

# memorandum

101.7  
PDR - 1  
LPDR  
WM-15  
WM-11  
WM-14

FEB 17 12:21

DATE:  
REPLY TO RW-24  
ATTN OF:  
SUBJECT: FY 1987 Consolidated Audit Schedule

TO: OGR Auditors

Attached is the FY 1987 consolidated schedule for all OGR and project audits showing proposed participation of OGR auditors. Please advise me as soon as possible of any problems in your participating in the audits indicated.

I also want to remind you that you are to prepare a written report of your participation within 5 days of the completion of the audit. This is required by OGR Quality Implementing Procedure 18.1 (copy attached). Wa (HQ) will be audited by NRC in the near future and it will prove embarrassing if we cannot demonstrate compliance with our QA procedures. Attached are two "sample" reports that others have prepared; I hope this will be of assistance in writing your own.

Thanks for your willing involvement in our QA audit process - I appreciate your contributions.

*Carl Newton*

Carl Newton, Quality Assurance Manager  
Office of Geologic Repositories

Attachments:

B706030171 B70217  
PDR WASTE PDR  
WM-10

B(2483)  
N(1372)

WM Record File  
101.7  
102.7  
106.4

WM Project 10, 11, 14  
Docket No \_\_\_\_\_  
PDR K. [unclear]  
LPDR K. [unclear]

Distribution:  
J. Kennedy  
RDM Litchman  
M. Delligatti  
K. Riddle

Distribution

OGR Auditors

O. Thompson, RW-24  
C. Newton, RW-24  
D. Brown, Weston  
G. Faust, Weston  
J. Richardson, Weston  
T. Russell, RW-32  
N. Abraham, RW-231  
K. Sommer, RW-242  
G. Faulkner, RW-233  
M. Lugo, Weston  
H. Bermanis, Weston  
R. Clark, Weston  
S. Panno, Weston  
L. Ibe, Weston  
R. Coleman, RW-221  
C. Kouts, RW-32  
S. Gomberg, RW-241  
E. Regnier, RW-242  
T. Gutmann, RW-32  
E. Gilardi, Weston  
J. Richardson, Weston  
J. Jones, RW-241

# OGR Consolidated Audit Schedule

1987

Project	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Headquarters OGR					SWIP	WMPO	SRPO						3
SWIP Richland	Battelle PNL (Thompson)		Westinghouse (Newton) (Ponno)	KE/PB (Brown) (Faulkner)	DOE-RL (OS Div.) (Faulst) (Brown) ..... DOE-RL (Non-OSD) (Faulkner) (Sommer)	Rockwell (Total GA Prog) (Faulst) (Richardson)	Boeing-DCSR (Russell) (Jones)	M.K. (Faulst) (Abraham)					8
SRPO Columbus	OHV	Golder 2/17 (Abraham)	OHV 2/2 (Tech Review) (Lugo) (Coleman) ..... LBL 3/17 (Ibe) (Clark)	BNL 4/7 (Newton) (Sommer) ..... UNC 4/24 (Bormanis) (Jones)	PS/PB 8/8 (Clark) (Russell) ..... PHL 8/12 (Sommer) (Kouts) ..... ANL 8/18 (Coleman) (Lugo)	USGS 8/2 (Sommer) (Thompson) ..... PNL/NEEL 8/18 (Ponno) (Faulkner) ..... Flour 8/22 (Ibe) (Bormanis)	M.K. 7/7 (Gomberg) (Brown) ..... ORNL 7/21 (Kouts) (Gutmann)	Integrator 8/4 (Regnier) (Gutmann) ..... USBN 8/11 (Sommer) (Bormanis) ..... TPSC 8/18 (Jones) (Lugo)				17	
WMPO Nevada			Los Alamos (Brown) (Sommer)	MAN (Richardson) (Gillard)	SAIC/TAMSB (Gutmann) (Thompson)	USGS Denver (Sommer) (Thompson) ..... USGS Menlo Park (Newton) (Gomberg)	PAE Tulsa (Faulst) (Coleman)	RECO (Ibe) (Clark)					7
<b>Totals</b>	2	1	4	4	7	7	8	5					

(Name) Selected by HQ-OGR for Participation  
 Actual Dates of Audits to be Confirmed 30 Days in Advance  
 Second Auditor Scheduled as an Alternate.

35 Audits  
Scheduled

SCHEDULE OF OGR PARTICIPATION IN PROJECT AUDITS 2/87

OGR REPRESENTATIVE	ESTIMATED START DATE	PROJECT OFFICE	CONTRACTOR
Jay Jones	* 4/21/87 * 7/87 8/18/87	SRPO BWIP SRPO	UNC Boeing-BCSR TFSC
Lib Ibe	3/17/87 6/23/87 8/87	SRPO SRPO WMPO	Lawrence Berkeley Lab. Flour REECO
Christopher Kouts	* 5/12/87 7/21/87	SRPO SRPO	PNL Oak Ridge Nat. Lab.
Miguel Lugo	3/3/87 * 5/19/87 * 8/18/87	SRPO SRPO SRPO	ONWI (Tech. Review) Argonne Nat. Lab. TFSC
Carl Newton	3/87 4/7/87 6/87	BWIP SRPO WMPO	Westinghouse Brookhaven Nat. Lab. USGS Menlo Park
Sam Panno	* 3/87 6/87	BWIP SRPO	Westinghouse PNL/HEDI
Ed Regnier	8/87	SRPO	Integrator
John Richardson	4/87 * 6/87	WMPO BWIP	Holmes & Narver Rockwell
Tom Russell	* 5/5/87 7/87	SRPO BWIP	Parsons Brinckerhoff/PB Boeing-BCSR
Karl Sommer	* 3/87 * 4/7/87 * 5/87 5/12/87 6/2/87 7/11/87	WMPO SRPO BWIP SRPO SRPO/WMPO SRPO	Los Alamos Nat. Lab. Brookhaven Nat. Lab. DOE-RL (Non-QSD) PNL USGS Denver USBM
Owen Thompson	1/87 * 5/87 * 6/87	BWIP WMPO SRPO/WMPO	Battelle-PNL SAIC/T&MSS USGS Denver

SCHEDULE OF OGR PARTICIPATION IN PROJECT AUDITS 2/87

OGR REPRESENTATIVE	ESTIMATED START DATE	PROJECT OFFICE	CONTRACTOR
Naomi Abraham	2/17/87 * 8/87	SRPO BWIP	Golder Morrison-Knudsen
Henry Bermanis	4/21/87 * 6/23/87 * 8/11/87	SRPO SRPO SRPO	UNC Flour USBM
Dave Brown	3/87 4/87 * 5/87 * 7/87	WMPO BWIP BWIP SRPO	Los Alamos Nat. Lab. Kaiser Eng/PB DOE-RL (QSD) Morrison-Knudsen
Bob Clark	* 3/17/87 5/5/87 * 8/87	SRPO SRPO WMPO	Lawrence Berkeley Lab. Parsons Brinckerhoff/PB REECO
Renee Coleman	* 3/3/87 5/19/87 * 7/87	SRPO SRPO WMPO	ONWI (Tech. Review) Argonne Nat. Lab. Fennix & Scission
Glen Faulkner	* 4/87 5/87 * 6/16/87	BWIP BWIP SRPO	Kaiser Eng./PB DOE-RL (Non-QSD) PNL/HEDL
Gary Faust	5/87 6/87 7/87 8/87	BWIP BWIP WMPO BWIP	DOE-RL (QSD) Rockwell Fennix & Scission Morrison-Knudsen
Edward Gilardi	* 4/87	WMPO	Holmes & Narver
Steve Gomberg	* 6/87 7/7/87	WMPO SRPO	USGS Menlo Park Morrison-Knudsen
Tom Gutman	5/87 * 7/21/87 * 8/4/87	WMPO SRPO SRPO	SAIC/T&MSS Oak Ridge Nat. Lab. Integrator

\* Indicates an alternate auditor.



QUALITY IMPLEMENTING PROCEDURE  
HEADQUARTERS-OFFICE OF GEOLOGIC REPOSITORIES (HQ-OGR)

QIP No. 18.1

Page 1 of 3

Rev. 1

Issued 8/1/86

TITLE Headquarters Participation in Project Office Audits of Their Contractors		PREPARED BY: <i>D. Brown</i>
REVIEWED BY: OGR QA MANAGER <i>Carl Martin</i>	APPROVED BY: DIRECTOR - SITING, LIC. & QA DIV. <i>J. Knight</i>	APPROVED BY: ASSOCIATE DIRECTOR OGR <i>[Signature]</i>

1.0 Purpose

The purpose of this procedure is to describe the system for Headquarters Office of Geologic Repositories (HQ-OGR) participation in Project Office audits.

2.0 Scope

This procedure applies to HQ-OGR participation in the Project Office audits of their prime/integrating contractor(s) and in the audits of major contractors conducted by the prime/integrating contractors for the Project Offices.

3.0 References

- 3.1 HQ-OGR Quality Assurance Plan - OGR/B-3
- 3.2 QIP 18.3 Auditor Training, Qualification and Certification
- 3.3 QIP 17.0 Quality Assurance Records

4.0 General

- 4.1 Reference 3.1 requires HQ-OGR to participate in selected QA audits of the contractors which are conducted by the Project Office or assigned by them to be conducted by a prime or integrating contractor.
- 4.2 Reference 3.2 requires that personnel who audit activities be provided appropriate training to assure that suitable proficiency is achieved and maintained.

5.0 Responsibilities

- 5.1 The OGR - Quality Assurance Manager (QAM) is responsible for reviewing project audit schedules and selecting the audits in which HQ personnel will participate. He will notify the Project Office in writing of the audits selected for HQ participation.

## 6.0 Procedure

### 6.1 OGR - Quality Assurance Manager

6.1.1 The QAM will review the audit schedule and audit plans from each project to select the audits in which HQ-OGR will participate. The selection is based on trends identified in previous audits, QA program requirements, conditions identified by unusual occurrence reports, or other as determined by the QAM.

6.1.2 The Project Office is notified by written memo of the audit(s) in which HQ-OGR will participate and will be requested to provide HQ with confirmation of the audit dates and scope sufficiently in advance of the scheduled audit in order that travel plans may be made.

### 6.2 HQ-OGR Audit Team Member

6.2.1 Upon HQ-OGR notification by the Project Office of a scheduled audit, the QAM will assign a HQ-OGR representative to participate in the audit as a team member. The assigned representative(s) must be certified in accordance with Reference 3.2.

6.2.2 The HQ representatives will thoroughly familiarize themselves with the QA plan and procedures identified in the audit notification and contact the project's audit team leader, if required, to obtain specific details. The audit checklist is prepared by the Audit Team Leader, but specialized questions may be developed by the HQ representatives for use during the audit.

6.2.3 At the completion of the audit, the HQ representative(s) will submit completed checklist or notes of items examined, persons contacted, and findings and observations to the Audit Team Leader who will issue the audit report.

6.2.4 The HQ-representative, within 5 days of return from the audit, will submit a written summary report. The sole purpose of this report is to provide HQ with a synopsis of audit results in advance of the audit team leader's official audit report. The summary report shall as a minimum:

- a) Describe the scope of the audit.
- b) Identify the organization audited.
- c) Provide a list of audit team members.
- d) Provide comments on the effectiveness of the QA Plan and procedures audited.
- e) Provide a summary of the findings and observations (if any).
- f) Highlight significant problems which may have an impact on program-wide activities. Problems, if any, should be discussed with the audit team leader prior to conclusion of the audit in order that they are accurately described in the summary report.

6.2.5 The summary report will be addressed to the QAM with copies to the Associate Director, OGR; the Director, Siting, Licensing and QA Division and the audit team leader.

#### 7.0 Records

Audit records are nonpermanent and as such will be maintained for a minimum of 5 years in accordance with Reference 3.3. As a minimum, the following records shall be maintained:

- a) Audit Plans
- b) Audit Report
- c) Audit Summary Reports
- d) Other correspondence related to each audit.

#### 8.0 Appendix

None





955 L'ENFANT PLAZA, S.W.  
8TH FLOOR  
WASHINGTON, D.C. 20024  
PHONE: (202) 646-6600

Mr. D. Carl Newton  
Quality Assurance Manager  
Siting, Licensing, and QA Division  
Office of Geologic Repositories  
Office of Civilian Radioactive Waste Management  
U.S. Department of Energy  
RW-24 (Forrestal)  
Washington, D.C. 20585

RFW-QA-DEL-01729-86  
October 17, 1986

Subject: Report of Weston Participation in SRPO QA Audit of Parsons-Redpath  
Contract # DE-AC01-83-NE44301  
TDD# 3002-24-24-3006

Dear Mr. Newton:

As required by OGR Quality Implementing Procedure No. 18.1, attached is a summary report of Weston participation in the audit of Parsons-Redpath QA Program on September 30 through October 2, 1986, under Audit No. PR-86-13-E. The audit was performed by the DOE's Salt Repository Project Office (SRPO) and Battelle Project Management Division (BPMD).

Should you have any questions on the report, please contact Lib Ibe at (202) 646-6661.

Sincerely,

ROY F. WESTON, INC.

Leonard T. Skoblar, Manager  
Regulatory, Safety and  
Quality Assurance Department

Approved by:

William M. Hewitt  
Program Manager

Enclosure

cc: R. Blaney J. Knight  
H. Brandt M. Langston  
J. Fiore T. J. Reese (SRPO)  
T. Issacs R. Stein  
S. Kale W. Hewitt  
D. Siefken  
C. Hawley

REPORT ON WESTON PARTICIPATION IN  
SRPO QA AUDIT OF  
PARSONS-REDPATH QA PROGRAM

AUDIT NO.: PR-86-13-E

AUDITING ORGANIZATION: DOE Salt Repository Project Office

AUDITED ORGANIZATION: Parsons-Redpath

DATE OF AUDIT: September 30 - October 2, 1986

AUDIT SCOPE: The scope of the audit was directed toward Parsons-Redpath's implementation of their QA Program as described in the QA Plan and quality implementing procedures. In addition, verification of the corrective actions identified by Parsons-Redpath as a result of the previous DOE audit was performed.

Specific areas addressed during the audit were; QA programmatic aspects including training and documentation, management assessment and reports to higher management, technical review of documents and reports, instructions and procedures, document control, procurement control, nonconformance and corrective action, records and audits.

AUDIT TEAM:

T. J. Reese	- DOE/SRPO, Audit Team Leader
D. L. Anderson	- DOE/SRPO, Auditor
L. D. Ibe	- Weston, Auditor
D. Paterson	- DOE/CER, Auditor
M. L. Gildner	- BPMD, Auditor-in-Training
R. Waters	- DOE/HQ, Technical Observer
D. Miall	- BPMD/ONWI, Technical Observer

Summary of the Audit

The Audit Team was divided into two groups. The first group, which included the technical observers, looked into the design reviews, document control, QA program implementation and interface control. The second group did the programmatic audit. I was part of the second group.

At the end of each audit day, the Audit Team Leader (ATL), orally presented to the Parsons-Redpath (P-R) management, the audit findings and observations on the areas audited for that day. At the conclusion of the audit, the ATL discussed the team's overall assessment of the P-R QA Program. He presented to the P-R Project Director one (1) audit finding and two (2) observations. He informed further that additional comments will be given in the audit report to be prepared. The audit finding and observations are as follows:

Finding (AAR No. PR-86-13-E-1)

The Records/Document Center does not inspect the records turned in by the department managers. Records indexing is insufficient to identify documents within a file folder. Some single copy QA records are not protected.

Observation (AAR No. PR-86-13-E-2)

There is no identification of training requirements by job position. Signatures on "Read and Route" forms do not indicate whether it is for receipt of the document or if it is for completion of the reading. Some training records do not indicate the revision numbers of the documents used in training. Some training attendance sheets are incompletely accomplished.

Observation (AAR No. PR-86-13-E-3)


P-R Staff fail to follow procedures, such as in (a) completing audit checklists and (b) completing document reviews made. This observation was also detected in the internal audit of P-R.

Comments on the Audit and P-R QA Program

1. The audit was conducted in a very professional manner. The P-R staff was equally professional and quite cooperative in responding to the questions and requests of the audit team.
2. Several inadequacies of the P-R QA Plan/Procedures were noted as the audit was performed. However, considering that SRPO has not completed its review/approval of these submitted documents, the auditors could not list them as findings or observations. Some members of the audit team, who are also reviewing the P-R documents, assured that the inadequacies will be addressed when SRPO sends its comments on the P-R QA Plan/Procedures. Note that P-R was authorized to implement the QA plan/procedures pending receipt of SRPO comments/approval on the documents submitted.
3. The audit team first group had difficulty rationalizing the design computations being performed by the P-R staff. P-R claims that the design of another contractor on the exploratory shaft was being "reviewed for constructability and inspectability". There was vagueness on the purpose of the calculations. Moreover, P-R does not claim design control responsibility and the calculations done by the P-R staff appear not to comply with QA requirements for design review.

The problem identified seem to stem from the vagueness of the statement of work issued to P-R, and the lack of identification of documentation expected from the contractor.

4. In the procedures reviewed, it was noted that there is no direct indication of what records are required to be turned over by P-R to DOE/SRPO. The procedures merely state that "when requested by the Client, records will be turned over." The audit team leader acknowledges the weakness of the current QA specifications/requirements issued to P-R. However, he assured that, with the issuance of the OGR QA Plan and QA Supplements, the QA requirements will be revised and made more definitive. With the current situation, there could later arise on the need for validation of prior quality records or data not having been obtained under a qualified QA program.
5. The P-R staff, particularly the QA Department, is trying to come up with a viable QA program. The staff attitude towards QA appears to be encouraging. Although the other audit team members have noted a marked improvement in the QA approach since the last audit in 1985, it is felt that considerable indoctrination and training efforts, and dedication to QA principles, are still needed to have an acceptable QA program going for P-R. A positive commitment on the part of P-R management could make the big difference.

  
L. D. Ibe  
Auditor

United States Government

Department of Energy

# memorandum

DATE:

REPLY TO: RW-24 OCT 06 1986  
ATTN OF:

SUBJECT: Report of Participation by Karl Sommer in SRPO QA Audit of PNL-  
Richland, WA

TO:

Jim Knight

Discussion:

Attached as required by section 6.2.4 of OGR QIP 18.1 is a report of my participation in the QA Audit conducted by SRPO of PNL the week of September 21, 1986.



Karl Sommer, RW-24

Attachment:

cc w/att: J. Reese, SRPO

Report of OGR Participation in SRPO QA Audit of PNL  
Richland, Washington

Auditing Organization: Salt Repository Project Office.

Audited Organization: Pacific Northwest Laboratories.

Dates of Audit: September 22-25, 1986.

Audit Scope: (1) Performance Assessment  
(2) Waste Package Studies

Audit Team Members:

T. J. Reese, SRPO, Audit Team Leader  
T. F. Orlin, BPMD/ONWI, Auditor  
J. C. Cunnane, ONWI, Technical Observer  
S. Brown, BPMD/ONWI, Auditor  
S. Mohan, ONWI, Technical Observer  
C. Walenga, NRC/HQ Observer  
T. J. Lefman, BPMD/ONWI, Auditor  
K. K. Wu, SRPO, Technical Observer  
K. G. Sommer, DOE/OGR, Auditor  
T. Verma, NRC/HQ Observer  
J. Perrin, ONWI, Technical Observer  
V. McCauley, ONWI, Technical Observer

Summary of Audit:

The audit was divided into three (3) teams with a balance of both auditors and technical observers. The two (2) Team Leaders assigned to waste package activities were T. Orlin and J. Lefman, the third team leader assigned to performance assessment was S. Brown.

Team 1 was responsible for solubility data, gamma radiolysis, and surveillance verification. Team 2 was responsible for corrosion data, spent fuel, and programmatic review and audit follow-up. Team 3 was responsible for computer code development, modeling, documentation verification, valadiation, and application.

The Audit Team Leader (ATL), J. Reese (SRPO) conducted a very professional audit, from the pre-audit caucus through the final close out meeting with PNL management.

The focus of the audit was on QA program implementation and the type of technical product being obtained.

During the pre-audit caucus NRC (C. Walenga) briefed Audit team members on NRC's performance oriented inspection system, i.e., in depth review and total implementation of the QA program. NRC indicated the checklist requires additional technical questions to confirm we will obtain a high-quality technical product. While I cannot dispute this concern by NRC, checklists are a start --- the technical product observers during the audit cycle confirmed that a good quality product has, to date, been supplied.

The audit revealed several concerns during the four (4) day audit cycle, many of the concerns were reviewed during the daily briefing to PNL management.

The ATL reviewed the teams' joint findings (3 total) and observations (8 total) during the final close-out meeting, details are as follows:

Finding 1 - Problems in the area of internal audit record books and lack of detailed documentation.

Finding 2 - Problems in the area of QA audit system; checklists not completed and not specific as to scope, responses lacking, corrective actions unresolved, and technical personnel not involved.

Finding 3 - Problems in the area of waste package modeling; software procedures not fully implemented and lab personnel retraining required.

Observations - Revealed several concerns/problems in areas of; management assessments, surveillance, procedure review, document control, computer run verifications, hand calculations, computer codes, and QA plan.

Evaluation of Conduct of Audit:

The audit was well conducted, and very professional. The QA Auditors were experience and for the most part, all five (5) technical observers were well trained, knew the check-list contents, and were of the proper discipline.

The audit checklist was well developed and, in my opinion, based on my experience using technical type audit checklists for Radioisotope Thermoelectric Generators for the Galiled and Ulysses (NASA) shuttle missions, covered the necessary aspects to assess the quality of the technical product (Data Reports).

I believe, based on comments from the two (2) NRC observers, NRC were, for the most part, convinced the technical product was properly assessed, and also the QA system was properly assessed. The NRC observers indicated the technical observers were a welcome addition to the audit team, and, in fact, confirmed DOE/OGR have moved-up on the "Learning Curve".

The ATL is to be congratulated for the professional conduct of the audit and, obtaining a good balance between QA and technical audit personnel.

Areas that offer a potential for improvement in the future are:

- 1). Attempt to limit scope to reduce the number of elements to be audited --- this was a "long-audit".
- 2). If scope is reduced, more frequent audits necessary to cover all elements.
- 3). The PNL presentation at the pre-audit conference was brief, not a detailed discussion on the PNL organization. In fact, during the audit cycle, I had to make a request three (3) times before I received a quality organization chart.
- 4). If a specific organization believes checklists are lacking (either QA or technical aspects), they should offer suggestions for improvement after receiving and reviewing the checklists --- prior to the audit.

Evaluation of Auditing- For- Effectiveness:

SRPO used the auditing - for - effectiveness method during this audit --- the checklist was well developed to determine programmatic problems.

Several comments as noted below:

- 1) The audit did focus on the quality of the technical activities.
- 2) All audit team members were trained for the requirements of auditing - for - effectiveness.
- 3) SRPO should set-up and conduct a surveillance of PNL (specific activities) as the audit follow-up to again measure the effectiveness.



- 4) The PNL QA Manager (C. Hunghey) must initiate controls to increase effectiveness of the QA systems and audits sections of the Quality Achievement Division.

FOR OCRWM DISTRIBUTION

SUBJECT: Report of SRPO Audit of PNL

ADDRESSEE: J. Knight

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BCC:

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J. Knight, RW-24

Originator's Chron: K. Sommer

OCRWM CCRU, RW-13 (5)

OGR Reading File

L&R Div. Chron

L&R Div. File # 6510,903.12.9.2

D. Siefken, Weston

L. Skoblar, Weston

L. Ibe, Weston

J. Kennedy, NRC

RW-24:KSommer:KMA:252-1639:typed 9/30/86

PC Code: KS23

Mach C

CONCURRENCES:

K.G. Sommer 10/6/86  
K. Sommer, RW-24

MEMO DISTRIBUTION LISTING

SUBJECT: FY 1987 Consolidated Audit Schedule

ADRESSEE: OGR Auditors

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PC Code: KS49

CONCURRENCES:

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K. Sommer, RW-24

C. Newton 2, 12, 87  
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