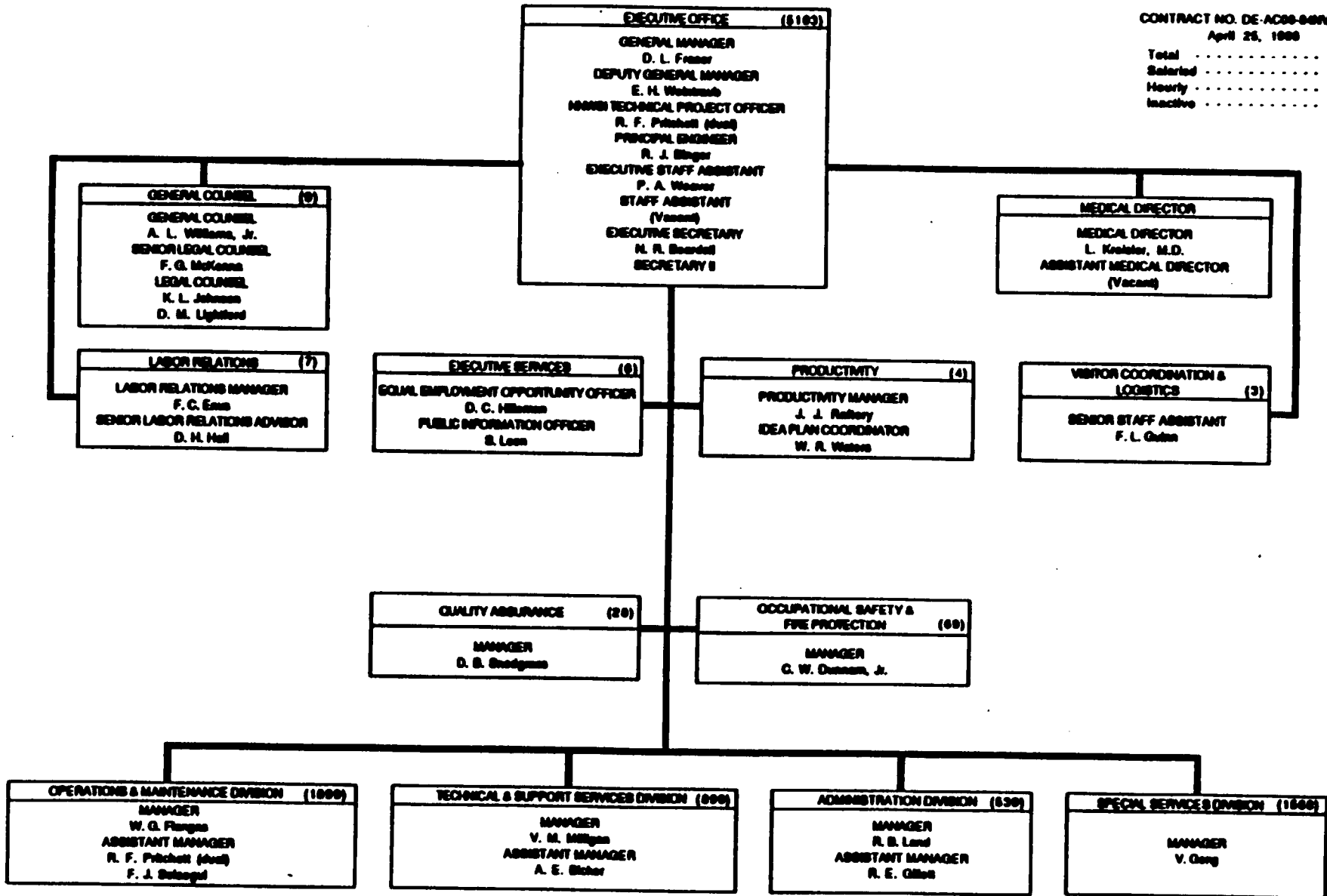
**BASE SUPPORT**  
 MAINTENANCE SUPERINTENDENT  
 E. C. Weaver

**FIELD OPERATIONS DEPARTMENT (NTS GENERAL & SUPPORT) (181)**  
 FIELD OPERATIONS DEPARTMENT MANAGER (NTS General & Support)  
 J. M. Tighi  
 ASSISTANT FIELD OPERATIONS DEPARTMENT MANAGER (NTS General & Support)  
 G. M. Nelson

**FLEET OPERATION DEPARTMENT (220)**  
 FLEET OPERATIONS DEPARTMENT MANAGER  
 B. D. Davis

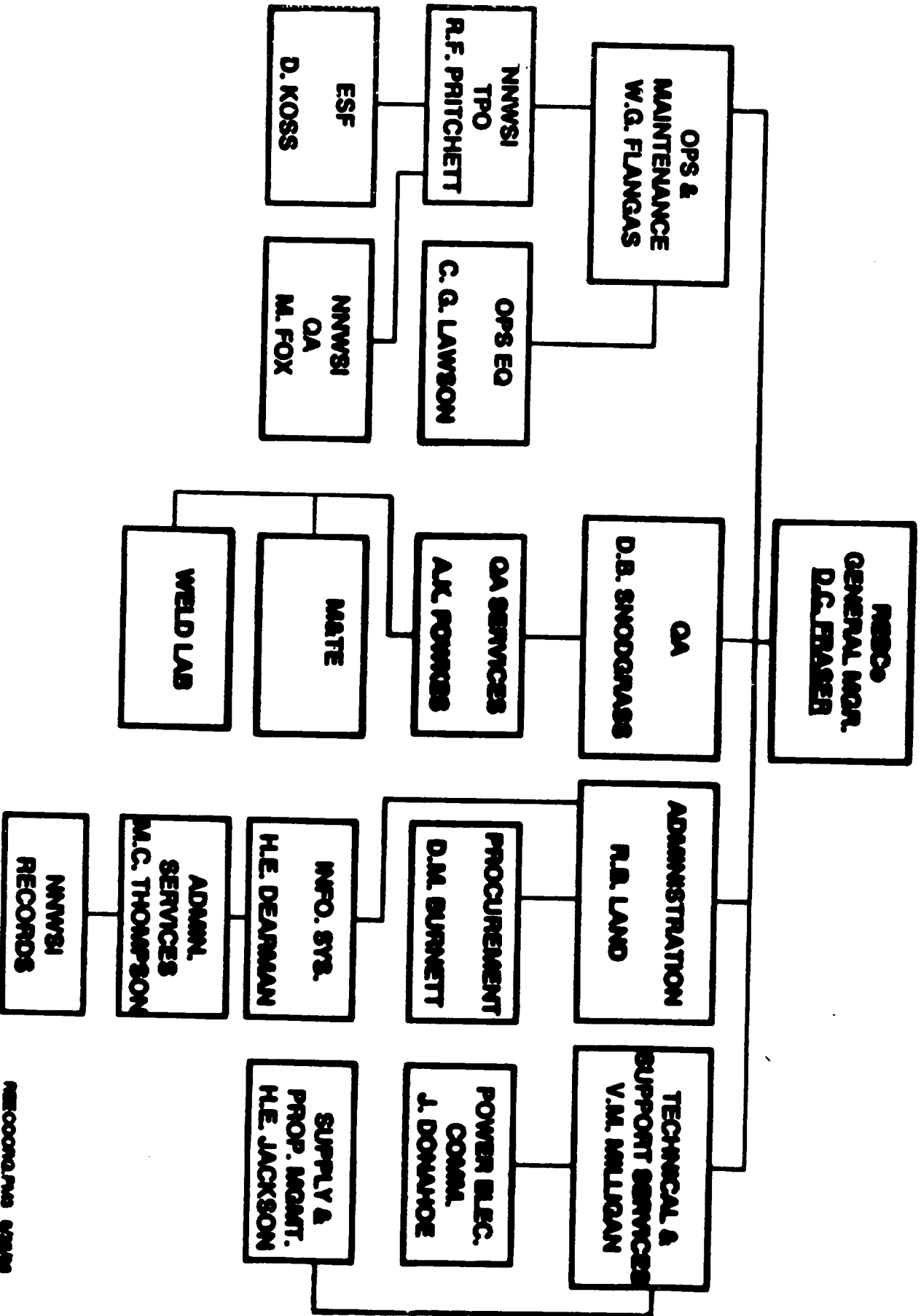
CONTRACT NO. DE-AC66-00W10327  
April 25, 1966

Total ..... \$107  
Salaried ..... 891  
Hourly ..... 4237  
Inactive ..... 66



\*\* Employment Total based on 1-1-66 Payroll

# REECO MATRIX MANAGEMENT ORGANIZATION



REECO00001/MS 02/88



# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization 88290

1 Date \_\_\_\_\_ 2 Severity Level  1  2  3 Page 1 of 1

3 Discovered During AUDIT 88-07 3a Identified By C. Thompson/S. Dana 3b Branch Chief Concurrence Date \_\_\_\_\_ 4 SDR No. 192 Rev. 0

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

8 Requirement (Audit Checklist Reference, if Applicable)  
(Reference Audit Checklist Item No. 2-2) The REECo QAPP, Rev. 5 Section II, Para. 3.2, requires REECo to develop procedures for performing management assessments.

9 Deficiency  
Contrary to the above requirement, there is no REECo procedures for performing management assessments.

10 Recommended Action(s):  Remedial  Investigative  Corrective  
1) Prepare and issue a procedure for performing management assessments in accordance with the requirements.

11 QAE/Lead Auditor Date *[Signature]* 9/4/88 12 Branch Manager Date *[Signature]* SEP 06 1988 13 Project Quality Mgr. Date *[Signature]* 9/9/88

14 Remedial/Investigative Action(s) \_\_\_\_\_ 15 Effective Date \_\_\_\_\_

16 Cause of the Condition & Corrective Action to Prevent Recurrence \_\_\_\_\_ 17 Effective Date \_\_\_\_\_

18 Signature/Date \_\_\_\_\_

19 Response  Accept  Amended Response  Reject QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

20 Amended Response  Accept  Reject QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

21 Verifi- cation  Satisfactory  Unsatisfactory QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

22 Remarks \_\_\_\_\_

23 QA CLOSURE QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_ PQM/Date \_\_\_\_\_

Comp. by Orig. QA Org.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization 88280  
Completed by Organization in Block 5  
Comp. by Orig. QA Org.

1 Date \_\_\_\_\_ 2 Severity Level  1  2  3 Page 1 of 2

3 Discovered During AUDIT 88-7 3a Identified By S. Dana 3b Branch Chief Concurrence Date \_\_\_\_\_ 4 SDR No. 193 Rev. 0

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

8 Requirement (Audit Checklist Reference, if Applicable)  
(Audit Checklist Item 1-1) The REECo NNWSI QA Program Plan (QAPP),  
568-DOC-115, Rev. 5, Section II:

9 Deficiency  
Contrary to the above requirements, REECo has not established position descriptions specific to all REECo positions involved in the performance of activities that affect quality on the NNWSI Project. REECo has established

10 Recommended Action(s):  Remedial  Investigative  Corrective  
1) Define the positions that affect quality on the NNWSI Project.

11 QAE/Lead Auditor Date *John P. Han 9/6/88* 12 Branch Manager Date *AA Adwell SEP 06 1988* 13 Project Quality Mgr. Date *Roy Marks 9/6/88*

14 Remedial/Investigative Action(s) \_\_\_\_\_ 15 Effective Date \_\_\_\_\_

16 Cause of the Condition & Corrective Action to Prevent Recurrence \_\_\_\_\_ 17 Effective Date \_\_\_\_\_

18 Signature/Date \_\_\_\_\_

19 Response  Accept  Amended Response  Reject QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

20 Amended Response  Accept  Reject QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

21 Verifi- cation  Satisfactory  Unsatisfactory QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_

22 Remarks \_\_\_\_\_

23 QA CLOSURE QAE/Lead Auditor/Date \_\_\_\_\_ Branch Manager/Date \_\_\_\_\_ PQM/Date \_\_\_\_\_



WMPO STANDARD DEFICIENCY REPORT  
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10/86

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Page 2 of 2

8 Requirement ( continued )

1. Paragraph 4.1, "Establishment of Requirements", states in part, "REEC Co shall establish requirements for the selection, indoctrination, and training of personnel performing or verifying activities that affect quality. The requirements shall establish position descriptions that set forth minimum personnel qualifications and from which appropriate indoctrination or training or both can be developed prior to initiation of activities that affect quality."
2. Paragraph 4.1.1, "Position Description", states, "Minimum education and experience requirements shall be established and documented in position description for each position involved in the performance of activities that affect quality."

9 Deficiency ( continued )

company position descriptions; however, these position descriptions are not specific to the NNWSI Project, and do not include minimum education and experience, and they do not provide for appropriate indoctrination or training or both.

One position description for NNWSI has been established for the Technical Project Officer (TPO). However, it does not state minimum education and experience, instead, it states "Desireable Education" and "Desireable Experience", nor does it provide for appropriate indoctrination or training or both.

10 Recommended Actions ( continued )

- 2) Develop an organization chart which depicts the positions defined in 1 above.
- 3) Establish position description for each position depicted in the organization chart.
- 4) Establish minimum education and experience requirements and provide for appropriate indoctrination and training or both in the position descriptions.
- 5) Evaluate each YMP individual performing YMP work against the requirements established by 1 thru 4 above. If any individual does not meet the established requirements, perform an impact analysis on the work completed by that individual.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization 82220

1 Date		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3	
3 Discovered During Audit 88-07		3a Identified By J. B. Clark	3b Branch Chief Concurrence Date		4 SDR No. 194 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) (Audit Checklist Item No. 6-1 thru 6-7) REECo NNWSI QA Program Plan, 568-DOC-115, Rev. 5, Section VI, "Document Control," Para. 1.0, "Documentation, Preparation, Review, Approval, and Issuance," states "The					
9 Deficiency Contrary to the above requirement, no documented method was identified for the implementation of the specified document control requirements.					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Identify the REECo matrix management organization which will perform the document control function.					

Completed by Organization in Block 5 April

11 QAE/Lead Auditor Date <i>[Signature]</i> 9/4/88		12 Branch Manager Date <i>[Signature]</i> SEP 06 1988		13 Project Quality Mgr. Date <i>[Signature]</i> 9/9/88	
---	--	--	--	---	--

14 Remedial/Investigative Action(s)		15 Effective Date _____	
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16 Cause of the Condition & Corrective Action to Prevent Recurrence		17 Effective Date _____	
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18 Signature/Date			
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Comp. by Orig. QA Org.

19 Response		<input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
20 Amended Response		<input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
21 Veri- fication		<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
22 Remarks							
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		PQM/Date	



WMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

SDR No. 194

Rev. 0

Page 2 of 3

8 Requirement ( continued )

preparation, review, approval, and issuance of documents such as instructions, procedures, plans, and drawings, including changes thereto, shall be controlled through the implementation of methods that assure that only correct documents are used. Document control shall be applied to the following:

- o Documents that assure technical adequacy.
- o Documents containing or specifying quality requirements.
- o Documents that prescribe activities affecting quality.

The document control system shall be documented, and the Project QA organization shall provide the appropriate review, resolution of comments, and concurrence with respect to quality-related aspects of the documents."

"Implementation of document control shall provide for the following:

- o Identification of documents to be controlled.
- o Identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents.
- o Review of documents for adequacy, completeness and correctness prior to approval and issuance.
- o A method for the removal or marking of obsolete or superseded documents to prevent inadvertent use.
- o A method for assuring that the correct and applicable documents are available at the location where they are to be used.
- o A master list or equivalent to identify the correct and updated revisions of documents.
- o Coordination of interface documents."

10 Recommended Actions ( continued )

2. Define the various methods used by the various organizations to implement the document control requirements.
3. Document the methods used in approved procedures. Assure that all NNWSI document control requirements are satisfied.



# Reynolds Electrical & Engineering Co., Inc.

Post Office Box 98521 • Las Vegas, NV 89193-8521

IN REPLY REFER TO:  
510-01-207

WBS 1.2.9.1.R  
QA: N/A

June 5, 1989

Carl P. Gertz, Project Manager  
Yucca Mountain Project Office  
Nevada Operations Office  
U.S. Department of Energy  
Post Office Box 98518  
Las Vegas, NV 89193-8518

ATTENTION: W. R. Dixon, Director  
Project & Operations Control Division

## YUCCA MOUNTAIN PROJECT STATUS REPORT

Attached is the April Project Status Report for REECO's participation in the Yucca Mountain Project.

*R F Pritchett*

R. F. Pritchett, Manager  
Yucca Mountain Project Division  
YMP Technical Project Officer

RFP:SLH:8:pjw

 Enclosure  
As stated

cy: See page 2

**REECO**

AN  COMPANY

Carl P. Gertz  
510-01-207  
June 5, 1989  
Page 2

cy w/encl.

Central Files THRU D. L. Fraser, M/S 555  
A. R. Veloso, DOE/NTSO, M/S 701  
L. M. Smith, DOE/NV, M/S 505  
R. L. Bullock, F&S, M/S 514  
J. C. Calovini, H&N, M/S 519  
R. J. Herbst, LANL/Los Alamos, NM  
H. N. Kalia, LANL/LV, M/S 527  
L. J. Jardine, LLNL/Livermore, CA  
W. G. Flangas, REECo, M/S 615  
C. R. Fox, REECo, M/S 760  
R. B. Land, REECo, M/S 585  
K. L. Limon, REECo, M/S 408  
V. M. Milligan, REECo, M/S 765  
N. E. Carter, SAIC, M/S 517  
R. G. Helms, SAIC, M/S 517  
T. L. Jackson, SAIC, M/S 517  
B. L. McKinnon, SAIC, M/S 517  
T. O. Hunter, SNL/Albuquerque, NM  
A. Buono, USGS, M/S 509  
L. R. Hayes, USGS/Denver, CO, M/S 509

Reynolds Electrical & Engineering Co., Inc.

YUCCA MOUNTAIN PROJECT STATUS REPORT  
APRIL 1989

WBS: 1.2.2.2.4.R

Project Title: Prototype Engineered Barrier Test  
Coordinator: L. P. Atkinson

The objective of this task is to provide construction support to principal investigators for Waste Package Prototype Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

Supported experimenters collecting data.

WBS: 1.2.3.1.1.5.R

Project Title: Site Investigations Management & Integration  
Coordinators: S. L. Hughes, E. A. Kelemen

The objective of this task is to provide routine maintenance on Area 25 facilities utilized on the Yucca Mountain Project and provide support to Project participants.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: Modifications - Tech Services Building 4215

Installed vacuum tank and lines. Released air balance reports to H&N. Removed all trash and construction materials from the job site. Completed installation of door hardware. Installed Area 3 bathroom partitions. Completed cutting cabinet tops in UZ Room. Installed signs in building as required. Completed chipping and sealing the northeast parking lot.

Task: SAIC Support

Continued repairs to building 4522 and installation of fresh air ducts for exhaust system.

Moved trailer from Air Force Warehouse to building adjacent to Service Station in Area 25. Set SAIC Air Sampling Platforms and wired them as required.

In support of NTS Contractor training efforts, a Fire Protection Engineer conducted a fire extinguisher training class for SAIC personnel in Area 25. The class consisted of a lecture and a demonstration of the use of various types of extinguishers on a live, contained fire.



Task: A/E Building 4015

Completed enlarging fire door openings on first and second floors of the west wing. Pulled in new conductors for lights, receptacles and switches in the bathrooms on the first floor of the east wing and the Visitors Center. Started removal of floor receptacles and capping openings left in floor. Completed removal of existing steel bracing for new stairway. Performed hydrostatic test on underground section of new 8" fire riser on the south side of the building.

Compacted and placed concrete pad for new Fire Riser Room addition. Installing device boxes and EMT conduit for telephone jacks, alarm bells and emergency lights on the first floor of the west wing. Removed existing paneling on the west wall of the first floor. Continued framing the west wing of the first floor.

Began removal of existing sprinkler heads on the first floor of the west wing. Started installing some sprinkler piping. Removed HVAC unit from the Mechanical Room on the first floor of the west wing. Completed removal of existing Fire Department connections at the northwest corner of the building. Placed chiller pad concrete. Removed ceiling grids and lights for sprinkler piping and HVAC duct removal. Started rewiring light fixtures for correct phasing and addition of ground wires on the west half of the first floor of the west wing. Installed 5/8" Type X drywall between the Records Room ceiling and the bottom of the second floor. Removed existing gypboard and completed framing for new ceiling in the west half of the women's rest room on the first floor of the east wing.

Started removing some ballasts from the lighting fixtures. All ballasts will be removed and replaced because of PCB. Fabricated and began installation of some HVAC duct sections in the east wing of the first floor. Installed ventilation air supply in the Records Room and 10" x 8" 26-gauge ducts for vault air circulation on the first floor. Completed removal of three existing re-heat coils. Removed power systems on the third floor. Removed PCB in 1000 kva transformer at NRDS No. 11. Began installation of conduit and boxes in stud walls on the first floor.

Installed support channel and beams for new stairway. Removed concrete and cut floor sheeting for new stairway. Removed existing closet carrier embedded in slab. Commenced installation of new closet carriers, 4" cast iron pipe in the rest rooms on the first floor of the east wing. Enlarged openings in fire walls for fire dampers on the first floor. Started wall switch installation on the first floor of the west wing. Started rewiring the Mechanical Room on the second floor of the west wing.

PROJECT STATUS REPORT

APRIL 1989

Page 3

A Safety Professional inspected work being performed in the A&E Building 4015 in Area 25, by Johnson Controls, a REECo subcontractor. Numerous electrical violations found during the inspection were brought to the attention of the Contract Administrator for corrective action.

Central Files

Major difficulties have been encountered in the remodeling of this project. An all inclusive RWOM is currently in process to cover the deficiencies not identifiable on original project drawings. Upon completions, this RWOM will be transmitted to the DOE Project Engineer.

Task: General Facility Support - Area 25

Completed installation of manifold system for laboratory in Building 4215 for USGS. Repairs to chiller unit are scheduled for May due to partial shipment of parts.

Completed summerization of swamp coolers at Buildings 4221 and 4320 for SAIC.

Completed summerization and repairs to swamp coolers at Building 4838, made repairs to air compressor, and changed filters in gas pumps for Fleet Operations.

Made repairs to air-conditioning unit and completed summerization of swamp coolers in Building 4222.

Provided janitorial support to YMP facilities.

Completed summerization of swamp cooler at J-11 pump house.

Provided water from Wells J-12 and J-13.

Updated phase-failure controls on submersible pump controllers for Wells J-12 and J-13 from Hatch to the more reliable Allen Bradley units.

Service Station, Building 4838, was activated this month and will be operated by Fleet Operations personnel.

Support has been provided to Centel Communications Systems to activate additional cables in Area 25 for requested telecommunications service.

PROJECT STATUS REPORT  
APRIL 1989  
Page 4

WBS: 1.2.3.2.4.1.R  
Project Title: Prototype Geologic Testing  
Coordinator: L. P. Atkinson

The objective of this task is to provide construction support to principal investigators for Geologic Prototype Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

No activity this reporting period.

Shaft Wall Mapping at Fran Ridge is on hold pending receipt of air quality permit from the State.

WBS: 1.2.3.3.6.1.R  
Project Title: Prototype Hydrologic Testing  
Coordinator: L. P. Atkinson

The objective of this task is to provide construction support to principal investigators for Hydrologic Prototype Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: Drill Hole Instrumentation

Supported experimenters collecting data.

Task: Wet and Dry Drilling

Supported experimenters collecting data.

Task: Optimum Rubble Size

Set up the Longyear 38 drill rig.

Task: Rubble Coring

Completed all blast rounds and sampling exercises.

Task: Perched Water

Continued material procurement.

Task: Intact Fracture

No activity this reporting period.

PROJECT STATUS REPORT  
APRIL 1989  
Page 5

WBS: 1.2.3.3.7.R  
Project Title: Hydrology Field Support  
Coordinator: S. L. Hughes

The objective of this task is to provide logistical support to USGS.

ACTIVITIES AND ACCOMPLISHMENTS:

The USGS has been issued 20 Net 21 hand held radios.

A Net 21 remote was installed at Building 4215.

WBS: 1.2.3.4.3.1.R  
Project Title: Prototype Geochemical Testing  
Coordinator: L. P. Atkinson

The objective of this task is to provide construction support to principal investigators for Prototype Geochemical Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: Diffusion Test

Continued support to experimenters collecting data.

WBS: 1.2.3.5.1.R  
Project Title: Sample Management Facility  
Coordinator: S. L. Hughes, E. A. Kelemen

The objective of this task is to provide general support to project participants with regard to the Sample Management Facility (SMF).

ACTIVITIES AND ACCOMPLISHMENTS:

Task: SMF Maintenance and Operational Support

Provided personnel for operational support.

Commenced installation of light fixtures for microscope tables.

Reviewed and submitted blueprints for SAIC Muck Sampling bins to Engineering Department.

PROJECT STATUS REPORT  
APRIL 1989  
Page 6

WBS: 1.2.3.5.2.R  
Project Title: Drilling/Site Support  
Coordinator: J. C. McDaniel

The objective of this task is to provide drilling and site support to project participants in vicinity of Yucca Mountain.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: Common-To Support

Provided electrical and maintenance support on active monitoring hole, No. USW UZ1.

The portable telephone system at Forty-Mile Canyon is being maintained for proper operation.

Took NRC representatives, Paul Prestholt and John Peshel, on a tour of Area 25 Subdock.

Discussed several proposed filing systems for the Well History files with Dave Warriner of REECO Local Records Center.

Received 1962 Ford Cab-Over Fuel Truck at Area 25 Subdock.

Prepared a list of essential needs and requirements for the YMP Surface Drilling.

Task: Prototype Drilling

A pipe thickness gauge was obtained to determine weights of casing and drill rods located in the Subdock Yard.

Accomplished work request to authorize Operations Equipment to service two vacuum units, Number 160019 and 160010, in Area 25 Subdock. Number 160019 may be sent to Salt Lake City, Utah, for Phase I with Lang about April 18 or 19, 1989.

Lang would like to have the Vacuum System in Salt Lake City, Utah, by May 4, 1989. Discussed arrangements for shipping of the Vacuum System with REECO Traffic. Prepared a proposed drilling schedule for the upcoming Prototype Drilling and Coring Program for Salt Lake City, Utah.

On April 13, 1989, Lang Exploratory Drilling (Lang) was notified to defer mobilization to the Nevada Test Site (NTS) until further directions were provided. Pending further instructions, they were directed to remain in a stand-by status effective April 17, 1989 with the capability to mobilize to NTS within two weeks after being notified.

**Planned Work:**

Direct Lang to perform Phase I Unsaturated Zone Drilling and Coring Equipment Development at a subcontractor selected site near Tooele, Utah. This action will be prior to the initiation of the planned prototype drilling activity at the NTS.

F&S, SAIC, Lang Exploratory Drilling, and REECO personnel met regarding offsite drilling in Utah. Both technical and cost concepts were discussed. Agreement was reached on technical data, however, the cost proposal will be reworked by Lang for resubmission on Monday, April 24, 1989.

Procurement personnel met with F&S to discuss F&S estimates for offsite drilling in Utah. F&S requested to release Lang's proposed cost to them. The request was denied on the basis that the F&S estimate must be independent.

Procurement and Drilling personnel continue discussions on the subcontract with Lang Exploratory Drilling. A copy of the proposed wording change on the Letter of Subcontract was given to YMP Drilling Section for review.

**Task: Drill Rig Procurement**

F&S is preparing specifications and performance criteria to be used in preparing procurement package.

**Task: USGS Prototype IDAS Support**

Delivered 10 KW generator to UZ4. Started and checked out backup generator on Shelter No. 2. Connected main generator to Shelter No. 2. Located and repaired freon leak in chiller system. Cleaned and restarted bound up pump. Started and adjusted chiller system. Installed eye wash stands in Shelter Nos. 1 and 2. Relocated fan coil transformer in IDAS Room of Shelter No. 2 for clearance of terminating cabinet. Delivered 14 pallets of sandbags to UZ4 to cover cables in lieu of trenching.

Completed wiring and patch panels in Building 4215.

Installed Codex data-sharing devices at 4215 and Fran Ridge.

Installed Emulex DHV-11 asynchronous 16-post device in ARC-2.

Installed RD 52 hard drive and RDQX3 controller in Watchdog computer.

Installed DMV-11 communications cards in UZ-1 and ARC-2. All five computers are now up and running on DECnet Network.

PROJECT STATUS REPORT

APRIL 1989

Page 8

WBS: 1.2.4.2.1.4.R

Project Title: Prototype Geomechanical Testing

Coordinator: L. P. Atkinson

The objective of this task is to provide construction support to principal investigators for Prototype Geomechanical Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: In Situ Stress Test

Mobilized Longyear 38 drill to the Demonstration Drift and began drilling dry NQ Holes. Mobilized the Longyear 38 drill to the Lazer Drift and began drilling wet NQ Holes.

Continued modification of Draft Operational Plans for the Prototype In Situ Stress Test at G-Tunnel.

WBS: 1.2.6.1.1.R

Project Title: Exploratory Shaft Management Planning  
& Design Review

Coordinator: D. L. Koss

The objective of this task is to provide construction support to principal investigators for Prototype Geomechanical Tests.

ACTIVITIES AND ACCOMPLISHMENTS:

Submitted field radio requirements and number of personnel for September 1989 through October 1990.

Reviewed and revised the Construction Engineering Organization Chart and Staffing Plan Schedule.

Reviewed Title II Construction Schedule (sinking below 100 feet) and updated Foreshaft Construction Schedule.

Commenced review of galloway design for ES-1 and ES-2 Shafts.

Reviewed Job Safety Analysis with the YMP Safety Engineer.

A Safety Professional and an Engineer assigned to the YMP Division initiated the development of Job Safety Analysis (JSAs) for this project. In accordance with Occupational Safety Code A-3, JSAs will be prepared for operations where written procedures will be required due to inherent hazards involved or due to the need for controls or special precautions.

Continued work on Surface Construction Schedule revisions.  
Developed layouts for ESF shops and warehouse.

Reviewed requests for rentals from Fleet Operations and Operations Equipment.

Assigned delivery dates for vehicles and equipment to be used for construction at the ESF Site.

Field trip to YMP ESF Site with W. A. Murphy of Atlas Powder, a representative of Atlas Distributing.

The following Quality Implementing Procedures were completed and submitted to the PQAM and TPO for approval:

- o QP 3.2 - Change Control Procedure
- o QP 3.3 - Technical Assessment Review Procedure
- o QP 5.2 - Preparation, Issue, and Control of Work Procedures

Completed review of the following APA's and submitted comments to SAIC:

- o APQ 5.4 - Assignment of Quality Assurance Levels
- o APQ 5.17 - Application of Graded Quality Assurance
- o APQ 6.8 - Identification of Items Important to Waste Isolation
- o APQ 6.9 - Identification of Items and Activities Subject to the Quality Level Assignment Process
- o APQ 6.10 - Identification of Items Important to Safety
- o Identification of Activities to be Placed on the Quality Activities List

The following meetings were attended during the period:

1. ESF Planning Meetings.
2. F&S Construction Equipment Design Input.
3. Site Characterization for Area 25.
4. Budget Validation for ESF.
5. QALA and QA Grading with SAIC, F&S, and H&N.



6. TPO Meetings.
7. Readiness Review Meetings.
8. Shaft Equipment Design Input Format.
9. Nuclear Waste Technical Review Board Meeting with SAIC.
10. Prototype Testing Progress Meeting.
11. Annual Institute of Shaft Drilling Technology Meeting.
12. Meeting with SAIC Audit Team to disposition their surveillance comments on REECO QP 5.2, "Preparation, Issue, and Control of Work Procedures."

WBS: 1.2.7.2.1.R  
Project Title: Climax  
Coordinator: K. K. Van Cleave

The objective of this task is to provide tour support, maintenance, and inspection of the Climax Facilities in Area 15.

**ACTIVITIES AND ACCOMPLISHMENTS:**

The following tours were conducted:

<u>DATE</u>	<u>NUMBER OF PERSONS</u>	<u>ORGANIZATION</u>
03/22/89	37	Elementary Teachers
03/23/89	41	Pahrump, NV Residents
03/24/89	29	USGS Employees and Dependents
03/24/89	34	Southern Nevada Residents
03/28/89	32	Mc Clelland AFB Personnel
03/29/89	26	Las Vegas Chamber of Commerce
03/29/89	36	US Council for Energy Awareness
03/30/89	14	Major General B. Clark and Staff
04/03/89	19	Friends of St. Jude Ranch
04/04/89	33	Washington, UT Residents
04/04/89	2	H&N
04/04/89	36	Las Vegas, NV Senior Citizens
04/04/89	4	DOE
04/06/89	4	Waste Management, West Vallen, NY
04/10/89	22	KVBC-TV, LV, NV Staff & Dependents
04/17/89	4	US Congress, Office of Technological Assessment
04/18/89	33	Dixie College Staff, St. George, UT
04/18/89	18	Classification Symposium

Climax Tours (continued):

04/19/89	45	Knudson JHS Staff, Las Vegas, NV
04/19/89	7	United Kingdom, Ministry of Defense
04/20/89	25	North Las Vegas, Chamber of Commerce

The monthly shaft inspection was performed on April 20, 1989. Continued reinforcing selected studdles and replacing shaft lagging. Completed installing wire lamp guards. Completed installation of emergency communication line. Refurbished power circuits in the Dog House. Supported linemen sampling surface transformers for PCBs.

Design Criteria being examined to establish the most cost-effective design to upgrade the electrical equipment for the Climax facility.

WBS: 1.2.7.2.3.R  
Project Title: G-Tunnel  
Coordinator: L. P. Atkinson

The objective of this task is to provide G-Tunnel support for routine mine plant operations, facility tours, and drilling/construction support associated with Tuff Rock Properties Field Testing.

ACTIVITIES AND ACCOMPLISHMENTS:

Provided support for the following tours:

<u>DATE</u>	<u>NUMBER OF PERSONS</u>	<u>ORGANIZATION</u>
03/28/89	10	Westinghouse Electric Corporation
04/04/89	5	DOE/YMP
04/11/89	5	Waste Management
04/12/89	4	SNLA
04/18/89	20	Classification Symposium

Attended meetings on April 13, and April 27, 1989 regarding Prototype Operational plans.

Continued change of personnel certifications to qualifications. Revised and updated the list of Technical Inspectors.

Updated core bit inventory for the drilling and continued to compile a core bit data base.

Task: Equipment Evaluation

Supported experimenters collecting data.

WBS: 1.2.9.1.1.R  
Project Title: Management and Integration

The objective of this task is to provide coordination of and compliance with all Yucca Mountain Project activities and requirements.

ACTIVITIES AND ACCOMPLISHMENTS:

Task: Project Management  
Coordinator: R. F. Pritchett

Attended a two day DOE briefing regarding the Nuclear Waste Technical Review Panel.

A GSA vehicle was received for use by REECo personnel in the YMP Division on project related business. The vehicle's use will be controlled and coordinated in the Division Office.

A draft of the Project Management Plan was submitted to writers. All elements of the Plan have now been addressed and are ready for review and editing. A two-week period has been designated for this exercise before the final draft is submitted to the Division Manager for revision or approval.

Attended the weekly Technical Project Officer (TPO) Meetings, a DOE/NVO meeting on environment, safety and health (ESH), and meetings regarding the FY 1991 WAS/FWP budget submittal.

Two internal Division procedures regarding personnel are being developed and will be submitted in draft form by May 5, 1989.

The Division Organization Statement is complete and ready for submittal. The individual Department Organization Statements are complete in draft form and will be given to the Division Manager for approval by mid-May.

A letter of response was sent to DOE/YMP in answer to their request for a personnel head count and radio communication requirements for REECo/YMP personnel at the NTS in FY 1990.

Task: Budgets  
Coordinator: S. L. Hughes

- Prepared monthly cost and status reports.
- Processed and submitted to procurement a capital equipment order for an EG&G vehicle.
- Processed work order for prototype drilling subcontract to drill USW UZP-1 and UZP-2.
- Turned over logistical support functions (phones and facilities maintenance) to Logistical Support Department.
- Attended meetings on development of alternate case budget scenario with DOE/YMP and other participants. Provided Field Operations Center budget submittal comparisons for FY90 WAS and FY91 WAS/FWP for 1990 and 1991. Started working on DOE action items for alternate case.
- Worked on projected underrun and current full-time equivalent (FTE) information for Project Office.
- Met with Vince Iorii, DOE/YMP, Wynn Wilson, DOE/YMP, R. F. Pritchett, REECo and R. J. Sweeney, SAIC, on Field Operations Center cost estimates to be submitted in WBS element 1.2.7 for FY90 and FY91.
- Met with R. F. Pritchett, REECo, R. E. Gates and A. M. Sastry, MACTEC, regarding funding for MACTEC support to REECo. Drafted a letter explaining support to the Project Office.
- Requested preparation of a purchase requisition by the REECo control department for a USGS capital funded fire proof safe.
- Provided estimates to the Project Office on miles of existing roads in Area 25 and the Yucca Mountain vicinity, and estimate of new roads projected for construction at the Exploratory Shaft Facility and drilling sites.
- Attended meeting with Raye Ritchey, USGS and Larry Hayes, USGS, to discuss capital items REECo would purchase once the Project Office has approved QA levels.
- Attended meetings with REECo YMP Project Control, REECo Construction Department, and SAIC personnel to discuss requirements for ESF budget validation May 2 through May 3, 1989. Prepared information for NTS wage rate presentation explaining load factors, etc. Prepared slides and other materials to be used in the validation meetings.

Task: Logistical Support  
Coordinator: S. O. Straub

The Logistical Support Senior Staff Assistant has been designated as the point of contact for all REECo telephone systems and services associated with YMP. In addition, she will be the building/facility safety representative.

Attended a Building Safety Committee Meeting. Most of the YMP participants had a representative present. REECo will prepare an Emergency Evacuation Plan for the Eleventh Floor of the Valley Bank Center.

A letter was written to DOE/YMP requesting assistance in obtaining authorization for establishment of a warehouse facility in Area 25. A sketch was attached to depict the required features of the warehouse.

A meeting was attended to discuss AP 4.1Q with SAIC, MACTEC, Project Office, SNL and LANL. All review comments on this document were resolved.

Interfacing between YMP Property Management and the REECo Property System was discussed with REECo Property Management personnel. YMP property will be handled and processed within the existing Property Management System and according to established guidelines.

The following items were received and assigned to REECo from the Bermuda Warehouse: one 25" color television set; four file cabinets; one storage cabinet; one movie projector; one overhead projector; one viewer with screen and cart; two bookcases; three refrigerators for the Area 25 Subdock/Drilling operations.

Task: Training  
Coordinator: M. C. Barker

The YMP Training Administrator met with REECo Training personnel to discuss Qualification Records for YMP Division employees. A lack of consistency in the methods of formatting these records was discovered. Strategies for achieving the conformity needed to comply with QP 2.2 are being developed.

Obtained attendance records from the YMP Training Center and will compile statistics on the REECo training and indoctrination completed to date. A meeting with the SAIC Training Manager was initiated to establish the number, type, and required attendance for courses offered at the YMP Training Center.

A preliminary lesson plan has been developed for a course entitled "Training the Occasional Trainer", to assist with instructor qualification.

Working with MACTEC to discuss the training related record keeping and monitoring requirements of the Project and strategies for automating it.

Task: Information Management Office  
Coordinator: M. C. Thompson

The REECO YMP Records Management manual has been delayed due to revision of AP1.7Q dated April 19, 1989. TPO-4 Records Management Procedure will be revised to include changes to AP1.7Q.

**SIGNIFICANT ACCOMPLISHMENTS:**

Documents Processed In	361
Documents Processed Out	86
Action Items In	11
Action Items Out	46
Fax Copies Received	44
Fax Copies Sent	49
Xerox Copies Made	60,049

Task: Project Support and Documentation Office, Clerical  
Coordinator: N. J. Snyder

The Technical Branch Procedure for the Project Office Local Records Center (LRC) is being reviewed for final copy by the YMP Support Branch, Yucca Mountain Project Office (Project Office), and Science Applications International Corporation.

The YMP Support Branch Work Procedures have been completed and sent to M. C. Thompson for final approval.

DOE/HQ conducted a Quality Assurance Surveillance on the Project Office LRC. HQ was pleased with the LRC's records processing and retrieval system.

The LRC received 40 rolls of microfilm of Project Office records from Holmes and Narver.

Met with Project Office Training Coordinator, to set up a required training and reading assignment schedule for the YMP Support Branch.

Processing Incoming and Outgoing correspondence, Reproduction, and Facsimiles - A. K. Sacco/Administrative Records Coordinator

Incoming Correspondence	1,318
New Action Items	285
Incoming and Outgoing Action Items	1,436
Outgoing Correspondence Distribution Count	9,280

Overnight Mail Sent

Airborne Express	53
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FAX's

Pages Received	1,594
Pages Sent	1,644
Recipients	362

Xerox Copies Made 294,039 pages

Project Support and Documentation Office, Clerical (continued)  
Records Center - D. A. Thomure Chief Clerk

Filed	3,721
Updated	3,674
Added	41
Document Requests	228
Documents Delivered	150
Queries	2,432
Miscellaneous	94,618
	-----
Total	104,864 functions

Microfilming

Boxes	7
Documents	1,144
Pages	21,277

Word Processing - B. Wheeler/Chief Clerk

Outgoing Letters with Enclosures Typed	631
Miscellaneous Documents Typed	522 pages

Task: Project Support and Documentation Office -  
Technical Writer  
Coordinator: J. J. Lorenz

Reviewed and facilitated the programmatic and policy review of the following draft technical documents:

<u>Reports</u>	<u>Papers</u>	<u>Journal</u> <u>Articles</u>	<u>Total</u> <u>Abstracts</u>	<u>Total</u> <u>Documents</u>	<u>Pages</u>
23	10	0	14	47	1,998

Continued to track and prepare approved letters for draft documents in the review cycle.

J. J. Lorenz received a letter from J. C. Bresee, Acting Associate Director for Program Administration and Resource Management, OCRWM, DOE/HQ, thanking him for promptly obtaining an aerial photograph of Yucca Mountain Mr. Bresee needed for facilities layout.

Project Support and Documentation Office - Technical Writer (continued)  
Coordinator: J. J. Lorenz

Met with DOE/YMP and DOE/HQ managers to discuss how to compile a bibliography for the Site Characterization Plan (SCP) program reports which will be published every six months.

J. J. Lorenz and D. W. Brickey, EG&G Energy Measurements, Inc., set up and staffed a Yucca Mountain Project display at the Joint Meeting of the American Society of Photogrammetrists and American Conference of Surveys and Mapping in Baltimore, MD, on April 2-7, 1989. About 6,000 professionals attended the meeting and about 1 in 12 attendees picked up handouts and/or asked questions about the Project. Several compliments were received on the exhibit developed by J. J. Lorenz.

Updated the Yucca Mountain Project Distribution List and Bibliography Distribution List.

Ordered large aerial photographs for DOE/HQ via Mike Cline, Weston.

Responded to a Bechtel request for Project Bibliography.

Discussed the NNW bibliography data base and search strategies with T. W. Bjerstedt, DOE/YMP, and A. T. Tamura, OSTI.

Wrote an informal 3-page letter to Dick Hill, DOE/HQ, and Jim Danna, Weston, providing additional information on the YMP Bibliography and NNW data base maintained for the Project at OSTI. The informal letter was sent by electronic mail.

Wrote a letter to Bob Loux, Executive Director, Nuclear Waste Project Office, State of Nevada, for Carl Gertz, Project Manager, DOE/YMP, regarding State of Nevada sponsored reports on the YMP and providing an updated distribution list.

Participated in a meeting with Claudia Newbury and Bill Hughes, DOE/HQ; Elaine Ezra and Larry Tinney, EG&G/EM, and Sherman Wu, USGS/Flagstaff. The purpose of the meeting was to develop long-term and short-term detailed topographic mapping plans, work plans for photogrammetry, and orthophoto project.

J. J. Lorenz and R. L. Steele returned from San Antonio, Texas, after a successful meeting of the American Association of Petroleum Geologists. Of the 6,650 attendees, about 1,000 were attracted to the Yucca Mountain Project technical information display manned by J. J. Lorenz, R. L. Steele, REECo; B. Schuck, SNL; and Carol Rehkop, DOE/YMP. J. J. Lorenz wrote a summary about the response to the YMP display.



Task: Supply and Property Management  
Coordinator: O. L. Gorby

ACTIVITIES AND ACCOMPLISHMENTS:

Warehousing Activity

Monthly Issue Line Items	776	
Total Units	132,734	
Total Dollars		\$77,999.29
Monthly Receiving Line Items	237	
Total Units	39,672	
Total Dollars		\$77,667.28

Property Accountability Records

As of April 28, 1989, the Yucca Mountain Project (YMP) had 377 capital assets with an acquisition cost of \$13,578,976.25 and 876 non-capital assets with an acquisition cost of \$1,483,297.63.

There are 25 outstanding purchase orders valued at \$2,200,930.25 and four outstanding purchase orders for excess material with, as yet, an undetermined acquisition cost.

There is a grand total of 1282 YMP related property items with an acquisition cost of \$17,263,204.13. Not including the above mentioned undetermined purchase orders.

General

There was a total of 3 Transmittal Forms forwarded to the Local Records Center.

Task: SCP Printing and Distribution  
Coordinator: M. C. Thompson

Twenty-eight copies of the Site Characterization Plan (SCP) were distributed during April. A weekly report and updated mailing lists were sent to the DOE Project Office accounting for the 1,203 copies distributed.

Discussed the procurement of 5,000 copies of the Site Characterization Plan overview with J. R. Dyer, DOE/YMP, and S. A. Ziehm, REECO. DOE/HQ will provide the copies and the REECO Warehouse will store them. The copies will be used as handouts in the YMP Technical Information

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display.

Task: Procurement  
Coordinator: D. M. Burnett

From March 27, 1989, through April 23, 1989, 167 purchase orders were written by Procurement with 106 having no quality level and 61 with a rating of Quality Level III.

Buyer's Handbook Procedure BH-6221A has been approved by Daryl B. Morse, DOE, on April 19, 1989.

Task: NWF Property Transfer  
Coordinators: R. L. Broadbent, K. R. Harms

Work continues at the Las Vegas warehouse and the Area 25 Subdock in receiving, inventorying, and processing documentation on NWF equipment being shipped to Nevada for use on the Yucca Mountain Project. At the direction of the Project Office, items are being issued to participants.

Task: Telecommunications Support  
Coordinator: L. G. Miller

ACTIVITIES AND ACCOMPLISHMENTS:

Continued to process telephone orders, reviewing those orders for authorized signature and proper work order number. Processed 18 requests for telecommunications service (SAIC - 7; YMPO - 4; REECO - 5; and H&N - 2).

Installation of a 56 Kbps circuit between 101 Convention Center Drive and Washington, D.C. is in progress at this time. We anticipate a turn-up by mid May.

WBS: 1.2.9.1.4.R  
Project Title: Records Management  
Coordinators: M. C. Thompson, D. R. Warriner

The objective of this task is to provide the Local Records Center (LRC) portion of the Yucca Mountain Project Information Management System (IMS) that will meet the requirements of YMP/88-9.

**ACTIVITIES AND ACCOMPLISHMENTS:**

Final copies of work procedures for record processing and retrieval and distribution of the Site Characterization Plan were completed and transmitted to the YMP Information Management Office.

Revision 1 of AP-1.7Q, Records Management, was issued April 19, 1989. This new procedure was compared to Revision 0 and evaluated as to its impact on REECo's records management program. TPO-4 and the Records Management Manual are currently being revised to be in compliance with the new revision.

LRC staff attended the following training/meetings:

Introduction to Quality Assurance  
Records Information System (RIS), formerly known as the  
Automated Records System (ARS), Data Base Searching

**Records Received:** Records have been received from the Procurement Department, REECo YMP Division, Engineering, and Supply and Property Department.

**Microfilm:** Forty reels of microfilm of YMP records were received from Holmes & Narver. This is the first microfilm received since October 1, 1988. None of the reels contain any REECo records, however.

**Litigation Discovery Records Processed:** Twenty-five record packages totaling 4,827 pages of Drilling Department records were transmitted to the Central Records Facility.

**Current Records Processed:** A combination of 209 records and record packages totaling 3,147 pages of current records were sent to the Central Records Facility.

WBS: 1.2.9.2.R  
Project Title: Project Control  
Coordinator: B. R. Gardella

#### ACTIVITIES AND ACCOMPLISHMENTS:

Met with SAIC on the Project Integrated Cost Control Manual; continued development of a Material Control Manual; developed criteria for the ESF Warehouse; assisted in the development of a YMP Receiving Warehouse Plan in Area 25; reviewed the Project Management Plan, and met with Microcomputer Support personnel to discuss the advantages of using a computer network system to meet automated scheduling and costing requirements within the Project.

Continuing to evaluate estimating databases. One of the systems under consideration is "Timberline". The Timberline support people are developing an example database for evaluation.

Preparing the REECO presentation on ESF Budget Validation to be given on May 2 and May 3, 1989.

#### Project Scheduling

Completed "what if" scenarios to support expected FY 1990 budget constraints in area of ESF support; completed resource loading of the ESF Site Preparation Schedule, and completed the development of the Long Range Planning Task description sheets for the ESF Site Preparation Network.

Preparing an ESF Title II design output schedule, which will be updated as the A/E's provide criteria.

A meeting with SAIC was held to plan a schedule exercise for the start of construction on the initial package and start of the collar.

#### Project Estimating

Completed input to the REECO estimating system to allow analysis of capabilities, and provided personnel representing Timberline software with a copy of the data base to determine if it could be utilized.

Completed a cost estimate for the ESF Site Preparation Network.

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WBS: 1.2.9.3.R

Project Title: Quality Assurance

Coordinator: M. A. Fox

ACTIVITIES AND ACCOMPLISHMENTS:

Reviewed and approved 141 purchase requisitions.

Completed the revision on 19 QA procedures.

Attended meeting with DOE/SAIC to discuss Audit 89-05 of REECo to be performed in June.

Attended meeting with Ken Wolverton of Harza Engineering to discuss the forthcoming surveillance of REECo.

Met with Training Administrator to discuss requirements of training program.

Met with Project Office Surveillance team to resolve procedure comments and outstanding SRDs of Audit 88-07.

Attended Project Office meeting on APQ 5.17, Graded Quality Assurance, and its application to REECo.

Project Participant Interface meeting QALA and Grading for implementation of NUREG 1318, discussed status and methods for grading YMP activities, and interfacing with SAIC and A&E.

Issued close out letter on ESF Readiness Review - all identified action items for REECo are closed.

Developed ten internal office procedures in draft form.

Distributed new and revised QPs to controlled distribution. Also distributed TPO-3 to controlled distribution.

Reviewed, compared, and researched each procedure against comments received from the DOE surveillance team in order to develop responses for their comments on QA procedures. Attended Procedure Review Comment Resolution meeting.

Reviewed and provided comments on Department's Inspection and Test personnel certifications. Also reviewed personnel certifications from Power and Communications department and DOD/FOD department. All of the certifications were rejected and returned to the departments with reasons stated.

Training Requirement Forms were issued to all REECo/YMP departments to be used to determine the training needs of their personnel. All required reading is to be completed by May 19, 1989, and the forms returned to the Training Administrator.

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**PLANNED WORK:**

Complete revision and development of remaining Yucca Mountain Project Quality Procedures in order to comply with Project Office Surveillance Team's comments.

Continue to develop and revise forms required for Quality Procedures.

Will provide training sessions on QP 2.4, Indoctrination and Training, to department heads to assist them in determining their training requirements.

Continue developing internal office procedures.

Continue general QA support to REECo/YMP activities.

**WBS:** 1.2.10.1.R

Project Title: State of Nevada Support  
Coordinator: R. F. Pritchett

The objective of this task is to provide support to the State of Nevada and their contractors during field investigations at the direction of DOE/YMP.

**ACTIVITIES AND ACCOMPLISHMENTS:**

No activity this reporting period.



# Reynolds Electrical & Engineering Co., Inc.

Post Office Box 98521 • Las Vegas, NV 89193-8521

IN REPLY REFER TO:

510-01-287

July 14, 1989

WBS 1.2.9.1.R

QA: N/A

Carl P. Gertz, Project Manager  
Yucca Mountain Project Office  
Nevada Operations Office  
U.S. Department of Energy  
Post Office Box 98518  
Las Vegas, NV 89193-8518

ATTENTION: W. R. Dixon, Director  
Project & Operations Control Division

## YUCCA MOUNTAIN PROJECT STATUS REPORT

Attached is the June Project Status Report for REECO's participation in the Yucca Mountain Project.

If further information is required, please contact Sandra L. Hughes at 794-7192.

*R F Pritchett*

R. F. Pritchett, Manager  
Yucca Mountain Project Division  
YMP Technical Project Officer

RFP:SLH:8:pjw

Enclosure  
As stated

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JUL 18 1989

Carl P. Gertz  
510-01-287  
July 14, 1989  
Page 2

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Executive Office, M/S 555  
L. M. Smith, DOE/NV, M/S 505  
M. E. Anderson, DOE/YMP, M/S 523  
V. F. Iorii, DOE/YMP, M/S 523  
C. R. Fox, REECo, M/S 760  
M. A. Fox, REECo, M/S 408  
B. R. Gardella, REECo, M/S 408  
D. L. Koss, REECo, M/S 408  
R. B. Land, REECo, M/S 585  
K. L. Limon, REECo, M/S 408  
C. J. Mason, REECo, M/S 408  
S. O. Straub, REECo, M/S 408  
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R. G. Helms, SAIC, M/S 517  
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B. L. McKinnon, SAIC, M/S 517





**REYNOLDS ELECTRICAL & ENGINEERING CO., INC.  
(REECO)**

**YUCCA MOUNTAIN PROJECT (YMP) STATUS REPORT**

**JUNE 1989**

**WBS 1.2.3.5**

**Task: Prototype Drilling**

Phase 1A of the Prototype Drilling and Coring Program at Tooele, Utah was completed on June 8, 1989. A total depth of 312' was reached on the 12" hole.

The following methods of coring were tested:

1. Blown core, reverse circulation
2. Vacuum wire line coring
3. Standard wire line coring

The blown core method has been moderately successful. Bit modification attempting to achieve increased lifting power has been, to date, unfavorable.

Vacuum wire line coring continues to present problems mainly caused by insufficient cleaning of cuttings from around the inner core barrel. Planned modifications to this system are expected to enhance its capability.

Standard wire line coring has proved successful with core recovery of 90 to 100 percent.

The plan is to continue testing equipment and methods of coring at another site in Southern Utah.

Lang Exploratory Drilling has moved the LM-120 rig and related equipment to their locality in Salt Lake City in preparation to begin Phase 1B. Phase 1B will consist of drilling rig and associated equipment modifications that are needed to enhance, expedite, and improve borehole drilling and coring methods.

**Task: LM-250 Drill Rig Procurement (Capital)**

On June 22, 1989, the Fenix and Scisson of Nevada (FSN) draft specifications and Sole Source Justification were received and routed for technical reviews by REECO Operations Equipment, Equipment Engineering, Industrial Hygiene, Safety, and YMP Quality Assurance personnel.

At the request of the DOE Project Manager, REECO prepared a procurement schedule outlining steps, durations and descriptions of procedures required to finalize and award the contract for the drill rig. This schedule was presented on June 29, 1989 to the Project Manager and other participants, and estimated an award date of November 27, 1989. Vendor will require a six month fabrication period after receipt of contract. This reflects a delivery date



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June 1989  
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Task: LM-250 Drill Rig Procurement (Capital)  
(Continued)

of late May 1990 which would impact current project schedules. The Project Manager stressed the importance of compressing this schedule wherever possible to reduce and hopefully eliminate schedule impacts to the Surface Based Drilling Program.

Dedicated members of the Technical Review Committee were identified by their responsible organizations and will be kept apprised of their requirements.

All specification and Sole Source Justification review comments were provided to FSN. Revisions will be made and the final review is scheduled for July 12, 1989.

The REECo YMP Procurement Department has begun preparatory work on the Request for Proposal (RFP) bid package to be sent to vendor.

WBS 1.2.9

Task: Site Characterization Plan (SCP) Distribution

Twelve SCP sets were distributed and weekly reports submitted to the Project Office.

WBS 1.2.9.3

Task: Quality Assurance

Met with DOE/YMP Audit Team Leader and Project Office representatives to discuss postponement of Audit 89-05 of REECo.

General

REECo has no reportable Level I or Level II Milestone activities at this time.



# Reynolds Electrical & Engineering Co., Inc.

Post Office Box 98521 • Las Vegas, NV 89193-8521

IN REPLY REFER TO

510-01-343

August 3, 1989

WBS 1.2.9.1.R

QA: N/A

Carl P. Gertz, Project Manager  
Yucca Mountain Project Office  
Nevada Operations Office  
U.S. Department of Energy  
Post Office Box 98518  
Las Vegas, NV 89193-8518

ATTENTION: W. R. Dixon, Director  
Project & Operations Control Division

## YUCCA MOUNTAIN PROJECT STATUS REPORT

Attached is the July Project Status Report for REECO's participation in the Yucca Mountain Project.

If further information is required, please contact Sandra L. Hughes at 794-7192.

*Bruce Gardella For*

R. F. Pritchett, Manager  
Yucca Mountain Project Division  
YMP Technical Project Officer

RFP:SLH:8:pjw

Enclosure  
As stated

cy: See page 2

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August 3, 1989  
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B. L. McKinnon, SAIC, M/S 517



**REYNOLDS ELECTRICAL & ENGINEERING CO., INC.  
(REECO)**

**YUCCA MOUNTAIN PROJECT (YMP) STATUS REPORT**

**JULY 1989**

**WASTE PACKAGE (1.2.2)**

**WBS 1.2.2.2**

**Task: Engineered Barrier System (EBS) Prototype Testing**

Support in G-Tunnel included:

1. Finished using the air injection equipment and removed packer.
2. Drilled four holes and installed lead pipe using HLNCC grout. Finished moisture density probe and stored equipment.
3. Supported experimenters during data collection.

Issued the Prototype Testing Operational Drilling and Mining Plan for the Engineered Barrier Overcore Test for review and comment by the Principal Investigator (PI) and REECO/G-Tunnel personnel.

**SITE (1.2.3)**

**WBS 1.2.3.2**

**Task: Prototype Geologic Testing**

Issued the Prototype Testing Operational Drilling and Mining Plan for the Fran Ridge Shaft Wall Mapping Test for review and comment by the PIs and REECO/G-Tunnel personnel.

Work at Fran Ridge is currently on hold pending receipt of required environmental permits from the State of Nevada.

**WBS 1.2.3.3**

**Task: Prototype Hydrologic Testing**

Issued the Prototype Testing Operational Drilling and Mining Plans for review and comment by the PIs and REECO/G-Tunnel personnel on the following:

**Blast Effects/Blast Characterization Tests**  
**Radial Intact Fracture Test**  
**Axial Intact Fracture Test**  
**Optimal Rubble Size Test**

G-Tunnel work included:

**Drill Hole Instrumentation Test - Supported experimenters collecting data.**

**Wet and Dry Drilling Test - Installed instrumentation and injected water into the dry holes for absorption test. Supported data collection.**

Perched Water Test - Instrumentation installed in holes PW-1 and PW-2. Attempted to salvage hole PW-3, which continues to collapse in the rubble zone. Rigged up and completed drilling hole PW-4, located adjacent to, and replacing hole PW-3. Hole caving continues to be a problem.

Intact Fracture Test - Mobilized drill rig and are currently drilling for radial fracture samples.

Optimal Rubble Size Test - Mobilized the drill rig and completed drilling the HQ size A hole. Grouting of the instrument package remains.

WBS 1.2.3.4

Task: Prototype Geochemical Testing

G-Tunnel work included:

Diffusion Test - Constructed a plywood and brattice cloth shed with a sandbag dam around the experiment for protection. Continued data collection support.

WBS 1.2.3.5

Task: Prototype Drilling (Subcontract)

A meeting was held on July 10, 1989 with Lang Exploratory Drilling in Salt Lake City, Utah. The meeting was to discuss Phase 1B; modifications to the Government-furnished vacuum system, Lang's LM-120 drill rig and associated equipment to improve borehole drilling and coring. Phase 1B was completed on July 21, 1989.

On July 18, 1989, Lang was given Notice to Proceed with Phase 1C at a drill site selected near Milford, Utah.

Phase 1C consists of drilling and coring an 8" and 12" hole on Frisco Mining property near Milford. Drilling operations began on July 25, 1989. Water was encountered while hammer drilling at a depth of 110'. Attempts to plug back with cement and re-drill at 124', and again at 222', proved unsuccessful. A total depth of 262' was reached. The hole was producing 80 gallons of water per minute. By consensus of the participants, the hole was abandoned on July 27, 1989. Another drill site was prepared approximately one quarter mile away. The LM-120 drill rig has been moved to the new location and surface casing has been set. Drilling operations should begin July 31, 1989.

A rig safety inspection was performed July 26 and 27, 1989, by REECO Safety on the LM-120 drill rig at the drill site. The initial report indicates the inspection went very well.

Task: LM-250 Drill Rig Procurement (Capital)

Fenix and Scisson of Nevada (FSN) Specifications, Revision 2, and revised sole source justification were received with all review comments incorporated. These revised documents were sent to all technical review committee members for final review on July 10, 1989.

A meeting of the review committee was held on July 12 and all approval signatures were obtained on the purchase requisition. At the same meeting, REECO/YMP Procurement personnel presented the Request for Proposal (RFP) for review and all necessary approvals were made.

The RFP was sent to Lang Exploratory Drilling by overnight mail on July 12, with a due date of August 29, 1989. This represents an approximate two week improvement on the initial schedule presented to the Project Office.

REPOSITORY (1.2.4)

WBS: 1.2.4.2

Task: Prototype Geomechanical Testing

G-Tunnel support included:

In Situ Stress Test - Completed drilling hole IS-3 in the Demonstration Drift. Completed drilling hole IS-4 in the Laser Drift. Hole IS-1 will be drilled after the instrumentation alcove is excavated.

TEST FACILITIES (1.2.7)

WBS 1.2.7.2

Task: Climax

Ten tours were conducted at the Climax Facility in Area 15 for a total of 173 persons.

Task: G-Tunnel

Routine mine plant support was provided during prototype testing activities.

Six tours were conducted for a total of 43 persons.

During the week of July 24, 1989, drift mining for additional prototype testing space was started. This work is being accomplished during slack time for the mining crew, on a non-interference basis with support for scheduled prototype tests.

**PROJECT MANAGEMENT (1.2.9)**

**WBS 1.2.9.1**

**Task: Site Characterization Plan (SCP) Distribution**

During this period, one SCP was distributed. The U.S. Department of Energy (DOE) letter that is enclosed with the SCP is being revised by the DOE Yucca Mountain Project Office. DOE has requested that SCP distribution be halted until the revised letter has been received. There are 28 pending SCP requests to date.

Due to the space problem at the Local Records Center (LRC), the extra copies of the SCP, Overview, Index, and Handbook have to be returned to the Bermuda Warehouse. The LRC will keep a sufficient supply on hand to meet the daily requirements and request additional materials from the warehouse as needed.

REECO is currently working on leasing a facility to adequately handle the space requirements of the LRC and SCP storage and distribution.

**Task: Long Range Planning (LRP)**

Completed the schedules and estimates necessary to provide the following deliverables:

- Detailed Exploratory Shaft Facility (ESF) shaft sinking estimate
- Detailed ESF construction schedule
- Revised Main Test Level development schedule

Attended the DOE/Headquarters LRP meeting.

**WBS 1.2.9.3**

**Task: Quality Assurance**

Revised the REECO Quality Assurance Program Plan (QAPP) 568-DOC-115 to include the Nuclear Regulatory Commission's (NRC) comments. It has been reviewed and approved by the Project Office.

Attended NRC/DOE QA review meeting in Rockville, Maryland where the status and scheduling of YMP audits was discussed.

**General**

REECO has no reportable Level I or Level II Milestone activities at this time.