

# NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

WM DOCKET CONTROL CENTER

84 APR 23 A11:42

MEMORANDUM FOR: Robert E. Browning, Director

Division of Waste Management

FROM:

Tilak R. Verma, Senior On-Site Licensing Representative

Salt Repository Project (SRP)

SUBJECT:

SRP SITE REPORT FOR THE WEEK OF APRIL 9, 1984

- 1. Stone and Webster Engineering Corporation (SWEC) is a Geologic Project Manager for the Permian Basin. SWEC works under a subcontract from the ONWI Battelle. During the week of April 9 through 13, 1984, ONWI QA Audit Team conducted a QA audit of the SWEC Quality Assurance Program related to the Permian Basin project activities at the SWEC office in Boston. I attended the QA audit (as an observer). A checklist used for the QA audit is attached. I will send you the ONWI QA Audit Report as soon as it becomes available.
- 2. I also checked on the status of some of the technical reports produced by SWEC. A list of these technical reports is attached. I will try to locate these reports here in the ONWI Library.

Tilak R. Verma, Senior On-Site Licensing Representative Salt Repository Project (SRP)

TRV:2144A

WM Record File WM Project\_ CIOL Docket No. PDR. LPDR\_ Distribution: REM JOB HM MJB MD LH NN MK 3K (Return to WM, 623-SS) J6 02 けん

REPORT NO.

G83-1

G83-2

G83-3 T-1

T-2

T-3

T-4

T-5

T-6

T-7

T-8

T-9

T-10

T-11

T-12

T-13

REPORT TYPE

Environmental Evaluation Report

Well Completion Report

Environmental Evaluation Report

Topical Report

Topical Report

Topical Report

81

ONWI-Perman Basin

DATE

01/25/83

02/08/83

02/08/83

03/22/83

03/07/83

02/23/83

04/12/83

04/25/83

05/26/83

05/24/83 06/17/83

08/01/83

07/07/83

12/29/83

12/15/83 and 12/16/83

This number not assigned



## REGISTER OF TECHNICAL REPORTS

1.13

· · · · · · · · · · · · · · · · · · ·		
TITLE	TRANSMITTAL LETTER	1.21
Zeeck No. 1 Well Completion Report	opest-579	1.23
Harman No. 1 Well Completion Report	OPBST-590	1.25
Gayler, King, and Holtzciay	OPBST-589	1.27
Ogalials Aquifer Mapping Report (Revised in T-16)	QPBST-631	1.29 1.30
Maps of Selected Formations Deaf Smith County	OPBST-613 (Draft)	1.32
Detten final Core Log and Core Photographs	OPBST-602	1.35
G. Friemel Final Core Log and Core Photographs	OPBST-654	1.38 1.39
Sawyer No. 1 Pumping Test and Fluid Sampling Report	OPBST-671	1.41 1.42
Zeeck No. 1 Final Core Log and Core Photographs	OPBST-703	1.44 1.45
Oschner Site	OPBST-699	1.47
Major Salt Beds (Revision of Report 682-12, 10/29/82)  (Report Selvere 10/25/43)	OPBST-727	1.49 1.50
Manafield No. 1 Pumping Test and Fiuld Sampling Report	OPBST-761	1.52 1.53
Dissolution Zone Water Wells	OPBST-745	1.55 1.5(
J. Friemel No. 1 Well Completion Report. (Repres	<b>ОРВ\$Т-899</b>	1.59
Holtzciaw No. 1 Well Completion Report	OPBST-882 and OPBST-885	2.5 2.6

1.18

2.10

J.O. No. 97 ONWI-Permian Basin

c-1369708-58c



Page 2

REPORT NO.	DATE	REPORT TYPE	INTLE	TRANSMITTAL LETTER	
T-14	Est. Jan. 1984	Topical Report	Hydrogeologic investigations Based on Orill-Stem Tests.	Initial Draft OPBST-771 (08/4/69) 83	2.14 2.15 2.16
T-15	08/01/83	Hell Completion Report	Harman No. 1 Final Core Log and Core Photographs	OPBST-765	2.21
T-16	10/21/83	Topical Report	ogallale Aquifer Mapping Progrem	OPBST-837	2.25
T-17	09/14/83	Topical Report (Draft)	Geoengineering Evaluation for the intermediate Shaft Liner Seal	OPBST-803	2.28 2.29
T-18	11/16/83	Well Completion Report	Sawyer No. 1 Hell (PD-3) (Reprodeling)	OPBST-861	2.3?
T-19	11/18/83	Well Completion Repart	Manafleta No. 1 Well (PD-4)	OPBST-865	2.34
T-20 4/5	Est. 198	Mell Completion Report	G. Friend No. 1 Well (PD-5)  Revision De (Sepres ruly)	opbst- <i>982</i>	2.31 2.34 2.36 2.37
T-21	Est. Jan. 1984	Well Completion Report	Detten No. 1 Well (PD-6) Reylsian 1	OPBST-	2.39 2.40
<b>T-22</b>	Est. Jan. 1984	Well Completion Report	Zeeck No. 1 Well (PD-7) Reylsian 1	OPBȘT-	2.42 2.43
T-23	Est. Jan. 1984	Well Completion Report	Harman No. 1 Well (PD-8) Reylsion 1	OPBST-	2.45 2.46
T-24	12/22/63	Well Completion Report	Dissolution Zone Water Wells (PP-8, 11, 12, 13) Revision 1 (Feptas Selvield)	QPBST-896	2.48 2.49 2.50
T-28		Wall Completion Report	Sawger No. 1 Mell (70-3) Pamping Vert & Flavid Sampling Report. (Revision 1)		·'
T-26		Well Completion Report	(Revision 1) Mausfield No. 1 WALE Pumping Tost o Fluid Sampling Report	<b>v-</b> •	
7-27		Topical Report	Ong nofthe Salako, Seven Robers, and San Andres Salt Mugu in Texas and New Mexico.	?	
			Property of the state of the st		

OR	GANIZATION AUDITED: STONE & WEBSTER				PREPAR	RFN BY-1 theforal of EA Patzer DATE.	3/28/84
DA	TEŞ OF AUDIT: 4/9-12/84			·	CONCUR	DATE	1/2/84
AU	DIT NO: 84-E-16				APPROV	VED BY G. Xweenmy DATE.	3/28/84
•	,	·				BPMD QAD Manager	/ / [
	QUALITY	ASSURANCE AUD	IT CHECKLIST		Page	1 of <u>29</u> <i>U</i>	-
NO.	ITEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMEN REVIEWED	T
	I. ORGANIZATION						
1.	Verify that the project organization is current and meets the description of Appendix 'A'.	QA Plan Section 1 Page 1	x			·	· · ·
2.	Review the organizational structure and determine whether the project QA manager has the necessary organizational freedom to ensure that the QA plan is implemented.	QA Plan Section 1 Page 2	×				•
3.	Verify that the project QA manager is supported by Engineering Assurance (EA) for internal project audits, supplier and site surveillance and audits, and TBEG interface.	QA Plan Section 1 Page 2	*				
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QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	II. QA PROGRAM					
1.	Verify if any stop work actions have been taken to date, and if so that:	QA Plan Revision 3 Section 2 Page 3				None Issued todate
	(a) Internal audit reports are issued within 15 days following the exit critique					
:	✓(b) Assure that corrective action on audit observations is completed within 60 days following delivery of the audit report to the respon- sible project or division.		·			
	(c) If corrective action is not com- pleted within 75 days subsequent to receipt of the audit report, stop all work except for corrective action (unless an approved exten- sion of time has been given)	· ·				
	(d) The BPMD project manager and QA specialist has been notified within 48 hours of the stop work action and the anticipated cor- rective action schedule.				×	

#### QUALITY ASSURANCE AUDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
2.	Review several monthly status report, and verify if the status of outstanding stop work orders has been included.	QA Plan Revision 3 Section 2 Page 3				
3.	Review several closed stop work orders and verify if the BPMD project manager and QA specialist has been notified within 48 hours of the lifting of the stop work order.	QA Plan Section 2 Page 3				
4.	Verify that project procedures that implement the QA plan are approved by the Project Manager and Project QA Manager.	QA Plan Section 2 Page 4				
5.	Verify that indoctrination and continuing education in the procedures to be used are provided to the project personnel according to EAP 2.4 supplemented by GTP 1.9.	QA Plan Section 2 Page 5	·			
6.	Verify that the division records manage- ment system and/or computerized training records system contains the documentation of education and experience of personnel working on the project.	QA Plan Section 2 Page 6				

QUALITY ASSURANCE—AUDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
¥7.		QA Plan Section 2 Page 6				
8.	Verify that the project QA manager pre- pares a monthly summary of activities and actions performed to fulfill the QA program according to PP 4-2.	QA Plan Section 2 Page 6				
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ITEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
1.	III. DESIGN CONTROL  Verifythat for each major activity that SWEC performs an activity plan is generated according to PP 5-23.  Review several activity plans and	QA Plan Section 3 Page 6 QA Plan	×			
	verify that they are approved by the independent technical reviewer, project manager, project QA manager, and are submitted to BPMD for review and acceptance. (NOTE: Appendix J lists the activity plans issued to date.)	Section 3 Page 6				
3.	Review SWEC and subcontractor procedures to verify that they include appropriate checks and reviews to confirm that data, evaluations, and conclusions are complete, correct, and adequate for the objectives of the program.	QA Plan Section 3 Page 7	·			
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### QUALITY ASSURANCE—UDIT CHECKLIST (Continued) Page 6 of 29

NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED	•
4	Verify that calculations are controlled and reviewed according to EAP 5.3, supplemented by PP 5-1. Verify that the procedures include specific instructions for the preparation, revision, cancellation, review, indexing, distribution, filing, confirmation of inputs and assumptions, method, computer program identifications (when applicable) inputs, references, and conclusions.	QA Plan Section 3 Page 7	-				
5.	Verify that computer programs used are documented and qualified according to EAP 5.3, supplemented by PAD 19-1, and that they include specific instructions for program identification, procedures, documentation, traceability, methods of qualifications (manual, comparison, empirical) reviews and approvals, and change control.	QA Plan Section 3 Page 8	×			Looked at several compation situations	
6.	Verify that SWEC sketches are controlled and reviewed according to EAP 5.5, supplemented by PP 5-2, by reviewing several sketches contained in ESSOWs, calculations, and technical reports	QA Plan Section 3 Part C Page 8					

#### QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
7.	Review several subcontractor documents containing technical data to determine if they are controlled in accordance with EAP 9.2 and PP 5-4.	QA Plan Section 3 Part D Page 8				
8.	Verify if interface activities and agreements between SWEC and University of Texas at Austin, and Texas Bureau of Economic Geology are conducted in accordance with PP 4-4 and 4-5.	QA Plan Section 3 Part E Page 8				
9.	Review a sample of technical reports and verify that independent technical review and quality assurance reviews are performed for those technical reports identified in PP 5-10.	QA Plan Section 3 Part F Page 8				
10	Review several documents to assure that documents containing nuclear safety-related information bear special marking in accordance with EAP 3.6 which identifies the documents such as ESSOWs and calculations, requiring identification and gives illustrations of the location of the markings for the documents.	QA Plan Section 3 Page 9				

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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
11)	Verify that project technical procedures, activity plans, computer programs, calcula tions, ESSOWs, topical and site characterization reports contain the signature and date of the independent technical reviewer, except computer programs which document same in accordance with EAP 5.25. (NOTE: The independent reviewer shall be independent of the work to be reviewed.)	QA Plan - Section 3 Page 9				
12.	Verify that EAP 3.13 is being implemented with regard to identification and control requirements for documents issued based on "unapproved" information.	QA Plan Section 3 Page 9	·			
13.	Verify that licensing commitments to be met during field work are recorded and tracked according to EAP 2.12 which describes the method of listing and tracking licensing commitments.	QA Plan Section 3 Page 10	·			
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#### QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	IV. PROCUREMENT DOCUMENT CONTROL					
1.	Review several "contract" or "purchase orders" and verify proper S&W review and approval per S&W procedures. ESSOW ENGRG SYC. Scope of Work, PR (Purchase Requisition).	Paragraph 1 EAP 4.15 EAP 4.3 PP 5-8				
	(a) Verify ENGRG assurance review of these documents as applicable.					
2.	Verify procurement documents are controlled in accordance with S&W procedures, PP 8-1 and 8-2.	Page 11 Paragraph 1 PP 8-1 PP 8-2				
3.	If S&W surveillance is specified in the procurement documents reviewed, verify implementation/completion per S&W procedure PP 4-3	Paragraph 3 Page 12 PP 4-3				
4.	Verify:					
	(a) That technical and quality assurance requirements changes in procurement documents have been processed in accordance with EAP 4.15.	Page 12 EAP 4.15				•
	(b) That urgently needed changes processed for EAP 6.3 and PP 5-19.	Page 12 EAP 6.3 PP 5-19				
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QUALITY ASSURANCE—AUDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	V. INSTRUCTIONS, PROCEDURES, & DRAWINGS					
1.	Verify that the matrix of implementing procedures for the permian basin study is current and deviations are properly approved.	QA Plan Section 5 Tabe V-1 Page 13				
2.	Verify that the QA plan is revised periodically as procedures are identified and issued.	QA Plan Section 5 Page 13				
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QUALITY ASSURANCE\_UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
	VI. DOCUMENT CONTROL	•				
1.	Verify that EAP 6.1 for indexing and distributin of drawings and ESSOWs is properly implemented.	QA Plan Section 6 Paragraph Page 13				
2.	Verify that urgent changes are controlled in accordance with EAP 6.3 are subject to strict controls to ensure proper review and approval. Verify that changes made by E&DCRs as well as dispositions to nonconformance and disposition reports are incorporated in ESSOWs and PTs accordance to PP 5-18 and 5-19	QA Plan Section 6 Page 14				

QUALITY ASSURANCE AUDIT CHECKLIST (Continued)

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NO.	ITEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
10.	VII. CONTROL OF PURCHASED EQUIPMENT, MATERIAL, AND SERVICES					
1.	Verify that the identification and approval of bidders, evaluation of bids and selection of subcontractors is performed in accordance with EAP 4.15, PP 8-1, and PP 8-2.	Paragraph Page 14 EAP 4.15 PP 8-1 PP 8-2	2			
2.	Review several procurement documents for evidence of proper quality assurance review:	Paragraph Page 14	2			•
	(a) Quality assurance department review of proposed bidders list.					
	(b) Engineering assurance division review of selected bid evaluations.					•
	(c) Project quality assurance manager review of letters of recommendations to ONWI.					
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QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
3.	When warranted by procurement document requirements during the bidding stage,  Verify evidence of:  (a) Engineering assurance review of contractor quality assurance programs and procedures and/or	Paragraph 3 Page 14 EAP 7.1 EAP 4.1 EAP 4.2 EAP 4.4				
	<ul><li>(b) Surveys of contractor operations.</li><li>(c) Contractors providing engineering services were evaluated prior to award of contract.</li></ul>					-
4.	Verify evidence of S&W review of contractor documents (procedures, etc.):  (a) prior to award  (b) subsequent to award	Page 15 Paragraph 2 EAP 9.2 EAP 7.1				
5.	Verify that surveys and audits of sub- contractors have been performed in accordance with S&W procedures.	Page 15 Paragraph 3 EAP 7.1				

QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
6.	Verify qualification of personnel performing surveys and audits.	Page 15 Paragraph 4 EAP 5.3				
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QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED	
	VIII. IDENTIFICATION OF MATERIAL, PARTS AND COMPONENTS						
1.	If physical samples (core, brine, etc.) are available at SWEC Boston offices, verify control of these samples per PP 5-3.	Page 15 Paragraph 1				·	
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
	IX. CONTROL OF PROCESSES					
1.	It is true that "special proceses" (e.g., welding, heat treating, NDE, etc.) as defined traditionally may not be applicable at this time. In addition, special processes are not often identified in geologic work activities. However, all processes should be controlled by having qualified personnel and procedures. This will be reviewed as part of the audit of Sections II and V.					
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
1.	<ul> <li>X. INSPECTION</li> <li>Check for evidence of inspection activities by SWEC engineers field representatives as directed by the project quality assurance manager per PP 9-1 and PP 9-2.</li> <li>(a) Procurment documents</li> <li>(b) Reports</li> </ul>	Page 16 Paragraph 1 PP 9-1 PP 9-2				
2.	Have any unscheduled documented surveil- lances been performed by engineering assurance personnel? If so, verify per- formance in accordance with EAP 4.3.	Page 16 Paragraph 1 EAP 4.3				
3.	Verify that surveillance and inspection activities are shown and integrated in the specific activity plan.	Page 16 Paragraph 1				·
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
1.	XI. TEST CONTROL  As appropriate, check for evidence that testing activities to be performed by subcontractors have been specified and completed in accordance with procurement	Page 16 Paragraph 1				
	document requirements.  (a) Tests to be performed  (b) Methods and procedures submittal  (c) Documentation of completion.					
2.	As appropriate to the location of this audit (Boston) check for evidence that laboratory and field testing has been performed according to S&W procedures:	Page 16 Paragraph 2				
	GTP 1.5, 1.6, 3.1, 3.2, 3.3, 3.14, 3.23 PTP 13697-9, 13697-12					
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QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	Į TEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
1.	XII. CONTROL OF MEASURING AND TEST EQUIPMENT  As appropriate to the location of this audit (Boston) verify that measuring and test equipment used by SWEC is controlled in accrodance with S&W procedures EAP 12.1 and GTP 3.2.  o Identification of equipment requiring calibration  o Calibration frequency	Page 17 Paragraph 1				
	o Calibration standards o Calibration acc./rej. criteria o Calibration status.		·			
2.	Review the "list of generic equipment requiring calibration by subcontractors" maintained by SWEC.	Page 17 Paragraph 2				
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QUALITY ASSURANCE WUDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
-	XIII. HANDLING, STORAGE, AND SHIPPING					
1.	Verify that requirements for handling, storage, and shipping of physical samples have been specified for applicable procurements.	Page 17 Paragraph 1				
2.	Review evidence that these requirements (1 above) have been monitored and verified by SWEC engineering field representatives.	Page 17 Paragraph 1				-
3.	As appropriate to this location, verify that handling and storage of physical samples is accomplished in accordance with PP 5-3 and applicable PTPs.	Page 17 Paragraph 1				
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	XIV. INSPECTION, TEST, AND OPERATING STATUS					
1.	Review for evidence that documentation which shows inspection status is included in SWEC procedures for inspection and verify completion. (Reference Section 10.)	Page 17 Paragraph 1			·	
2.	Verify that SWEC laboratory test procedures describe the methods, conditions, and documentation required to satisfy inspection, test, and operating status requirements. (Reference Section 5.)	Page 17 Paragraph 2				
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	XV. NONCONFORMING MATERIAL, PARTS, OR COMPONENTS					
1.	Select several nonconformance and disposition reports and verify processing per S&W procedure EAP 15.2, as supplemented by PP 5-18 (SWEC initiated).	Page 18 Paragraph 1				
2.	Review intent of the statement "data, documents, and physical samples which are suspect because of a nonconformance are evaluated, if necessary".	Page 18 Paragraph 1				
3.	Verify evidence of audit, surveillance or reinspection which assures nonconformances are eliminated. (Reference Sections XVI and XVIII.)	Page 18 Paragraph 1				
4.	Verify method for, and evidence of, notification to BPMD (ONWI), for nonconformance and disposition reports. (SWEC initiated.)	Page 18 Paragraph 1				
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QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
5.	Verify the method for the identification and control of nonconforming items.  (Physically). Are items withheld from further processing pending resolution?  (Disposition).	Page 16 Paragraph 2				
6.	Select several subcontractor identified nonconformances and verify processing per S&W PP 8-1 and 8-2. (Reference Section IV)	Page 18 Paragraph 2				
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
NO.	XVI. CORRECTIVE ACTION	171101 #	WO TOKE			
1.	Verify implementation of the corrective action system to assure conformance with EAP 7.1 for subcontractors, EAP 18.1 for internal audits, and PP 4-3 for surveillances.	Section 16 Page 18				
2.	Review a representative sample of problem reports to assure conformance with EDPP 8.7.3.	Section 16 Page 18				·
3.	Review a sample of incident reports to verify that they are documented by the engineers' field representative and reported to the project exploration geologist and project QA manager who will inform the ONWI QA specialist within 72 hours.	Section 16 Page 19				
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<b>AUDIT</b>	NO:	84-E-16
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## QUALITY ASSURANCE—UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	N/A	COMMENTS AND DOCUMENT REVIEWED
4.	Verify that incident reports have been issued for the following reasons:	Section 16 Page 19				
	(a) Occurences which may have a signi- ficant effort in the quality of certain data which may be used for design or decision making by project participatns.					
	(b) Occurences which will lead to significant cost increases or schedule delays for an important task.					
	(c) Dissemination of the incident report will be useful to project participants in avoiding repeated similar problems.					

QUALITY ASSURANCE JUDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	XVII. QA RECORDS					
1.	Verify that records are collected and maintained in accordance with EAP 17.2, GTP 8.6, EATP 1.7, and PP 7-1 through 7-4.	Section 17 Page 19				
2.	Verify that records are collected from subcontractors, and records are turned over to ONWI in accordance with PP 7-3.	Section 17 Page 17				
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#### QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ŢTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
1.	XVIII. AUDITS  Verify that audits of SWEC activities are performed in accordance with EDPP 8.7.1.  (Procedure includes provision for schedul-	Section 18 Page 20				
2.	ing, planning, conducting, reporting, analysis of data, and follow up of data.)  Verify that auditors are properly qualified	Section 18				
3.	according to EATP 5.3.  Verify that surveillances are conducted in	Page 20 Section 18				
	accorance with PP 4-3.	Page 20	·			
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	ĮTEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT REVIEWED
	VERIFICATION OF CORRECTIVE ACTION FROM AUDIT 83-E-02					
	Finding No. 1					
1.	Verify that training sessions have been conducted on 10/27/83, and scheduled personnel attended the session. $RAM$	C/A Memo 9/19/83	-			
2.	Verify that corrective action with regard to Finding No. 2 has been implemented per memo from S&W to BPMD dated 6/20/83, Page 4 of 8.	S&W Memo 6/20/83				
3.	Review PTP 13697-13-2 sent in memo OPBST-618 to determine whether it adequately addresses Observation No. 1.	S&W Memo 9/19/83				
4.	Observation No. 2 is closed.					$\sim$
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QUALITY ASSURANCE UDIT CHECKLIST (Continued)

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NO.	Į TEM	REF. PARA #	SATIS- FACTORY	DEF.	,N/A	COMMENTS AND DOCUMENT ** REVIEWED
5.	Observation No. 3  Verify that PP 9-1-1 has been revised to clarify the organizational responsibility of the field QC and QA activities. Also verify that the QA plan has been clarified within this regard.	S&W Response to Observati No. 3, 9/19/	þn			
6.	Observation No. 4  This observation can be closed, since S&W has submitted a personnel identification roster with the 9/19/83 additional corrective action response.					·
7.	Observation No. 5  This observation can be closed based on submittal of Revision 3 of the QA plan to ONWI. The approved deviations have been incorporated into the plan. However, the QA plan should be verified to be current as part of this audit.	S&W Memo 6/20/83				
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