

Report of WESTON Observation of
 WMPO QA Audit NO. 88-01 of
 Fenix and Scisson, 2/22-3/2/88

Introduction

At the request of DOE-HQ, WESTON participated as an observer on the Waste Management Project Office (WMPO) audit #88-01 of Fenix and Scisson, Inc. (F&S). This report documents the WESTON observer's assessment of the effectiveness of the WMPO Audit Program with respect to this audit and also, to some extent, documents conclusions reached as to the adequacy of the Fenix and Scisson Quality Assurance (QA) Program.

The purpose of audit #88-01 was to evaluate the effectiveness of the F&S Quality Assurance Program Plan (QAPP) with respect to the requirements of NNWSI NVO-196-17, revision 5, and to verify the implementation of the QA program as it relates to the NNWSI Project.

The scope of WMPO audit #88-01 focused on the following:

Programmatic elements (10CFR50 Appendix B):

- 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

Technical Areas:

Exploratory Shaft Facility (ESF) Design Activities

Based on the purpose and scope of this audit, the WESTON observer believes that, from a QA programmatic standpoint, the audit team did accomplish their goal of evaluating the effectiveness of and verifying implementation of the F&S QA Program. However, from a technical standpoint it was apparent that the audit was performed too early to assess the adequacy of F&S ESF design activities; the audit team was informed by F&S that there were no Title I design drawings completed as yet. The audit team was limited to reviewing F&S Study No. 11 "ESF Structural Design Study Report" and associated design control procedures.

Observations of the Conduct of the Audit

WMPO audit #88-01 was conducted at F&S, Tulsa 2/22-25/88 and F&S, Las Vegas/Mercury 2/29-3/2/88. This report is based on observations of the pre-audit team meeting, pre-audit conference, the entrance and exit meetings (Tulsa, Las Vegas, Mercury), the actual auditing activities, and the daily audit team caucuses.

Audit Team Preparation

Based on the type of questions asked by the audit team and the method in which certain areas were pursued, the WESTON observer believes that the audit team was adequately prepared and had thorough knowledge of the F&S organization's scope of work, procedures and policies. Audit checklists were developed by the audit team (based on the requirements of the F&S QAPP, QA Procedures, and Design Control Procedures). These checklists along with the audit plan, QAPP, and procedures were provided to the observer well in advance of the audit. This facilitated the observer's audit preparation.

Pre-Audit Team Meeting

On February 22, 1988 a pre-audit meeting was held in Tulsa by the team members (including observers). The purpose of this meeting was to brief the team and observers on the objectives of the upcoming audit and clarify the audit schedule. An introduction was given by WMPO Project Quality Manager, Jim Blaylock, who then turned the briefing over to Audit Team Leader, Henry Caldwell. This briefing allowed the WESTON observer to ask some last minute questions prior to the conduct of the audit.

Pre-Audit Conference and Post-Audit Conference

The pre-audit conference was held on February 23, 1988. At this meeting the audit team and observers were introduced to F&S personnel and F&S contacts were established based on the areas to be audited. During this meeting the audit team leader clearly presented the purpose, objective and scope of the audit to the auditee. This meeting also provided a forum for questions and answers between audit team members, observers and F&S personnel.

The post-audit conference was held on March 2, 1988. At this meeting the audit team leader provided F&S management with the draft deficiencies (formerly called findings), observations and recommendations resulting from this audit (Appendix A). The draft deficiencies were clearly communicated to F&S during this meeting and F&S was provided the opportunity to ask questions or request clarifications with regard to the deficiencies. While appearing somewhat defensive with regard to some of the deficiencies, F&S seemed to be responsive to them and indicated a commitment to provide timely responses. It was at this meeting that the audit team leader stated that due to the number of deficiencies and observations (11 deficiencies, 6 observations) and the nature of several of these (personnel qualification/certification), the audit team would recommend that WMPO put a hold on current ESF design activities until such time that F&S responds to identified deficiencies, provides corrective action, and a readiness review is performed to determine if the required QA controls are in place.

Audit Activities

The WESTON observer believes that his presence and the presence of other observers (State of Nevada, NRC, WMPO) in no way hindered the audit team in its performance. On the contrary, the observers were allowed, if not encouraged, to ask questions, state opinions, and offer recommendations. The WESTON observer identified some concerns which were followed up by the audit team and resulted in the generation of one of the draft deficiencies and one of the draft observations.

Under the direction of the audit team leader, Henry Caldwell, audit #88-01 was conducted in a professional, organized and knowledgeable manner. At the end of each day the audit team held caucuses for the purpose of exchanging information, discussing preliminary deficiencies and monitoring the overall progress of the audit. The audit team leader also met frequently with F&S management personnel to keep them informed of the preliminary deficiencies/observations that were being discovered.

The WESTON observer was impressed with the overall knowledge and experience of the audit team. The combined efforts of the team resulted in a complete, comprehensive evaluation of the F&S QA Program with respect to the audit scope. The team identified substantial deficiencies based on evaluation of objective evidence or the lack of objective evidence.

The WESTON observer did have some concerns with regard to the F&S organization on this audit. As previously stated, the audit resulted in the generation of 11 draft deficiencies and 6 observations, several of which were in the area of personnel qualification. With F&S beginning Title I ESF design activities, this is a significant problem, in the opinion of the WESTON observer. WMPO should closely monitor the steps taken by F&S to correct the identified deficiencies, especially in the area of qualification. Prior work should also be evaluated to determine the impact on quality based on these deficiencies. Also, F&S personnel could show improvement in the area of "audit etiquette." It was observed that F&S personnel occasionally displayed a lack of professionalism in their interaction with the audit team. The WESTON observer was impressed with the manner in which the audit team conducted itself in those instances.

APPENDIX A

WMPO QA AUDIT #88-01; DRAFT
DEFICIENCIES, OBSERVATIONS AND
RECOMMENDATIONS

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WMPD STANDARD DEFICIENCY REPORT

N-QA-038
3/87

1 Date <u>25 Feb 88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of
3 Discovered During WMPD Audit 88-1		3a Identified By G. Dymme G. Heaney	3b Branch Chief Concurrence Date N/A	4 SDR No. <u>104</u> Rev. <u>0</u>
5 Organization Fenix & Scisson		6 Person(s) Contacted L. Weyand		7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) F&S Design Control Procedure NNWSI-DC-09 "Interdiscipline Checking", Rev. 4, paragraph 6.1.2 states "All work products shall have undergone review in accordance with the DCP NNWSI-DC-04, "Design Verification" before (continued)				
9 Deficiency Contrary to the above requirement, the interdiscipline reviews for F&S Study No. 11 "ESF Structural Design Study Report" Part I and Part II (continued)				
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Revise NNWSI-DC-04 to permit a non-sequential design verification and inter- discipline review as may be determined by the ESF Design Manager or his designee.				
11 QAE/Lead Auditor Date		12 Branch Manager Date	13 Project Quality Mgr. 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				
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 Veri- fication <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	Branch Manager/Date	
22 Remarks				
DRAFT				
23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date	



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

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8. Requirement (continued)

commencement of the interdisciplinary review activities."

9. Deficiency (continued)

commenced prior to the verifications being accepted and released for the interdisciplinary review.

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1 Date <u>25 Feb 88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of	
3 Discovered During Audit 88-01		3a Identified By <small>AUDITOR</small> R. F. Cote	3b Branch Chief Concurrence Date		4 SDR No. <u>105</u> Rev. <u>0</u>
5 Organization F&S		6 Person(s) Contacted Harry Forshaw		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) "No audit check list, reference" Requirement No. 1, NVO-196-17, Rev. 5, Sec. II "Quality Assurance Program", para. 1.0 "Extent of the Quality Assurance Program" states in part: Each NNWSI Project Participant shall develop a Quality Assurance Program Plan (continued)					
9 Deficiency Contrary to the above requirements, F&S Tulsa, OK initiated (3) three Quality Assurance Level II purchase orders to the following services: (continued)					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> 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 a commitment to implement the requirements of NVO-196-17, Rev. 5, (continued)					
11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. 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					
19 Response		<input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	
20 Amended Response		<input type="checkbox"/> Accept <input type="checkbox"/> Reject		Branch Manager/Date	
21 Verification		<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	
				Branch Manager/Date	
22 Remarks					
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23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
				PQM/Date	

8. Requirement (continued)

(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 QAP 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, comments 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.

9. Deficiency (continued)

- 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 6/30/86 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 F&S 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".

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10. Recommended Action(s) (continued)

sec. 4.0 "Procurement Document Control" and sec. 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 on quality of services performed.

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1 Date <u>25 Feb 88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
3 Discovered During Audit 88-01		3a Identified By <small>AUDITOR</small> R. F. Cote	3b Branch Chief Concurrence Date		4 SDR No. <u>106</u> Rev. <u>0</u>
5 Organization F&S Tulsa		6 Person(s) Contacted M. Regenda, H. Forshaw		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) Ck List Element 1-4 Requirement No. 1 - F&S QAPP-002, Rev. 2, section 2.0 "Quality Assurance Program" para 2.4 Personnel Selection, Indoctrination, and Training Procedures, sub para. 2.4.1.1 states: (continued)					
9 Deficiency Contrary to the above requirements, a review of personnel qualification/verifi- cation and training files did not indicate that F&S Tulsa, OK (continued)					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Establish <u>minimum</u> education requirements applicable to the individuals res- ponsibilities and activities pertaining to the NNWSI project, e.g., B.S. Mining engineering experience 5 years drill and blast shaft design. (continued)					
11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. 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					
19 Response		<input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> Response		QAE/Lead Auditor/Date	
20 Amended Response		<input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	
21 Verifi- cation		<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	
22 Remarks		Branch Manager/Date		Branch Manager/Date	
DRAFT					
3 2A CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
PGM/Date					

8. Requirement (continued)

2.4.1.1 Position Description Minimum education and experience requirements are established and documented in position descriptions for each position involved in the performance of activities that affect 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 descriptions for their direct subordinates.

9. Deficiency (continued)

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

~~THIS CONDITION HAS RESULTED IN THE ABILITY OF THE PERSONNEL TO DETERMINE THE VALIDITY OF THE ESP PERSONNEL CAPABILITIES TO PERFORM ACTIVITIES WHICH AFFECT QUALITY~~

THIS CONDITION ^{RESULTED} IN THE ABILITY OF DETERMINING THE VALIDITY OF THE QUALIFICATIONS OF THE ESP PERSONNEL PERFORMING ACTIVITIES WHICH AFFECT QUALITY.

10. Recommended Action(s) (continued)

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."

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1 Date <u>25 Feb 88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
3 Discovered During Audit 88-01		3a Identified By R. F. Cote		3b Branch Chief Concurrence Date	
5 Organization F&S Tulsa, OK		6 Person(s) Contacted Harry Forshaw, Paul Hale		4 SDR No. <u>107</u> Rev. <u>0</u>	
7 Response Due Date is 20 Working Days from Date of Transmittal					
8 Requirement (Audit Checklist Reference, if Applicable) Check list reference 1-6, NRC check list 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" (continued)					
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 number 2 would be deemed necessary. (continued)					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Evaluate and identify activities which would be considered complex and where initial proficiency must be demonstrated, e.g., shaft drilling design and blast engr. (continued)					
11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. 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					
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					
DRAFT					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
PGM/Date					

8. Requirement (continued)

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 affect quality.

Requirement No. 2 - F&S QAPP-002, Rev. 2, Sec. 2.0 "Quality Assurance Program", para 2.4 "Personnel Selection, Indoctrination, and Training Procedures", sub para. 2.4.1.4 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 of the activity. Such in-depth instructions may be internal or external classroom sessions, classroom sessions supplemented by hands-on workshops, on-the-job training, other instructional methods, or combinations thereof.

9. Deficiency (continued)

A review of F&S activities ^{SNAPT} in Tulsa indicates that such complex activities, e.g., design of subsurface drilling and blasting techniques, would be considered complex in nature and deemed necessary that these personnel demonstrate initial proficiency and training as stated above, prior to assigning these personnel to perform these quality affecting activities.

10. Recommended Action(s) (continued)

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

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3/87

1 Date <u>25 Feb 88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
3 Discovered During Audit 88-01		3a Identified By R. F. Cote		3b Branch Chief Concurrence Date	
4 SDR No. <u>108</u>		Rev. <u>0</u>			
5 Organization F&S Tulsa, OK		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 (continued)					
9 Deficiency Contrary to the above requirement, managers and supervisors have certified personnel as having met the requirements specified in the subject (continued)					
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 proced- ural requirements pertaining to the written certification of their subordinates, which is required to be based on the pre-established position (continued)					
11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. 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					
19 Response		<input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> Response		QAE/Lead Auditor/Date	
20 Amended Response		<input type="checkbox"/> Accept <input checked="" type="checkbox"/> <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	
21 Verifi- cation		<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	
22 Remarks					
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23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
				PQM/Date	

8. Requirement (continued)

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.

9. Deficiency (continued)

position description, re: SDR 106. Since no position descriptions have been established for the below listed personnel, these management certifications would be considered invalid.

- Project Design Manager
- Lead Project Design Engineer
- Design Support Services Manager
- Project QA Representative
- Project QA Representative
- Lead Mining Design Engineer
- Senior Mining Engineer
- Lead Structural/Civil Design Engineer
- Structural Engineer
- Lead Mechanical Design Engineer
- Lead Electrical/Instrumentation Engineer
- ~~Drafting Coordinator~~
- ~~Cost & Scheduling Engineer~~

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10. Recommended Action(s) (continued)

description.

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

Evaluate work performed by the listed individuals and determine if they were qualified to perform their assigned tasks.

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1 Date 3-1-88 2 Severity Level 1 2 3 Page 1 of 2

3 Discovered During WMPD Audit 88-0 3a Identified By D. Klimas 3b Branch Chief Concurrence Date N/A 4 SDR No. 109 Rev. 0

5 Organization Fenix & Scisson 6 Person(s) Contacted Dan Tunney 7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable) QAP-18.1(n), Rev. 2, Para. 3.13.
 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 F&S ADR 87-06 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 comply with NNWSI-SOP-03-02. DC-12 was approved on December 11, 1987.

10 Recommended Action(s): Remedial Investigative Corrective
Reinstruct audit personnel as to procedure requirements regarding closeout of Audit Deficiency Reports.

11 QAE/Lead Auditor Date 12 Branch Manager Date 13 Project Quality Mgr. 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 _____

19 Response	<input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <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 DRAFT

23 QA CLOSURE QAE/Lead Auditor/Date Branch Manager/Date POM/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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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 2
3 Discovered During WMPO Audit 88-01	3a Identified By D. Klimas	3b Branch Chief Concurrence Date N/A	4 SDR No. <u>110</u> Rev. <u>0</u>	
5 Organization Fenix & Scisson		6 Person(s) Contacted Dan Tunney		7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) F&S QAPP 16.1, Para. 4.1, Conditions for Initiating a CAR - CAR's 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 type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective Initiate a CAR per procedure requirements. 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	12 Branch Manager	Date	13 Project Quality Mgr.	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				
19 Response	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended <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				
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23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date	

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Block 8 Requirement (cont'd)

1. An organization is not following or does not have approved procedures to accomplish its assigned tasks.
2. The organization has failed to correct deficiencies in response to audit reports or memos to the organization management.

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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 WMPO Audit 88-01		3a Identified By D. Klimas	3b Branch Chief Concurrence Date N/A		4 SDR No. <u>111</u> Rev. <u>0</u>
5 Organization Fenix & Scisson		6 Person(s) Contacted Dan Tunney		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) QAPP-002, Rev. 2, Section 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.					
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 Initiate, approve and publish a surveillance procedure for the conduct of surveillance activities. Provide training to personnel performing surveillance activities.					
11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. 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					
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					
DRAFT					
23 QA CLOSURE	QAE/Lead Auditor/Date		Branch Manager/Date		PGM/Date



DRAFT YMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

1 Date 03-01-88		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of
3 Discovered During 88-01	3a Identified By R. F. Cote	3b Branch Chief Concurrence Date		4 SDR No. 112 Rev. 0
5 Organization F&S		6 Person(s) Contacted D. J. Tunney		7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) Req. No. 1 PP-60-01-Rev. 0 "Personnel Selection & Indoctrination: Paragraph states:				
9 Deficiency Contrary to the above Requirements Position Description for an F&S NTS NNWSI SR. QA Engineer, requires "Educational Qualifications to include "A Senior QA Engineer shall possess a bachelors or higher degree in an Engineering or				
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" 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 (cont'd)				
11 QAE/Lead Auditor Date	12 Branch Manager	Date	13 Project Quality Mgr.	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 _____

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 Verifi- cation	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date	Branch Manager/Date

22 Remarks _____

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23 QA CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date
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Req. No. 1 (Continued)

6.1 POSITION DESCRIPTIONS

Each Manager and Supervisor shall establish, document and maintain on file, position descriptions for their direct subordinates.

Req. No. 2 PP-60-01-Rev. 0 " Personnel Selection & Indoctrination"

Para. 6.2 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.

9. Deficiency (Continued)

Scientific Discipline, and specialized training in the QA Field". 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 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.

10. Recommended Action (cont'd)

specified in their appropriate position descriptions where such position descriptions exist.

Retrain managers, supervisors, and administration personnel who verify education to those specified in the position description into the understanding of the differences between technical degrees as specified and non-technical degrees.

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, and identify what action has or will be taken including date to correct and prevent this condition from recurring.

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3/87

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 2	
Discovered During dit 88-01	3a Identified By R. F. Cote	3b Branch Chief Concurrence Date		4 SDR No. <u>113</u> Rev. <u>0</u>	
Organization S	6 Person(s) Contacted D. Tunney, T. McCracken			7 Response Due Date is 20 Working Days from Date of Transmittal	

Requirement (Audit Checklist Reference, if Applicable)
PP-10-02, Rev. 0, "Training on NNWSI Procedures," Para. 4.0, Definitions, paragraph 4.1, Training, states "In depth instruction provided to (cont'd)"

Deficiency
Contrary to the above requirements a review of the personnel file does not provide objective evidence of the standard training the subject individual is (cont'd)

Recommended Action(s): Remedial Investigative Corrective
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)

2AE/Lead Auditor Date	12 Branch Manager Date	13 Project Quality Mgr. Date
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Remedial/Investigative Action(s)
15 Effective Date _____

Cause of the Condition & Corrective Action to Prevent Recurrence
17 Effective Date _____

Signature/Date

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

Remarks

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CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date
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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)."

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 those staff who report to the Project Manager, the PM shall be responsible for training those personnel."

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."

Deficiency (cont'd)

Required to receive.

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 through 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.

Recommended Action (cont'd)

Evaluate and determine if this condition is an isolated incident and provide the WMPO with the objective evidence demonstrating the method utilized to establish the situation results. E.G., number of technical personnel reviewed and those found to meet requirement and those that have not met requirements.

Evaluate and determine if standard training courses have been established applicable to individual disciplines within each department as stated in Requirement No. 3. Notify the WMPO by F&S department the applicable training course requirements and intent.

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

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

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DRAFT WMPO STANDARD DEFICIENCY REPORT

N-0A-038
3/87Date 3-1-88 2 Severity Level 1 2 3 Page 1 of 2Discovered During dit 88-01 3a Identified By R. F. Cote 3b Branch Chief Concurrence Date _____ 4 SDR No. 114 Rev. 0Organization S 5 Person(s) Contacted D. Tunney, M. Regenda 7 Response Due Date is 20 Working Days from Date of Transmittal

Requirement (Audit Checklist Reference, if Applicable)

PP-60-01, Rev. 0, "Personnel Selection and Indoctrination," Para. 6.2, states part "Each manager and supervisor shall compare the education, experience (cont'd)

Deficiency

Contrary to the above requirements a review of personnel position descriptions for both QA and technical personnel. (e.g., ESF Design Engineers) do not specify (cont'd)

Recommended Action(s): Remedial Investigative Corrective

Specify in the position description(s) the required training an individual is to receive prior to management certification, or should it not be the intent to (cont'd)

2A E/Lead Auditor Date _____ 12 Branch Manager Date _____ 13 Project Quality Mgr. Date _____

Remedial/Investigative Action(s)

15 Effective Date _____

Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

Signature/Date

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

Remarks

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CLOSURE	QAE/Lead Auditor/Date	Branch Manager/Date	PQM/Date
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requirement (cont'd)

id 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."

PP-60-01, Rev. 0, "Personnel Selection and Indoctrination," Attachment 1.A, Personnel Qualification Evaluation, states in part "Based on my personal 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 assigned task."

1. _____
Manager or Supervisor Date _____

deficiency (cont'd)

the training required for the individual position description by which the individual was then certified as having attained by the manager or supervisor as indicated in requirement No. 2.

Recommended Action (cont'd)

Identify the required training in the position description then delete this requirement 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.

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G. Heaney
G. Dymmel

OBSERVATION NO. 1

Fenix & Scisson Design Control Procedure (DCP) NNWSI-DC-05 "External Interface Control", Rev. 3, paragraph 6.3.1.A describes that external input documents (i.e., Reference Information Base (RIB)) are issued to F&S and distributed to F&S personnel. F&S engineering personnel are responsible to review and evaluate the design input to determine if it is adequate for the intended design and indicate acceptance or rejection of the design input by letter in accordance with DCP NNWSI-DC-02 "Design Methodology", Rev. 4, paragraph 6.1.1.4.

The WMPO requests that DCP NNWSI-DC-05, paragraph 6.3.1 be revised to explain that the external technical input documents including revisions are distributed to appropriate F&S design personnel who perform an evaluation of the technical input in accordance with DCP NNWSI-DC-02. This action would close the loop and clearly delineate procedurally that design input documents including revisions are reviewed and evaluated by F&S design personnel.

Additionally, procedure NNWSI-DC-02, para. 6.1.1.4 should be revised to explain that the evaluation of design inputs and revisions also includes evaluation for impact on F&S approved designs in addition to the evaluation for acceptance or rejection of the design input. These procedural controls would ensure that if technical data inputs as provided for by the RIB are revised, these revisions will receive a documented engineering evaluation for impact on current approved designs.

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G. Dymmel
G. Heaney

OBSERVATION NO. 2

The F&S verification of designs performed by F&S subcontractors is performed in accordance with DCP NNWSI-DC-04 "Design Verification", Rev. 4, para. 6.1.5. F&S Design Study No. 11 "ESF Structural Design Study", Part II, which included F&S internal design inputs as well as a subcontractor design report, was verified in its entirety on one verification sheet. The audit team believes that when a subcontractor design output document is received by F&S, the verification and design analysis of that document should be independent of the verification and design analysis of F&S design output documents. The independent verification and design analysis of the subcontractor design output document should be a part of the QA record package for the F&S design output document. F&S is requested to review and revise appropriate implementing procedures to ensure this type of independent review is performed.

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G. Heaney

RECOMMENDATION NO. 1

F&S DCP NNWSI-DC-09 "Interdiscipline Checking", Rev. 4, para. 6.2.8 should be revised to include the Project Manager or his designee is responsible for assuring that document review comment disputes are resolved. This revision would make the comment resolution process for interdiscipline checking consistent with the comment resolution process for design verifications (refer to DCP NNWSI-DC-04 "Design Verification", Rev. 4, para. 6.1.3.2).

Additionally, if F&S procedures (i.e., DCP-NNWSI-DC-09 and DCP NNWSI-DC-04) allow for comments to be made directly on the work product, these marked up work products should be specifically retained as QA records. These records would ensure a method is available to check if all comments were reconciled and incorporated into the final work product.

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G. Heaney

RECOMMENDATION NO. 7

F&S DCP NNWSI-DC-17 "Quality Assurance Records", Rev. 3 describes how records generated and processed in the Tulsa design office are transmitted to Las Vegas. Once in Las Vegas, the records are processed in accordance with F&S procedure PP-50-01 "NNWSI Records Management." The combination of these two procedures address the F&S QAPP requirements and indicate the entire trail of F&S Tulsa records from initial validation to transmittal to the NNWSI Project Records Center. Procedure NNWSI-DC-17 presently does not explain that records transmitted to Las Vegas are further processed in accordance with F&S procedure PP-50-01. Additionally, NNWSI-DC-17 does not reference PP-50-01. The audit team recommends that NNWSI-DC-17 be revised to indicate a reference to PP-50-01 and explain how F&S Tulsa records are further processed. This information would close the loop for the processing of these records.

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G. Heaney

OBSERVATION NO. 3

The F&S Quality Assurance Program Plan, Rev. 2, para. 5.1 requires that each implementing procedure will include a section which identifies the QA records which are generated during implementation of the procedure. Although this requirement is being implemented satisfactorily in each DCP, the requirement has not been included in DCP NNWSI-DC-08 "Preparation of Procedures", Rev. 3 which is the controlling document for the preparation of all DCPs.

It is requested that F&S provide a commitment date for when NNWSI-DC-08 will be revised to include this requirement.

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G. Dymmel
G. Heaney

OBSERVATION NO. 4

F&S Design Control Procedure NNWSI-DC-02 "Design Methodology", Rev. 4, para. 6.1.1 describes that design inputs are provided to F&S and these design inputs must be approved by WMPO. Subcontractor design output documents (i.e., a developed computer program) may be used directly in an F&S design output document. This subcontractor design output document essentially becomes a design input provided to F&S.

The procedure does not describe how subcontractor design inputs provided to F&S are handled or differentiate between design inputs provided by the WMPO and F&S subcontractors. The implication is that all design inputs (both subcontractor and WMPO provided) are to be approved by the WMPO. It was observed by the audit team that the intended practice to be followed is to have F&S and not the WMPO approve subcontractor design inputs. It is requested that F&S review and revise NNWSI-DC-02 as appropriate to clearly delineate how subcontractor design inputs are to be reviewed and approved by F&S.

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OBSERVATION NO. 5

R. F. Cote

A review of all indoctrination and training records of procedures that F&S Tulsa personnel have been trained in, do not consistently reference the revision level of the document to which the individuals have been trained.

It is recommended that future training records which reflect the procedures that personnel have been trained in, clearly indicate the revision level of the document the personnel have been indoctrinated and trained in.

Documenting this revision level will facilitate in ascertaining whether or not personnel are trained in the current document(s) associated with the activities they are implementing.

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OBSERVATION 6

D. Klimas

A review of activities in the F&S Tulsa office was conducted on February 10, 11, 1987 which resulted in the identification of (22) minor concerns. This activity was conducted which identified deficiencies without a system to require a response, track corrective action completion or to require a corrective action completion date for correcting these deficiencies.

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