

U. S. NUCLEAR REGULATORY COMMISSION
OBSERVATION AUDIT REPORT
FOR THE
WASTE MANAGEMENT PROJECT OFFICE
AUDIT (NO. 88-01) OF
FENIX & SCISSON, INC.

John Peshel

John Peshel
Technical Review Branch
Division of High-Level Waste
Management

4-12-88

Date:

8805030440 880412
PDR WASTE PDR
WM-1

James Donnelly

James Donnelly
Operations Branch
Division of High-Level Waste
Management

4-12-88

Date:

Summary

From February 22, 1988 through March 2, 1988, the Nuclear Regulatory Commission (NRC) staff observed the Department of Energy (DOE)/Waste Management Project Office's (WMPO) audit #88-01 of Fenix and Scisson (F&S), Inc. The WMPO objective for audit #88-01 was to evaluate the implementation and effectiveness of the F&S quality assurance (QA) program. The audit focused primarily on the F&S design activities for the Exploratory Shaft Facility (ESF). This observation audit assessed the effectiveness of WMPO's audit #88-01, given the scope and desired objectives of the subject audit. To a lesser degree, this observation audit also evaluated the adequacy of the F&S QA program.

Information upon which the NRC observers based their conclusions was collected on the subject audit through the review of checklists, direct observation of the auditors, discussions with the audit team, review of the standard deficiency reports (SDRs), and evaluation of the audit team's final recommendations. Based on the information gathered, the NRC observers believe that a thorough programmatic audit was conducted for those areas observed. Qualified and knowledgeable auditors, persistent investigations until answers were obtained, excellent communication between the audit team and the audited organization, and appropriate corrective action recommendations support this conclusion. However, there is one area where improvement is needed. The NRC observers believe that the effectiveness of this audit would have been improved by including a technical specialist who was knowledgeable in the technical area being audited (i.e., a mining engineer experienced in the design of drill and blast shafts and underground in-situ testing). Since the appropriate technical expertise did not exist on the audit team, no evaluation of the "end product" was made. Procedures could have been approved and followed, proper records could have been maintained; yet, the end product may still be inadequate since no evaluation of an end product was performed. For future audits which include a technical evaluation, the NRC observers would recommend that a sampling and review of the end product be performed by technical specialists who are knowledgeable in the area being audited. The technical specialist could also assist the audit team in establishing the initial proficiency of the technical staff and managers in a specified technical field.

Introduction

From February 22, 1988 through March 2, 1988 the NRC staff performed an observation audit of WMPO's audit #88-01 of F&S. The audit was conducted at F&S offices in Tulsa, Oklahoma; Las Vegas, Nevada; and at the Nevada Test Site (NTS). The purpose and scope of audit #88-01 was to evaluate the effectiveness and implementation of the F&S QA program, with considerable emphasis on the design activities for the ESF. Based on this purpose and scope, the NRC observers evaluated the effectiveness of the audit team in achieving their stated goals. The audit team was made up of an audit team leader, three auditors, and a technical specialist - all employed by Science Applications International Corporation (SAIC). In addition, during all or portions of the audit there were observers from the State of Nevada, DOE's Office of Geologic Repositories (OGR), and DOE/WMPO.

Observation audits by the NRC staff are being performed to gain confidence that the NRC's QA requirements are being met. Observation audits also determine if adequate QA provisions are in place for items and activities important to radiological safety or waste isolation. These actions are necessary to assure that inadequacies in the QA program, which could adversely impact the site or site characterization data, are identified and resolved.

The remainder of this report provides specific details and supporting information on which the NRC observers based their conclusions and recommendations. Appendix A of this report contains the results of the audit.

Scope of Audit

The WMPO audit #88-01 focused on the following QA criteria from 10 CFR 50 Appendix B:

<u>Criterion</u>	<u>Title</u>
2.0	Quality Assurance Program
3.0	Scientific Investigation and Design Control
4.0	Procurement Document Control
5.0	Instructions, Procedures and Drawings
6.0	Document Control
7.0	Control of Purchased Items and Services
16.0	Corrective Action
17.0	Quality Assurance Records
18.0	Audits

The audit team focused primarily on the design of the ESF, with lesser emphasis being placed on activities such as study preparation and the necessary QA controls that cover these efforts.

NRC Observations

A. Auditor Qualifications

Although the NRC observers did not examine the written records of qualifications for the audit team, based on discussions, the overall qualifications and experience of the team appeared adequate and appropriate for conducting a QA programmatic audit of F&S. Records of audit team qualifications will need to be verified by the staff at a later date. It appears that each member substantially exceeded the minimum requirements in NQA-1, Supplement 2S-3 on the Qualification of Quality Assurance Audit Personnel. For example, two of the three auditors have lead auditor certifications. Likewise, it appeared that the audit team had substantial nuclear QA and licensing experience. For example, two audit team members had approximately 3 and 10 years respectively of experience in nuclear reactor QA. Another audit team member had 15 years experience in nuclear QA/QC and had testified in a nuclear licensing hearing. The audit team leader had 6 years of nuclear QA experience and over 10 years of experience in fuel cycle related work. The communication skills of the audit team leader were excellent. During the entrance/exit meetings and team caucuses, the audit team leader clearly communicated the audit scope and results to F&S. The ability of the audit team leader to communicate clearly and interact effectively with the audit team and F&S personnel was an asset to the overall audit.

The technical specialist for the audit team did not appear to have the appropriate technical expertise for the area being audited. Through discussions with the technical specialist, it was learned that the technical specialist had considerable experience in fuel reprocessing. However, F&S is the architect/engineer for the design of a drill and blast exploratory shaft and underground testing. Thus, the NRC observers do not believe that the background of the technical specialist was appropriate for the area being audited.

B. Audit Team Preparation

The audit plan and checklist were completed prior to the audit. The audit team notebook which included the audit plan, checklist, F&S implementing procedures, etc. was forwarded to the NRC observers before the audit. This is consistent with DOE's policy for audit observers.

Upon review of the programmatic checklist, the NRC observer noted that several of the checklist questions could have been answered during a QA program document review. When the audit team was approached with this concern, they indicated that these checklist questions were answered and documented prior to the actual audit. This was verified and found acceptable to the NRC observers.

Through direct observation of the auditors during their questioning of the F&S staff, it appeared that they had an adequate knowledge of the F&S QA program and implementing procedures. For example, the F&S Quality Assurance Program Plan (QAPP) takes exception to QA criteria 4 and 7 which deal with procurement. The audit team identified an SDR with respect to F&S procuring services from consultants. The audit team's SDR clearly states that such an exception is not

appropriate. Likewise, the audit team was knowledgeable in the WMPO QA program requirements document, NVO-196-17.

C. Selection of Areas to be Audited

During discussions with the audit team, it was learned that F&S had been authorized to commence Title I design for the ESF in early January 1988. The proposed schedule also called for a 50% Title I design review for the ESF in mid-April 1988. Based on this information, the NRC observers believe it was appropriate that a combination technical and programmatic audit be preformed. Nonetheless, the NRC observers do not feel an appropriate technical review was conducted. (Refer to Section F for details.)

The audit team did utilize previous audit and surveillance results to assist in guiding their investigations. As described in section D of this report, even previously closed out SDRs were reexamined based on new information gathered during this audit. Furthermore, at least one of the auditors had participated in a previous audit of F&S and used that knowledge and experience to enhance the investigation.

D. Conduct of the Entrance and Exit Meeting

The audit team performed entrance and exit meetings as scheduled in the audit plan. There were three entrance meetings conducted by the audit team - one each in Tulsa, Las Vegas, and at the NTS. In each instance, the scope of the audit was clearly defined, requirements documents were identified, contacts were established, and questions or comments were encouraged. Three exit meetings were also held in the locations specified above. In each case the findings were verbally stated to F&S and during the March 2, 1988 exit meeting the SDRs were presented in draft typed form. The audit team afforded the F&S staff the opportunity to present additional information or to ask for clarification. During the final exit meeting, which was held in Las Vegas on March 2, 1988, and covered the combined audit results from Tulsa, Las Vegas and the NTS, the F&S QA manager requested that each of the SDRs be explained in detail. Prior to this request, the audit team leader gave a brief synopsis of all the SDRs, observations and recommendations. A detailed explanation was provided. The NRC observers believe that an excellent job was performed by the audit team leader in clearly communicating the results of the audit.

The observers were also given the opportunity to express their concerns and comments at the exit meetings. No comments were made. However, prior to the exit meeting which was held in Tulsa and after the March 2, 1988 exit meeting the NRC observers verbally presented their comments and concerns to the audit team leader with respect to the conduct of the audit and the adequacy of the F&S QA program.

In short, the entrance and exit meetings were performed in a highly professional manner; the results were clearly communicated; and the auditee and observers were given the opportunity to ask questions or to make additional comments.

E. Coverage and Conduct of the Audit

In terms of evaluating programmatic implementation of the F&S QA program, the NRC observers believe the audit team did a thorough review. The audit team was persistent in their review until conclusions were reached on a solid foundation of facts. For example, the question of whether or not position descriptions (PDs) were established was investigated in Tulsa, Las Vegas, and the NTS. The PDs, per the F&S QA program, must establish the minimum education and experience requirements for personnel performing activities that affect quality. In each location, F&S was given the opportunity to provide PDs for the appropriate personnel. Consequently, the audit team identified the following SDRs: 1) some PDs did not exist, 2) managers and supervisors were certifying personnel as meeting the minimum education and experience requirements when these minimum criteria did not exist and 3) one certification form identified an individual as meeting the minimum education requirements (a PD was established for this individual). The minimum education required was a Bachelor of Science in an engineering or scientific discipline; however, that individual possessed a Masters of Arts and Bachelor of Arts. There was no consistency in the status or format of the PDs between the three F&S locations. This problem was quite confusing and potentially significant since the initial proficiency of the F&S personnel for the design of the ESF could not be established during the conduct of the audit.

As stated earlier, only 9 of the 18 criteria were addressed by the audit team. This appears to be adequate to the NRC observers since many of the criteria (e.g., Criterion 12, Control of Measuring and Test Equipment and Criterion 13, Handling, Storage and Shipping) are not applicable for the design work being performed by F&S. In addition, it appeared that very little activity had taken place for many of the applicable criteria (i.e., procurement and corrective action).

As presented at the March 2, 1988 exit meeting, there were 11 SDRs, 6 observations, and 2 recommendations. There was one potential SDR regarding a previously closed out SDR (#066) concerning QA records. The F&S response to WMPO for SDR #066 from a previously conducted WMPO audit appeared inadequate to the audit team at the time of this audit. The audit team leader classified this as a potential SDR since he wanted to research this further with his management. The audit team is commended for reevaluating a previously closed out SDR. The NRC observers feel this was the appropriate action to take. Of the SDRs identified, the majority of these were significant and required prompt corrective action.

The NRC observers presented written checklist questions to the audit team leader for submittal to F&S. All of the questions were submitted to F&S. The audit team did an excellent job of accommodating the questions and needs of the observers.

The final recommendation of the audit team at the March 2, 1988 exit meeting was 1) stop or hold work until corrective action is taken, 2) perform a readiness review before proceeding and 3) perform periodic surveillances to ensure that the QA program and corrective action are being followed. The audit team indicated that this recommendation would be made to DOE/WMPO. The decision to accept or reject this recommendation rests with DOE/WMPO. The NRC observers

believe that immediate DOE and F&S management attention and corrective action is necessary and that the audit team's recommendation is one method by which these corrections can be made. F&S is performing the design of the ESF and the NRC staff believes this activity could have a direct impact on the waste isolation characteristics of the site.

F. Evaluation of Technical Proficiency and Technical Products

The NRC observers do not believe an adequate technical audit was performed. This conclusion is supported by the lack of appropriate technical expertise, and little technical substance to the "technical" checklist. A sampling of typical "technical" checklist questions is as follows:

Audit Item No.

- | | |
|-----|---|
| 2-1 | A. Review and verify that design inputs such as baseline documents, performance requirements etc., are identified and documented in a design input document that is prepared by the design organization in accordance with written approved procedures. |
| 2-4 | A. Review and verify that the design organization had identified and documented the verification method used to verify design data and that results are verified and the verifier identified. |

These checklist questions are not considered appropriate for a technical audit. The NRC observers do not believe these are detailed technical questions requiring special expertise to ask and evaluate. These questions appear more appropriate for a programmatic audit.

Nonetheless, the audit team made several attempts to establish the initial proficiency of the F&S staff working on the ESF design. PD's were examined and present work products were requested - all in an attempt to establish the qualifications of the F&S design engineers and managers.

The audit team attempted to examine the education, training, and experience of the F&S staff in the design of conventional (i.e., drill and blast) shafts and underground in-situ testing. Unfortunately, the resumes for the F&S design engineers and managers were not made available to the audit team based on the premise that this would be a violation of the Privacy Act. However, before being informed about the Privacy Act considerations, the audit team did see a few resumes of the F&S design engineers. In one case, the resume of the lead design engineer for the ESF was examined and apparently this engineer did not have any experience in the design of underground excavations or drill and blast shafts and drifts. The PDs for the F&S design personnel were written in a very general way and important work experience for designers in different specialized fields was not specified. Likewise, some of the PDs could not be located.

The audit team then attempted to examine the present work being performed on the design of the ESF and underground testing. The F&S Design Study No. 11: "ESF Structural Design Study" was examined by the audit team and was found to be a useful design input prepared by F&S and their subcontractors. However, there were no F&S drawings or calculations available to examine the current Title I design work for the ESF. The available F&S design interface drawings (interface between the ESF design and the overall repository design) and ESF conceptual design sketches were not produced by F&S. A request was submitted by the NRC observers to the audit team leader for past F&S shaft designs. The request was referred to F&S for their consideration. As a result, F&S provided a list of past shaft designs performed by F&S. From this list it appeared that the last vertical conventional shaft designed by F&S was constructed in 1965. The NRC observers were informed that no present design engineers or design managers, working on the ESF design, took part in that design work.

F&S has considerable experience in design and construction of shafts by "blind" large diameter rotary drilling from the surface using drilling mud. The shaft drilling rigs are usually modified oil rigs used for drilling deep oil and gas wells. However, the two 12' inside diameter exploratory shafts for the ESF are going to be excavated by conventional drilling and blasting mining methods, using explosives to break the rock during excavation. A mining crew works on the bottom of the shaft drilling small diameter holes and charging them with explosives. The two shaft construction methods - large diameter drilling and conventional mining - are significantly different in terms of design, equipment and needed expertise.

The careful excavation of the shafts, when explosives are used, is likely to be important to waste isolation. The state of the art "smooth wall blasting" (a type of controlled blasting) should be used to minimize the fracturing of the shaft walls. The design criteria for rock excavation [10 CFR 60.133(f)] require that "the design of underground facility shall incorporate excavation methods that will limit the potential for creating a preferential pathway for groundwater to contact the waste packages or radionuclide migration to the accessible environment."

For the above reasons, the DOE/WMPO audit team correctly attempted to establish the initial proficiency of the F&S design engineers and managers in the design of drill and blast shafts. From the limited information provided by F&S, the audit team was unable to conclude that such a proficiency had been acquired, to a sufficient degree, by the F&S design engineers and design managers. The NRC observers agreed with this conclusion. In short, the initial proficiency of F&S was indeterminate.

In addition to the above, it was noted by the NRC observers that the entire design work performed by F&S is designated by DOE to be QA Level II, in contrast to the Consultation Draft Site Characterization Plan (CDSCP) (Section 8.6.4.2 Quality Assurance during site characterization) which states that blasting in shafts and drifts will be controlled as a QA Level I activity. It is the opinion of the NRC observers that the design of this activity by F&S should also be QA Level I since such an activity could have a direct impact on waste isolation and the characterization of the site. Nonetheless, QA level designations are not determined by F&S and therefore, is not considered part of the DOE/WMPO audit of F&S.

G. Audit Team Coordination

Overall, the coordination of the audit team was quite good. The lead auditor took control and provided the needed leadership when necessary. For example, when one of the audit team members engaged in an intense discussion with the F&S staff regarding the need to document training requirements in a PD, the audit team leader advised the auditor that the primary focus should be on whether or not the necessary training has been stated, completed, and documented, not whether the training requirements are documented in the PD. The NRC observers believe this was the appropriate guidance. Likewise, the team members interacted well and provided supporting or clarifying information to other members as necessary. For example, previous audit and surveillance results and the names of personnel performing design activities for the ESF were passed on to other affected audit team members. Audit team caucuses were frequently held to discuss the current audit results and to discuss strategy for the next day of auditing.

**FOR INFORMATION
ONLY**

PRELIMINARY
3-18-88

Richard L. Bullock
Technical Project Officer for NNWSI
Fenix & Scisson, Inc.
Mail Stop 514
P.O. Box 93265
Las Vegas, NV 89193-3265

**WASTE MANAGEMENT PROJECT OFFICE (WMPO) QUALITY ASSURANCE (QA) STANDARD
DEFICIENCY REPORTS (SDRS) RESULTING FROM AUDIT 88-01 OF FENIX & SCISSON, INC.
(F&S) SUPPORT OF THE NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS (NNWSI)
PROJECT**

Enclosed are thirteen SDRs, Nos. 104 through 116, which were generated during the course of WMPO QA Audit 88-01 of the F&S NNWSI Project Program Plan and technical activities. Please note that you are required to provide responses to each SDR by completing blocks 14 through 18 as appropriate on the first page of each SDR. (Be advised that the audit checklist references provided on each SDR are for WMPO internal use and should have no bearing on your ability to respond to the cited deficiencies.)

A copy of your responses is due back to this office 20 working days from the date of this letter. You are asked to concurrently send the original of each SDR response to Nita J. Brogan of Science Applications International Corporation, Las Vegas, Nevada.

If you have any questions, please contact Henry E. Caldwell at 295-8740.

James Blaylock
Project Quality Manager
Waste Management Project Office

WMPO:JB-

Enclosures:
SDRs Nos. 104-116

**FOR INFORMATION
ONLY**

Richard L. Bullock

-2-

cc w/encl:

S. W. Zimmerman, State of NV, Carson City, NV
V. J. Cassella, HQ (RW-222) FORS
Ralph Stein, HQ (RW-23) FORS
R. W. Clark, DOE/HQ (Weston), Washington, DC
M. J. Regenda, F&S, Mercury, NV
S. H. Klein, SAIC, Las Vegas, NV
W. R. Kazor, SAIC, Las Vegas, NV
J. W. Estella, SAIC, Las Vegas, NV
O. D. Smith, SAIC, Las Vegas, NV
F. J. Ruth, SAIC, Las Vegas, NV
H. H. Caldwell, SAIC, Las Vegas, NV
B. A. Wozniak, SAIC, Las Vegas, NV
J. J. Brogan, SAIC, Las Vegas, NV
J. R. Rinaldi, QAD, NV
J. P. Donnelley, NRC, Washington, DC
M. B. Blanchard, WMPO, NV
W. R. Dixon, WMPO, NV
L. P. Skousen, WMPO, NV
C. P. Gertz, WMPO, NV
R. E. Monks, WMPO, NV
M. P. Kunich, WMPO, NV



WMPO STANDARD DEFICIENCY REPORT CONTINUATION SHEET

N-QA-0:
10/86

SDR No. 104

Rev. 0

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Block 9 Deficiency (cont'd)

The WMPO recognizes that this same deficiency was previously reported by F&S on Audit Deficiency Report No. QA(N)-87-01-4. However, this SDR is being written because no actions were taken or committed in the referred ADR to prevent recurrence of this deficiency. As a minimum, personnel involved with the activity should be reinstructed to procedural requirements and a review should be made to assess any adverse impacts on the final work product.

Block 10 Recommended Action(s) (cont'd)

2. Reinstruct appropriate personnel to procedural requirements. Provide objective evidence with response to the SDR.
3. Perform a review to assess any adverse impacts on the final work product caused by the identified deficiency.
4. Annotate the file for Study No. 11 and other files with similar deficiencies to indicate that the deficiency described in Block 9 has been identified in WMPO SDR-104 (Audit 88-01).

WMPO STANDARD DEFICIENCY REPORT

N-QA-1
3/87

32ano

Completed by Originating QA Organization

Aprvl.

Completed by Organization in Block 5

Comp. by Orig. QA Org.

1 Date 2/25/88 2 Severity Level 1 2 3 Page 1 of :

3 Discovered During WMPO Audit 88-01 3a Identified By R. F. Cote 3b Branch Chief Concurrence Date N/A 4 SDR No. 105 Rev. 0

5 Organization F&S 6 Person(s) Contacted Harry Forshaw 7 Response Due Date 20 Working Days fr Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable) (no audit checklist reference)
Requirement No. I: NVO-196-17, Rev. 5, Sec. II, "Quality Assurance Program, Para. 1.0 "Extent of Quality Assurance Program" states in part: Each NNWSI Proje Participant shall develop a Quality Assurance Program Plan (cont'd)

9 Deficiency Contrary to the above requirements, F&S Tulsa, OK initiated three (3) Quality Assurance Level II purchase orders to the following services: (cont'd)

10 Recommended Action(s): Remedial Investigative Corrective
Suspend all current Level II contracted services, submit to WMPO for review, approval and prior to implementation, a revision of the F&S QAPP which addresses commitment to implement the requirements of NVO-196-17, Rev. 5 (cont'd)

11 QAE/Lead Auditor Date MAR 16 1988 12 Branch Manager [Signature] Date 3/16/88 13 Project Quality Mgr. Date [Signature] 2/18/88

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

23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date
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WMPO STANDARD DEFICIENCY REPORT CONTINUATION SHEET

N-QA-03
10/86

SDR No. 105

Rev. 0

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Block 8 Requirements (cont'd)

(Synonymous with the NRC definition of QA administrative procedures) which shall provide the description of the organization's QA program and indicate the commitment to the applicable NNWSI Project QA requirements given herein.

Requirement No. II: NVO-196-17, Rev. 5, Sec. II, Para. 1.2 Contents of the QAPP states in part: The QAPP shall be submitted to the WMPO for review and approval prior to implementation and shall include a checklist based on this NNWSI QAPP which identifies how and where each requirement of this document is addressed. The QAPP of each Project participant and NTS Support Contractor shall be reviewed, comment resolved, and the document approved by the WMPO prior to implementation.

Requirement No. III: F&S QAPP-002, Rev. 2, Sec. II, Para. 2.1.1 states in part: The QA criteria and specific requirements associated with these criteria have been adapted to the NNWSI Project activities through NVO-196-17 and are addressed in QAPP-002. When a specific criteria is not applicable to F&S activities it will be noted in the QAPP and recorded on the checklist.

Requirement No. IV: F&S QAPP-002, Rev. 2, Sec. 4.0 "Procurement Document Control" Para. 4.1.1 states in part: Exception. This section is not applicable to F&S as the AE for the design of the ESF. When and if F&S is assigned procurement responsibility, the QA requirements will be in accordance with NVO-196-17.

Requirement No. V: F&S QAPP-002, Rev. 2, Sec. 7.0 "Control of Purchased Items and Services," Para. 7.1 states in part: Exception. This section, same as 4.0 is not applicable to F&S as the AE for design of the ESF. When and if F&S is assigned procurement responsibility, the QA requirements will be in accordance with NVO-196-17.

Block 9 Deficiency (cont'd)

- o Dr. E. J. Cording, Geotechnical Consultant, Contract No. 508-SC-02, initiated 6/20/86 and amended 1/27/88.
- o Floyd C. Bossard & Associates, Ventilation Consultant, Contract No. 508-SC-04, initiated 6/20/86 and amended 1/26/88.
- o David W. Kneebone, OCCU Safety Specialist, Contract No. 508-SC-05, initiated 7/30/86 and amended 1/26/88.

The subject purchased services were amended prior to submitting to the WMPO for approval and prior to implementation, a revision to the F&S QAPP-002 which would address a commitment to the requirements of NVO-196-17, Rev. 5, Sec. 4.0 "Procurement Document Control" and Sec. 7.0 "Control of Purchased Items and Services."



WPMO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-0:
10/86

SDR No. 105

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Block 10 Recommended Action(s) (cont'd)

Section 4.0 "Procurement Document Control" and Section 7.0 "Control of Purchased Items and Services."

Develop procedures which implement the aforementioned requirements prior to resumption of procurement of items and services.

Evaluate work performed by the referenced subcontractors since 1/12/88 for impact c quality of services performed.

WMPO STANDARD DEFICIENCY REPORT

N-QA-3/87

5240
 Completed by Originating QA Organization
 Completed by Organization in Block 5
 Comp. by Orig. QA Org.

1 Date 1/25/88	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of
3 Discovered During WMPO Audit 88-01	3a Identified By R. F. Cote	3b Branch Chief Concurrence Date N/A	4 SDR No. 106 Rev. _____
5 Organization F&S Tulsa	6 Person(s) Contacted M. Regenda, H. Forshaw		7 Response Due Date 20 Working Days Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) Checklist Element 1-4 Requirement No. I-F&S QAPP-002, Rev. 2, Sec. 2.0 "Quality Assurance Program" Para. 2.4 Personnel Selection, Indoctrination, and Training Procedures, sub Para. 2.4.1.1 states: (cont'd)			
9 Deficiency Contrary to the above requirements, a review of personnel qualification verification and training files did not indicate that F&S Tulsa, OK (cont'd)			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Establish minimum education requirements applicable to the individual's responsibilities and activities pertaining to the NNWSI Project, e.g., B.S. Mining engineering experience, 5 years drill and blast shaft design. (cont'd)			
11 QAE/Lead Auditor Date <i>[Signature]</i> MAR 16 1988	12 Branch Manager <i>[Signature]</i>	Date 3-16-88	13 Project Quality Mgr. Date <i>[Signature]</i> 7/13
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	PGM/Date



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-03
10/86

SDR No. 106

Rev. 0

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Block 8 Requirement (cont'd)

2.4.1.1 Position Description minimum education and experience requirements are established and documented on position descriptions for each position involved in the performance of activities that effect quality.

Requirement No. 2-PP-60.01, Rev. 0 "Personnel Selection and Indoctrination", Para. 6.1, "Position Descriptions" states: Each manager and supervisor shall establish, document and maintain on file, position for their direct subordinates.

Block 9 Deficiency (cont'd)

has established personnel minimum position description requirements for personnel performing activities affecting quality.

This condition resulted in the inability to determine the validity of the qualification of ESF personnel performing activities which effect quality.

Block 10 Recommended Action(s) (cont'd)

Each manager/supervisor must indicate, e.g., sign and date, that they have established these "position descriptions" or establish a management endorsement of the above "position descriptions."

WMPO STANDARD DEFICIENCY REPORT

N-QA-C
3/87

13990

Completed by Originating QA Organization

Aprvl.

Completed by Organization in Block 5

Comp. by Orig. QA Org.

1 Date 2/25/88 2 Severity Level 1 2 3 Page 1 of 2

3 Discovered During WMPO Audit 88-01 3a Identified By R.F. Cote 3b Branch Chief Concurrence Date N/A 4 SDR No. 107 Rev.

5 Organization F&S Tulsa, OK 6 Person(s) Contacted Harry Forshaw, Paul Hale 7 Response Due Date 20 Working Days fr Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable) Checklist reference 1-6, NRC checklist element (2). Requirement No. 1 - F&S QAPP-002, Rev. 2, Sec. 2.0 "Quality Assurance Program", Para. 2.4 "Personnel Selection, Indoctrination and Training Procedures" (cont'd)

9 Deficiency Contrary to the above requirements, F&S Tulsa has not identified those activities which would be considered complex in nature, where training as described in Requirement No. 1 would be deemed necessary.

10 Recommended Action(s): Remedial Investigative Corrective
Evaluate and identify activities which would be considered complex and where initial proficiency must be demonstrated, e.g., shaft drilling design and blast engineers. (cont'd)

11 QAE/Lead Auditor Date MAR 14 1988 12 Branch Manager [Signature] Date 3/16/88 13 Project Quality Mgr. Date [Signature] 7/12/88

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 Verification Satisfactory Unsatisfactory QAE/Lead Auditor/Date _____ Branch Manager/Date _____

22 Remarks _____

23 QA CLOSURE QAE/Lead Auditor/Date _____ Branch Manager/Date _____ PGM/Date _____



**WMPO STANDARD DEFICIENCY REPORT
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Block 8 Requirement (cont'd)

Sub Para. 2.4.1 states in part: Establishment of requirements-F&S has established requirements for the selection, indoctrination, and training of personnel performing or verifying activities that affect quality. The requirements establish position descriptions that set forth minimum personnel qualifications and provide for appropriate indoctrination or training or both, prior to initiation of activities that effect quality.

Requirement No. 2-F&S QAPP-002, Rev. 2, Sec. 2.0 "Quality Assurance Program", Par. 2.4 "Personnel Selection, Indoctrination, and Training Procedures", Sub. Para. 2.4.1.4 states in part: Training. Prior to assigning personnel to perform quality affecting activities that are complex in nature (i.e., assignments where it is deemed necessary to demonstrate initial proficiency), training will be conducted to gain the required proficiency. The training (in-depth instruction) will include the principles, techniques, and requirements of the activity. Such in depth instructions may be internal or external classroom sessions supplemented by hands on workshops, on-the-job training, other instructional methods, or combinations thereof.

Block 10 Recommended Action(s) (cont'd)

Develop training procedures and train (in-depth instruction) as deemed necessary the subject personnel in the unique requirements associated with identified complex activities prior to the performing the subject task.

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Completed by Originating QA Organization	1 Date <u>2/25/88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>2</u>
	3 Discovered During <u>Audit 88-01</u>	3a Identified By <u>R. F. Cote</u>	3b Branch Chief Concurrence Date <u>N/A</u>	4 SDR No. <u>108</u> Rev. _____	
	5 Organization <u>F&S All Locations</u>		6 Person(s) Contacted		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) Check List element 1-9 PP-60.01, Rev. 0, Personnel Selection and Indoctrination, para. 6.2 "Personnel Qualification Evaluation" states in part: Each Manager and Supervisor shall compare the education, experience, and training against those (cont'd)				
9 Deficiency Contrary to the above requirement, managers and supervisors have certified personnel as having met the requirements specified in the subject position description. Since no position descriptions have been established (re: SDR 106) for the below listed personnel, these management certifications (cont'd)					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Train the applicable management and supervisory personnel in the subject procedural requirements pertaining to the written certification of their subordinates, which is required to be based on the pre-established position (cont'd)					
Completed by Organization in Block 5	11 QAE/Lead Auditor Date <u>[Signature]</u> <u>MAR 11 1988</u>	12 Branch Manager <u>[Signature]</u> <u>3/11/88</u>	Date	13 Project Quality Mgr. Date <u>[Signature]</u> <u>3/11/88</u>	Date
	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	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
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Block 8 Requirement (cont'd)

specified in the position description and MNWSI Procedures. Only employees who meet the standard will be utilized to perform activities that affect quality. The Managers and Supervisors will certify that requirements have been met in the format specified in Attachment 1.

A copy of this shall be sent to Central Files.

Block 9 Deficiency (cont'd)

would be considered invalid.

Project Design Manager
Lead Project Design Engineer
Design Support Services Manager
Project QA Representative
Lead Mining Design Engineer
Senior Mining Engineer
Structural Engineer
Lead Mechanical Design Engineer
Lead Electrical/Instrumentation Engineer
Quality Assurance Coordinator - LV Office

Block 10 Recommended Action(s) (cont'd)

description.

Perform and document initial proficiency in accordance with pre-established position description.

Evaluate work performed by currently assigned individuals and determine if they were qualified to perform their assigned tasks by comparison to established position descriptions.

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3/87

Completed by Originating QA Organization

1 Date <u>3/1/88</u>	2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page <u>1</u> of <u> </u>
3 Discovered During <u>WMPO Audit 88-01</u>	3a Identified By <u>D. Klimas</u>	3b Branch Chief Concurrence Date <u>N/A</u>	4 SDR No. <u>109</u> Rev. <u>0</u>
5 Organization <u>Fenix & Scisson</u>	6 Person(s) Contacted <u>Dan Tunney</u>		7 Response Due Date <u>20 Working Days fr</u> Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) <u>QAP-18.1 (n), Rev. 2, Para. 3-13.</u> The Lead Auditor or a designated team auditor shall perform a follow-up audit or surveillance to verify implementation of corrective action as stated in the Audit Deficiency Report. The auditor shall document on the ADR the action (cont'd)			
9 Deficiency Contrary to the above requirements <u>F&S ADR 87-06</u> was signed on November 30, 1987 indicating acceptance and closeout prior to completion of corrective action. The corrective action was to revise F&S procedure DC-12 to comp with NNWSI-SOP-03-02. DC-12 was approved on December 11, 1987.			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Reinstruct audit personnel as to procedure requirements regarding closeout of Audit Deficiency Reports.			

Aprvl.

11 QAE/Lead Auditor Date <u>[Signature]</u> <u>MAR 14 1988</u>	12 Branch Manager Date <u>[Signature]</u> <u>3/16/88</u>	13 Project Quality Mgr. Date <u>[Signature]</u> <u>7/18/85</u>
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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 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



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Block 8 Requirement (cont'd)

or documentation viewed as evidence of corrective action implementation. The Lead Auditor shall then sign the ADR indicating acceptance and closeout.

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58 and

Completed by Originating QA Organization

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Completed by Organization in Block 5

Comp. by Orig. QA Org.

1 Date 3/1/88	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of
3 Discovered During WMPO Audit 88-01	3a Identified By D. Klimas	3b Branch Chief Concurrence Date N/A	4 SDR No. 110 Rev. 0
5 Organization Fenix & Scisson	6 Person(s) Contacted Dan Tunney		7 Response Due Date 20 Working Days fr. Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) F&S QAP 16-1, Para. 4.1, Conditions for Initiating a CAR - CARs shall be initiated by Quality Assurance after all reasonable means for obtaining corrective action have been exhausted and one or more of the following conditions still exists: (cont'd)			
9 Deficiency Contrary to the above requirements F&S AFR 87-02-04 was initiated for not having an approved procedure to accomplish surveillance activities when a Corrective Action Request (CAR) should have been issued.			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Initiate a CAR procedure requirement. Investigate to determine if all activities have approved procedures in place. Reinstruct personnel to procedure requirements in QAP 16.1(N), Rev. 0			
11 QAE/Lead Auditor Date <i>[Signature]</i> MAR 14 1988	12 Branch Manager <i>[Signature]</i> 3/14/88	Date	13 Project Quality Mgr. Date <i>[Signature]</i> 3/18/88
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 <input type="checkbox"/> Reject 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
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Block 8 Requirement (cont'd)

1. An organization is not following or does not have approved procedures to accomplish it's assigned tasks; as in the case of the subject surveillance.

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3/87

305ano

Completed by Originating QA Organization

Completed by Organization in Block 5

Comp. by Orig. QA Org.

1 Date <u>3/1/88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u> </u>	
3 Discovered During <u>WMPO Audit 88-01</u>		3a Identified By <u>D. Klimas</u>	3b Branch Chief Concurrence Date <u>N/A</u>		4 SDR No. <u>111</u> Rev. <u>0</u>
5 Organization <u>Fenix & Scisson</u>		6 Person(s) Contacted <u>Dan Tunney</u>		7 Response Due Date <u>20 Working Days fr</u> Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) <u>F&S QAPP-002, Rev. 2, Sec. 18, Para. 18.10, 2nd Para. states in part: "Measures for the surveillance of site investigations will be established and executed in accordance with procedures prepared by F&S.</u>					
9 Deficiency Contrary to the above requirements, F&S personnel are performing surveillance activities without an approved surveillance procedure. Reference F&S surveillances SR-88-001, SR-87-06.					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective <u>Initiate, approve and publish a surveillance procedure for the conduct of surveillance activities. Provide training to personnel performing surveillance activities.</u>					
11 QAE/Lead Auditor Date <u>[Signature] MAR 14 1988</u>		12 Branch Manager Date <u>[Signature] 3/16/88</u>		13 Project Quality Mgr. Date <u>[Signature] 3/18/88</u>	
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		QAE/Lead Auditor/Date	
		<input type="checkbox"/> Reject		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	
				PGM/Date	

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Completed by Organization in Block 5

1 Date 3/1/88	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of
3 Discovered During WMPO Audit 88-01	3a Identified By R. F. Cote	3b Branch Chief Concurrence Date N/A	4 SDR No. 112 Rev. (
5 Organization F&S	6 Person(s) Contacted D. J. Tunney		7 Response Due Date 20 Working Days f Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) Requirement No. 1 PP-60-01, Rev Personnel Selection & Indoctrination: Paragraph states: 6.1 Position Descriptions Each Manager and Supervisor shall establish, document and maintain file, position descriptions for their direct subordinates. (cont'd)			
9 Deficiency Contrary to the above requirements, position description for an F&S NTS NNWSI Senior QA Engineer, requires Educational qualifications to include "A Senior QA Engineer shall possess a bachelors or higher degree in an Engineering or Scientific Discipline, and specialized training in the QA Field." (cont'd)			
10 Recommended Action(s): <input type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input type="checkbox"/> Corrective Review all (e.g., Tulsa, LV, NTS) F&S QA and technical personnel and verify that the subject individuals actually possess the required degree credentials specific in their appropriate position descriptions where such position descriptions exist			
11 QAE/Lead Auditor Date <i>[Signature]</i> MAR 14 1988	12 Branch Manager <i>[Signature]</i> 3/16/88	13 Project Quality Mgr. Date <i>[Signature]</i> 3/18/88	
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 <input type="checkbox"/> Reject <input type="checkbox"/> 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 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

Comp. by Orig. QA Org.



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Block 8 Requirement (cont'd)

Requirement No. 2 PP-60-01- Rev. 0, "Personnel Selection & Indoctrination" Para. 6.1 states in part: Each Manager and Supervisor shall compare the education, experience, and training against those specified in the position description and NNWSI Procedures. Only employees who meet the standard will be utilized to perform activities that affect quality. The Managers and Supervisors will certify that requirements have been met in the format specified in Attachment 1. A copy of this shall be sent to Central Files.

Block 9 Deficiency (cont'd)

The subject individual was certified as having met the educational requirements by the Director of QA on 9/16/87. A review of the SR. QA Engineer education requirement indicates that the individual possess a "Masters of Arts (MA) and Bachelor of Arts B.A." which does not comply with the position description or certification of verification of education as detailed by the Director of QA.

Block 10 Recommended Action(s) (cont'd)

Evaluate the impact on quality for those personnel who have not met the educational portion of the position description and determine if the lack of degree requirement has affected the quality of activities to which they have and are performing. Submit to this office a list, by title, of those personnel who have not met the degree requirements specified in the position description the tasks performed and identified what action has or will be taken including (date to correct and to prevent this condition from recurring.)

WMPO STANDARD DEFICIENCY REPORT

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3/87

Completed by Originating QA Organization	1 Date <u>3/1/88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>2</u>
	3 Discovered During <u>Audit 88-01</u>		3a Identified By <u>R. F. Cote</u>		3b Branch Chief Concurrence Date <u>N/A</u>
	4 SDR No. <u>113</u>		4 Rev. <u>0</u>		
	5 Organization <u>F&S</u>		6 Person(s) Contacted <u>D. Tunney, T. McCracken</u>		7 Response Due Date is <u>20 Working Days from</u> Date of Transmittal
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) <u>1. PP-10-02, Rev. 0, "Training on NNWSI Procedures," Para. 4.0, Definitions, Subparagraph 4.1, Training, states "In depth instruction provided to (cont'd)</u>				
	9 Deficiency <u>Contrary to the above requirements a review of the personnel file does not provide objective evidence of the standard training the subject individual is required to receive. (cont'd)</u>				
	10 Recommended Action(s): <input type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective <u>Establish training course applicable to the subject individuals discipline as required in Requirement No. 3. Provide objective evidence that the individual has completed the aforementioned training. (cont'd)</u>				
	11 QAE/Lead Auditor Date <u>MAR 11 1988</u>	12 Branch Manager <u>[Signature]</u>		Date <u>3/1/88</u>	13 Project Quality Mgr. Date <u>[Signature]</u>
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 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



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Block 8 Requirement (cont'd)

personnel to develop and demonstrate initial proficiency in the application of selected requirements, methods, and procedures, and to adapt to changes in technology, methods, or job responsibilities (NVO-196-17)."

2. PP-10-02, Rev. 0, "Training on NNWSI Procedures," Para. 5.2, states "Each Department Manager is responsible for training his subordinates or in the case of the staff who report to the Project Manager, the PM shall be responsible for training those personnel."

3. PP-10-02, Rev. 0, "Training on NNWSI Procedures," Para. 6.1.1, Standard Training, states "A standard course of training shall be given on all the NNWSI procedures that are applicable to individual disciplines within each department, that are at the time enforced in the NNWSI Project Procedures Manual."

Block 9 Deficiency (cont'd)

Contrary to the above requirement a review of the Senior Mining Engineer's training file does not indicate by objective evidence that the subject individual was trained in NNWSI procedures applicable to the individual's discipline as stated in requirement No. 3, nor is there a method in place throughout the F&S organization (e.g., Tulsa, LV, and the NTS) which identifies the required standard training applicable to the individual disciplines.

It should be noted that the subject individual was certified by the F&S NNWSI Project Manager on 11/2/87 as having met the aforementioned training requirements.

Block 10 Recommended Action(s) (cont'd)

Evaluate and determine the extent of this condition.

Evaluate and determine what standard training courses are appropriate to individual disciplines within each department as stated in Requirement No. 3. Identify to the WMPO, by F&S department, the applicable training course requirements and content.

Identify to WMPO how F&S will correct this condition, and prevent its recurrence.

After the individual has completed the required training, re-certify the individual by the appropriate manager or supervisor.

WMPO STANDARD DEFICIENCY REPORT

N-QA-3/87

Completed by Originating QA Organization

1 Date <u>3/1/88</u>	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 1
3 Discovered During <u>WMPO Audit 88-01</u>	3a Identified By <u>R. F. Cote</u>	3b Branch Chief Concurrence Date <u>N/A</u>	4 SDR No. <u>114</u> Rev. <u> </u>
5 Organization <u>F&S</u>	6 Person(s) Contacted <u>D. Tunney, M. Regenda</u>		7 Response Due Date <u>20 Working Days</u> Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) <u>1. PP-60-01, Rev. 0, "Personne Selection and Indoctrination," Para. 6.2, states in part: "Each Manager and Supervisor shall compare the education, experience (cont'd)</u>			
9 Deficiency Contrary to the above requirements a review of personnel position descriptions for both QA and technical personnel (e.g., ESF Design Engineers) does not specify the training required for the individual position description by which the individual is then certified.			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Specify the required training an individual is to receive prior to management certification, or should it not be the intent to identify the required training in the position description then delete this requirement (cont'd)			

11 QAE/Lead Auditor Date <u>MAR 14 1988</u>	12 Branch Manager <u>[Signature]</u>	Date <u>3/18/88</u>	13 Project Quality Mgr. Da <u>[Signature]</u>
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14 Remedial/Investigative Action(s) _____

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence _____

17 Effective Date _____

18 Signature/Data _____

Comp. by Orig. QA Org.

19 Response	<input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> 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
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CONTINUATION SHEET**

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Block 8 Requirement (cont'd)

and training against those specified in the position description and NNWSI procedures. Only employees who meet the standard will be utilized to perform activities that affect quality. The managers and supervisors will certify that requirements have been met in the format specified in Attachment 1. A copy of th shall be sent to Central Files."

2. PP-10-01, Rev. 0, "Personnel Selection and Indoctrination, "Attachment 1.A, Personnel Qualification Evaluation, states in part "Based on my personnel review of the individual's education, experience, and training compared to the employee's position description and NNWSI procedures, I certify this employee for the assigne task.

1. _____

Manager or Supervisor Date _____

Recommend Action(s) (cont'd)

from the procedure as stated above and identify to WMPO the procedure which will identify the required training an individual must receive prior to performing activities affecting quality.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization

1 Date <u>3/1/88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>3</u>	
3 Discovered During <u>Audit 88-01</u>		3a Identified By <u>R. Cote'</u>	3b Branch Chief Concurrence Date		4 SDR No. <u>115</u> Rev. <u>0</u>
5 Organization <u>F&S</u>		6 Person(s) Contacted <u>D. Tunney</u>		7 Response Due Date is <u>20 Working Days from</u> Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) 1. F&S QAPP-002, Rev. 2, Para. 17.1.1, states "A document is not considered to be a Quality Assurance Record until it satisfies the definition of a Quality (cont'd)"					
9 Deficiency Contrary to the above requirements, a review of position description documents for F&S Tulsa and NNWSI Project QA and technical personnel (e.g., Senior (cont'd))					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Submit list to WMPO of those F&S management personnel (e.g., name, title, and department) and the subordinate position descriptions they are (cont'd)					

11 QAE/Lead Auditor Date <u>A. J. [Signature]</u> <u>MAR 11 1988</u>	12 Branch Manager Date <u>W. R. Kason</u> <u>3/11/88</u>	13 Project Quality Mgr. Date <u>Roy E. Mude</u> <u>3/11/88</u>
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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 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



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Requirement (cont'd)

Assurance Record as defined below.

The term records, used throughout this section is to be interpreted as Quality Assurance Records. Quality Assurance Records include individual documents that have been executed, completed, and approved and that furnish evidence of the quality and completeness of data (including raw data), and activities affecting quality; documents prepared and maintained to demonstrate implementation of quality assurance programs (e.g., audit, surveillance, and inspection reports); procurement documents; "other documents, such as plans, correspondence, documentation of telecons, specifications, technical data, books, maps, papers, photographs, and data sheets; magnetic media; and other materials that provide data and document quality regardless of the physical form or characteristics." A completed record is a document that will either receive no more entries or whose revision would normally consist of the reissue of the document; and is signed and dated by the organization and, as applicable, by personnel authorized to approve the document. Records will be distributed, handled, and controlled in accordance with written procedures.

2. PP-60-01, Rev. 0, Personnel Selection and Indoctrination, Para. 6.1, states "Each manager and supervisor shall establish, document, and maintain on file, position descriptions for their direct subordinates."

3. PP-60-01, Rev. 0, Personnel Selection and Indoctrination, Para. 6.2, states "The Director of Personnel, Las Vegas or a designee shall verify the education and experience of employees stationed in Las Vegas and at the NTS. The Administrative Clerk/Personnel, Tulsa, shall verify the education and experience of employees stationed in Tulsa. They will then use Attachment 1 to certify that this verification has been completed. This shall be sent to the cognizant manager or supervisor."

Each manager and supervisor shall compare the education, experience, and training against those specified in the position description and NNWSI Project procedures. Only employees who meet the standard will be utilized to perform activities that affect quality. The managers and supervisors will certify that requirements have been met in the format specified in Attachment 1. A copy of this shall be sent to Central Files.

4. F&S QAPP-002, Rev. 2, Section 17.0, Quality Assurance Records, Subparagraph 17.1.2.2, states in part "Sufficient records will be specified, prepared, and maintained to furnish documented evidence of activities that affect quality. The records will include at least the following: operating logs, the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. Also, the records will include closely related data such as qualifications of personnel, procedures, and equipment."



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Deficiency (cont'd)

QA Engineers and QA Engineers) do not provide objective evidence that the subject position descriptions were established and documented by the applicable manager, QA Director, or supervisor as stated in Requirement No. 2.

These position descriptions which establish the basis for the certification of personnel performing quality affecting activities would be considered QA records and must be signed and dated by personnel authorized to approve the subject position description since the revision of these description(s) would normally consist of the reissue of the subject document.

The subject position descriptions must also be included in the personnel qualification files as required in Requirement No. 4 since it establishes the qualification requirements for the initial and continual basis for requalification of all individuals to perform activities which affect quality.

Recommended Action (cont'd)

required to develop per Requirement No. 2 and have the subject management personnel sign, date, and include revision numbers on the position description.

2. Establish a method to control the issues of position descriptions.
3. Include position description(s) as stated above in personnel qualification files, and retain such records as lifetime QA records.

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Standard

Completed by Originating QA Organization

Apr. 5

Completed by Organization in Block 5

Comp. by Orig. QA Org.

1 Date 3/8/88 2 Severity Level 1 2 3 Page 1 of 2

3 Discovered During WMPO Audit 88-01 3a Identified By G. Heaney 3b Branch Chief Concurrence Date N/A 4 SDR No. 116 Rev. 0

5 Organization F&S 6 Person(s) Contacted M. Regenda, T. McCracken 7 Response Due Date 20 Working Days fr Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable) F&S procedure NNWSI-DC-17, "Quality Assurance Records," Rev. 3, establishes requirements for the administration of F&S QA records generated by the Tulsa Design Office including the identification, storage, retention, and transmittal of appropriate (cont'd)

9 Deficiency Contrary to the above requirements, F&S Tulsa is not complying with the stated requirements in NNWSI-DC-17. "Review and Comment Records" (form 508-TUL-29) could not be located in the F&S Nevada Test Site (NTS) Records Center for any of the F&S Tulsa NNWSI-Design Control Procedures.

10 Recommended Action(s): Remedial Investigative Corrective
1. Transmit F&S Tulsa Design Office completed QA records to the NTS Records Center in accordance with procedural requirements. (cont'd)

11 QAE/Lead Auditor Date MAR 11 1988 12 Branch Manager [Signature] Date 3/11/88 13 Project Quality Mgr. Date [Signature] 3/11/88

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

23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date
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Block 8 Requirement (cont'd)

records to permanent storage.

Paragraph 6.2.2 of the procedure requires that F&S QA records generated in Tulsa be transmitted to Las Vegas within 30 days after the record becomes complete.

Block 9 Deficiency (cont'd)

Discussion:

During follow-up of corrective actions committed to previously generated SDR No. 066, Rev. 0, which stated that no QA records had been generated by the F&S Tulsa Design Office, it was observed during the audit that QA records had been previously generated by the Tulsa Design Office and were transmitted to the NTS Records Center for further processing prior to the date of the F&S response (9/16/87) to SDR-066.

Examples:

F&S Transmittals	FS-NNWSI-0250 dated 7/6/87
	FS-NNWSI-0235 dated 6/22/87
	FS-NNWSI-0127 dated 4/3/87
	FS-NNWSI-0192 dated 5/12/87
	FS-NNWSI-0191 dated 5/12/87

Block 10 Recommended Action(s) (cont'd)

- 2) Revise the time frame established in NNWSI-DC-17 if 30 days is not a realistic time frame to transmit completed QA records to the NTS Records Center.
- 3) Reinstruct appropriate personnel to procedural requirements. Provide objective evidence.