



Department of Energy  
Washington, DC 20585

DEC 16 1988

John Linehan, Chief  
Project Management and Quality  
Assurance Branch  
Division of High Level  
Waste Management  
Office of Nuclear Materials  
Safety and Safeguards  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: Completed Yucca Mountain Project Office (YMPO)  
Quality Assurance (QA) Audit 88-06 checklist

Dear Mr. Linehan:

During the YMPO QA Audit 88-06 of Sandia National Laboratory in Albuquerque, New Mexico, conducted July 25 through August 3, 1988, the audit team leader received a request from observer Joseph Holonich of the Nuclear Regulatory Commission to provide a copy of the completed audit checklist to him.

Enclosed is the subject checklist. Questions regarding this transmittal should be directed to Gordon Appel of my staff at 586-1462.

Sincerely,

Ralph Stein  
Associate Director for Systems  
Integration and Regulations  
Office of Civilian Radioactive  
Waste Management

cc: J. Holonich, NRC w/encl  
L. Barrett, RW-3  
J. Jones, RW-3  
J. Blaylock, YMPO  
W. Mansel, YMPO

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PDR WASTE  
WM-11 PDC

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NH03  
WM-11 102.7



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Washington, DC 20585

DEC 16 1988

John Linehan, Chief  
Project Management and Quality  
Assurance Branch  
Division of High Level  
Waste Management  
Office of Nuclear Materials  
Safety and Safeguards  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: Completed Yucca Mountain Project Office (YMPO)  
Quality Assurance (QA) Audit 88-06 checklist

Dear Mr. Linehan:

During the YMPO QA Audit 88-06 of Sandia National Laboratory in Albuquerque, New Mexico, conducted July 25 through August 3, 1988, the audit team leader received a request from observer Joseph Holonich of the Nuclear Regulatory Commission to provide a copy of the completed audit checklist to him.

Enclosed is the subject checklist. Questions regarding this transmittal should be directed to Gordon Appel of my staff at 586-1462.

Sincerely,

Ralph Stein  
Associate Director for Systems  
Integration and Regulations  
Office of Civilian Radioactive  
Waste Management

cc: J. Holonich, NRC w/encl  
L. Barrett, RW-3  
J. Jones, RW-3  
J. Blaylock, YMPO  
W. Mansel, YMPO

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102.7  
NH 3  
Wm-11



## Department of Energy

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

WBS 1.2.9.3  
"QA: N/A"

NN1.881118.0003

NOV 18 1988

Ralph Stein, Associate Director, Systems Integration and Regulations, Civilian  
Radioactive Waste Management, HQ (RW-30) FORS

TRANSMITTAL OF COMPLETED YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE)  
QUALITY ASSURANCE (QA) AUDIT 88-06 CHECKLIST FOR RELEASE TO OUTSIDE AGENCIES

During the performance of the Project Office QA Audit 88-06 of Sandia National Laboratories in Albuquerque, New Mexico, conducted July 25 through August 3, 1988, the audit team leader received requests from observers Joseph Holonich from the U.S. Nuclear Regulatory Commission and Susan Zimmerman from the State of Nevada to provide them with a copy of the completed audit checklist. The audit checklist is considered complete upon issuance of the audit report which contains the final results (i.e., deficiency documents, observations, and recommendations) of the audit. Enclosed are two copies of the completed audit checklist for you to make further distribution to these outside agencies in accordance with the U.S. Department of Energy/Headquarters policy.

If you have any questions, please contact James Blaylock of my staff at  
FTS 544-7913.

A handwritten signature in black ink, appearing to read "Carl P. Gertz".

Carl P. Gertz, Project Manager  
Yucca Mountain Project Office

YMP:JB-537

Enclosure:  
Audit 88-06 Checklist



**Department of Energy**

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

WBS 1.2.9.3  
"QA"

NMI.881117.0030

NOV 17 1988

Thomas O. Hunter  
Technical Project Officer for Yucca Mountain Project  
Sandia National Laboratories  
P.O. Box 5800  
Organization 6310  
Albuquerque, NM 87185

CLOSURE OF YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) STANDARD DEFICIENCY REPORTS (SDRS) 028, REVISION 1, AND 029, REVISION 1

Corrective actions committed in your response to Project Office QA SDRs 028, Revision 1, and 029, Revision 1, have been satisfactorily verified to be complete. The SDRs are closed. An information copy of the SDRs is enclosed for your records.

If you have any questions, please contact Wendell B. Mansel of my staff at FTS 544-7945 or Gerard Heaney of Science Applications International Corporation at FTS 544-7739.

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

YMP:WEM-679

Enclosures:

1. SDR 028, Rev. 1
2. SDR 029, Rev. 1

Received w/Ltr Dated 12/16/88

102.7

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization	1 Date <u>2/2/88</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>1</u>
	3 Discovered During <u>WMPO Audit 87-5</u>	3a Identified By <u>G. Dymmel / G. Heaney</u>	3b Branch Chief Concurrency Date <u>N/A</u>		4 SDR No. <u>028</u> Rev. <u>1</u>
	5 Organization <u>SNL</u>		6 Person(s) Contacted <u>R. Stinebaugh, R. Hill, C. Subramanian</u>		7 Response Due Date is <u>20 Working Days from Date of Transmittal</u>
	8 Requirement (Audit Checklist Reference, if Applicable) 1) See original SDR 2) Corrective actions must be completed by effective dates specified or extension obtained.				
Completed by Organization in Block 5	9 Deficiency 1) See original SDR 2) Non responsive to committed corrective action within specified time.				
	10 Recommended Action(s): <input type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1) Complete committed corrective actions. 2) Determine cause for "non responsiveness" to committed corrective actions and corrective action to preclude recurrence.				
	11 QAE/Lead Auditor Date <u>R. Caldwell FEB 03 1988</u>	12 Branch Manager Date <u>2/3/88</u>		13 Project Quality Mgr. Date <u>James Blumel 2/3/88</u>	
Completed by Org. QA Org	14 Remedial/Investigative Action(s) 1) Please see SNL letter, subject: "Request to Close SDR No. 028 (WMPO Audit 87-5)," dated February 11, 1988. 15 Effective Date <u>N/A</u>				
	16 Cause of the Condition & Corrective Action to Prevent Recurrence The cause of non-responsiveness in carrying out the actions specified in blocks 14 and 16 of Revision 0 of this SDR was repeated and incremental revision of the priorities of the responsible party and lack of aggressive follow-up by the SNL NNWSI QA organization in detecting the delays and resolving the cause of the delays. General corrective action will consist of more 17 Effective Date <u>N/A</u>				
	18 Signature/Date <u>R.P. Richards 4/25/88</u> <u>R.P. Richards, COT Coordinator, SNL NNWSI Project Dept.</u>				
Comp. by Orig. QA Org	19. Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date <u>R. Caldwell 4/28/88</u>	Branch Manager/Date <u>M. K. Meyer 4/28/88</u>	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	Branch Manager/Date	
	21 Verification <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <u>R. Caldwell 4/28/88</u>	Branch Manager/Date <u>M. K. Meyer 4/28/88</u>	
	22 Remarks				
23 QA CLOSURE		QAE/Lead Auditor/Date <u>R. Caldwell 4/29/88</u>	Branch Manager/Date <u>M. K. Meyer 4/28/88</u>	PGM/Date <u>R. Caldwell 5/2/88</u>	

# WA 0 STANDARD DEFICIENCY REPORT

N-DA-038  
3/87

Completed by Originating QA Organization

1 Date <u>6/5/87</u>		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>2</u>	
3 Discovered During <u>WMPD Audit 87-5</u>		3a Identified By <u>G. Himmel/ G. Heaney</u>		3b Branch Chief Concurrence Date <u>N/A</u>	
4 Organization <u>SNL</u>		5 Person(s) Contacted <u>R. Stinebaugh, R. Hill, C. Subramanian</u>		7 Response Due Date is <u>20 Working Days from Date of Transmittal</u>	
6 Requirement (Audit Checklist Reference, if Applicable) <u>Sandia National Laboratories NNWSI Quality Assurance Program Plan Rev. A, Para. 5.1.2, states in part "Detailed technical documents will be (cont'd)"</u>					
9 Deficiency <u>Contrary to the above requirement, SNL Department Operating Procedures (DOP) 3-6 "Design Change Control" and DOP 3-9 "Interface Control of NNWSI (cont'd)"</u>					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective <u>1. Revise DOPs 3-6 and 3-9 to reference and include the processing of SOP-03-05 generated documents. (cont'd)</u>					

Apr 1

11 QAE/Lead Auditor Date <u>THOMAS O. HUNTER JUN 24 1987</u>	12 Branch Manager Date <u>[Signature] 7/15/87</u>	13 Project Quality Mgr. Date <u>James Blaylock 7/15/87</u>
-----------------------------------------------------------------	------------------------------------------------------	---------------------------------------------------------------

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)  
NNWSI SOP 03-05 will be evaluated for its impact on SNL NNWSI QA implementing procedures related to design and interface control. The affected procedures will be appropriately revised, if necessary. Responsible party is R. R. Hill

15 Effective Date 9/30/87

16 Cause of the Condition & Corrective Action to Prevent Recurrence (Rev. 1)  
If required due to possible revisions to procedures, the effects and details of those revisions will be disseminated to personnel involved with ESF design via a training vehicle to be determined. The cause of this situation was simply that, between receipt of SOP-03-05 and the audit visit, this organization had not evaluated the SOP for its impact on our procedures, due to work on the CDR and other activities.

17 Effective Date 10/30/87

18 Signature/Date  
[Signature] 8/7/87 for Tom Thomas O. Hunter, Manager  
NNWSI Project Department

Comp. by Orig. QA Org.

19 Response	<input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended Response	QAE/Lead Auditor/Date <u>[Signature] 15 Sept 87</u>	Branch Manager/Date <u>[Signature] 9/16/87</u>
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 checked="" type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <u>[Signature] 5 Feb 88</u>	Branch Manager/Date <u>[Signature] 2/5/88</u>
22 Remarks				
23 QA CLOSURE	QAE/Lead Auditor/Date <u>[Signature] 10/5 1988</u>	Branch Manager/Date <u>[Signature] 2/5/88</u>	PQM/Date <u>James Blaylock 2/5/</u>	



W. O STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
10/86

SDR No. 028

Rev. 0

Page 2 of 2

Requirement (cont'd)

developed and contain instructions for the actual performance of activities that include but are not limited to design, testing, experiments, and analysis (refer to audit checklist item T-4).

Deficiency (cont'd)

Engineering Design" do not make reference to the NNWSI Standard Operations Procedure SOP-03-05 "ESF Project Interface Control Procedure." The DOPs do not address the processing and approvals within SNL of ESF Engineering Change Requests which are generated in accordance with SOP-03-05.

The SOP-03-05 is a procedure used by the ESF Project group to establish and implement interface control of ESF design changes between NNWSI Project participants. SNL would be sent ESF Engineering Change Requests for evaluation and review for impact on SNL surface and subsurface designs.

Recommended Actions (cont'd)

2. Reinstruct appropriate personnel to the revised procedures.

*SDR 028 Rev. 1, cont. (block 16)*

Cause

frequent and routine follow-up by QA facilitated by the SNL NNWSI audit/surveillance/NCR tracking systems now in place.

# WMPO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization	1 Date <u>2/2/88</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 87-5	3a Identified By G. Dymally/ G. Reaney	3b Branch Chief Concurrence Date N/A		4 SDR No. <u>029</u> Rev. <u>1</u>	
	5 Organization SNL	6 Person(s) Contacted R. Stinebaugh		7 Response Due Date is 20 Working Days from Date of Transmittal		
	8 Requirement (Audit Checklist Reference, if Applicable) 1) See original SDR 2) Corrective actions must be completed by effective dates specified or extension obtained.					
	9 Deficiency 1) See original SDR 2) Non responsive to committed corrective action within specified time.					
	10 Recommended Action(s): <input type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1) Complete committed corrective actions. 2) Determine cause for "non responsiveness" to committed corrective actions and corrective action to preclude recurrence.					
	Completed by Organization in Block 5	11 QAE/Lead Auditor Date <u>J. Howell</u> FEB 03 1988	12 Branch Manager Date <u>R. Klemens</u> 2/3/88	13 Project Quality Mgr. Date <u>James Blank</u> 2/3/88		
		14 Remedial/Investigative Action(s) <u>Complete actions specified in SDR 029, Rev. 0, blocks 14 and 16.</u>		15 Effective Date <u>Feb. 18, 1988</u>		
		16 Cause of the Condition & Corrective Action to Prevent Recurrence <u>The cause of "non-responsiveness" in carrying out actions specified in block 16 of SDR 029, Rev. 0, was simply continuing assessment and adjustment of QA priorities, resulting in a number of delays in performance of the actions. This is a normal aspect of the management of a dynamic work effort and requires no action to preclude its recurrence.</u>				
	Comp. by Orig. QA Org.	18 Signature/Date <u>R.K. Richards</u> , R.K. Richards, QA Coordinator, Feb 24, 1988				
19 Response		<input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended Response	QAE/Lead Auditor/Date <u>J. Howell</u> APR 20 1988	Branch Manager/Date <u>R. Klemens for W. Kay</u> 4/24/88	
20 Amended Response		<input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date	Branch Manager/Date	
21 Verification		<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <u>J. Howell</u> APR 20 1988	Branch Manager/Date <u>R. Klemens for W. Kay</u> 4/20/88	
22 Remarks <u>Reviewed objective evidence needed to confirm that committed corrective actions were completed.</u>						
23 QA CLOSURE	QAE/Lead Auditor/Date <u>J. Howell</u> APR 20 1988	Branch Manager/Date <u>R. Klemens for W. Kay</u> 4/20/88	FCM/Date <u>[Signature]</u> 5/2/88			



# WMFO STANDARD DEFICIENCY REPORT

N-QA-038  
3/87

Completed by Originating QA Organization in Block 5 April

1 Date <u>6/5/87</u>		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page <u>1</u> of <u>2</u>	
3 Discovered During <u>MWPN Audit R7-5</u>		3a Identified By <u>R. Hymmet G. Heaney</u>		3b Branch Chief Concurrence Date <u>N/A</u>	
4 SDR No. <u>029</u>		Rev. <u>0</u>			
5 Organization <u>SNL</u>		6 Person(s) Contacted <u>R. Stinebaugh</u>		7 Response Due Date is <u>20 Working Days from Date of Transmittal</u>	
8 Requirement (Audit Checklist Reference, if Applicable) <u>SNP-02-02, "Assignment of QA Levels to NNWSI Activities and Items," Rev. 1, Sec. 6.1.2, requires in part that once assigned, the QA level for a (cont'd)</u>					
9 Deficiency <u>Contrary to this requirement WBS subtask 1.2, "Emplacement Orientations," was approved by Design Investigation Memo (DIM) 102 (2/19/87) as a QA (cont'd)</u>					
10 Recommended Action(s): <input type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective <u>1. Review all DIMs issued and determine if QA level is consistent with level assigned to related WBS or Modified Work Plan. (cont'd)</u>					

11 OAE/Lead Auditor Date <u>St. A. Callwell 24 1987</u>	12 Branch Manager Date <u>Tom Hunter 7/15/87</u>	13 Project Quality Mgr. Date <u>James Blaylock 7/15/87</u>
------------------------------------------------------------	-----------------------------------------------------	---------------------------------------------------------------

14 Remedial/Investigative Action(s)  
A request to revise the QA Level Assignment will be submitted to redesignate the work specified by DIM 102 as QA Level 3 by September 11, 1987. Responsible party: R. E. Stinebaugh.

15 Effective Date 9/11/87

16 Cause of the Condition & Corrective Action to Prevent Recurrence (Rev. 1)

a. All DIMs will be reviewed for consistency of QA levels in the DIMS, with QA level assignments (QA Coordinator, by September 11, 1987).

b. Based on result of a., revise other DIMs, if necessary (responsible Task Leaders).

17 Effective Date 9/30/87

18 Signature/Date  
Thomas O. Hunter 8-28-87 Thomas O. Hunter, Manager  
NNWSI Project Department

19 Response	<input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject	<input type="checkbox"/> Amended Response	OAE/Lead Auditor/Date <u>St. A. Callwell 15 Sept 87</u>	Branch Manager/Date <u>Tom Hunter 9/15/87</u>
20 Amended Response	<input type="checkbox"/> Accept <input type="checkbox"/> Reject		OAE/Lead Auditor/Date	Branch Manager/Date
21 Verification	<input type="checkbox"/> Satisfactory <input checked="" type="checkbox"/> Unsatisfactory		OAE/Lead Auditor/Date <u>St. A. Callwell 5 Feb 88</u>	Branch Manager/Date <u>Tom Hunter 2/5/88</u>

22 Remarks

23 QA CLOSURE	OAE/Lead Auditor/Date <u>St. A. Callwell 6 5 1988</u>	Branch Manager/Date <u>Tom Hunter 2/5/88</u>	POW/Date <u>James Blaylock 2/5/88</u>
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**MPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET**

**N-QA-038  
10/85**

**SDR No. 029**

**Rev. 0**

**Page 2 of 2**

Requirement (cont'd)

particular activity or item will be applied by all NNWSI Project participating organizations and any NTS support contractors who are involved in the activity. (Refer to audit checklist Item No. T-8)

Deficiency (cont'd)

Level III activity. This is inconsistent with the QA Level II designation given to the parent WBS 1.2.4.3.

Recommended Actions (cont'd)

2. Revise DIM 102 under approved procedures to the required QA Level II.
3. SNL to verify with subcontractors that work will be completed to QA Level II as specified by revised DIM 102.
4. Revise any other DIMs identified by the above review as being inconsistent.
5. Determine and report impact (if any) on both inhouse and subcontractor activities.
6. Determine root cause for inconsistent assignment of QA Levels to DIMs. Provide and document training given to preclude recurrence.

Condition & Corrective Action (cont'd) (Rev. 1)

- c. Based on result of a., determine impact of inconsistent QA levels (responsible Task Leaders and QA).
- d. The cause of this condition was lack of understanding on the part of the DIM author of the requirement stated in 8, above, and his confusion about how to control preliminary, scoping activities (based on a policy statement by the Project Quality Manager). This has all been clarified to the individual involved. If the result of 16a, above, indicates the need, more widespread training will be conducted.

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
1-1	QAP 1-3, Rev. 0 Para. 4.2.1	Verify that NCRs that are issued to initiate a stop work action are identified (prominently) with the words "work stoppage." <i>NCR - SALV - 87-2 7/15/87 - Only 1 issued CONTRACT 04-0964 ROGER M. ZIMMERMAN (SNC) CONTRACT MONITOR</i>	5.	<i>Work provided without approval of QA Plan &amp; Personnel Cuts</i>	R. Zimmerman
1-2	Para. 4.2.2	Verify that when a letter or memo is used, that the following is included (as a minimum): <ul style="list-style-type: none"><li>- Instructions to stop</li><li>- An explanation of the problem</li><li>- A request for corrective actions to be developed</li><li>- A request for immediate receipt acknowledgement</li></ul> <i>10 memos issued 3/21/88 "Not completing of automation" J.G. Yagin (no release memo) R.C. Finerso (no release memo) R.M. Zimmerman Released R.B. Pope S. Jimock P.E. Kaplan C. Rautman L. Yarrington O. Seclary L.L. Hill</i>		<i>X Receipt acknowledgement not requested REFER TO SRR NO. 168 <i>[Signature]</i> 7/25/88</i>	R. Zimmerman

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
13	QAP 1-3, Rev. 0 Para. 4.3	<p>Verify that corrective action responses to "stop works" address:</p> <ul style="list-style-type: none"> <li>- Efforts necessary to correct the problem deficiency</li> <li>- Analysis of root cause and means of eliminating cause</li> <li>- Action necessary to correct any product affected (may be data, design, etc.)</li> </ul> <hr/> <p>SDR NO. 168</p> <hr/> <p><u>Mgt assessment</u> - identified root causes in some instances.</p>	X	<p>No documented dispositions provided</p> <p>SEE SDR NO. 168</p>	K. H. HARRIS
			<p>(9) Auditor Signature <i>C. M. Thompson</i> 7/25/88 (10) Date</p>		

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
1 4	QAP 1 3, Rev. 0 Para. 4.4.2 and 4.4.3	Verify that the recission of work stoppages are documented on the NCR or a letter, as applicable.  SDR NO. 168	X	1 of 10 recissions avail - all in memos - NCR does have clear recission statement. Recission memos signed by QA.  SEE SDR NO. 168	RICHARDS
1 5	Para. 5.0	Verify that all correspondence regarding work stoppages is entered into the SNL NNWSI Department Records Center in file designation 90/1293/NCF/Q.	5.	Recid file code number entered by source on copy.	
				(9) Auditor Signature <i>[Signature]</i>	(10) Date 7/25/88

(1) Organization SNI.

(2) Page 4 of 118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
1-6	QAP 1-3, Rev. 0 Para. 4.4	Verify that QA has performed a verification of committed corrective actions prior to the resumption of work activities.	5	<p>8 of 10 personnel                      verified for release                      NCR also indicates                      satisfactory verification                      of deficiency.</p> <p><i>[Signature]</i> 7/25/87</p>	R. L. WALKER

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
1-7	Previous WMPO Audit R7-5 Observation No. 5	Verify SNI, has taken action committed to in response to the observation.	S	Observation No 88-06-03 Draft of REV B to SNE <del>now</del> <del>of</del> <del>APP</del> incorporated commitment will require verification when APP is approved and loaded.	B. RICHARDS
1-8	NNWSE / PP-9 Rev 0 Sec I Para 2.2	Verify that PA personnel and actors are able to escalate disputes to progressively higher org. levels through established channels including the PPM	S	SNE-NNWSE - APP Rev B "DRAFT" does incorporate See observation 88-06-03  [Signature] 2/28/88	

(9) Auditor Signature

(10) Date

(1) Organization SNI.

(2) Page 6 of 118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2 1	QAP 2.5, Rev. 0 Para. 5.1.1  4/15/88  9/15/88	Verify that SNI, NNWSI organization supervisors have developed and monitored a familiarisation program for each newly assigned individual. This program shall be tailored to the individuals unique needs.  STEPHEN L. PASSMAN (MRS) 6362  EUGENE S. HERTEL (MRS) 6314 GEOTECH ENGR  STANLEY A. EDMUND 6316		Familiarization program developed - however:  1. Not completed prior to the start of quality related activities 2. Content not always suitable OBS SEE SDR NO 88-06-13	R. RICHARDS
2 2	Para. 5.1.1.1	Verify that the program includes the applicable 8 items identified in the procedure.  EUGENE S. HERTEL (MRS) 6314  E.S. HERTEL 15462 Support Staff - all WP/QALAS - Milestones & interfaces 15461 Support Staff - mgt DOP 2-6, 4-1, 6-2, 7-1, 7-2 12521 Support Staff - sep & DOP 15-1, 16-1, DOP 12-1 12522 " " DOP 2-3, DOP 3-13-4 HIRE DATES: 3/15/88 3-10, 2-4, 3-3, 3-2 COMPLETION - GAAL: 5/31/88	S S S S	Standard form used includes all documents & normal incl. licensing, related interaction	SEE SDR NO 88-06-13  7/26/88 Auditor Signature

Pre-ACD Studios

COMPLETION - ACTUAL 6/16/88

S.L. PASSMAN  
12/4/87  
12/4/87  
Analyzing PT  
Analyzing PT

HIRE 4/15/88  
GOAL 7/1/88  
ACTUAL 6/10/88

one WORK PLAN/QALAS.  
0 of 12.  
1 of 14  
implementing procedure assigned first "General"  
Assigned 3 Task Specific  
DOP 2-4, 3-3 & 3-2.



Volm's 211  
pg 6A of 118

NAME	POSITION	TIME LARGE	CONTENT
E.S. HERTZ	Support Staff 12462, 12461 12521 & 12522	Hire 3/15/88 Goal 5/31/88 ~3mo Actual 6/6/88 (2wks) from goal	Adequate
S.L. PASSMAN	PI. 12142 & 12144	H 4/15/88 G 7/1/88 ~2mo A 6/10/88 (1mo 2wks) in from goal	Inadequate. No general implementing PA - Only 3 Task Specific
L.S. COSTIN	PI 12421 & 126923 SS 12462.	* H 10/10/86 G 1/30/87 ~7mo A 5/27/87 (4mos) from goal	Inadequate Not required Work Plans / PARS - Milestones - Only DOP 2-4, 3-3, 3-2.
T. LAUB	T.L. Pre-Closure 12463	* H 10/10/86 ~1yr G 12/24/86 3mo A 3/12/88 (1yr 1mo 2wks) from goal	Inadequate - No general implementing only PAP 2-3 & DOP 3-4 3-10, 2-4, 3-3, 3-2, 4-1 & 4-2
R.W. PRINDLE	PI 12141 12144	* H 10/10/86 G 2/23/86 ~7mo A 5/29/87 (1yr 3mos) from goal M/T Comp 7/26/88	Inadequate Only PAP 2-3, DOP 2-1, 2-2 3-9, 2-4, 3-3, 4-1 7-1.

63 of 118  
 6/3/88

F. B. NIMICK TL 104213 \*H 10/10/86  
 PI. 126923. G 1/5/87 ~4mo  
 A 2/16/87 (1mo)  
 from goal

Unable to evaluate

C. A. RAUTMAN TL 12132 \*H 10/10/86 ~1YR  
 G 12/23/86 4mo  
 A 3/28/88 (1yr  
 3mo)  
 from goal

Unable to evaluate.

J. EDMUND. S.S. 12914 H. 2/15/88  
 Records Mgt. G. 2/15/88 <1mo  
 A. 3/10/88 (1mo)  
 from goal.

Adequate.

\* On Project when procedure was issued

8 reviewed - CONTENT

- 2 Adequate
- 4 Inadequate
- 2 Unable to evaluate.

TIME LAPSE. <1mo to >1YR

<1mo	<3mo	<6mo	>6mo	<>1YR.
1	2	1	2	2

CUM. TOTAL	3	4	4	
------------	---	---	---	--

Imp... 2/26/88

Supplement of 118

268

STAN EDWARD

12914

Support Staff  
Records Mgr  
Senior Records Clerk.

HIRE

GOAL

2/27/88

ACTUAL

3/10/88.

Death AP 1-79

General Singing DCMS.

DOP 6-1, 6.2, 17-1.

CM Thompson 7/24/88

2  
Split  
pg. 60 & 118

TOM. SAUB

HIRE

GOAL: 12/24/86.

ACTUAL: 2/12/88.

T.L. 12463. Pre-Closure Safety analysis

Work Plan / CMAA:

Milestones & interfaces

MIS (Budget).

PAP 2-3.

DOP 3-4, 3-10, 2-4, 3-3, 3-2, 4-1, 4-2.

L. M. Thompson <sup>OR</sup> 7/26/88

PROCEDURE EFFECTIVE 10/10/86.

WMPO APPROVED

PAR 3-5.

L.S. COSTIN -

HIRE DATE  
GOAL DATE - 1/30/87.  
ACTUAL DATE 5/27/87

- 124211 PI (A, B). Rock Mass Thermal Anal.
- 12462 Support Staff (A, B, C, D). Encl "6" Tunnel.
- 126923 PI Analysis Support.

- ① Not required to read/discuss work plan & PARs.
- ② Demonstrate a knowledge of milestones & required interfaces
- ③ Only required to ~~read~~ <sup>be familiar with</sup> PARs
- POP 3-4
  - " 3-3
  - " 3-2

CM Thompson 7/26/88

21  
500000  
Pg. 6 of 118

R.W. PRINDLE

HIRE

GOAL: 12/23/86

ACTUAL: 5/29/87.

1.2.1.4.4. P.I. Pul verif of Codes  
1.2.1.4.1. P.I. Pul verif of Codes.

Required

Work Plans & DALAS.

Milestones

MIS. (Budget).

QAP-2-3

DOP 2-1

" 2-2

" 3-8

" 2-4

" 3-3

" 4-1

" 7-1

W. Thompson 7/26/88

2.1  
6/1/87  
Pg. 6 of 118

F. B. NIMCK

HIRE.

GOAL

1/5/87

ACTUAL

2/16/87.

T.L. 124213.

P.T. 126923.

Lab. Properties

ES. Geomech Test.

Work Plan / PALAS.

Activities & interfaces

MIS (Budget).

QAP 2-3

DOP 2-1, 2-2

DOP 2-3, 5-2, 8-1, 8-2, 11-1, 11-2, 11-3,  
12-1, 13-1, 14-1, 17-2, 4-1, 7-1.

Conf/Impson 7/26/87

2.1  
Spokane  
Pg. 6H of 118

\* STOP WORK ISSUED 3/21/88

C.A. LAUTMAN

HIRE

GOAL 12/31/86

ACTUAL 3/28/88

T.L. 12/32. Computer Graphics

Work Plan & PHAS  
Milestones

DOP 7-1, 7-2, 4-1, 4-2

MIS (budget)

PAP 3-3

DOP 3-1, 3-2

DOP 17-1

DOP 3-2, 3-7, 3-3

DOP 3-4, 3-3, 3-2

DOP 3-2, 5-2, 8-1

8-2, 11-1, 11-2, 11-3

11-4, 12-1, 13-1,

14-1, 17-2.

4-1 & 7-1

Comp Stoppage 7/24/88



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-3	QAP 2-5, Rev. 0 Para. 5.1.1.2	<p>Verify that the program appears as follows:</p> <ul style="list-style-type: none"> <li>o An introductory statement which explains the program and provides guidance on completing it.</li> <li>o A deadline for completing the program.</li> <li>o A series of learning activities proceeding from general to specific. The objective of each activity must be clearly stated.</li> <li>o A sign-off by the <del>trainer</del>. <i>TRAINER CM 7/24/88.</i></li> <li>o A sign-off by the supervisor.</li> </ul> <p><i>Item considered to be unclear - observation does not identify specific concern 11/14/88 CM.</i></p>	<p><i>CM</i> <i>X</i> <i>S</i> <i>S</i> <i>S</i> <i>X</i></p>	<p><i>Audit Report addresses overall training problem. See Observation No 88-06-13 Item 2.1. &amp; Exp Summary Item #3</i></p> <p><i>Objective of EACH activity not clearly stated. Overall "familiarization"</i></p>	<p><i>R. Richards</i></p>
2-4	Para. 5.1.2	<p>Verify that the programs are completed in the time allotted.</p>	<p><i>CM</i> <i>S</i> <i>X</i></p>	<p><i>See Audit Item 2.1.</i></p> <p><i>SDR No _____</i></p> <p><i>NOTE</i> <i>R. Richards - STOP WORK ORDER - Issued March 88. Problem corrected.</i></p> <p><i>C. Thompson 7/26/88</i></p>	<p><i>R. Richards</i></p>


For audit item 2-3, further research (after the audit was closed) determined that a deficient condition exists. Therefore, the SDR will be issued independent of the audit by auditor C.M. Thompson.

B. Henney 11-15-88  
Lead auditor

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2.5	QAP 2-5, Rev. 0 Para. 5.2.1	Verify that continuing training is identified based on: <ul style="list-style-type: none"> <li>o Changes to policy and procedures</li> <li>o Technical or scientific advances</li> <li>o Weaknesses identified by audits/surveillances</li> <li>o New requirements</li> </ul> Training records maintained by "events" No traceability to individual	X	Unable to verify - No specific report - ment on returning on reviews No training schedule a summary of training is maintained DOR No. 177	R. RICHARDS
2.6	Para. 5.2.2	Verify that training plans contain the items listed in the procedure - and a statement of the objective and the measurement.  OBJECTIVES - overall Determination of existing levels of Learning objectives Determination of degree of trainee learning.	X S 8.7.1 10-12-88	Not done - (Informal always - no consistent knowledge format - Dissolved No 88-06-13 [Signature] 7/26/88	

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-7	QAI 2-5, Rev. 0 Para. 5.2.2	Verify that a QA training session summary form has been completed as required and filed in 6310 00/1293/TCN/Q level.	5	3-3 ring binders reviewed.	REVIEWED
2 R	Para. 5.2.2	Verify that a catalog of completed training plans, materials, or video tapes is maintained in the SNL NNWSI Records Center.	5 8.7. 10-12-88 X 5	Not maintained corrected during audit 8.7.	
			 (9) Auditor Signature	7/26/88 (10) Date	

(1) Organization SNI.

(2) Page 10 of 118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-9	QAI' 2-5, Rev. 0 Para. 5.2.3	Verify that Form QAP 2-5, or equivalent, is used to document informal training.	5	3- 3 Ring binders revised	R. L. WARD
2-10	Para. 5.2.4  BULLETINS. (More urgent) 6/30/86 - Purchg Req- Problems 4/15/86 QA Level con Level assigned	Verify that QA advisories or bulletins are issued as appropriate.  ADVISORIES: (Annual Collocation) 7/19/88 - DOP 8-2, Rev 0 Announce new highlights 7/19/88 DOP 17-2, Rev B To be issued - differences 7/5/88 DOP 4-1 - Change 2/4/88 SOP 03-05 (NNWSI) 8/31/87 DOP 77-1 Black Ink 4/20/87 DOP 4-1 & 7-1 Highlights 3/30/87 DOP 3-1 Highlights 1/29/87 DOP 6-2 Revised - Highlights 12/1/86 QAP 2-5 Highlights	5	1988-3 1987-4 1986-3 1985-3          C. M. Simpson 7/26/88	

(9) Auditor Signature

(10) Date

6/30/86 con  
- 10/3/86 NNWSI SOP-02-01 Summary  
2/11/86 QA Levels for Records  
10/31/85 Field Testing Controls  
9/17/85 Lab & Field Testing  
10/3/85 Field Test )g-TI

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-11	QAP 2-5, Rev. 0 Para. 5.2.5	<p style="text-align: center;"><b>INTEC</b></p> <p>Verify that the SNI, <del>INTEC</del> program is used advantageously for personnel on the NNWSI Project.</p>	<p>X</p> <p>Saw</p>	<p>No NNWSI records maintained on personnel's involvement in INTEC. Interview with COSTIN &amp; LAUS indicated frequent attendance.</p>	R. RICHARD
2-12	Para. 5.2.6	<p>Verify that the need for additional training is documented in conjunction with the annual performance appraisal.</p> <p style="text-align: center;">Supv. makes out new Familiarization Record</p>	<p>X</p>	<p>OR No. 177</p> <p>Examination No. _____</p> <p>No way to verify except by the existence of a second familiarization form.</p>	
			<p><i>[Signature]</i></p>	<p>7/28/88</p>	

(9) Auditor Signature

(10) Date

(1) Organization SNI, (2) Page 12 of 118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-13	QAI 2.7, Rev. 0 Para. 3.0	Verify that auditors have been trained by one of the following methods and that these methods are documented:  o Orientation o Training programs o On-the-job training	5	Reviewed the following records which were found satisfactory: Harley Kirschman Greg Warner Richard Bachr	Richard
2-14	Para. 4.1.1	Verify that the auditors used on SNI audits have the education and experience commensurate with the activities to be audited.	5	Reviewed education and experience documentation for the following auditors: Harley J. Kirschmann Walt Hedzick Greg Warner Frederick J. Ruth	↓ 8/2/88

(9) Auditor Signature (10) Date

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2 15	QAP 2-7, Rev. 0 Para. 4.2	Verify that lead auditors meet the following requirements: <ul style="list-style-type: none"> <li>o Education and experience (10 credits per Appendix B to the procedure)</li> <li>o Communication skills attested to by the QAC or member of management</li> <li>o Training, as determined by management evaluation, to ensure audit skills                             <ul style="list-style-type: none"> <li>- Knowledge and understanding of the SNL QAPP, 10 CFR 60, NQA-1</li> <li>- Knowledge and understanding of principles and techniques of auditing</li> <li>- Knowledge of SNL documents</li> </ul> </li> <li>o Pass an exam which evaluates comprehension and ability to apply the body of knowledge identified previously</li> </ul>	S	Reviewed Lead Auditor qualification records for the following individuals: Bob Richards, Walt Hedzick Greg Warner  Reviewed the examination administered to Bob Richards which was found to have questions specific to the necessary areas.  Fredrick J. Ruth 8/2/88	Richards        ✓
			(9) Auditor Signature	(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-16	QAI 2 7, Rev. 0 Para. 5.0	Verify that auditors and lead auditors maintain their proficiency by participating as a member of an audit team in at least one acceptably organized and controlled audit per year.	S	Bob Richards Audit PB-87-1 Curt Barnes (3 audits) Greg Warner (3 audits)	Bob Richards
2-17	Para. 5.1	If auditors or lead auditors require requalification, verify that the requirements of the procedure have been met.	S	Reviewed qualification of Bob Richards who was requalified	↓
			(9) Auditor Signature	(10) Date	

*Frederick J. Keith*  
(9) Auditor Signature

*8/2/88*  
(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-18	DOP 2 G, Rev. 0 Para. 4.1	Verify that personnel with job titles of either task leader, principal investigator, or supporting staff meet the minimum qualifications for the job title as described in the procedure.  <i>New position descriptions issued 7/22/88</i>	X	<i>Position descriptions do not identify min education &amp; experience requirements.</i>	<i>P. Lewis</i>
2-19	Para. 4.2	Verify that the Division Supervisor evaluates the job performance of assigned personnel to determine if adequate proficiency has been maintained. The evaluation shall be concurred with by the NNWSI Department Manager.	5	<i>Review 13 Certs all were current within exp date</i>	
				<i>[Signature]</i>	
				(9) Auditor Signature	(10) Date <i>7/29/88</i>

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-20	DQP 2-6, Rev. 0 Para. 6.0	Verify that the certification of personnel is documented on Form QAP 2-6 and includes the information required by the procedure.	S	From DAP 2-6(1)	B. RICHARDS
2-21	Para. 6.0	Verify that the certification document is retained as a lifetime QA record in file 90/1293/CRT/Q1.	S		
3-31A	Para 3.0	Verify that the QAP has been applied to personnel who perform and verify Quality Level I tasks	S X 9.7. 10-12-88	corrected during audit from DAP 2-6(1) No certs available for B. RICHARDS or M. BAHR M. Thompson	12/28/88 12/27/88

(9) Auditor Signature

(10) Date

(1) Organization SNI.

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-22	DQP 2 2, Rev. A Para. 1.0 and 3.1	Verify that study plans are prepared for studies, experiments, tests, and analyses that are listed in the SCP.	S	Study plan SLTR 87-3004 activities are referenced in the SCP section 8.3.1.15.15	Penny Schwartz
2-23	Para. 4.1	Verify that study plans conform to the general format outlined in the procedure.	S	Reviewed "Excavation Investigation Study Plan" (SLTR 87-3004) Rev. B Format follows the standard outline in DQP-2-2	↓
				Frederick J. Keith	8/2/88
				(9) Auditor Signature	(10) Date

(1) Organization SNI.

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2 24	DQP 2.2, Rev. A Para. 5.1.3	Verify that SPs are produced as SITRs and distributed by Department 6310 Records Management to a master distribution list.	S	Distribution noted on the cover letter and in RMS	Mary Schwanitz
2 25	Para. 5.2.1	Verify that SPs are approved as required by DQP 6-2. In addition, QA approval is required.	DN S	Study Plan SLTR 87-3004	Mary Schwanitz
		<p><i>8. Agency 8-5-88</i></p> <p><i>generation - Deficiency already identified and documented in NCR No. SNL-88-3</i></p>	S	<p><i>Richard</i></p>	<p><i>Richard</i></p>
				<p><i>Frederick J. Ruel</i></p>	<p><i>8/2/88</i></p>

(9) Auditor Signature

(10) Date



(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
2-27	NNWSI Project QAP, Rev. 5, Section II  Para. 5.1	Verify position descriptions are established for SNL NNWSI Project personnel. Verify SNL NNWSI Project personnel meet these position descriptions.  <i>X Bechtel &amp; Parsons ?</i>	X	DOCUMENT DATED 7/22/88 Education & experience - minimum requirements not identified - see attached. SDR No. <u>169</u>	R. Richter
2-28	Previous WMPO Audit 87-5 Observation No. 6	Follow-up on SNL response to this observation to ensure a deficiency has not developed.	S 10/20/88	item 2.1 - No method possible to verify that training is provided as crafted to policies or procedures occur See Observation No. 84 10-12-88 88-06-13 [Signature] 7/26/88	

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-1	Para. 3.1.1	<p>SNL-NNWSI-QAPP, Rev. 0</p> <p>Verify that prior to the start of any performance assessment, design, or site characterization activity that a work plan is developed for each work breakdown structure element involved.</p>	S	<p>Verified Work Plans for WBS</p> <p>1.2.4.3.2.5 (Surface Facilities)</p> <p>1.2.4.3.3.5 (Shafts &amp; Ramps),</p> <p>1.2.4.3.4.5 (Underground Excavation),</p> <p>1.2.4.3.5.5 (Underground Service Sps)</p> <p>Reviewed the following DIMs against the applicable Work Plans to determine whether activities stated in the DIM are included in the WPs:</p> <p>① DIM # 16 (WBS 1.2.4.3.2.5) 7/6/87</p> <p>② DIM # 28 (WBS 1.2.4.3.2.5) 8/17/87</p> <p>③ DIM 149 (WBS 1.2.4.3.3) Rev 0</p>	<p>Roger Hill</p> <p>R. Stinbaugh</p> <p>Roger Hill</p> <p>R. Stinbaugh</p>
(9) Auditor Signature <u>J. J. [Signature]</u> (10) Date <u>7/28/88</u>					

Summary of Investigation (Cont)

- ④ DIM 135 (WBS 1.2.4.3.3) Rev A
- ⑤ DIM 112 (WBS 1.2.4.3.3) 7/25/86
- ⑥ DIM 113 (WBS 1.2.4.3.5) Rev 0
- ⑦ DIM 115 (WBS 1.2.4.3.4) Rev 0

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-2	SNI--NNWSI-QAPP, Rev.0  Para. 3.1.1 (1) thru (3)	Verify that work plans developed contain or reference the following:  <ul style="list-style-type: none"> <li>o Discussion of overall purpose for the work</li> <li>o Applicable regulations/requirements</li> <li>o Performance criteria</li> <li>o Key issues</li> <li>o Information needs</li> <li>o Higher level planning documents</li> <li>o Description of previous work</li> <li>o QA levels/QA controls of previous work</li> <li>o Description of work to be performed</li> <li>o Methods, procedures, equipment, and computer codes to be used or to be developed</li> <li>o Interfaces</li> <li>o Inputs (data, information, and items)</li> <li>o Outputs (data, information, and items)</li> <li>o Reports to be produced</li> </ul> <hr/> <p style="text-align: center;">SEE OBSERVATION NO. <u>88-06-05</u> B.N. 9-26-88</p>	X S SD 2/15/88	Reviewed Work Plans identified in Audit Item No. 3-1, Requirements one acceptable with the following exceptions: ① WBS 1.2.4.3.2.5 & 1.2.4.3.5.5 Describes previous work but does not provide QA level/controls of previous work ② WBS 1.2.4.3.3.5 & 1.2.4.3.4.5 No description of previous work OR QA level/controls of previous work	Roger Hill
				(9) Auditor Signature <i>[Signature]</i>	(10) Date 7/27/88



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-3	SNL-NNWSI-QAPP, Rev. 0 Para. 3.2.1	Verify that the work plans are reviewed and approved. The review to include: <ul style="list-style-type: none"> <li>o SNL NNWSI Project Department technical review</li> <li>o Reviewers to be qualified and independent</li> <li>o Results of review documented and resolved</li> </ul> The approval to include: <ul style="list-style-type: none"> <li>o Task leader</li> <li>o Technical reviewer</li> <li>o QA</li> <li>o TPO</li> <li>o WMPO PQM and Branch Chief</li> </ul> <hr/> SEE OBSERVATION NO. <u>88-06-07</u> <u>8-7-9-26-88</u>	X S SD 8/15/88	Work Plans WPS 1.2.4.3.2.5 (Part B): No objective evidence that a technical review was performed. Work Plans WPS 1.2.4.3.2.5, 1.2.4.3.4, 1.2.4.3.5: Were approved by letter from WMPO PQM (J. Blaylock) 7/22/88. As yet, the Work Plans have not received the approval signature on the WP cover sheet for the	R Hill R Stinbaugh
3-4	Para. 3.3	Verify that any technical change to the work plan receives the same review and approval.  <hr/> SEE OBSERVATION NO. <u>88-06-07</u> <u>8-7-9-26-88</u>	SD 8/15/88 S X See 3-3 for details	WMPO (PQM) & WMPO (Tech). The Tech. Reviewer for all WPs was K D Young (see 3-16).	R Hill R Stinbaugh
				(9) Auditor Signature <u>S J Hill</u>	(10) Date <u>7/29/88</u>

Summary of Investigation (Cont)

No documented evidence could be provided to substantiate the technical review

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-5  F-30 1-14	SNL-NWST-QAPP, Rev. 0  Para. 3.4	Verify that all activities/items and tasks included in the work plans are assigned a QA level.	X S SD R/15/88	Reviewed Work Plans identified in 3-1. All have been assigned quality level II. Reviewed the following DIMs to ensure the WP quality level has been passed down to the DIM:  ① DIM # 6 QL II ② DIM # 28 QL II (7/27/88) ③ DIM # 149 QL II ④ DIM # 135 QL II ⑤ DIM # 112 QL II ⑥ DIM # 113 QL II	R Hill H Mac Donald R Stambaugh
				(9) Auditor Signature <u>[Signature]</u>	(10) Date <u>7/28/88</u>

⑦ DIM # 115 QL II

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
<p>3-6</p> <p>T-14</p> <p>T-13</p> <p>T-30</p>	<p>SNL-NNWSI-QAPI, Rev. 0</p> <p>Para. 3.4 (SOP-02-02, Rev. 1) Interim Change Notice 5/9/86</p> <p>SIP</p>	<p>Verify QA level assignment includes the following:</p> <ul style="list-style-type: none"> <li>o Approval of TPO</li> <li>o PQA review and approval of QA criteria applied to each item or activity</li> <li>o WMPO approval of QA level applied</li> <li>o PI involvement in determining and documenting QA level by sign and date of QALAS</li> <li>o Subdivisions of items/activities are same QA level or reduction is justified</li> <li>N/A o Data, documents, and computer codes used for licensing process are QA Level I</li> <li>o Use of QALAS</li> <li>o QALAS individually numbered and revision controlled</li> <li>o Selection of QA criteria which apply specified on QALAS</li> <li>o QALAS references SIP</li> <li>o QA level assignment checklist utilized and completed (i.e., technical justification)</li> <li>o Changes to QALAS are subject to same controls</li> <li>N/A o Justification for upgrade of QA level</li> </ul> <p>SEE SDR-170</p>	<p>X</p>	<p>Reviewed each QALAS attached to Work Plans identified in 3-14-86</p> <p>All requirements are acceptable with the following exceptions: evidence No objective was presented to substantiate that a technical or Quality Assurance review was performed.</p> <p>SDR-170</p>	<p>R Hill</p> <p>A</p> <p>MacDougall</p> <p>R</p> <p>Stimbaugh</p>
(9) Auditor Signature <u>S. Jones</u>				(10) Date <u>7/25/88</u>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-7	SNL-NNWSI-QAPP, Rev. 0 Para. 3.5.2	Verify that interface controls are applied during SI activities. Interface controls include: <ul style="list-style-type: none"> <li>o Assignment of responsibility</li> <li>o Establishment of procedures among and within participating organizations</li> <li>o Review approval release distribution and revision of documents involved in interfaces</li> <li>o Interface between SNL and its suppliers are controlled by procurement documents</li> </ul>	N/A	No SI activities, to date have taken place for WBS 1.2.4.3.2, 1.2.4.3.3, 1.2.4.3.4, 1.2.4.3.5  NOT AUDITED	Reggs Hill Hugh McDougall
3-8	Para. 3.5.2.2	Verify that transmittal of information or items, including samples, across interfaces is documented.	N/A	See Audit Item No 3-7  NOT AUDITED	Reggs Hill Hugh McDougall
			(9) Auditor Signature <i>S. J. [Signature]</i>	(10) Date <u>7/26/88</u>	

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-9	SNL-NNWSI-QAPP, Rev. 0 Para. 3.5.3	Verify that a close-out check is performed upon completion of each scientific investigation close-out check is to include:  o Required QA records are complete o That WMPO is given the opportunity to participate in the close	N/A	See Audit Item 3-7	Roger Hill
				NOT AUDITED	Hugh MacDougal
(9) Auditor Signature				<i>[Signature]</i>	(10) Date <u>7/29/88</u>

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-10  T-35 T-12 T-17 T-20	SNL-NNWSI-QAPP, Rev. 0  Para. 3.6.1.1   NUB-176-17 Rev 5 Para 2.2.1 Section III 3D 7/27/88	Verify that design inputs are identified, documented, and their selection reviewed and approved. Design inputs include:  <ul style="list-style-type: none"> <li>o Design bases</li> <li>o Performance requirements</li> <li>o Regulatory requirements</li> <li>o Codes</li> <li>o Standards</li> <li>o Manufacturers design data</li> <li>o Quality standards</li> </ul> Verify that design inputs (DIMs) have been reviewed and approved by the responsible QA organization SEE SDR-170	S     SDR-170 X 50R	Reviewed the following DIMs: ① DIM 39 Rev 1 (5/19/88) No QA review or approval ② DIM 16 Rev 0 4/6/87 No QA review or approval ③ DIM 28 Rev 0 6/6/87 No QA review or approval ④ DIM 149 Rev 0	R Hill H MacDugal R Stambaugh
3-11  T-37	Para. 3.6.1.2	Verify that changes to design inputs are identified, documented, approved, and controlled. (Note: The reason for the change must be included)   SEE SDR-170	X 012	No QA review or approval ⑤ DIM 135 Rev A No QA review or approval All of the above DIMs identify and document design inputs	R Hill H MacDugal R Stambaugh

(9) Auditor Signature: J. D. [Signature] (10) Date: 7/27/88

Summary of Investigation (Cont)

Audit Item No. 3-10:  
 For additional information relative to this item see Audit Item T-31

Audit Item No 3-11:  
 The DIMs identified in 3-10 that have been revised, no QA review or approval was obtained.

(1) Organization SNI,

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-12	SNI-NNWSI-QAPP, Rev. 0 Para. 3.6.2.1	Verify that design analysis documents are detailed. Design analysis documents are to be: <ul style="list-style-type: none"> <li>o Legible</li> <li>o Suitable for reproduction, filing, and retrieval</li> <li>o Calculations are to be identified by subject, including structure, system, or component</li> <li>o Calculations include originator, reviewer, and date</li> </ul>	S	Reviewed the following Design Analysis Documents: Surface Facilities ① SANDER-7051 "Probable Maximum Flood Control Study" (This report has not been published yet) No calculations were available. BNI contract requires they transmit calculations <sup>at</sup> <del>of</del> <sup>of PSD</sup> <del>of</del> <sup>of</sup> completion of the Task. (See also T-27 for additional info). N/A Under Ground	R. Hill H Max Douglas R K Skirbargh
				(9) Auditor Signature <i>S. Jones</i>	(10) Date 7/29/88

Summary of Investigation (Cont)

No design analysis documents have been completed for WBS tasks 1.2.4.3.3, 1.2.4.3.4 & 1.2.4.3.5 (See also Audit Item No. T-46 for additional info).

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-13	SNL-NNWSI-QAPP, Rev. 0 Para. 3.6.2.2	<p>Verify that design analysis documents include:</p> <ul style="list-style-type: none"> <li>o Definition of objective of the analysis</li> <li>o Definition of design inputs and their source</li> <li>o Listing of applicable references</li> <li>o Results of literature searches or other background data</li> <li>o Identification of assumptions and indicators of those which require verification as the design proceeds</li> <li>o Identification of computer calculations, including computer type, program name, revision, inputs, outputs, evidence of program verification, and the basis of application to the specific problem</li> <li>o Signature and date of review and approval by appropriate personnel</li> </ul> <p><i>Verified</i> <i>7/29/88</i></p>	S	<p>Reviewed the following documents: <i>Surface Facilities</i></p> <p>① SAND 88-7051</p> <p>(This report has not been published yet) <i>(See also T-19 &amp; T-21)</i></p> <p><del>UNDERGROUND</del></p> <p>N/A Only calculations available were unofficial copies from PB. PB contract requires they transmit calculations at task completion. No design analysis documents have been completed. (See also T-37 &amp; T-46 for additional info.)</p>	<p>R Hill H. McDougall R. Stinbaugh</p>
				(9) Auditor Signature <i>S. D. [Signature]</i>	(10) Date <i>7/29/88</i>



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-14  F-36 F-17 T-26	SNL-NWWSI-QAPP, Rev. 0  Para. 3.6.4	Verify that design verification for completed QA Level I design activities has taken place. Design verification includes:  o Identification of the verification method, results, and verifier o Verification prior to release or identification and control of un-verified portions	N/A	No Level I design activities have taken place not applicable	R. Hill H MacDonnell R Stinbaugh
3-15	5.6 7/29/88 Para. 3.6.4	Verify that changes to previously verified designs are subjected to verification, including overall effects of the changes on the design.	7/29/88 N/A S	<del>See 3-18</del> (See Audit Item No. 3-18) <del>NOTE</del> <del>See Audit Item No 3-18</del> for	

(9) Auditor Signature *S. Jones* (10) Date 7/29/88

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-16  T-38	SNL-NWST-QAPP, Rev. 0  Para. 3.6.4.5	Verify that personnel who perform design verification are certified and were not involved with the original design.  Note: If supervisor performs verification, assure supervisor did not establish the design input or specify design approach or rule out certain considerations. Supervisor verification must be approved by management superior to the supervisor.	S	See audit item No T-17 (Surface Facilities). Verified qualification for <u>R. Pope, H. MacDugall, Subra</u> (Underground) Verified qualification for <u>KD Young</u> See audit item No. T-38	R. Hill
3-17  T-41 T-3 T-17 T-20	Para. 3.6.4.6	Verify that design verification was accomplished by one of the following methods:  o Design review (consider Para. 3.6.4.6 a thru f) o Alternate calculations o Qualification test (consider Para. 3.6.4.6(3))	S	(Underground Facilities) for additional qualification verification All design verification was accomplished by design review. See 3-20 for reports/documents reviewed and results.	R Hill H. MacDugall
			(9) Auditor Signature <u>S. Jones</u>	(10) Date <u>7/29/88</u>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS, AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-18	SNL-NNWSI-QAPP, Rev. 0 Para. 3.6.6	Verify changes to approved design are subject to design control measures commensurate with original controls.  * ADDRESSED BY SNL IN CPEN  AUDIT FINDING AFR-PB-1	* S 7/29/88	Reviewed drawings : RO7048A/1 Rev 1 RO7048A/10 Rev 1  No objective was provided that a DCR was generated	R Stinbaugh H McDargel R Richard
3-19  T-43 T-24	Para. 3.6.7	Verify design interface controls are applied to QA level I and II design activities. Interface controls include:  o Identification of internal and external design organization o Responsibilities and procedures established o Documentation of information transmitted across interfaces  See Classification No. <u>88-06-02</u>	* S 8/15/88	Reviewed the following documents ① PB contract 57-0878 ② BNI Contract 23-9599 ③ BNI QAPP Rev 3 ④ PB QAPP July 1987  PB & SNL have no system to review SNL DDP revisions for potential impact to	R Hill B Stinbaugh
				(9) Auditor Signature <u>S. Jones</u> (10) Date <u>7/29/88</u>	

Audit ITEM 3-18 (Cont)

However, this deficiency has been identified by SNL during an audit at PB. (Reference SNL AFR-PB-1, 5-10-88). The SNL deficiency report identifies PB drawings R07048A/1-15 as having been revised without processing of a Design Change Request (DCR).

For Surface Facilities, no changes have been made to approved design per Hugh MacDougall.

Audit ITEM 3-19 (Cont)

PB DOPs. Four (4) PB DOPs were identified that have not been revised ~~or~~ reviewed <sup>on 7/25/88</sup> for potential impact) and the corresponding SNL DOPs have been revised. The procedures are 1) DOP 3-1, 2) DOP 3-4, 3) DOP 3-6 and 4) DOP 3-9

Checklist NO. 98-06-01

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
3-20  F-42 F-41 F-41	SNL-MNWSI-QAPP, Rev. 0  Para. 3.6.8.1  NVD-196-17 Rev 5 Para 2.7.1.3 Section III 1/21/88	Verify design output documents include the following:  <ul style="list-style-type: none"> <li>o Relation to design input</li> <li>o Identification of assemblies/components that are part of items being designed</li> <li>o Commercial grade items identified (Note: See Para. 3.6.8.1(2))</li> <li>o Evidence of review and approval cycle achieved (technical and quality).</li> </ul> Verify the review and approval cycle includes QA of the design organization and WMPO  SEE SPR NO. <u>170</u>	X	Reviewed the following documents: <del>SURFACE FACILITIES (SBS 1.2, 1.3, 2)</del> ① SANDER-1051  No review and approval by SNL QA (This report has not been reviewed by WMPO yet). Verified review performed by SNL (R. Pope, Subra H. MacDougall); BNI's Subsequent response & resolution of comments; and documentation by SNL on the "Dept 6310 Manuscript Review Sheet (See ODP 62). Noted that	R. Hill  H. MacDougall R. Stinbaugh
				(9) Auditor Signature <u>[Signature]</u> (10) Date <u>7/23/88</u>	

SPR  
Report

checklist item 3-20 continued

the review sheet was not filled out correctly (e.g., review requirements not checked, reviewers did not initial in appropriate space signifying completion of review, whiteout on review sheet).

### SAND87-2082

No review and approval by SNL QA. (This report has not been sent for WMFO review). Verified review performed by SNL (R. Pope, H. MacDougall) and BNIs subsequent response & resolution of comments. The "Dept 6310 Manuscript Review Sheet" has not been completed (i.e., signature and date of reviewers). Noted the review sheet was not filled out correctly (e.g., reviewers did not initial, review requirements not checked).

### UNDERGROUND (WBS 1.2.4.3.3, 1.2.4.3.4, 1.2.4.3.5)

Reviewed drawings:

- RO7048A/3 Rev 0 (ESF ICD) • RO7048A/6 Rev 0
- RO7048A/5 Rev 0 (ESF ICD)

Using a checklist "SNL Drawing Review ~~Sheet~~ Checklist" that is not proceduralized. The checklist has signature/date of the SNL "Reviewer" and "Checker" and ~~also~~ lists 9 questions relative to design verification. The questions are similar to the SNL-QAPP paragraph 3.6.4.6.



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
4-1	SNL-NWWSI-QAPP, Rev. 0  Para. 4.1	Verify that procurement documents have been prepared, approved, and issued in accordance with written procedures and policies. Also verify that both the technical and QA organizations have documented their reviews.	S	4.1 6-88 SNL AUDIT FINDING SNL-88-12 (DRAFT ATTACHED) FOUND THAT SEVERAL PR'S WERE NOT REVIEWED BY REQUESTER AND/OR NOT IN RECORD CENTER, SEE ATTACHMENT FOR DETAILS	* DB
4-1a		DURING INTERVIEW, QUESTION WAS RAISED ABOUT TRAINING TO DOP 4-1, REV A WHICH WAS BROUGHT OUT IN FINDING SNL-88-12 (ATTACHED)	S	4.1a TRAINING IS SCHEDULED FOR AUGUST 25 AND SEPT 1, 1988. TRAINING WILL COVER DOP'S 4-1 REV. A, 7-1 AND 7-2 SEE TRAINING LETTER ATTACHMENT 2	
4-2	Para. 4.1.3.1	Verify that procurement document changes are subject to the same degree of control, including reviews and approvals, as utilized in the preparation and processing of the original document.	S	4.1.3.1 SNL-88-12 FOUND THAT CHANGES TO PR'S WERE NOT BEING REVIEWED (SEE ATTACHED DRAFT FINDING FOR DETAILS)	
4-2a		DOES QA REVIEW CONTRACTS?	S	4.2a NO - REQUESTER ONLY AS PER PROCEDURE	

(9) Auditor Signature J. A. Ulrich

(10) Date 7-29-88

\* DOROTHY PROCKMAN



SNL MISSI DEPARTMENT 6310  
AUDIT FINDING REPORT

**DRAFT**

- 1. REPORT NO.: SNL-88-12
- 2. AUDITOR(S): Kirschenmann and Barnes
- 3. DATE: June 10, 1988
- 4. DISCUSSED WITH: Dottie Brockman
- 5. REQUIREMENT: DOP-4-1 Revision A, Procurement Document Requirements
  - A. Paragraph 4.3.2.3 requires the PR requester to verify the accuracy of the placed contract and to make a notation on the contract prior to sending the contract to the Records Center.
  - B. Paragraph 4.4.1.2 requires the QA Coordinator to ensure that a copy of QA Level 1 PRs (and Statements of Work) are forwarded to the WMFO.
  - C. Paragraph 4.4.4 requires the PR requester to ensure that, after the PR is processed by Purchasing, the PO/change/amendment is correct, marked, verified, and sent to Records Center.
- 6. FINDING:
  - A. There was no evidence in the Records Center to verify the review by the 7125 requester on PR 55-0139 (11/27/87) and no copy of the contract in files as required by paragraph 5.0. No evidence of required review and file copy on PR 58-1411 by 6314 or on PR 47-7368 in the Records Center.
  - B. There was no evidence that copies of PRs are being forwarded to the WMFO.
  - C. There was no evidence in the Records Center to verify the review on PO/contract changes for 58-1411 changes 1 through 10. Similarly, there was none for 47-7368 changes 1 through 9 and 95-8399 changes 1 through 3.

REPLY BY \_\_\_\_\_ (DATE)

7. CAUSE:

8. CORRECTIVE ACTION TAKEN:

9. ACTION TO PRECLUDE RECURRENCE:

10. DATE OF FULL COMPLIANCE:

11. RESPONSIBLE MANAGER/SUPERVISOR & DATE:

12. EVALUATION OF CORRECTIVE ACTION STATEMENT:

SATISFACTORY \_\_\_\_\_ UNSATISFACTORY \_\_\_\_\_

LEAD AUDITOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
(IF "UNSATISFACTORY" NOTED, EXPLANATION TO BE ATTACHED ON SEPARATE SHEET)

VERIFICATION OF ACTION TAKEN: SATISFACTORY \_\_\_\_\_ UNSATISFACTORY \_\_\_\_\_

Pg 36A OF 118

## Sandia National Laboratories

Albuquerque, New Mexico 87185

Date July 25, 1988

to Distribution

from: D. L. Brockman, 6310

subject QA Training for Procurement Related DOPs: 4-1 Rev. A, 7-1, and 7-2

Training classes will be conducted on Thursday, August 25, and Thursday, September 1, from 9:00 a.m. to 11:00 a.m. in building 823, room 2279. In order to assure adequate room is available, please advise Schultz as to which session you plan to attend.

The training will cover DOP's 4-1 Rev. A, 7-1, and 7-2. The training will include review of requirements for Procurement Planning, Procurement Documents, and Receiving Documentation. Training on all of these DOPs is necessary for anyone who generates procurement documents, even if the procurements are for NQ or QA III items.

If for some reason you are unable to attend one of the classes, please contact Dottie and other arrangements will be made.

Please plan to attend.

DLB:6310:mjh

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*Released for audit  
per T.O. Hunter 7/27/88*

*Pg. 368 OF 118*

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6316 E. W. Shepherd  
6316 M. A. Tang  
6317 S. Sinnock  
6310 90/1293/TRN/Q1 ←  
6310 NNWSICF

(1) Organization SNL

(2) Page 37 of 118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
4-3	SNL-NWTSI-QAPP, Rev. 0  Para. 4.1.1.3	Verify that sub-tier contractors for QA level I and II procurements have a documented QA program that has been reviewed and approved by SNL prior to initiation of activities specified by the contract.	N/A	NO SUBTIER CONTRACTORS NEED TO TALK TO BECHTEL PI - HUGH McDUGALL BECHTEL CONTRACT ADM, STATED THERE WERE NO SUB TIER CONTRACTORS TO SNL CONTRACTORS	DB *
4-4	DOP 4-1, Rev. A  Para. 4.4.1.2	Verify that the QA Coordinator has ensured that a copy of QA level I PRs (and statements of work) are forwarded to WMPO QA.	S	4.4.1.2 FROM 6-88 SNL AUDIT FINDING SNL-88-12, COPIES HAVE NOT BEEN FORWARDED TO WMPO. DRAFT COPY OF FINDING ATTACHED TO PAGE 36 OF THIS CHECKLIST  1/2 TEN HAVE BEEN SENT SEE JULY 21 LETTER ATTACHED ABOUT TWENTY MORE TO BE SENT  ATTACHMENT 1 TO ITEM 4.4 LIST THOSE SENT  ATTACHMENT 2 LISTS THOSE PR THAT ARE TO BE SENT	

(9) Auditor Signature J.G. ULSETH (10) Date 7-29-88

\* SEE PAGE 36

ATTACHMENT I  
TO QUESTION  
4-4, PAGE  
37

**Sandia National Laboratories**

Albuquerque, New Mexico 87185

July 21, 1988

PG. 37A OF 118

Manager, QA Verification Division  
Science Applications International Corp.  
101 Convention Center Dr.  
Suite 407  
Las Vegas, Nevada 89109

Dear Sir:

The NNWSI Quality Assurance Plan, Section IV, calls for Participants to submit to you procurement documents associated with QA Level I which contain certain information. Enclosed are extracts of procurement documents for the following SNL contacts in response to that requirement:

23-9587 original  
Amendment 1  
Amendment 2

23-9591 original  
Amendment 1

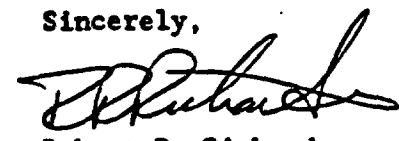
23-9592  
23-9593  
53-1606  
55-3524  
55-3532  
64-6269A

64-6299B original  
Amendment 1  
Amendment 2

64-6299C

Additional documents will be forwarded as they are accumulated.

Sincerely,



Robert R. Richards  
QA Coordinator  
NNWSI Project Department 6310

RRR:6310:mjh  
Enclosure

Released for audit  
per TO Hinder 7/27/88

pg 37A OF 118

Manager

July 21, 1988

- Copy to: (w/o enc.)
- 6310 T. O. Hunter
- 6310 D. L. Brockman
- 6310 R. M. Baehr
- 6310 R. R. Richards
- 6310 10/90/1293/COR/NQ
- 6310 NNWSICF

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TODAY'S DATE 07/26/88

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ATTACHMENT 2 TO QUESTION 4-4  
OF CHECKLIST QUESTIONS ON PAGE 37

of 3

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Released for audit  
per TO Hunter, 7/27/88

UPDATE	PO NUMBER	DESCRIPTION	QA LEVEL
880630	068478	ACCELEROMETERS	I
880630	239587	TECHNICAL SUPPORT SERVI	I
880630	239591	LICENSE SARC GEOMOD	I
880630	239591	LICENSE SARC GEOMOD	I
880630	239591	LICENSE SARC GEOMOD	I
NEW	239592	Graphics Software Package	I
NEW	239593	Data Acq Software	I
OLD	531606	Computer Equip	I
DIF CASE	550139	Accelerometer Mounts	I
880630	553524	VAX SOFTWARE	I
880630	553532	RS/EXPLORER DATA ANALYS	I
880630	553532	RS/EXPLORER DATA ANALYS	I
880630	553532	RS/EXPLORER DATA ANALYS	I

NOTE: THIS ATTACHMENT IS A LIST OF LEVEL I CONTRACTS THAT HAVE NOT BEEN SENT TO WMPO AS OF 7-27-88

INTERNAL BNL AUDIT FINDING SNL-88-12 ON JUNE 10, 1988 IDENTIFIED THE PROBLEM AND THE CORRECTIVE ACTION IS TO SEND THE CONTRACTS IN THIS ATTACHMENT TO WMPO BY 8-31-88

J A Ulseth  
7-27-88

20

UPDATE	PO NUMBER	DESCRIPTION	QA LEVEL
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880630	555434	ACCELEROMETERS	I
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DIF CASE	555435	<i>accelerometers</i>	I
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DIF CASE	556202	CABLE MATERIAL	I
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NEW	570899	COMPUTER UPGRADE	I
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880630	570900	CABLE	I
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880630	635551	EXTENSOMETER	I
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880630	635904	VIDEO SYSTEM	I
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880630	637479	SERVICES	I
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880630	646269A	<i>Maintenance</i>	I
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880630	646269A	"	I
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880630	646269B	"	I
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880630	646269B	"	I
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OLD	646269C	"	I
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UPDATE	PO NUMBER	DESCRIPTION	QA LEVEL
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OLD	646269C	Maintenance	I
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880630	646407	ANALYSIS OF GROUND MOTI	I
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880630	646407	ANALYSIS OF GROUND MOTI	I
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880630	646407	ANALYSIS OF GROUND MOTI	I
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TODAY'S DATE 07/26/88

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UPDATE	PD NUMBER	DESCRIPTION	QA LEVEL
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880630	040964	SERVICES	1&11
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880630	040964	SERVICES	1&11
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
4-5	DOP 4-1, Rev. A Para. 5.0	Verify that procurement (contractor) records have been entered into the 20-series in the SNL NNWSI Records Management System.	S	EXAMINED VOLS I AND II CONTRACT RECORDS ~ 25 contracts in each Vol. 20 SERIES	DB*
4-6	Previous WMPD Audit 87-5 Observation No. 3	Verify DOP 4-1 has been revised as committed in response to the observation.	S	8-17-87 REV A WAS APPROVED	

(9) Auditor Signature J. D. Ulrich (10) Date 7-29-88

\* SEE PG 36

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-1	DQP 5-1, Rev. A Para. 4.1	Verify that QAPs are written to conform to the general format requirements of the procedure. (Determine if there is any conflict with DQP 5-3)	S	Reviewed the following procedures - QAP-2-3, QAP-2-5, QAP-2-7	Bernie Schiboby
5-2	Para. 4.1	Verify that the procedures are reviewed by a Division Supervisor, a QA reviewer, and the Department Manager.	S	Reviewed the following procedures - DQP-2-2, QAP 2-3, DQP 2-6, DQP-5-2 all procedures indicated review by required individuals.	↓
				<i>Fredrick J. Smith</i>	8/1/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-3	DOP 5-1, Rev. A Para. 4.1	Verify that the procedures are approved by the above issue.	5	Procedures have been approved by the above issue.	Harry Schwartz
5-4	Para. 4.2	Verify that "other procedures" are similarly written except that:  o The RMS staff assigns the identifiers o The only required review is by the Division Supervisor	N/A not audited	None have been written which would be considered "other procedures".	↓
				<i>Frederick J. Reub</i>	9/1/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-5	DOP 5-1, Rev. A Para. 5.1	Verify that the procedures are revised as necessary to: <ul style="list-style-type: none"> <li>o Implement changes in NNWSI Project policy</li> <li>o Reflect changes in SM, policy</li> <li>o Correct recognized deficiencies</li> <li>o Establish policy and procedures for activities not presently covered.</li> </ul>	S	Procedures have been revised as necessary.	Barry Schuritz
5-6	Para. 6.0	Verify that DOPs and QAPs are filed in file 35/1203/5.2.4 or 5.2.5 (all revisions).	S	Verified the following procedures, with the latest revisions, were filed in the NNWSI Project RMS - QAP 2-3, Rev A; DOP 3-4 Rev B, DOP 5-2 Rev C TP-59, Rev B, EP-0017 Rev A	i  Frederick J. Ruck 8/1/88

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-7	DOP 5-2, Rev. U Para. 4.3.1, 4.3.2, and 4.3.3	Verify that TPs follow the format provided in the DOP.	S	Reviewed the following TPs - TP-64, TP-65, TP-82, TP-83	Harry Schwartz
5-8	Para. 4.5	Verify that TPs are reviewed and approved by the following: <ul style="list-style-type: none"> <li>o Author</li> <li>o SNL NNSI Project PI</li> <li>o An independent technical reviewer</li> <li>o Division Supervisor of the PI</li> <li>o (QA Review - WMPO 88/9)</li> </ul> SEE SDR NO. 178	X SDC AWB. X	The following procedures were reviewed, TP-59, TP-62, TP-82, TP-83. None of the procedures indicate a QA review. It is no longer a requirement for WMP to review/approve procedures.	Frederick J. Ruth 8/1/88

(9) Auditor Signature (10) Date





(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-10	DOP 5-3, Rev. 0 Para. 3.3	Verify that the person designated to perform the QA review of each DOP has been trained by the QA Coordinator and that this training has been documented on Form DOP 5-3(1).	not audited	Procedure has not been implemented since	Harry Schwartz
5-11	Para. 3.4	Verify that the supervisor of the designated reviewer has certified the individuals qualification to perform a QA review on Form DOP 5-3 and that a copy of this form has been forwarded to the SNL NNWSI Records Center.	Not audited	SEE 5-10	↓
<p>(9) Auditor Signature <i>Frederick J. Ruth</i></p>				<p>(10) Date <i>8/2/88</i></p>	

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
5-12	DQP 5-3, Rev. 0 Para. 3.5.1	Verify that the DQP review is documented on Form DQP 5-3(2), Checklist for QA Review of Department Operating Procedures.	<i>Not audited</i>	SEE 5-10	<i>Wmry Schuartz</i>
5-13	Para. 3.6	Verify that the QA Coordinator ensures that an adequate QA review was performed by signing the cover sheet of the QAP.	<i>Not audited</i>	SEE 5-10	↓
<p>(9) Auditor Signature <i>Fredrick J. Ruth</i></p>				<p>(10) Date <i>8/2/88</i></p>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-1	DOP 6-1, Rev. A Para. 4.1	Verify that a master document list has been prepared and maintained. This list must contain all the controlled documents identified for use on the NNSI Project. (QAP 2-5 - our controlled copy says "Draft 2") also <sup>DC, P</sup> <del>QAP</del> 2-6.  <u>SLTR 87-6001 RIB</u>  <u>Rev A 7/15/87</u>	O/S S X S	Issued "periodically" Substitutes for Table of Contents - <del>not controlled</del>  <del>See Obs. No. 5</del> System Problems	M. TANG S. EDWARDS
6-2	Para. 4.2.1	Verify that the Records Management staff:  o Assigns a unique number to each document copy o Labels the copy with the holders name, copy number, and instructions to return the document when no longer needed o Maintains a controlled distribution log equivalent to the example in the procedure.  <u>Each procedure may contain a different controlled number</u>	X S	<del>See Obs. No. 5</del> Log maintained by procedure - cannot trace by individual to the copies that should be held. S. Edmunds changing system - should be in effect 9/88.  <u>S. Edmunds</u>	7/29/87 (9) Auditor Signature (10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-3	DQP 6-1, Rev. A Para. 4.4.3	<p style="text-align: center;"><i>OK</i></p> <p>Verify that the responsible MMSI Project Management staff member or the QA Coordinator certifies that the distribution list is current for each revision by initialing and dating the existing list or by written instruction for changes to the list.</p> <p><i>SUBRAMANIAN (MTS)</i> <i>CHITTOOR</i> <i>TP 82, Rev 0</i></p>	5	<p><i>Received memo + form</i></p>	<p><i>J. EDWARD</i> <i>M-TANK</i></p>
6-4	<p>Para. 4.3.4</p> <p><i>OBS# B</i> <i>from</i> <i>SVC</i> <i>Internal</i> <i>Audit 88-03</i></p>	<p>Verify that the Records Management staff:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Periodically updates the Master Document List</li> <li><input type="checkbox"/> Distributes copies of the list to WMPO and to the WMPO QASC</li> <li><input type="checkbox"/> Monitors receipt of transmittal and acknowledgment forms from each individual on controlled document distribution</li> </ul> <p><i>The Master Document List is revised only periodically to update the list approved revision of documents such as procedures. This makes it difficult to determine the latest approved version of a document during these intervals. A table of contents updated as a procedure is revised would eliminate this confusion.</i></p>	5	<p><i>J. Edmond</i> <i>Mr. Cho. Ho</i> <i>NBC (J. Kennedy)</i> <i>NV (Sub-Louis)</i> <i>do not receive copies of Master List.</i> <i>J. Edmond reworking system. Ready card</i></p>	
			(9) Auditor Signature	(10) Date	
			<i>[Signature]</i>	<i>11/29/88</i>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-5	DUP 6-1, Rev. A Para. 4.4.2.3	Verify that the QA Coordinator indicates concurrence with minor changes by signing the cover page of the change.	N/A	No issued to date	MAC DUNN PRINDLE CASTIN
6-6	Para. 4.3.5	Verify that the recipients of controlled documents have maintained their documents current in accordance with Records Management instructions.	5	3 Individuals selected H.R. Mac DUNN R.W. PRINDLE L. CASTIN. All manuals agree with first list L. Thompson 7/29/80	

(9) Auditor Signature

(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-7	DOP 6-1, Rev. A Para. 4.4.4	<p>Verify that the Records Management staff maintains a historical file of originals of all controlled documents, revisions, and superseded issues, and marks them superseded or deleted, as appropriate.</p> <p><i>DOP-4-1, in reviewing procurement activities associated with DOP-4-1, it was noted that Supplier buyers are not on the controlled distribution list for receipt of this DOP. Buyers may not be aware of the requirements in DOP-4-1 for requester reviews and file copies unless an S.C.E. provides for buyer activities consistent with the DOP.</i></p>	S	<p><i>Reviewed:</i></p> <p><i>DOP 3-2 Rev 0</i></p> <p><i>3-6 Rev 0</i></p> <p><i>3-8 Rev 0.</i></p> <p><i>2-2 Rev 0.</i></p> <p><i>3-3 Rev 0</i></p> <p><i>3-4 Rev A.</i></p> <p><i>3-4 Rev 0</i></p>	S. EDWARDS
				<i>Tom Thompson</i>	<i>7/29/88</i>
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-8	DQP 6-2, Rev. 0 Para. 1.0	<p>Verify that documents authored by Department 6310 personnel comply with the following review cycle:</p> <ul style="list-style-type: none"> <li>o Three copies of draft to the technical reports editor (this requirement can be waived if the author's supervisor signs the manuscript review sheet indicating approval).</li> <li>o Author's supervisor has selected two independent technical reviewers to review the document.</li> <li>o Technical reviewers document comments on the manuscript review form; author resolves comments and forwards document to editor. (Unresolved comments can be resolved by the author's supervisor who must document the decision)</li> <li>o After editing, the author's division secretary prepares a transmittal letter to DOE/NV and an SNL review and approval form. This is forwarded to the author's supervisor along with the manuscript review and approval form.</li> </ul>	<p>S Open 8/2/85 S S</p>	<p>Reviewed SAND 87-1245 report. There is objective evidence in the file which indicates proper review and approvals.</p> <p>Transmittal letter on file.</p>	<p>Harry Chubb</p> <p style="text-align: right;">↓</p> <p>Frederick J. Ruth 8/2/85</p>
			(9) Auditor Signature	(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-8	LQP 6-2, Rev. 0 Para. 1.0	<ul style="list-style-type: none"> <li>o Supervisor reviews document and when satisfied, signs the review and approval form. (Copies are sent to TPOs of other NNSI organizations if appropriate)</li> <li>o Secretary "logs in" the document and forwards to Department 6310 Manager.</li> <li>o When satisfied, Department Manager forwards document and transmittal letter to NVO for "policy review."</li> <li>o When NVO comments are received, secretary updates the log and forwards comments to author for resolution.</li> <li>o Author resolves NVO comments (how documented) and document is then processed through the final review process - classification, patent/legal, and publication policy reviews.</li> </ul>	S  S	Reviewed SAND 87-1245       Transmittal letter on file       _____ _____ _____ _____ _____ _____ _____ _____	[Signature] ↓                _____ _____ _____ _____ _____ _____ _____ _____
				Frederick J. Roth (9) Auditor Signature	8/2/88 (10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-9	DQP 6-2, Rev. 0 Para. 2.0	<p>Verify that documents authored by other SNL organizations for Department 6310 are processed in accordance with the following:</p> <ul style="list-style-type: none"> <li>o Draft reviewed by two independent technical reviewers (one should be in Department 6310).</li> <li>o Author arranges for editorial review (this can be postponed until considerable changes are expected).</li> <li>o Author resolves technical and editorial review comments and obtains their final approval.</li> <li>o Copies of the document are sent to Department 6316 for acceptability for the RIB. If unacceptable, the 6316 representative works with the 6310 contract to resolve. When acceptable, the manuscript review sheet is signed.</li> </ul>	S  S S S	<p>Reviewed SAND 87-1176                  Authored by Michelle.                  Sanders, 7311                  Manuscript Review Sheet signed by editorial reviewers.                  Signature blocks are signed indicating final approval                  Signed by F.T. Shelling</p>	<p>Stan Edmund</p>
				<p><i>Fredrick J. Ruth</i> 8/2/88</p>	
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-9	DOP 6-2, Rev. 0 Para. 2.0	<ul style="list-style-type: none"> <li>o Copies are sent to Division 6315 to identify candidate information for the SEPDU. When acceptable, the manuscript review sheet is signed.</li> <li>o Copies are sent to the Department Records Management System (DRMS) representative who determines if all data and supporting documents for the reported data have been placed in the DRMS. Unsatisfactory results will be resolved with the author and the Department 6310 contact. When satisfactory, the Records Management representative will sign the manuscript review sheet.</li> <li>o Author's division supervisor and department review document, resolve comments with author and sign the review and approval form when satisfactory.</li> <li>o Author's division supervisor's secretary prepares transmittal letter to NVO and sends document, letter, manuscript review sheets, and review and approval forms to Department 6310 secretary who "logs it in" and forwards the package to the Department 6310 Manager.</li> </ul>	S  S  S  S	<p>Signed by Kintman</p> <p>manuscript review sheet signed by Barry Schwartz</p> <p>Review and approval form has been signed by the appropriate personnel</p> <p>Transmittal letter in the file.</p>	<p>Stan Edmunds</p> <p style="text-align: center;">↓</p>
				<p><i>Frederick J. Ruth</i></p>	<p>8/2/88</p>
				<p>(9) Auditor Signature</p>	<p>(10) Date</p>

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-9	DQP 6-2, Rev. 0 Para. 2.0	<ul style="list-style-type: none"> <li>o Department 6310 manager signs the transmittal if the package is satisfactory.</li> <li>o After NVO comments are received, they are resolved between NVO and the Department 6310 Manager. The Department Manager indicates satisfactory resolution by signing under "Special Approvals."</li> <li>o The document and review and approval forms are sent through the remaining steps in the final review process - classification, patent/legal, and publication policy reviews.</li> </ul>	S   S	<p><i>Letter on file</i></p> <p><i>Letter received from WMLP dated 1/4/88 indicating the report is acceptable</i></p> <p><i>Form indicates signature of appropriate departments</i></p>	<p><i>Non</i></p> <p><i>Edmund</i></p> <p style="text-align: center;">↓</p>
			(9) Auditor Signature	(10) Date	

*Frederick J. Ruth 8/2/88*



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
6-10	DQP 6-2, Rev. 0 Para. 3.0	<ul style="list-style-type: none"> <li>o Data Records Management System reviews the document and package to determine if all data and supporting documents have been placed in the DRMS. Signs manuscript review sheet when satisfactory.</li> <li>o Editor attached technical publication checklist and sends to the monitor's division secretary.</li> <li>o Secretary prepares review and approval form and transmittal letter to NVO.</li> <li>o Division supervisor determines that all is satisfactory, signs the review and approval form.</li> <li>o Division secretary "logs in" the document.</li> <li>o Department 6310 Manager reviews the document and signs the transmittal letter when all is satisfactory.</li> <li>o NVO comments are resolved by monitor.</li> <li>o Secretary forwards all copies of the QA records to RMS.</li> </ul> <p><i>The Manuscript Review Sheet in use is a later revision than that in Appendix A. The form in use contains all the information as that in the original, plus additional information. Procedures should be kept consistent with the forms in use.</i></p>	S	<p><i>Manuscript Review Sheet signed by Schwartz.</i></p> <p><i>Reviewed complete SAND-86-7005. Objective evidence of file that it has gone through the correct review and approval cycles.</i></p> <p><i>Frederick J. [Signature]</i></p>	<p><i>Harry Schwartz</i></p> <p><i>8/2/86</i></p>

(9) Auditor Signature

(10) Date

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-1	DOP 7-1, Rev. 0 Para. 6.3.3	Verify that the form "QA Requirements for Purchase Requisitions (NWSI) has been completed and accompanies the PR.	S	<p><u>6.3.3</u> <u>RANDOM JAN 7-29-98</u>  REVIEWED A SAMPLE OF  SIX PR'S:  23-9583 6-8-88 RE SPEC  23-9584 4-28-87 BUSINESSLAND  (OFF THE SHELF DESK TOP COMPUTER  NO QA REQ)  #23-9585 5-16-88 TRI  23-9586 5-16-88 CCS  23-9599 5-24-88 BECHTEL  REVIEWED THE EP PORTION  OF THE PR'S</p>	DB*
7-2	Para. 6.3.3.1 thru 6.3.3.7	Verify that the QA requirements listed in these paragraphs have been included in the procurement planning process.	S	<p><u>6.3.3.1</u>  REVIEWED THE FORM "QA  REQUIREMENTS FOR PURCHASE  REQUISITIONS (NWSI)"  FOR EACH OF THE ABOVE  PR'S (AUDIT ITEM 7-1)</p> <p># WRITE OVERS NOTED  WITH OUT DATE, SIG.</p>	DB
				(9) Auditor Signature <u>J A Ullrich</u>	(10) Date <u>7-29-98</u>

\* DOROTHY FROCK (DB)

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-3	DOP 7-1, Rev. 0 Para. 6.3.4	Verify that for procurement of services, the reports or other deliverable documents have been specified along with due dates. Also, for items or material, the due dates have been provided.	S	<u>6.3.4</u> EXAMINED FORM F-6430-RD INCLUDED WITH PR'S 23-9583 AND 23-9590 WHICH INCLUDED DUE DATES AND DELIVERABLE/ REPORTING INFORMATION	DB *
7-4	Para. 6.3.5	Verify that the method(s) for determining the acceptability of items or services being procured have been determined. Verify that a receipt inspection process has been established and documented.	S	<u>6.3.5</u> DOP 7-2 IS THE APPROVED PROCEDURE FOR RECEIVING FORM 9511 "INVOICE" INDICATES APPROVAL OF SERVICES FORM 04- 0461	DB:

(9) Auditor Signature J A Wood (10) Date 7-29-88

\* SEC. PAGE 3

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-5	DOP 7-2, Rev. 0 Para. 4.2.2	Verify that source verification activities are documented and meet the requirements in Para. 4.2.2, Subparagraphs 4.2.2.1 thru 4.2.2.7.	N/A	NO PR'S THAT REQUIRE SOURCE INSPECTION/VERIFICATION NOT APPLICABLE	DB*
7-6	Para. 4.2.3	Verify that receiving inspections are performed and documented to the requirements in Subparagraphs 4.4.1 thru 4.4.8.  Note: These paragraphs are numbered incorrectly to the major paragraph number - 4.2.3.	S	SEE QUESTION 7-8	DB

(9) Auditor Signature J. G. [Signature] (10) Date 7-29-88

\* SEE PAGE 57



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-7	DQP 7-2, Rev. 0  Para. 4.2.1.1 and 4.2.1.2	<p>Verify by examination of certificates of conformance (COC) for supplier provided items or related services, that the COCs meet the listed requirements.</p> <ol style="list-style-type: none"> <li>The COC identifies specific procurement requirements met by the purchased item or service.</li> <li>The COC is attested to by a person who is responsible for this QA function and whose function and position are described in the supplier's QA program.</li> </ol> <p>Verify that the requester of the items or services has checked the COC to the above requirements. Also verify that documentation of this check has been sent to records.</p> <hr/> <hr/> <hr/>	NA	<p>NONE IN ANY PURCHASES TO DATE DICK BAEHR CONCURS</p> <p>NOT APPLICABLE</p>	DB*
				(9) Auditor Signature <i>J. Albrecht</i> (10) Date <u>7-29-88</u>	

\* SEE PAGE 57

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
7-8	DQP 7-2, Rev. 0 Para. 4.5	Verify that post-receipt testing and acceptance activities are performed and documented to the requirements in subparagraphs 4.5.1, 4.5.2, and 4.5.3.  Note: Para. 4.5.3 states "Documentation...defined in Sections 4.5.1 and 4.5.2 of this DQP." There is not a paragraph labeled 4.5.1, however, there is an unlabeled paragraph where 4.5.1 should be.	S	4.5 EXAMINED TWO PR'S 23-9593 6-2-87  55-3521 L 3-1-88  THESE WERE THE ONLY PR'S OUT OF 3 BOOKS  ~ 75 PR'S THAT POST RECEIPT ACCEPTANCE ACTIVITIES  THE POST-RECEIPT TESTING AND ACCEPTANCE SYSTEM IS IN PLACE AND ACCEPTABLE	*
7-9	Para. 4.6	Verify that acceptance of services by the requester has been performed by one or more of the methods listed in subparagraphs 4.6.1 thru 4.6.5 and also the requirements of 4.6.6.	S	DKK BAEHR SEE ATTACHED AUDIT/SURVEILLANCE SCHEDULE  THESE ARE SURVEILLANCES AND AUDITS OF PILOGRAMS NOT THE ACTUAL HANDS ON RECEIVING-AS NOTED IN AUDIT ITEM 7-8 ONLY TWO PR'S REQUIRED ACCEPTANCE SIGN OFF	DB

(9) Auditor Signature *J. G. Ullrich* (10) Date 7/29/88

\* SEE PG 57

ATTACHMENT 1  
TO 7-9 Pg 61

July 25, 1988  
Rev. A  
Page 1 of 1

SNL NNWSI FY88  
SURVEILLANCE SCHEDULE

<u>COMPANY</u>	<u>CONTRACT</u>	<u>DESIGNATOR</u>	<u>DATE</u>
Lawrence Berkeley Laboratories	SNL 33-9614	LBL 87NS	10/1/87
SNL, Division 6310	DOP 3-4	DOP 3-4-88-1	2/15/88
SNL, Division 6310	DOP 3-8	DOP 3-8-88-1	1/14/88
SNL, Division 6310	GAP 2-5	GAP 2-5-88-1	11/4/87
SNL, Division 6310	GAP 18-1	GAP 18-1-88-1	11/4/87
Waterways Experimental Station	SNL 37-5031	WES 888-1	5/12/88
Bechtel National, Inc.	SNL 23-9599	BNI 888-1	8/1/88
IL, Division 6310	DOP 2-6	DOP 2-6-88-1	TBD
SNL, Division 6310	DOP 17-2	DOP 17-2-88-1	TBD
SNL, Division 6310	Computer Codes In RMS	DOP 3-2-88-1	TBD
SNL, Division 6232	TDS 6230-88	TDS S6230-88-1	TBD
SNL, Department 1510	TDS 1510-88	TDS S1510-88-1	TBD
SNL, Division 7111	TDS 7110-88	TDS S7110-88-1	TBD

  
QA Coordinator                      7/25/88  
Date

6310 90/1293/SUR/ND  
6310 NNWSICF

Pg 61A OF 118

ATTACH 2  
~~7-4~~ 7-9 Pg 61  
JRU 7-24-88

Sandia National Laboratories

Albuquerque, New Mexico 87185

AUG 25 1987

THIS IS AN NNWSI MILESTONE	
No.	R 893
Date Completed	8/24/87
Precursor for Level 1 Milestone	
No.	NDUE

Mr. Mitchell P. Kunich, Acting Director  
Waste Management Project Office  
U.S. Department of Energy  
Nevada Operations Office  
P.O. Box 98518  
Las Vega, Nevada 89193-8518

Dear Mitch:

Attached is the fiscal year 1988 Schedule of Internal and External QA Audits to be conducted by Sandia National Laboratories, NNWSI Project Department. This satisfies Milestone R893.

Sincerely,

Thomas O. Hunter, Manager  
NNWSI Project Department 6310

RMB:6310:mjh  
Attachment

Copy to:  
WMFO J. Blaylock  
SAIC R. Belyea  
SAIC W. Kazor  
6310 T. O. Hunter  
6310 R. R. Richards  
6316 S. E. Sharpton  
6316 E. W. Shepherd  
6310 R. M. Baehr  
6310 90/1293/AUD/Q1  
6310 10/1292/MLS/Q1  
6310 NNWSICF

Pg 618 OF 118

August 24, 1987

SNL NNWSI  
QA Audit Schedule  
FY88

FIRM DATES TO BE COORDINATED WITH AUDITED ORGANIZATION

<u>Date</u>	<u>Organization to be Audited</u>	<u>Requirements</u>	<u>Designator</u>
October	IT Corporation	QA requirements of contracts 58-1411 and 64-6207	ITC-88
November	SAIC	QA requirements of contract 04-0964	SAIC-88
	UNM	QA requirements of contract (new contract)	UNM-88
January	U.S. Corps of Engineers, Waterway's Experiment Station	Requirements of QA manual and contract	WES-88
	Golder Associates	QA requirements of contract 95-9505 (tentative)	GOL-88
February	Bechtel National Inc.	QA requirements of contract 52-9817	BNI-88
	IT Corporation	QA requirements of contracts 58-1411 and 64-6207 (compliance and follow-up)	ITC-88-2
	Parsons Brinckerhoff	QA requirements of contract 47-7368	PB-88
March	Agapito	QA requirements of contracts 25-8908 and 23-9590	AGA-88

August 24, 1987

<u>Date</u>	<u>Organization to be Audited</u>	<u>Requirements</u>	<u>Designator</u>
April	University of California Lawrence Berkeley Laboratory	QA requirements of contracts	LBL-88P LBL-88N
	SAIC	QA requirements of contract 04-0964 (compliance and follow-up)	SAIC-88-2
May	New England Research	QA requirements of contract	NER-88
	SNL	SNL NNWSI QAPP and implementing procedures	SNL-88
	U.S. Corps of Engineers Waterways Experiment Station	QA requirements of contract (compliance and follow-up)	WES-88-2
June	Robbins Company	QA requirements of contract 32-5828	ROB-87
July	RE/SPEC	QA requirements of contracts 25-8909 and 23-9583	RES-88

ATTACH 3  
7-9 7-4 pg 61  
JAD  
7-29-88

Sandia National Laboratories

Albuquerque, New Mexico 87185

March 4, 1988

Mr. James Blaylock  
Waste Management Project Office  
U.S. Department of Energy  
Nevada Operations Office  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Dear Jim:

Attached is a Revised Fiscal Year 1988 Schedule of QA Audits to be conducted by Sandia National Laboratories, NNWSI Project Department.

Sincerely,

*Richard M. Baehr*

Richard M. Baehr  
QA Assistant  
NNWSI Project Department 6310

RMB:6310:mjh  
Attachment

Copy to:

SAIC S. H. Klein  
SAIC W. Kazor  
MAC C. Barnes  
6310 T. O. Hunter  
6310 R. R. Richards  
6310 R. M. Baehr  
6310 90/1293/AUD/Q1  
6310 NNWSICF

Pg 61E of ...

March 4, 1988

SNL NWSI  
QA Audit Schedule  
FY88

FIRM DATES TO BE COORDINATED WITH AUDITED ORGANIZATION

<u>Date</u>	<u>Organization to be Audited</u>	<u>Requirements</u>	<u>Designator</u>
February	UNM	QA requirements of contract 01-9156	UNM-88
March	Bechtel National Inc.	Close out audit of contract 52-9817	BNI-88
	New England Research	QA requirements of contract 95-8399	NER-88
April	SAIC	QA requirements of contract 04-0964	SAI-88
	Parsons Brinckerhoff	QA requirements of contract 47-9156	PB-88
May	SNL NWSI Project Department (Internal Audit) Procedures	SNL NWSI QAPP and Implementing Procedures (All Elements)	SNL-88
	IT Corp.	Close out audit of contract 58-1411	ITC-88-2
	Agapito	QA requirements of contract 23-9590	AGA-88
June	U.S. Corps of Engineers Waterways Experiment Station	Close out audit of contract 37-5031	WES-88
	Univ. of California Lawrence Berkeley Laboratory	QA requirements of contracts 33-9614, 32-0716 and 64-0620	LBL-88
August	IT Corp.	QA requirements of contracts 06-9008	ITC-88-3
	RE/SPEC	QA requirements of contracts 75-0881, and 23-9583	RES-88

*Pg 61F of 1.*





(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-23	Surface Facilities 1.2.4.3.2.S, Rev. II	<p>What procedures are in place to define internal controls on engineering and design activity? Are they appropriate to the current activity and current in status? Is the QA level of the controls consistent with the QA level of the activity?</p> <hr/> <hr/> <hr/> <p>Bechtel is performing support work. How are the interfaces between SNI, and Bechtel defined? Is there a controlled copy of the Bechtel procedures available for review?</p> <hr/> <hr/> <hr/>	S	<p><del>DOP 3-1 Rev 3, DOP 3-2 Rev 0, DOP 3-3 Rev 0, DOP 3-4 Rev 3, DOP 3-5 Rev 0, DOP 3-6 Rev 0 and DOP 6-2 Rev 0 are in place. They are appropriate to the current activity and are undergoing revisions to incorporate the requirements of the UNMCI QA Plan 88-9. This will be accomplished in Sept 88. The QA level of the controls are consistent with the QA level of the activity.</del></p> <p>The interfaces are defined in the SANDIA-BECHTEL contract Attachment I Document # 23-9574 dtd. May 13, 1987. This document also contains the QA requirements placed upon BECHTEL. There is a copy of the BECHTEL QA procedures, and some implementing procedures. There is a requirement for BECHTEL to have an approved QA plan. This was available for inspection and covers the design related items required by the contract. The Bechtel implementing procedure EDP I 4.16-06 "Engineering Studies &amp; Reports" Rev 2 was available for review.</p>	R. Hill H. Heddingall R. Hill

X

(9) Auditor Signature: Margaret C. Beck 7-29-88

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-25	Surface Facilities 1.2.4.3.2.S, Rev. D	Has a baseline for repository facility design been established? How are changes to baselines controlled?	S	Bechtel has been directed to use the Repository Design Requirements in a 6-27-88 letter. This change is covered by the Design Change Register. The change process is covered by DOP 3-6. The RIB (Controlled copy 80) is available at Bechtel. These documents are referenced in the exhibit.	R. Hill
T-26		Verify that design verification controls are implemented including the verification method, the results are verified and the verifier(s) identified. What acceptance criteria is used?	S	There was one QA Level 2 design review available for inspection. This is the design review documentation for Conceptualization of Improvements to Waste Handling Facility. The documentation shows that the checklist listed in DOP 5-5 was addressed. The conclusion reached in this design review was that it was inappropriate to approve for further development.	H. Huchongel R. Hill
				Margaret C. Baska 7-29-88	
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
TXZ	Surface Facilities 1.2.4.3.2.S, Rev. B	Were DIMs written and approved prior to the commencement of major calculations and analyses? What technical procedures are in place governing the analyses supporting the DIM?	S	DIM No 16 (for the PMF study) was signed 1-6-87. The authorization letter was dtd 1-8-87. Work did not proceed until after that. DOT 3-4 covers the preparation and control of the DIM. The SANDIA-BECHTEL contract Attachment 3, Document No. 23-9599 dtd May 12, 1987 covers the QA and technical requirements for the analyses supporting the DIM.	M. M. M. A. Stevenson
3-10		Have design inputs been reviewed and accepted by QA?  SEE SDR NO. 170	X SDR NO. 170	Only QA level I DIMs are reviewed by SNL QA. There have been no QA level I DIMs prepared by WBS 1.2.4.3.2. The BECHTEL TUFF PP 1.1 states "Direct control and verification of quality remains with project department managers who perform the work." Audit them See 3-10  Margaret C. Beala 7-29-88	B. Richards

(9) Auditor Signature (10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 28	Previous WMPO Audit 87-5 Observation No. 4	Verify that a plan is being developed to identify which of the data not collected under an NNWSI Project approved program should be qualified and how to go about it.	S	<p>SOP 3-11 section 5.12 covers the admission of data from non-NNWSI sources and reference NNWSI SOP 03-03</p> <p>Some forms from Frank Muzick were checked from the source to the SEPDB input sheets.</p> <p>Margaret C. Burke 7-29-88</p>	Barry Schwartz

(9) Auditor Signature

(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-30	Shaft/Ramp 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Svc. System  1.2.4.3.5	In the QAI designation for the DIM activities consistent with the QAI designation for the parent WP? Is the data used also of the required QAI?  <u>SEE OBSERVATION NO. 88-06-09</u>  <u>27.9-26-88</u>	<del>X</del> S S/N 9-26-88	All DIMs were checked against parent WPs and were found consistent. Data references in all WPs and DIMs did not limit QAL 2 work to the use of QAL 1 or 2 data. Data in use was also traced to the SCP-CDR (a QAL 3 document)	R. Stinebaugh
T-31		Were the required documents (DIMs and procedures) approved and in place prior to the commencement of the work? Were the people trained in accordance with current revisions of those procedures prior to work commencement?	S	All QAL 2 activity DIM files were reviewed to determine initiation dates. Certain DIMs stipulate that certain planning activities may proceed Authorization to Proceed. Training records for responsible individuals were checked to verify that training preceded work initiation. It was not evident that training is updated when procedures are revised.	R. Stinebaugh

*Thomas L. Webb* 7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-32	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System 1.2.4.3.5	<p>What criteria are used to determine if design calculations and analyses fall within the PDM or DIM realm? If complex calculations or analyses are performed under a DIM, what justification exists for that decision?</p> <p><u>DOP 3-5 Paragraph 4.1.3.4 states "If a significant calculation is to be performed as a part of design, the PI shall adhere to the requirements of DOP 3-3..."</u></p> <p><u>SEE SOR NO. 179</u></p>	<p><u>2/19-26</u> <u>X</u> <u>X</u></p>	<p>No PDMs have been developed to support design activities in these WBSs as should be required by the WPs. Mr. Stinebaugh affirmed that certain calculations performed in these WBSs fit the definition of Scientific Analyses and Calculations and Engineering Calculations as specified in DOP 3-3 and are not routine as controlled by DOP 3-10.</p>	R. Stinebaugh
T-33		<p>What criteria are used to determine the need, or lack thereof, for technical procedures to control work performance? Were the procedures used technically adequate for the work performed?</p> <p><u>SNL-NNWSI-QAPP Section 2.4.3 states</u></p> <p><u>"Technical Procedures will be developed for individual technical tasks."</u></p>	<p><u>X</u> <u>S</u> <u>894</u> <u>9-26-86</u></p>	<p>Technical Procedures are not required for design investigations since they do not qualify as research. SNL DOPs and PB GEPs were reviewed.</p> <p>SNL has not technically reviewed PBs GEPs and therefore verification of Technical Adequacy cannot be determined in an audit forum.</p> <p> cursory examination reveals procedures are lacking in the areas of a) graded requirements corresponding to graded QA, b) Concerns addressed in T-35 c) Concerns addressed in T-36.</p>	R. Stinebaugh
(9) Auditor Signature				(10) Date	

*Richard L. Water* 7/29/88



(1) Organization SNI.

(2) Page 10 of 110

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-34	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srv. System  1.2.4.3.5	Is the data provided in the DIM sufficient for the design? How does a designer obtain needed data that is not provided by the DIM?  <u>(Data quality addressed in T-30)</u>	S	DIMs reference RIB data. Additional data may be requested in the Acceptance of Task correspondence. Other correspondence has also proven effective as evidenced by PE/S 51 and R. Strubough to R. Harig, 6/7/88 where additional information was provided and documented.	R. Strubough
T-35		When the designer makes an assumption, how is this assumption documented and tracked? If an assumption is used in the selection of alternatives how is this assumption verified or validated?	* S B.H. 9-26-88	The only requirement dealing with assumptions found is that they must be documented. See observation for T-33.  Observation not written into audit report There are no QA requirements to have procedures + control for level III activities G. Henney 9-26-88	R. Strubough
				(9) Auditor Signature	(10) Date

*Richard R. Mato* 7/29/88

(1) Organization SNL

(2) Page 20 of 110

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-36	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System 1.2.4.3.5	When alternative design methodologies, design solutions, or analytical models (coders) exist, does documentation exist to justify the selection made? Have critical selections been corroborated by peer review or other suitable methods?  <i>observation not written into</i> <i>audit report - SS SEE T-35</i> <i>for explanation S. Hesney 9-26-88</i>	X S B.N. 9-26-88	Current DOPs do not specifically address how to document alternative identification and the selection process to be used in design. NO SNL design reviews of applicable design information has been performed to verify selection corroborations. See observation for T-33. <i>8/9-26-88</i>	R. Stinebaugh
T-37	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System 1.2.4.3.5	Have the computer codes used to support this work been documented in accordance with DOP 3-2 and NNSI SOP-03-02? How are design equations documented, referenced, and verified for proper application?	S	Investigations revealed two codes in use: CLMSIM (by Mine Ventilation Services) and SHAFT (by J.F.T. Agapito) both of which (per Barry Dial - SAIC Auditor) have been certified for application to the design effort. The certification process provides the necessary documentation etc.	R. Stinebaugh
(9) Auditor Signature			(10) Date		

*Thomas R. Math* 7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-38	Shaft/Ramp 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System 1.2.4.3.5	Are the credentials and/or background of the individuals performing the work suited to the task(s) assigned? Where suitability is questionable, what steps have been taken to assure technical quality of work?	S	DIMs and Acceptance of Task Memos were reviewed for responsible individuals. Resumes for several SNL and PB personnel were reviewed and all were found to be well qualified in education and background.	R. Stinson
T-39		Are the designs, analyses, and tradeoffs sufficiently detailed/exhaustive to provide design solutions that meet the intended purpose and objectives of the task?  <u>SEE OBSERVATION NO. 88-06-14</u> <u>8/21. 9-26-88</u>	<del>S</del> S 8/21. 9-26-88	Six DIMs were reviewed against the parent WPs to verify that objectives were shared. Only a general correlation was evident. Detailed review of calculations performed under 2 DIMs revealed that the detail/rigor of the design effort was adequate for the design maturity. One PB report, which has not been through a SNL design review, was found to be of insufficient detail and lacking in required content.	R. Stinson
			(9) Auditor Signature	(10) Date	

*[Signature]* R. Watson 7/27/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-40	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Brvc System 1.2.4.3.5	How will the results from these design investigations be controlled as to future application or reference? If appropriate, how will this work be upgraded in the future to meet QA Level I designation for LAD or PPCD?  <u>SEE OBSERVATION NO. 88-06-15</u>  <u>8.9.9-26-88</u>	<del>X</del> S <u>8.9.9-26-88</u>	Discussion with R. Stinebaugh revealed that information contained in SAND reports does not have QAL designation or specific stated limitations on subsequent use. No procedure exists for upgrading design information. See observation for T-33.	R. Stinebaugh
T-41		Have uncertainties in the existing data been allowed for in the selection of design alternatives? Is conservatism evidenced in the design calculations to allow for probable variations in physical characteristics or properties?	S	Due to a very limited availability of design calculations compounded by difficulty identifying data sources (see T-42) only one example of conservative application of physical properties was located. This conservatism allowed for a very high heat load on the ventilation system in DIM 114 Subtask 1.17-3. Was unable to determine if the cooldown period was similarly conservative.	R. Stinebaugh
			(9) Auditor Signature	(10) Date	

*John R. Waters* 7/29/88

(1) Organization SNL

(2) Page 23 of 110

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-42	Shaft/Ramp 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System 1.2.4.3.5	<p>Are the criteria and data specified in the DIMs traceable through the design calculations/drawings and into the final report(s)? Are the criteria and data specified in the DIMs traceable to the source documents (SDR, RID, etc)?</p> <hr/> <p><u>SEE OBSERVATION NO. 88-06-16</u></p> <hr/> <p><u>8/9/9-26-88</u></p>	<p>X S 8/9-26-88</p>	<p>The "information only" background materials for DIM 114 Subtask 1.17-3 was reviewed for traceability. Data sources (example Vol. 1 of 3 p. 627) are not always referenced. Traceability is not evidenced within the calculations (example Vol. 1 of 3 p. 1 uses information from Vol. 3 of 3 page 28 but did not include a reference to it. Traceability overall was found to be very lacking.</p>	<p>R. Stinebaugh</p>
T-43		<p>How are the interfaces between these WBS elements identified and controlled? How are the interfaces between these WBS elements and other WBS elements identified and controlled? Are design changes analyzed for impact across these interfaces?</p> <hr/> <hr/> <hr/>	<p>S</p>	<p>The Subsystem Design Requirements Doc. provides evidence that WBS element interfaces are identified and controlled in the interface sections. Interface drawings R0705/2-7 and R0708A/1-15 are used to identify and control interfaces between Repository surface/46 and Repository/ES respectively.</p>	<p>R. Stinebaugh</p>
			(9) Auditor Signature	(10) Date	

*James R. Watson* 7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-44	Shaft/Ramps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc System  1.2.4.3.5	How are the information needs specified in the WPs addressed in the DINs, the subsequent design efforts, and final reports?	S	Discussions with E. Stinebaugh indicate that no current activity is involved in issue resolution. Subsequent discussion revealed that certain studies in progress may provide some input to the issue resolution process.	R. Stinebaugh
T-45		Past achievements are identified in the WPs, but no QA level is designated. Does this past work provide input to the activities performed under the WPs?  <u>SEE OBSERVATION NO. 88-06-05</u> <u>8/9-26-88</u>	<del>S</del> X 8/9 9-26-88	See Audit Item No. 3-2 WPs were reviewed and found to be lacking in the areas as noted under Item 3-2.	R. Stinebaugh
			(9) Auditor Signature	(10) Date	

*James L. Watts* 7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-46	Shaft/Kamps 1.2.4.3.3 Underground Excavations 1.2.4.3.4 Underground Srvc. System  1.2.4.3.5	Do the SAND reports satisfy objectives of the WIP? Does the design output meet the requirements and objectives specified in the DIM?	N/A	There have been no SAND reports prepared under these WBS elements.	R. Stinebaugh
T-47		Have all designs been verified by (a) intermediate and final design reviews, (b) performing an independent design or analysis, or (c) qualification testing of the final product? Are comments and/or discrepancies and their resolutions documented?  <i>See question 34 / 3-18</i> <i>8/7. 9-26-88</i>	* S 8/7. 9-26-88	The only available objective evidence of completed design reviews were for the interface drawings R07098A 1-15. Random comment drawings were reviewed against the final revised drawings to verify that comments had been incorporated. Problems with the change control documentation relative to the ICDs are identified in Audit Item Number 3-18.  covered by SNL finding AFR-PB-1 8/7. 9-26-88	R. Stinebaugh
(9) Auditor Signature				(10) Date	

*Donald R. Watson 7/29/88*





(1) Organization SNI.

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 49	Reference Information Base 1.2.1.3.3.S, Rev. II DQP 3-8, Rev. A	Verify the proper use of:  RID Change Requests (RIDCR) <u>CRI form ok [Maximum Probable Flood]</u> <u>followed Proc.</u>	S		Doc Schilling
T 50		RID CR Log <u>print-out from computer.</u> <u>CRI → DR1 [DR file complete no H&amp;N response]</u>	S		
T 51		RID Development Requests (RIDDR) <u>DR1 →</u>	S		
				<u>[Signature]</u>	<u>7/28/88</u>
				(9) Auditor Signature	(10) Date

(1) Organization SNI,

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-52	Reference Information Base 1.2.1.3.3.S, Rev. II DOP 3-8, Rev. A	Verify the proper use of:  RID DR Log <u>DR1</u>	S		Doc Schelling
T-53		RID Change Evaluations (RIDGE) <u>DR1 all have been reviewed.</u>  <u>no</u>  including the final approval of WMPO for the inclusion of the information or data in the RID, as indicated by the signature of the WMPO TSAC Chairperson, as specified in DOP 3-8, for an adequate number of items within the WMPO controlled version of the RID.  <u>no items submitted to WMPO for final review + approval</u>  <u>Version 03.001 December 1987</u> <u>is the only reviewed + approved RID</u>	S  S		
				<u>[Signature]</u>	<u>7/28/88</u>
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-54	<p>Reference Information Base 1.2.1.3.3.S DQP 3-8, Rev. A</p> <p>OK SNL 46 note? ← SNL 54 note ← SNL 54 OK SNL 53 OK SNL 52 -SNL 54</p>	<p>SEE OBS. NO. 88-06-21</p> <p>Verify the accuracy of data and information in the WMPO controlled version of the RIB, by comparing it to the source documentation for that data or information.</p> <p>1.11.1 1.16.3 - 52 OK 1.3.1.2 1.16.4 - 51 OK 1.3.1.3 2.4.3 - 98 OK 1.3.1.4.1 1.3.1.4.2 1.3.1.6.1</p>	<p>S 8.71. 9-26-88</p>	<p>Observation T-54</p> <p>Will ask Bill Sublette to verify Det. table 2-4 and Table 2-9 (2-27) + (2-43) respectively SANDR4-2141 went through 3.3 review process PDM process. (i.e. No corresponding Appendix D) [asked him to do this]</p> <p>[For Item 1.3.1.5 page 2 of 5]</p> <p>Dry Term Evaluation for YCW Range given in RIB is 0.13: Range given in Table 2-9 SEP-COR is 0.29.</p>	<p>F. NIMCK</p>
T-55		<p>Verify the sources and the associated quality level assignments of information or data from the WMPO controlled version of the RIB.</p> <p>see above</p> <p>Plan is to change front: no QA level associated w/ sources, but a TP which misses the QA status of the data in the section.</p>	<p>S</p>	<p>[ask Bill Sublette to look into in-situ check (calibration) in Table 2-10 page 2 of 4 of SEP-COR [asked him to do this]</p> <p>[page number for 1.11.3 page 2 refers to page 2 sheet is the handwritten sheet, not the approved sheet only the one copy appears, 7/28/88]</p>	
			(9) Auditor Signature		(10) Date





(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 56	Repository Performance Code Development/ Certification 1.2.4.6.1	Is the QA level for activities under this WIS appropriate for the intended use of the results?  - QALAS	S	EXAMINED QALAS FOR  WBS ELEMENTS AND SUBTASKS	S. BAUR L. COSTIN
T 57		What criteria were used for selecting the QA levels for tasks under this WIS element?	S	- EXAMINED QALAS  - V&V IS LEVEL I AND II	S. BAUR L. COSTIN
T 58		What criteria were used for selecting computer codes for this WIS?  - SNL CODES, CONTRACTOR CODES	S	CODES WITH BASIC CAPABILITIES  REQUIRED TO PERFORM THERMAL  AND THERMOMECHANICAL ANALYSES.	S. BAUR L. COSTIN

(9) Auditor Signature

(10) Date

Ben W. Dier  
J. Healey

7/26/88  
7/26/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-59	Repository Performance Code Development/ Certification 1.2.4.6.1	What methods were used for disqualifying alternative codes or methods?	S	CODE AND MODEL EVALUATION AN ONGOING TASK. NO CODE WITH BASIC CAPABILITIES HAVE BEEN DISQUALIFIED.	S. BAUER L. COSTIN
T-60		What criteria were used for selecting or developing verification problems?	S	VERIFICATION IS APPLICATION DEPENDENT. U/U PROBLEMS EXAMINED CONSISTENT WITH INTENDED APPLICATION.	S. BAUER L. COSTIN
T-61		What procedure was used for re verifying a computer code when modifications are made to a code?	S	NO MODIFICATIONS HAVE BEEN MADE. DOP-3-2 REQUIRES VERIFICATION FOR A CODE TO BE CERTIFIED FOR QA LEVEL I	S. BAUER L. COSTIN
				(9) Auditor Signature	(10) Date

*Boyd W. Simpson*  
*D. Heaney*

7/26/88

7/20/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-62	Repository Performance Code Development/ Certification 1.2.4.6.1	Are technical procedures in place for QA Level I and II analysis work?	S	AND II ANALYSES  SANDIA OOP'S (2-4, 3-3, 3-4)	S. BAUR L. COSTIN
		Are modified code versions given a unique designation which is identified in the code output?	S	ARE APPROVED AND  IN PLACE  CODES ENTERED INTO SYSTEM  ASSIGNED VERSION WHICH  WILL APPEAR IN OUTPUT	S. BAUR L. COSTIN
T-64			What acceptance criteria (i.e., % error) is used during computer code verification?	S	PEER REVIEW OF ALL  VERIFICATION RESULTS.

(9) Auditor Signature

(10) Date

*Bay W. O'Neil*  
*J. Heaney*

7/26/88  
7/26/88



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-65	Repository Performance Code Development/ Certification 1.2.4.6.1	What methods and/or software tools are used to make modifications to baselined computer codes?	S	NO MODIFICATIONS HAVE BEEN MADE TO CODES IN SYSTEM.  MODIFICATION METHOD (EDITOR, SOFTWARE TOOL) LEFT TO ANALYST AND/OR CONTRACTOR.	S. BAUER L. COSTIN
T-66		What documentation standard is applied to computer programs developed by SMI and commercial software vendors?	S	NUREG-0856, DOP 3-2	S. BAUER L. COSTIN
T-67		Are the verification problems adequately documented to allow independent review and/or verification?	S	NO FORMAT OR CONTENT GUIDELINES. VIU PROBLEM	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

*Bay w. Simpson*

7/26/88

*J. Heaney*

7/26/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-68	Repository Performance Code Development/ Certification 1.2.4.6.1	Is there a verification problem documentation standard and/or procedure?	S	DOCUMENTATION EXAMINED CONTAINED BASIC INFORMATION <del>NECESSARY</del> NECESSARY TO EVALUATE AND/OR REPEAT PROBLEM  NO REQUIRED FORMAT. DOP 3-2 SPECIFIES THAT VERIFICATION PROBLEMS MUST BE FULLY DOCUMENTED. SNL APPROVES DOCUMENT OUTLINE AND PEER REVIEWS DOCUMENTATION.	S. BAUER L. COSTIN
T-69		What procedures or methods are used to track modifications made to a code by individual investigators?	S	SOFTWARE MODIFICATION FORM REQUIRED FOR MODIFICATIONS TO CODES IN SYSTEM. ACTUAL MODIFICATION IS PERFORMED USING EDITOR OR SOFTWARE TOOL. NO MODIFICATIONS HAVE BEEN MADE TO DATE.	S. BAUER L. COSTIN
T-70		What verification procedures and documentation standard are applied to subcontractor developed computer codes?	S	SNL DOP 3-2 AND NUDEG-0856	S. BAUER L. COSTIN
				(9) Auditor Signature	(10) Date

*Bay W. D.*  
*S. Fearey*

7/26/88  
7/26/88



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 71	Design Analysis 1.2.4.6.2.S, Rev. C	Is the QA level of DIM or PDM consistent with the QA level of parent WBS?	S	CHECKED PDM'S AND DIMS AGAINST MODIFIED WORK PLAN, NO DISCREPANCIES WERE OBSERVED	BEN CARTNER
T-72		Were the DIMs or PDM approved and in place prior to the commencement of the analysis activities?	S	WE EXAMINED PDM'S AND DIMS AND THEY WERE APPROVED PRIOR TO THE COMMENCEMENT OF ANALYSIS ACTIVITIES	BEN CARTNER
				(9) Auditor Signature	(10) Date

*By W. J. P.*

7/29/88

*John P. Thomas*

7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-73	Design Analysis 1.2.4.6.2.9, Rev. C	<p>Were the computer codes used to support QA Level I and II work documented in accordance with DHP 3-2 and/or NNWSI SOP-03-02?</p> <p><i>Recommendation suggested</i></p> <p><i>SEE OBSERVATION NO. 88-06-23</i></p> <p><i>88. 9-23-88</i></p>	S	<p><i>CODES WERE DOCUMENTED TO DOP 3-2 STANDARDS</i></p> <p><i>Need to file paper work on certification w/ cert work QA check on STRESSD CODE</i></p>	B. ECHARTNER
T-74		<p>Were PNDs written and approved prior to the commencement of major calculations and analyses?</p>	S	<p><i>PDM'S WERE WRITTEN FOR ALL MAJOR ANALYSES and approval dates did not indicate any discrepancies</i></p>	B. ECHARTNER

(9) Auditor Signature

(10) Date

*B. W. P.*  
*John P. ...*

*7/29/88*  
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-75	Design Analysis 1.2.4.6.2.S, Rev. C	What procedure is used to change or modify information in PDM or DIM if the proposed code, approach, data, initial, or boundary conditions are inappropriate or have an adverse impact on the analysis results?	S	DOP 3-3 SPECIFIES THE PROCEDURE TO MODIFY A PDM, NO DISCREPANCIES WERE OBSERVED	B. ECHARTNER
T-76		Are technical procedures in place governing the analyses and/or calculations supporting the DIMs or PDMs?	S	DOPS ARE IN PLACE GOVERNING ANALYSES OR CALCULATIONS SUPPORTING PDM'S AND DIMS NO DISCREPANCIES WERE OBSERVED	B. ECHARTNER

(9) Auditor Signature

(10) Date

*Barry W. Quinn*  
*John P. Quinn*

7/29/88  
7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-77	Design Analysis 1.2.4.6.2.S, Rev. C	Is there evidence to demonstrate that the information provided in the PDM or DIM was used in the supporting analyses and adequately documented in the SAND report and/or letter report?	S	CHECKED POM, INLET FUE AND FINAL SANDIA REPORT. NO DISCREPANCIES OBSERVED	B. EQUARTNER
T-78		Is the QA level of the design and model data consistent with the QA level of the PDM or DIM?  <u>Sublette will write observation</u>  <u>SEE OBSERVATION NO. 88-06-19</u> <u>8/9. 9-26-88</u>	S	QA LEVEL II ANALYSES ARE PERFORMED WITH QA LEVEL III OR UNQUALIFIED DATA	B. EQUARTNER
T-79		If the material property data is not taken from NNWSI reference property or design database, has the data choice been justified in the PDM or DIM?	S	MATERIAL PROPERTY DATA TAKEN FROM REFERENCE DATA BASE. NO DISCREPANCIES OBSERVED	B. EQUARTNER

(9) Auditor Signature

(10) Date

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(7) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 80	Design Analysis 1.2.4.6.2.S, Rev. C	If the code is not certified or documented in accordance with DOP 3-2 what steps were taken to verify the code?	S	PDM SPECIES THAT MODIFIED CODE BE REVERIFIED AND DOCUMENTED TO DOP 3-2 STANDARDS. WORK IS CURRENTLY ONGOING AND NO DISCREPANCIES OBSERVED AT THIS TIME	B. ECHARTNER
T 81		Is the QA level for this activity appropriate for the results or data?	S	CHECKED DIMS AND PDBIS UNDER WBS, NO DISCREPANCIES WERE OBSERVED	B. ECHARTNER
T 82		What criteria were used for selecting the QA level for this activity?	S	QALAS AND LOGIC DIAGRAMS WERE CHECKED FOR THIS WBS NO DISCREPANCIES WERE OBSERVED	B. ECHARTNER
(9) Auditor Signature				(10) Date	

*Ben W. L.*  
*John P. Kimura*

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T.83	Design Analysis 1.2.4.6.2.S, Rev. C	<p>What criteria were used for selecting the analysis method for this activity?</p> <p>1. Were alternative methods considered?</p> <hr/> <hr/> <hr/> <p>2. What criteria were used for disqualifying an alternative method?</p> <hr/> <hr/> <hr/>	S  S    S	<p>CODE CAPABILITIES WERE ADEQUATELY MATCHED TO ANALYSIS REQUIREMENTS. SUBCONTRACTOR AND SNL PERSONNEL ARE EXPERIENCED AND FAMILIAR WITH CODES, NO DISCREPANCIES WERE OBSERVED.</p> <p>For the type of analyses reviewed, no criteria were required and no discrepancies were observed.</p>	B. ENHARTNER  B. ENHARTNER
			(9) Auditor Signature	(10) Date	

*John P. Jensen*

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-84	Design Analysis 1.2.4.6.2.S, Rev. C	What was the basis for any modifications made to a computer code for this activity?	S	CAPABILITIES WERE NECESSARILY TO PERFORM ANALYSES. MODIFICATIONS WERE REQUESTED BY PDM NO DISCREPANCIES <del>IN DOP</del> WERE OBSERVED	B. EMMERTNER
T-85		What procedure was used for re-verifying a computer code if modifications were made to the code for this activity?	S	DOP 3-2 PROVIDES VERIFICATION PROCEDURE AND APPEARS TO HAVE BEEN IMPLEMENTED. NO DISCREPANCIES WERE OBSERVED	B. EMMERTNER
T-86		Was a criteria established for selecting verification problems for a code which was modified for this activity?	S	VERIFICATION PROBLEMS WERE SELECTED TO EXERCISE THE MODIFIED SECTIONS OF CODE Problems executed were applicable to PDM analyses that were to be performed. No discrepancies were observed	B. EMMERTNER
(9) Auditor Signature				(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-87	Design Analysis 1.2.4.6.2.S, Rev. C	What criteria were used for determining if the code modifications for this activity requires that the code be reverified?	S	MODIFIED CODE WAS VERIFIED PRIOR TO ANALYSIS ACTIVITIES. THIS REQUIREMENT WAS STATED IN POM, AND NO DISCREPANCIES WERE OBSERVED.	B. EDWARDS
T-88		Were modified versions given a unique designation which is identified in the analysis output?	S	DOP 3-2 REQUIRES THAT MODIFIED CODES BE RE-ENTERED INTO SYSTEM WITH NEW VERSION DESIGNATION FOR OBSERVATIONS THAT WERE MADE THE FINAL WORK HAS NOT BEEN PERFORMED BUT NO DISCREPANCIES WERE OBSERVED.	B. EDWARDS
T-89		What procedures were used to document computer code modifications for this activity?	S	DOP 3-2 SPECIFIES DOCUMENTATION STANDARDS. POM EXAMINED <del>THE</del> REQUIRED THAT THE CODE DOCUMENTATION BE UPDATED FOR MODIFICATIONS.	B. EDWARDS

(9) Auditor Signature: *[Signature]*  
 (10) Date: 7/29/88  
 88/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-90	Design Analysis 1.2.4.6.2.S, Rev. C	Was the version of the computer code identified for this activity the current, verified, baselined version?	S	CHECKED COBE CERTIFICATION FILES, no problems found	B. ECHARTNER
T-91		What criteria/justification was used for selecting a non-baselined or non-verified code for this activity?	S	NON BASELINED WERE NOT USED UNDER WBS	B. ECHARTNER
T-92		Is a verification plan developed for code and model modifications made for this activity?	S	ONE POM REQUIRED CODE MODIFICATIONS AND VERIFICATION REQUIREMENTS WERE STATED. Work has not been completed but no problems found	B. ECHARTNER

(9) Auditor Signature

(10) Date

*John W. Dief*  
*John P. Sullivan*

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-93	Design Analysis 1.2.4.6.2.S, Rev. C	What acceptance criteria is applied to code verification activities?	S	RESULTS WERE COMPARED TO ANALYTIC SOLUTIONS OR OUTPUT FROM ANOTHER CODE. NO DISCREPANCIES WERE OBSERVED	B. ECKHARTNER
T-94		What procedure, method, or software tool is used to track code modifications?	S	ANALYST IS RESPONSIBLE FOR MAKING MODIFICATIONS USING EDITOR OR SOFTWARE TOOL. NO VIOLATIONS OF DOP'S OBSERVED	B. ECKHARTNER
T-95		Is there sufficient documentation of software modifications to allow a qualified, outside individual to independently reproduce, review, and/or repeat an analysis?	S	DOP 3-2 REQUIRES THAT MODIFICATIONS BE DOCUMENTED ON SOFTWARE CHANGE FORM WHICH WERE OBSERVED TO BE IN ORDER	B. ECKHARTNER
			(9) Auditor Signature	(10) Date	

*B. Eckhartner*  
*John P. Stinner*

7/29/88  
7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-96	Design Analysis 1.2.4.6.2.S, Rev. C	Is there adequate documentation in the PDM or DIM file to allow a qualified, outside individual to independently reproduce, review, or verify the results from an analysis?	S	SUFFICIENT INFORMATION WAS IN PDM'S TO REPEAT ANALYSES FOR THE CLOSED FILES EXAMINED	B. Egan
T-97		Are individuals involved in the technical review of computer analyses adequately qualified and experienced in the execution of the computer code to determine that the input/output from the analysis is correct and consistent with the problem statement in the PDM or DIM?	S	SUBCONTRACTORS WROTE CODES AND ARE QUALIFIED TO REVIEW INPUT AND OUTPUT FILES, NO DISCREPANCIES WERE OBSERVED	B. Egan

(9) Auditor Signature

(10) Date

*Ben W. [Signature]*  
*John P. [Signature]*

7/29/88  
7/29/88

WMPO AUDIT CHECKLIST NO. 88-06-02

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-97A	WBS 1.2.4.6.2.5 DESIGN ANALYSIS	IS THE WORK PERFORMED AUTHORIZED BY THE PDM? <del>SDR</del> RECOMMENDATION OBSERVATION B.G. <del>9-26-88</del> 9-26-88	S NA	PDM 75-013 STATED THAT HEFF VERSION 4.1 <sup>WAS USED</sup> <del>BE</del> MODIFIED, DOCUMENTED, AND USED TO PERFORM ANALYSES. THE EVIDENCE WE EXAMINED INDICATES THAT THE CODE STRESS3D WAS MODIFIED, DOCUMENTED, AND USED TO PERFORM ANALYSES WHICH WERE DOCUMENTED IN A LETTER REPORT. PI WILL ADD MEMO TO FILE DOCUMENTING USE OF STRESS3D AND ENTER CODE INTO CODE CONFIGURATION MANAGEMENT SYSTEM.  SEE OBSERVATION NO. <del>88-06-23</del> B.G. 9-26-88                      88-06-24	B. EQUATUTAF2

(9) Auditor Signature John P. [Signature] Date 7/28/88  
By [Signature] Date 08/21/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-98	Design Analysis 1.2.4.6.2.S, Rev. C	What criteria is used to determine if a peer review is required or justified?	S	DOP'S SPECIFY REQUIREMENTS FOR PEER REVIEW	B. EDWARDS
T-99		What steps are taken to ensure that outside contractors are qualified to perform the tasks assigned to them?	S	SIGN OFF ON TASK ACCEPTANCE MEMO CERTIFIES QUALIFICATIONS OF ANALYSTS.	B. EDWARDS

(9) Auditor Signature

(10) Date

*B. Edwards*  
*John P. Minnie*

7/29/88  
7/29/88



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 100	Design Analysis 1.2.4.6.2.S, Rev. C	<p>Are the qualifications of the analysts performing analyses at SNI, and at outside contractors commensurate with the level of expertise required for an analysis?</p>	S	<p>CONTRACTOR RESUME'S ON FILE. FAMILIAR WITH QUALIFICATIONS OF PRINCIPALS <del>AND</del> DOING WORK AT SUBCONTRACTORS</p>	B. EGHWARTNER
		<p>If not, is a qualified individual responsible for checking the input/output for each analysis?</p>	S	<p>ANALYSES WERE CHECKED BY SUBCONTRACTOR AND SNI PI</p>	B. EGHWARTNER
<p>(9) Auditor Signature (10) Date</p>					

*B. Egwartner*

7/29/88  
7/29/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-101	Basis for Design 1.2.4.1.2.3, Rev. C	<p>What personnel have been or are working on this activity since its inception (list)?</p> <p><u>Present list - available - rec'd list</u></p> <p><u>Past list - to come - rec'd list</u></p> <p><u>list given to <del>for</del> Cathy Thompson</u></p>	S		<p>Chittur Subramaniam</p> <p>James Phillips</p> <p>James Pearsley</p>
T-102		<p>What contractors have been used or are being used for this work since its inception (list)?</p> <p><u>Present &amp; Past to be supplied -</u></p> <p><u>rec'd</u></p> <p><u>EG &amp; G (one person); calibration</u></p> <p><u>[EG &amp; G, Las Vegas, is NV00 subcontractor, not SNL sub.]</u></p> <p><u>Problems with auditing EG &amp; G and interfacing</u></p> <p><u>Greentree, Inc (one person)</u></p> <p><u>Kaman, Science (Dike Wood) one person</u></p>	S	<p>Calibration documentation of problem has been previously identified (Primus Standards Laboratory of SNL)</p> <p><u>David Cummings 7/28/88</u></p> <p><u>B. Pearsley 7/28/88</u></p>	

(9) Auditor Signature

(10) Date

(1) Organization SNL						(2) Page 51 of 110	
(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED		
T-103	Basis for Design 1.2.4.1.2.8, Rev. C  Page 6, Item d	What is the NNWSI Weapons Test Seismic Investigation Quality Plan?  probably not a QP - Subramanian wrote section - He was out of room at time question was asked - Will ask when he returns.	S X 8.7. 9-26-88	Observation NO. 88-06-05	* see pg 50		
T-104		6310 QAPP - this is WTSI QP Old QA plan for seismic investigation * Are there any other procedures which need to be developed in addition to those specified in EP-004, Rev. 0?  TP-87 not yet completed  EP-004 has been revised and updated but not yet approved QAPP-15-1 - - completed QAPP-16-1 - - DOP 12-1 - not yet been written  (DOP 12-1 is EGS & G Calibration system to replace Primary Standards Lab.)	S				
				(Handwritten Signature) 7/28/88 7/28/88			
			(9) Auditor Signature	(10) Date			

T-103 (cont'd) \* We were given copies of Rev 0 and Rev A  
OBSERVATION: This QA plan has been superseded by NNWSI QAPP.  
 Modified work plan for WBS has to be revised.  
 OBS. NO. 88-06-05

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-105	Basis for Design 1.2.4.1.2.S, Rev. C  Page 6, Item d	What were the technical procedures which were used before the current technical procedures were approved (sequential list)? SNL is to provide copies of all of these procedures.  (TD) Tech. Procedures and Task Definition Statements (TDS) lists requested  Rec'd copies of old procedures for TDS for '86, '87 + '88	S		* see pg. 50
T 106	Page 6, Item e	What are all of the computer programs which have been or are being used for this work since the inception of the work (list)?  SPECTRA FILTER, PSRV code used since inception of project. Codes audited during program.  Request list of changes - see <u>187-</u> SHAW 1176  Rec'd list of modifications	S	David [Signature] 7/28/88 [Signature] 7/28/88	

(9) Auditor Signature

(10) Date

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 107	Basis for Design 1.2.4.1.2.5, Rev. C  Page 6, Item c	What is the status of the documentation, verification, and validation of all of these codes, and of all versions of these codes?  Phillips considers a closed form solution valid for current work  To best of his knowledge, codes are documented  Phillips spoke to Warren Miller & certifies codes SAND 87-1176  Are any additional computer codes to be developed for this work?  Finite Difference for Analysis  None for UNE's or anticipated.  FD to be purchased or obtained from University or other commercial source. We recommend that SML obtain documentation of codes from source.  Raypath and Plotter programs from USSS are in process of being reviewed for QA by SANDIA personnel	S	See Audit Item A, AD	* see pg. 50
T 108			S		[Signature] 7/28/88 7/28/88

(10) Auditor Signature

(11) Date

(1) Organization SNL

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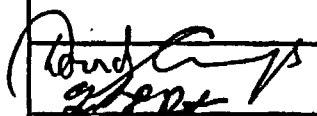
(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 109	Basis for Design 1.2.4.1.2.S, Rev. C  Page 6, Item f	What are all of the reports and publications which have been produced from this work since its inception, including SAND, SLTR, and outside publications (list)?  <i>does not write SLTR's - 2 VRS/Blame reports (in just John Blume) SNL no outside publications List to be supplied - LIST REC'D Blame reports are QA level II. Recommend that anything that might be used for decision and as QA level I - SNL consider the majority Verify that significant technical comments (if any) from technical reviewers have been resolved. (A number of publications will be selected from the above list for this verification)</i>	S		+ see pg. 50
T 110		<p><i>To be Verified</i></p> <p><i>SAND 87-1P11 ✓</i></p> <p><i>SAND 86-7006 ✓</i></p> <p><i>SAND 87-2381 ✓</i></p> <p><i>SAND 86-0439 ✓</i></p> <p><i>SAND 85-1605 no review sheets best document only</i></p> <p><i>SAND 82 - 0174 not in file</i></p> <p><i>SAND 83-7458 no review sheets, best document only</i></p> <p><i>SAN 86-2201 ✓</i></p>	S	<p><i>previous deficiencies in documents of SAND reviews identified in previous audits.</i></p> <p><i>7/28/88</i></p> <p><i>7/28/88</i></p>	

*[Handwritten Signature]*

(9) Auditor Signature

(10) Date

T-109 - Working Group reports have been considered QA level II

(11) AUDIT ITEM NO.	(14) QUALITY ELEMENT & REFERENCE	(15) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(16) RESULTS S, X, N/A	(17) SUMMARY OF INVESTIGATION	(18) PERSON CONTACTED
T 111	Basis for Design 1.2.4.1.2.S, Rev. C  Page 6, Item f	<p>For purposes of interfacing with the USGS (exchange of data, procedures, and information):</p> <p>1. What USGS draft reports have been submitted to SNL for review (list) (results of reviews)?</p> <p><i>USGS SNL</i>  <i>Catalog only -</i> } <i>USGS to SNL</i>  <i>no other reports submitted -</i> }  <i>SNL should get reports for SNL's review</i></p> <p><i>Technical dispute between Vietnam (SNL) and USGS apparently occurred -</i>  <i>Dispute was related to removal of USGS from catalog and how to go about it</i></p> <p>2. What SNL draft reports have been submitted to the USGS for review (list) (results of reviews)?</p> <p><i>USGS is on distribution for mandatory review for reports that go to WMPO. Requested list. SNL will supply.</i></p>	S		# <i>see pg. 50</i>
			S		7/21/88 7/28/88
			(19) Auditor Signature	(10) Date	


(7) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 112	Basis for Design 1.2.4.1.2.5, Rev. C  Page 6, Item f	Are there any other interfaces between the USGS and SNL for this work (e.g., the ICWG)?  <u>seismic cost/benefit; Blume reports; ICWG</u>  <u>No contact w/ Charles Bufe, Harman, n. measurements - Only contact has been with Rogers.</u>	S X B.N. 9-26-88	SEE OBSERVATION  NO. 88-06-04	* see pg. 50
T 113		How will UNP data that was acquired before the existing procedures were approved be evaluated for use in licensing?  <u>SAND 87-2073</u>  <u>Design review (SNL used SOP-03-03 to evaluate this problem in 1985)</u>	S	[Signature] 7/28/88 [Signature] 7/28/88	

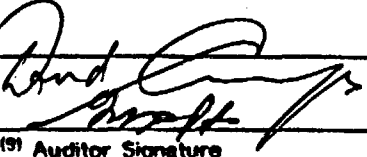
T-112 SNL does not know where USGS stations are. - interface problem  
 SNL does not know where new USGS stations will be - Some discussion between Phillips + Bufe (USGS) has been made - USGS requested Sandia locations

T-113 Observation: USGS + SNL have more direct communication - USGS → SNL + SNL → USGS  
 NO. 88-06-04



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 114	Basis for Design 1.2.4.1.2.S, Rev. C  Page 6, Item f	How in SMI, handling the problem of the QA levels and the use of USGS earthquake data in this WTS?  <u>SMI does not rely on QA by USGS</u> <u>SMI's QA program is totally independent of USGS program &amp; QA levels</u> <u>This is USGS's problem.</u>	S		see pg. 50
T 115		How much new data will be required for the objectives of this project?  <u>10 to 15 Q/A level I shots.</u> <u>(Best Estimate) - These are total shots -</u> <u>5 to 10 shots repeat over next</u> <u>2-years.</u>  <u>See SAND 87-2073</u>	S		
<p><i>[Signature]</i> <i>[Signature]</i></p>				7/28/88	7/28/88
(9) Auditor Signature				(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-116	Basis for Design 1.2.4.1.2.S, Rev. C  Page 6, Item f	How much data has been acquired since the new technical procedures have been approved?  <u>see answer to T-113</u>  <u>5-6 photos recorded under new QA system</u>	S		* see pg. 50
T-117	EP-004, Rev. D Page 2-3.1.1 Appendix A	What is the status of:  1. Calibration Program, DOP 12-1 <sup>QAP</sup> 2. Nonconformance Reporting and Controls, POP 15-1 3. Corrective Action Requirements, QAP 16-1 4. Setup and Adjustment TM Control Box (PFTU), TP-87  <u>QAP 15-1, DOP 12-1 Rev A, QAP 16-1</u>  <u>EP-004 A have been written - we have copy now (given to us). TP-87 not yet written</u>	S		
				(9) Auditor Signature	7/28/88 7/29/88 (10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 118	Basis for Design 1.2.4.1.2.S, Rev. C  FP-004, Rev. 0 Page 2-3.1.1 Appendix A	Has work been done which requires compliance with QAP 15-1, QAP 16-1, and TP-87? QAP Yes for TP-87: calibration for instrument is slightly different from other similar instruments and a procedure was considered to be a good idea to have a TP prepared. Calibration records left for work done.  Yes for QAP 16-1, QAP 15-1. However, no non-conformance has been identified to date (7/26/88)	S		< see pg. 50
T 119	General	What PDMs and DIMs have been approved for this work (list)? so only active PDM. PDM 75-8 no Dimc for megapans 428 PDM 75-9 closed because work is a subtask under 75-8  Dim 34 Rev 1 (p. 1 to 2 indicate Rev 1 p 3 to 9 indicate Rev 0 - Corrections made @ 2:30 PM, 7/28/88  PDM 75-8 QA level I p. 7 indicates that geologic parameters will be used to assess mtn and will be taken from NNEWSI Reference Information Base but does not indicate which version (02.002 or 03.001). Mr. Subramanian tells us version to be used in mini-RIB. He will specify appropriate version number in next revision	S		
					7/28/88 7/28/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 120	Basis for Design 1.2.4.1.2.S, Rev. C  General	Review all files of PDMS and DIMs for this work.  <i>Rev'd 75-8</i> <i>Rev'd Dim 34 Rev 1</i>	S		* <i>see pg. 50</i>
T-121		Verify that approved technical procedures have been implemented.  <i>Verified</i>  <i>walked thru TP-82</i>	S		
<i>[Signature]</i> Auditor Signature				7/25/88 7/28/88 (9) Date	

BWD

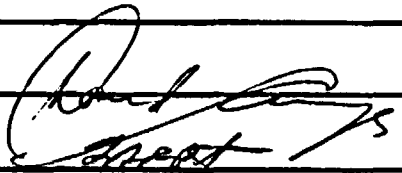
7/27/88 Barry Dial DC  
David Cummings

WMPO AUDIT CHECKLIST NO. 88-06-02

N-QA-044  
7187

(1) Organization SNL

(2) Page 8 of 10 of 110-118

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-120 A	Basis For Design 1.2.4.1.2.5 Rev C  General: Computer Codes	Were the computer codes used to support QA Level I and II work certified in accordance with DOP 3-2?  SPECTRA, FILTER, PSRV, PLOT <sup>①</sup> all certified 7/21/88 by James S. Phillips. RAYPATH not found, but SNL (Mary Green) is co-ordinating with Jane Phillips. <sup>①</sup>	S		Mary Green
T-121 B		For new versions, what procedures are followed?  P.I. or other appropriate investigator re-certifies new version new code is entered into master Form exists for making changes	S		
T-121 A <sup>①</sup> cont'd		7/28/88 8:45A.M. Mary Green identified the software QA checklist and submittal form for R83 PLOT (also known as PLOT) - dated July 21, 22, 1988 and Software verification etc for			7/28/88 7/28/88

(9) Auditor Signature

(10) Date

RAY 84 (also known as Raygo RAYPATH dated 7/21/88 DC 7/28/88)

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 122	Lab Properties 1.2.4.2.1.3.S, Rev. C	<p>Are the QA levels for activities in this WIS consistent with where the results will be applied? Is the data input consistent with the level of the activity? What criteria were used for determining the QA level of the activity?</p> <hr/> <p style="text-align: center;">SEE SDR NO.173</p> <hr/>	X	<p>BASED ON DISCUSSIONS WITH THE P.E., THE FIRST TWO PARTS OF THIS QUESTION ARE NOT SATISFACTORY (SEE SDR 173 AND OBSERVATION 88-06-19). THE THIRD PART OF THE QUESTION IS SATISFACTORY BECAUSE A FLOWCHART IN SNL QAPP SHOWS HOW QALAs WERE HANDLED</p>	F. NIMICK R. PRICE
T 123		<p>Were the DIMs or PDMs in place and approved prior to the start of the activity? If not, what vehicle was used to initiate work and did it conform to a procedure?</p> <hr/> <hr/> <hr/>	S	<p>EXPERIMENTAL PROCEDURES WERE USED FOR MOST WORK. STATEMENT OF WORK INITIATED NEW ENGLAND RESEARCH CONTRACT.</p>	F. NIMICK R. PRICE
(9) Auditor Signature <i>[Signature]</i>				(10) Date 8/3/88	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 124	Lab Properties 1.2.4.2.1.3.S, Rev. C	Were the procedures in place and approved prior to the start of testing or analyses?	S	EP-0007 WAS IN PLACE PRIOR TO THE START OF THE ONLY QA-LEVEL WORK IN Activity B.1. THIS WAS THE UNIV. of NEW MEXICO CONTRACT WORK ON MINERALS.	F. NIMICK R. PAIRE
T 125		Are the requirements in the PDMs or DIMs detailed enough for the testing and/or analyses? What procedures are followed for adding additional requirements or requesting additional testing and/or analyses of results?	S	the requirements in PDM-33 WERE DETAILED ENOUGH FOR THE REQUESTED STATISTICAL ANALYSIS. A REQUEST FOR A REVISION IS INITIATED BY A PI (DOP 3-3)	F. NIMICK R. PAIRE

(9) Auditor Signature *[Signature]* (10) Date *8/3/88*

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 126	Lab Properties 1.2.4.2.1.3.S, Rev. C	Do the SAND reports, PDMs, or DIMs satisfy the objectives of the modified work plan?	S	PDM-33 Adequately satisfies the objectives of the modified workplan.	F. NIMICK R. PRICE
T 127		Do the results of the PDMs or DIMs adequately respond to the requested work in addition to the objectives of the modified work plan?	S	PDM-33 Adequately responds to the requested work in addition to the objectives of the modified workplan.	F. NIMICK R. PRICE

(9) Auditor Signature *W.P. Sublette* (10) Date *8/3/88*



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 128	Lab Properties 1.2.4.2.1.3.S, Rev. C	Are the credentials and background of the individuals performing the work appropriate for the tasks?	S	CREDENTIALS AND BACKGROUND OF THE INDIVIDUALS PERFORMING THE WORK IN PDM-33 WERE APPROPRIATE FOR THE TASK	F. NIMICK R. PRICE
T 129		How will the results of these activities be controlled as to future reference or application? If appropriate how will this work be upgraded in the future to meet higher QA level applications?	S	PUT INTO SCIENTIFIC AND ENGINEERING DATA BASE (SEPDB) FOR FUTURE USE BY PARTICIPANTS APPLICATION IS RESPONSIBILITY OF THE USER. WORK WILL BE UPGRADED USING DOP 3-11	F. NIMICK R. PRICE

(9) Auditor Signature *[Signature]* (10) Date 8/3/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 130	Lab Properties 1.2.4.2.1.3.S, Rev. C	Are the criteria and data specified in the PDMs or DIMs traceable through the supporting calculations and into the final report? Are the criteria and data specified in the PDMs or DIMs traceable to the source documents?	S	THE DATA AND CRITERIA SPECIFIED IN PDM-33 ARE TRACEABLE TO THE SOURCE DOCUMENT. NO FINAL REPORT HAS BEEN ISSUED FOR THIS PDM.	F. NIMICK R. PRICE
T-131		How are the information needs specified in the work plan addressed in the PDMs, DIMs, and SAND reports?	S	DOP-33 DOES NOT REQUIRE THAT INFORMATION NEED BE IDENTIFIED IN PDM'S. THE ELEMENT HAS NO DIM'S AND ONLY ONE PDM. SAND REPORTS DO NOT REQUIRE INFORMATION NEEDS.	F. NIMICK R. PRICE
			(9) Auditor Signature	(10) Date 8/3/88	

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-132	Lab Properties 1.2.4.2.1.3.S, Rev. C	Are the data presented in the SAND reports traceable to their source documents?	S	SAND 85-0762 WAS CHECKED FOR DATA TRACEABILITY AND IT WAS FOUND TO BE SATISFACTORY	F. NIMICK R. PRICE
T-133		What codes were used in the analysis of laboratory data and were they documented in accordance with DQP 3-2?	S	SAS STATISTICAL PACKAGE WAS USED IN ANALYZING PDM-33. THIS IS A COMMERCIAL STATISTICAL PACKAGE. 80% OF THE WORK WAS COMPLETED BEFORE DQP 3-2 WAS APPROVED. HOWEVER SINCE THE INPUT DATA WAS UNQUALIFIED, THE RESULTS WILL ALSO BE UNQUALIFIED EVEN THOUGH THE PROCESS WAS QA-LEVEL III. SINCE THE RESULTS ARE UNQUALIFIED, IT IS NOT NECESSARY THAT PROCEDURES WERE TO BE IN PLACE.	F. NIMICK R. PRICE
			(9) Auditor Signature	(10) Date	

*W. J. Lub...* 8/3/88

(1) Organization SNI,

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 134	Lab Properties 1.2.4.2.1.3.S, Rev. C	Do the DIMs or PDMs reference all appropriate procedures for the activity?	S	PDM-33 REFERENCES All appropriate procedures for the activity	F. NIMICK R. PRICE
T 135		Is documentation available for the methods defined in the DIMs or PDMs?	S	The documentation for the statistics package (SAS) that was used in PDM-33 is available and adequate.	F. NIMICK R. PRICE
			(9) Auditor Signature	<i>[Signature]</i>	(10) Date 8/3/88

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 136	Lab Properties 1.2.4.2.1.3.S, Rev. C	Are there any support contractors to SNL in this WHS element? How is the subcontractor controlled? How is compliance with the NNWSI Project QAPP insured? Verify any training or indoctrination of subcontractor personnel on the QAPP.	S	UNIV. OF NEW MEXICO AND NEW ENGLAND RESEARCH ARE SUPPORT CONTRACTORS. THE PI OVERSEES CONTROL AND COMPLIANCE IS ACCOMPLISHED THROUGH EP-0002 AND EP-0007. TRAINING AND INDOCTRINATION OF SUBCONTRACTOR PERSONNEL ON QAPP WAS ADEQUATE	
T 137		Verify the transmittal of work objectives and data to the subcontractor is in accordance with the SNL QAPP.	S	VERIFICATION SHOWED DOCUMENTATION WAS SATISFACTORY FOR EP-0002 AND EP-0007. THESE EXPERIMENTAL PROCEDURES HAD WORK OBJECTIVES IN COMPLIANCE WITH DOP 11-1.	F. NIMICK R. PRICE
			(9) Auditor Signature	(10) Date 8/7/85	



(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-139	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. II	<p>Is the work plan #12141-86 (9/86) the most current version? Significant discrepancies exist between the work plan and the FY 88 WPAS and FY 89 WAS P&amp;S account. Some of the tasks described in the work plan are missing in the WAS for the WBS 1.2.1.4.1. If activities have been transferred to other WBS element(s), where are they documented and what procedures have been followed?</p> <p><u>SEE OBSERVATION NO. 88-06-05</u> <u>8/9-26-88</u></p>	S	<p>Yes, SNL is working under the '86 work plan. The work plan, however, is not current. An important part of the tasks A and B of the '86 work plan is not being performed in SNL under WBS 1.2.1.4.1. or any other WBS element.</p>	P. Kaplan
T-140		<p>Is the list of the PDMs current? Some PDMs seem to be in wrong WBS elements. For example, PDM #72.009 and #72.010 (1D and 2D, Groundwater Travel Time Calculations, respectively) are under WBS 1.2.1.4.2 for the radionuclide source term.</p> <p><u>SEE OBSERVATION NO. 88-06-05</u> <u>8/9-26-88</u></p>	S	<p>No RAL I &amp; II PDM's. 8 QAL III exist. PDM # 72.009 and # 72.010 calculates only the near-field GWTT. They are in right WBS. WBS 1.2.1.4.1 PDM's, however, are all listed under WBS 1.2.1.4.4 due to an earlier work assignment and subsequent changes in SNL org.</p>	R. Prindle
<p>(9) Auditor Signature <u>[Signature]</u>, (10) Date <u>7/28/88</u></p>					

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T-141	Flow and Radionuclide Transport. 1.2.1.4.1.S, Rev. B	Most tasks are to be performed at two QA levels (i.e., initially at QA level III and later at QA level I). What is the transition point and what criteria are used to determine the transition? Will everything needed for the DEIS, FEIS, SAR, and LA be repeated at QA level I? Do the schedules and milestones reflect this approach? More importantly, will there be enough time to repeat everything at QA level I?	S	No set criteria exists. All LA documents will be done at QAL I. There are no criteria that will determine the transition from QAL III to QAL I or II.  <del>SEE</del> OBSERVATION NO. 88-06-11 8/9. 9-26-88	P. Kaplan
T-142		Codes TRIUMF, UNSAT2, and SECOL are not used in the Task D for groundwater flow and radionuclide transport, yet they are to be used in verification and validation. What is the approach taken in verification and validation? Where are the plans documented?	S	These codes are needed to verify the codes that will be used in the analyses.  The VdV approach is beyond the scope of this QA.	R. Prindle
			(9) Auditor Signature <u>[Signature]</u> (10) Date <u>7/22/88</u>		



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T 143	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. II	<p>In WIS 1.2.4.6.1.S, the preliminary verification of the code was assigned in QA level II, but in WIS 1.2.1.4.1.S, the preliminary verification was assigned QA level III. What is the criteria for assigning the QA level for code verification? Why does WIS 1.2.4.6.1.S and 1.2.4.1.S have a different QA level for verifying the same codes (SAGUARD)?</p>	S	<p>SAGUARD is not currently expected to be used extensively for WBS 1.2.1.4.1 but will play an important role in 1.2.4.6.1</p>	R. Prindle
T-144		<p>What technical procedures are in place for this WIS?</p>	S	None	R. Prindle

(9) Auditor Signature *M. J. [unclear]* (10) Date 7/22/88

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T-145	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. 0	<p>Do the equations or models applied to radionuclide transport address saturated and unsaturated flow? Are the assumptions, boundary conditions, and initial conditions justified for the models?</p> <p><u>SEE OBSERVATION NO. 88-06-11</u> <u>#.N. 9-26-88</u></p> <p><u>Most of assumptions, B.C. s will be checked during validation process.</u></p>	S	<p><u>No saturated zone. RN transport is currently being studied.</u></p> <p><u>Assumptions &amp; boundary conditions are being checked. However, there is a documentation problem since all work is done on QAL III Scoping study basis.</u></p>	<p><u>P. Kaplan</u></p> <p><u>R. Drindle</u></p>
T 146		<p>Are the input data for computer simulations taken from the NNWSI technical data base? What procedure is used to provide input data taken both from the project data base and from outside sources, if any?</p>	S	<p><u>They come from literature, SEPDB and RIB including the original source. No particular procedure exists.</u></p>	<p><u>P. Kaplan</u></p>
				(9) Auditor Signature <u>M. Humpaluk</u>	(10) Date <u>7/28/88</u>

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T-147	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. D	Is the QA level of the DIM or PDM consistent with the QA level of the parent WBS?	S	No DIM exists in this WBS. WBS does not have any assigned QA level. QA level assigned to PDM is consistent with the QA level assigned to the task in the work plan.	P. Kaplan
T-148		Were the DIMs or PDMs approved and in place prior to the commencement of the analysis activities?	S	Only QAL I and II require PDMs before the work starts. QAL II does not require a PDM and even when PDM is written for QAL III task, PDM doesn't have to be written before the task begins.	P. Kaplan
			(9) Auditor Signature	(10) Date 7/28/88	

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T 149	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. B	What procedure is used to change or modify information in PDM or DIM if the proposed codes, approach, data, initial, or boundary conditions are inappropriate or have an adverse input on the analysis results?	S	Currently procedures exist to modify POMS. However, application of the process to QAL III POMS is up to the discretion of P.I.	R. Prindle
T 150		What criteria were used for selecting the analysis method for this WIS? Were alternative methods considered? What criteria were used for disqualifying alternative methods?	S	No formal documentation exist for screening studies. Most codes or analysis methods are selected based on available information for pre-screening. The applicability of codes are tested in the COVE activities.	P. Kaplan
			(9) Auditor Signature <i>M. Simpson</i>	(10) Date <i>7/8/88</i>	

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T 151	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. D	What criteria were used for determining if the code modifications for the activity required that the code be reverified?	N/A	not applicable. no code modifications at this time.	R. Prindle
T 152		Were modified versions given a unique designation which is identified in the analysis output?	N/A	not applicable. no code modifications at this time.	R. Prindle

(9) Auditor Signature M. J. [unclear] (10) Date 7/28/81

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T-153	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. II	The PDM log #72.013 and #72.015 on WBS 1.2.1.4.1 were defined as QA Level 0. What is QA Level 0?	S	Not even written. They are closed.	R. Prindle
T 154		The dates of PDM #72.013, #72.016, and #72.020 on WBS 1.2.1.4.1 are unknown. What is the status of those PDMs?	S	All of them are closed. They have never been written.	R. Prindle
(9) Auditor Signature <u>W. J. [Signature]</u> (10) Date <u>7/22/87</u>					

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T 155	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. D	Does in-house software documentation completely address each requirement listed for the program's category? If the requirements for commercial codes do not apply, has the explanation of why the requirement does not apply been properly addressed?	S.	Only non-SES commercial codes are used in this WBS. QA procedures are being implemented for commercial codes.	P. Kaplan
T 156		Have technical reviews been conducted in accordance with DOP 6-2? Were the technical reviewers qualified according to the requirements of DOP 2-6 before they completed these reviews? Is the documentation consistent with the procedures?	S	In this WBS, no QAL I or II documents <del>was</del> have been published. Qualifying the reviewers is not required for QAL II work, although qualified reviewers were used for the review of QAL III documents.	R. Prindle
			(9) Auditor Signature <i>Albin Park</i> (10) Date <i>7/28/88</i>		

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T 157	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. B	Are computer codes assigned a unique identification for storage and tracking? Are unique version numbers and release numbers assigned properly? What procedures are applied and are the documentations current?	S	Currently they are not in the configuration management. However, they expect even QAL III will go into configuration management.	P. Kaplan R. Prindle
T 158		Does the master log consist of all the traceable records regarding new versions and new releases of each code? Where is the master log?	N/A	Not in place yet. not audited	R. Prindle
			(9) Auditor Signature <i>M. Humpert</i>	(10) Date 7/28/88	



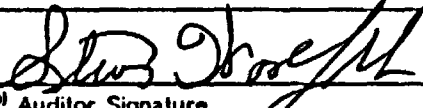
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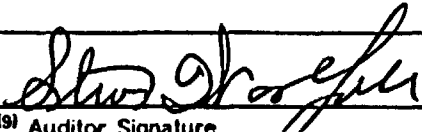
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T 159	Flow and Radionuclide Transport 1.2.1.4.1.S, Rev. D	Has a technical review been conducted on each computer code before it becomes part of a code's permanent file?	N/A.	Not in the system yet. They will follow DOP 3-2. not applicable at this time	R. Prindle
T-160		Is the software category form complete for each code?	N/A	Not in the system yet. not audited	R. Prindle

(9) Auditor Signature *W. J. [Signature]* (10) Date 7/27/88

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T-161	Flow and Radionuclide Transport 1.2.4.1.S, Rev. D	Have software QA checklists for SRS in-house and SRS commercial been documented?	N/A	Not in the system yet. All RAL III work. not audited	R. Prindle
T-162		Have software QA checklists for non-SRS in-house and non-SRS commercial been documented properly?	N/A	Not in the system yet. not audited	R. Prindle
				(9) Auditor Signature <i>W. Kempark</i>	(10) Date <i>7/28/88</i>

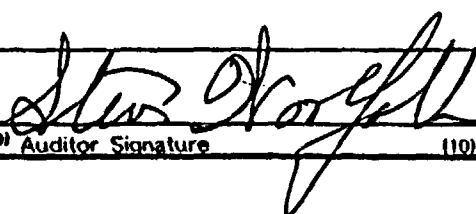
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T 163	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. B  DOP 3 3, Rev. A Para. 4.1	Review selected PDMs and verify that they contain the items of information in Para. 4.1 particularly the technical information required to define the problem. 3 PDMs were issued in this area. PDM 74-001 was completed under QA-DIT-3 (Note data in general is consistent with DOP 3-3, although there are some format divergence. PDM 74-002 file contains letter specifying the activity (is contained in DITM) and no other information. PDM 74-003 stands missing to meet DOP 3-3 in ADM dated 7/20/88 were added in memo dated 7/20/88. Technical data in description incomplete (no data on spent fuel cask). The data was supplied verbally by PI.	S	In general, with the exception of the missing records for PDM-74-002 appear consistent with DOP 3-3 although some more detailed technical data is sometimes required. Note in the future it would appear appropriate to document (by telephone conf. memo) supplementary data. The need for the second memo for PDM 74-003 might suggest earlier training could be helpful but data is insufficient for a definitive statement.	T. Laub
T 164	Para. 4.3.D	Review any samples of a "conditionally accepted" PDM to verify resolution of the "conditional acceptance." PDM 74-001 acceptance resolved in a manner consistent with DOP 3-3 • PDM 74-002 no information available • PDM 74-003 no response received to this ADM at this time	S	DOP 3-3 criteria has been met. Note much of this activity (PDM 74-001 + 74-002) predate DOP 3-3.	T. Laub
					7/23/88
				(9) Auditor Signature	(10) Date

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T 165	<p>Preclosure Safety Analysis 1.2.4.6.3.S, Rev. B)</p> <p>DOP 3-3, Rev. A Para. 6.1</p>	<p>Verify that the background of the analyst is appropriate and that it is verified by the task leader's supervisor (see Table I).</p> <p><i>Contractor supervisor indicated analyst assignment in acceptance letter for PDM 74-001 and sign assignment in acceptance letter as required by DOP 3-3. No other information available.</i></p>	S	<p><i>Existing data indicates requirements of DOP 3-3 are being followed. A more definite statement, and perhaps some data providing the basis, might be technically more appropriate. (Also see T-172)</i></p>	T. Leub
T-166	Para. 6.2	<p>Verify the analyses/calculations associated with the PDM are properly documented, particularly listing of applicable references, results of literature and background searches, identification of assumptions, documentation of any computer calculations, and verification and validation of the program per DOP 3-2.</p> <p><i>No data is available to address this question since PDM 74-001 was terminated, and reissued as DIM4 and PDM 74-002 was cancelled and reissued as DIM6, and PDM 74-003 has not been accepted at this time</i></p>	N/A	<p><i>No data available</i></p> <p><i>Not applicable</i></p>	T Leub
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T 169	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II  DOP 3-4, Rev. II Para. 4.1	Is the modified work plan up to date on items of scope, staff, schedule, and deliverables?  <i>Addressed by review of work plans by other auditors. References in DIM appear appropriate but extremely limited.</i>	N/A	Not audited	N/A
T 170	Para. 4.3	Review the task acceptance memo to assure it complies with the requirements in Para. 4.3 with emphasis on technical content adequacy.  <i>Task acceptance memos were reviewed for DIM's 4, 9, 18, 20, 37, 39, 122 and 122. All were acceptable except for 122 for which no acceptance memo was found although the report was prepared. However this DIM appears to have been an activity initiated under DIM 114 in July 1986 which produces the DOPs requiring the acceptance memo. Apparently DIM 122 was only issued to clarify the activity.</i>	S	A note in the file addressing the acceptance of DIM 122 appear appropriate to provide a complete file.	T. Lamb
					7/23/87

(9) Auditor Signature

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T 171	<p>Preclosure Safety Analysis 1.2.4.6.3.S</p> <p>DOP 3-4, Rev. II Para. 4.3.D</p>	<p>Review resolution of any "conditional acceptance" of a DIM with emphasis on technical content.</p> <p><u>The conditional acceptance addressed in the audit (see previous results) were all consistent with the procedures. (see T-170)</u></p>	S	No deviations found.	T. Loub
T 172	Para. 6.1	<p>Verify the adequacy of personnel qualification and the documentation of same for personnel completing the task.</p> <p><u>No documentation of qualifications of personnel are required by this DOP and no appropriate personnel were identified. Only DIM 124 prepared by LATA provide certification of personnel.</u></p>	S	<p>No documentation required. Procedure does require appropriate personnel be used thus it would appear appropriate to modify DOP 3-4 to require documentation since without it, how can adequacy be assured. At a minimum certification by the supervisor should be required although minimal document would appear more appropriate if coupled with this certification.</p>	T. Loub
				(9) Auditor Signature	(10) Date

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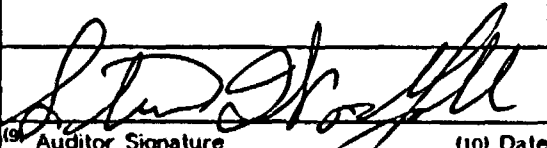
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T-173	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II  DUP 3-4, Rev. II Para. 6.2	Verify the adequacy of the DIM documentation as specified in the list in Para. 6.2. Based on a review of the results of the DIMs on T-163; The LATA (DIM 117) and the Parsons (DIM 122) are adequately documented. However the Bechtel DIM (balance) [note review includes reports and Task Files] was lack computer code verification data, and other than the cover sheets for calculations, [note cover sheets would appear to adequate] to document calculations per paragraph 7.0's requirement for documentation of final results.	X SOR # 175	LATA and Parsons results are adequate, Bechtel results do not require certain computer program verification & validation information and only the calculation sheets cover sheets were included.	T. Laub
T 174	Para. 8.0	Verify that the documentation evaluated in this task are in the SNI/NNWSI record system.  DIM 5 Data appears adequate, except for DIM-4 which was lacking on technical information on split foot cast designs. Note this data was provided verbally. Note above discrepancy was addressed in T-163 to T-165	S	SEE SDR # 175  Data appears adequate accept as addressed in T-163 to T-165, which relates to DIM-4 a continuation of PDM 74-003	T. Laub          7/22/88
Auditor Signature				(10) Date	

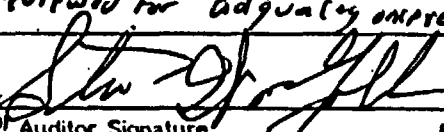
\* Even if not required this data and calculation sheets need to be included to allow future analyst to understand these calculations.



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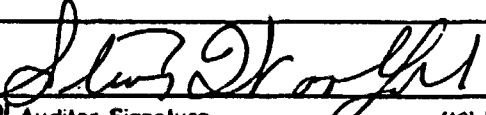
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T 175	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II  DOP 3-10, Rev. 0	Identify samples of routine calculation completed under DOP 3-10, if any.  <i>No calculations under this procedure have been completed under this procedure</i>	N/A	Not applicable	Ti Loub
T-176	Para. 4.0	Review a sample of the calculations identified in Item T-175 and verify they are consistent with Section 4.0 of DOP 3-10. This review will emphasize the evaluation of technical documentation to determine if sufficient information is provided to allow verification of the calculation and that all computer programs used were verified and validated.  <i>See Above</i>	N/A	Not applicable	Ti Loub
				7/27/88 (10) Date	

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T-177	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. B  DOP 3-10, Rev. 0 Para. 6.1	Verify that the calculation documentation reviewed in Item T-176 are entered into the SNL/NNWSI record system.  <i>See previous response</i>	N/A	<i>Not applicable</i>	T. Long
T-178	DOP 3-2, Rev. 0 Para. 2.0	Review any software identified in previous reviews for determining software classes and the accuracy of this determination.  <i>Software used in DIM 124 appears adequate. No software was used in DIM 122. Any software used in the PDM and DIM analyzed (see T-163 + T-162) from Bechtel do not meet the requirements for software documentation base on reports and task files available at SNL. Thus they don't meet applicable procedure.</i>  See SDR NO. 175	X SDR # 175	<i>Software documentation needs to be obtained from Bechtel for NNWSI/SNL records. This documentation will need to be reviewed for adequacy expressed.</i>  	T. Long     7/27/87

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(10) Date

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T-178	<p>Pre-closure Safety Analysis 1.2.4.6.3.S, Rev. B</p> <p>DQP 3-2, Rev. 0 Para. 4.0, 5.0, 6.0</p>	<p>Review a sample of the document of the software identified in Item T-178 to assure the completeness and adequacy of the documentation as shown in Figure 1.</p> <p>LATA Document for DIM 124 appears adequate even for Level II. Note DIM indicates Level III. See T-179 for other software. Note WBS is currently II but being revised to Level III.</p>	N/A	<p>Not auditable except for LATA since data is unavailable (see T-178)</p>	T. Lash
T-180	<p>DQP 6-2, Rev. 0 Para. 1.0, 2.0</p>	<p>Review the documentation of the technical and management review of reports to assure resolution of all comments.</p> <p>SAND 7-20704 Documentation of concurrence in file although comments are not, comment should solve by direct conclusion.</p> <p>SAND 7-0140A Some documentation above for S&amp;P review (form indicating reviewers didn't keep comment copies.) Maybe <del>comments</del> in formal file. No NVO comment for <del>was</del> sent to NVO. (Letter in file.) Didn't contact author. Comment review copies not yet submitted to records by author. NVO comments by phone and revised.</p> <p>SAND 7-2923 No review sheets but comment present.</p> <p>LATA to sent to NVO reporting</p>	S	<p>LATA documentation for DIM 124 adequate.</p>	T. Lash
				<p>General improvement in record keeping appears to be needed. However sample not statistically significant.</p>	
					7/23/87

(9) Auditor Signature

(10) Date

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T-181	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. B  DOP 6-2, Rev. 0 Para. 5.0	Verify that the reviews from Item T-180 have been entered into the SNL/NNWSI Records System.  Only a limited number of Task Files are currently available for DIM in records. <del>As should be added</del> However these are open for transfer. Several DIM acceptance memo <del>aren't</del> locate in Record Systems but are available from SNL personnel. Also see T-173	S	SNL should expedite transfer of these records to facilitate use by other groups and to prevent the loss of these documents. Also see T-173.	T. Loub
T-182		Is the data provided in the PDM or DIM sufficient for the intended purpose? How does an analyst obtain needed data that is not provided by the PDM or DIM?  See T-163 and T-168	N/A	See T-163 & Duplicate item so not applicable.	T. Loub
				[Signature]	7/23/88

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-183	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. B	<p>Where alternative methodologies, solutions, or analytical models (codes) exist, does documentation exist to justify the selection made? Have critical selections been corroborated by peer review or other suitable methods?</p> <p><i>This subject is typically not addressed. However the work done <del>is</del> addresses preliminary activities so impact is marginal. Basis of methodology selection appears to be convicere.</i></p>	5	<p><i>This is adequate to meet minimal needs at this time, but addressing this subject would significantly improve technical documentation.</i></p>	T. Loub
T-184		<p>Is the QA level of the DIM or PDM consistent with the QA level of the parent WBS?</p> <p><i>DIM 37 indicates III but WBS is Level II. However a proposed Task Plan also identified on this DIM change QA level to Level III. This appeared to be isolated error</i></p>	5	<p><i>This DIM should be corrected otherwise none found.</i></p>	T. Loub
				<p><i>[Handwritten Signature]</i></p>	7/27/88

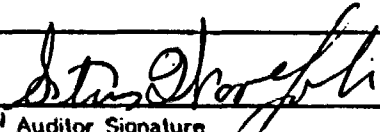
Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-185	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II	<p>Were the DIMs or PDM approved and in place prior to the commencement of the analysis activities?</p> <p>PDM <del>approved</del> Feb 25, <sup>conditional</sup> acceptance 3/24, <del>conference 4/2</del>, but monthly report indicate activity in February and/or March specifically 2/25 and April for PDM 7401 or equivalently DIM 4. The conditional acceptance question was related to cost and manpower <del>the</del> only so data wasn't affected. Contact indicate this <del>was</del> approved</p> <p>Were the computer codes used to support QA level I and II work documented in accordance with DOP 3-2 and NNSI SOP 03-02?</p> <p>See T-160, T-173, T-178, T-179</p>	S	<p>This appears to be a technical violation of DOP 3.3 and 3.4 however data quality isn't affected so the action might be to revise the DOP to allow this to occur if data is affected.</p>	T. Lamb
T-186		<p>See T-160, T-173, T-178, T-179</p>	N/A	<p>Addressed in items indicated, Not audited.</p>	T. Lamb
				<p><i>[Signature]</i></p>	7/28/88
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-187	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II	<p>Were PDMs written and approved prior to the commencement of major calculations and analyses?</p> <p><i>No major calculations were done thru PDM. Only major work complete was transferred to PDM (PDM 74,001 &amp; 2) PDM 74,003 hasn't been accepted yet</i></p>	N/A	Not applicable	T. Lamb
T-188		<p>What procedure is used to change or modify information in PDM or DIM if the proposed code, approach, data, initial, or boundary conditions are inappropriate or have an adverse impact on the analysis results?</p> <p><i>DOP 3.3 &amp; DOP 3.4</i></p>	S	Addressed by DOP 3.3 & DOP 3.4	None
					7/28/87
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-189	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. D	What technical procedures are in place governing the analyses supporting the DIM or PDM?  DOP 3.3 + DOP 3.4	S	Addressed by DOP 3.3 + 3.4	None
T-190		Is there evidence to demonstrate that the information provided in the PDM or DIM was used in the supporting analyses and adequately documented in the SAND report or memo?  SAND 88-2928 (currently A4 Level II)  is based on SLTR 87-7013 but is not referenced in the document support file. Currently identifying that this document supported by the SLTR depends on authors memory. This unless referencable documents are generated there is no tie to supporting documentation. <del>Further</del> tie-in.	S	This activity currently follows meet procedures. But I.F. SNL file contained reference to SLTR, this would facilitate traceability. SEE OBSERVATION NO. 88-06-14  <i>[Signature]</i>	Tilous       7/28/88

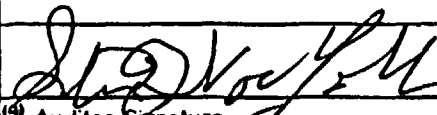
(9) Auditor Signature

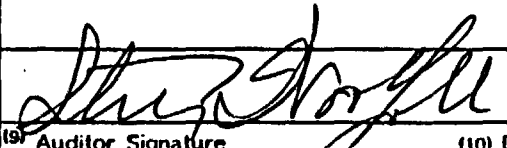
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 191	Preclosure Safety Analysis 1.2.4.6.3.5, Rev. II	Is the QA level of the analysis and model data consistent with the QA level of the PDM or DIM?  <i>See T-184</i>	N/A	Not audited only item addressed in T-184	
T 192		If the code is not certified or documented in accordance with DQP 3-2, what steps were taken to verify the code for this application?  <i>See T-166, T-173, T-178, T-179</i>	N/A	Not specifically addressed elsewhere	T. Lewis
					7/28/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-193	Preclosure Safety Analysis 1.2.4.6.3.S	What was the basis for any modifications made to a computer code for this activity?  <u>No data available or</u> <u>addressed elsewhere</u>	N/A	Not auditable see T-192	T. Loub
T-194		Was a criteria established for selecting verification problems for a code which was modified for this activity? Were the problems/verification appropriate?  <u>No data available or</u> <u>addressed elsewhere</u>	N/A	NOT auditable see T-192	T. Loub
					7/24/88
(9) Auditor Signature				(10) Date	

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-195	Preclosure Safety Analysis 1.2.4.6.3.S, Rev. II	What procedures were used to document computer code modifications for this activity?  <u>No data available for contractor</u> <u>although SNL DOP 3-2</u> <u>applicable</u>	S	Currently assume as adequate based on data available (see T-192)	T-Lamb
T-196		Was the version of the computer code identified for this activity the current verified version?  <u>Version not identified SCT 87-2013</u> <u>version should be in Task File for DIMs.</u> <u>Program contained in report</u> <u>for DIM 124 and adequate</u> <u>documented. Otherwise see T-192.</u>	S	This may not be satisfactory if resolutions of items detailed T-192 are unsatisfactory.	T. Lamb
(9) Auditor Signature				(10) Date	

*John Wood* 7/27/87

WMPO AUDIT CHECKLIST NO. 88-06-02

N-0A-044

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
TX96A	<p>Prelosure Safety Analysis 1.2.4.6.3.S, Rev. B</p> <p>DOPG-2 Rev. 0 Section 1.0</p>	<p>How are reviews (technical) conducted when the documents or related subjects addressed in the document effect areas outside SNL responsibility (i.e. responsibility of other NNSEI contractors or WMPO itself).</p> <p>Currently <u>DIMP1 and DIMP2</u> PDM 74,003 falls in this area. There are no specific requirements, although informal technical reviews from contract are being done this is not an official requirement. Note the current WMPO review is policy only.</p> <p>An another area where there could be a major impact is SNL analysis of cash handling, SAIC transport groups and the OCRM national risk development program. When a projected release accident is hypothesized this accident analysis is will significantly impact all these groups. Thus formal interface is necessary to assure NNSEI/OCRM consistency across the program.</p>	S	<p>Currently there is no requirement for formal technical reviews in SNL or WMPO procedures, however the OAPP would indicate appropriate reviews are required. In addition in it is in the best interest of the project to require these reviews. Thus a formal review process is needed. However to minimize program impact a control comment period must be strictly defined and failure to comment when the specified period treat as a no comment response.</p> <p><i>[Signature]</i></p>	<p>T. Loub</p> <p>7/28/82</p>

(9) Auditor Signature

(10) Date

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-107	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	Is the QA level of DIM or PDM consistent with the QA level of parent WMS?	S	EXAMINED PDM'S 71.007, 71.013, 71.014, 71.021, 71.028	S. BAUER L. COSTIN
T-108		Were the DIMs or PDMs approved and in place prior to the commencement of the analysis activities?	S	CHECKED PDM FILES FOR PDM'S 71.007, 71.013, 71.014, 71.021, 71.028	S. BAUER L. COSTIN
T-100		Were the computer codes used to support QA Level I and II work documented in accordance with DOP 3-2 and/or NNWSI SOP-03-02?  <del>SOP TO BE WRITTEN</del> <i>B. Kenney 8-1-88</i>  <i>corrected during audit</i>  SEE OBSERVATION NO. 88-06-18 <i>B.H. 9-26-88</i>	S <i>X.A.</i> <i>7-78</i>	EXAMINED CODE DOCUMENTATION, AND CERTIFICATIONS IN PDM FILES. <del>SEE</del> SIGEPS, A CALCULATIONAL <del>NON-SES</del> CODE LACKS USERS MANUAL AS REQUIRED BY DOP 3-2	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

*B. Kenney*  
*John P. Linnick*

7/28/88  
7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 200	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. B	Were PDMs written and approved prior to the commencement of major calculations and analyses?	S	REVIEWED A NUMBER OF PDM'S.	S. BAUR L. COSTIN
T 201		What procedure is used to change or modify information in PDM or DIM if the proposed code, approach, data, initial, or boundary conditions are inappropriate or have an adverse impact on the analysis results	S	DOP 3-3 OUTLINES PROCEDURE FOR MODIFYING PDM. MOST MAJOR PDM'S ARE INTEGRATED WITH GROUP PERFORMING WORK TO WORK OUT PROBLEMS BEFORE PDM'S ARE REVIEWED AND APPROVED.	S. BAUR L. COSTIN
T-202		Are technical procedures in place governing the analyses and/or calculations supporting the DIMs or PDMs?	S	DOP'S IN PLACE GOVERNING ANALYSES AND CALCULATIONS.	S. BAUR L. COSTIN

(9) Auditor Signature

(10) Date

*[Handwritten Signature]*  
John P. Linnick

7/29/88  
7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-203	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	Is there evidence to demonstrate that the information provided in the PDM or DIN was used in the supporting analyses and adequately documented in the SAND report and/or letter report?	S	EXAMINED PDM'S AND LETTER REPORTS FOR WBS, SOME WORK WAS DONE <del>AND</del> <del>PREVIOUS</del> PRIOR TO GOVERNMENT'S APPROVAL. FILES WILL BE UPGRADED WHEN CLOSED OUT, WHICH IS CONSISTENT WITH CURRENT DOP.	S. BAUER L. COSTAN
T-204		Is the QA level of the design and model data consistent with the QA level of the PDM or DIN?  <u>SEE OBSERVATION NO. 88-06-19</u> <u>8.9.9-26-88</u>	S X 88-06-19 8.9.9-26-88	FRACTURE AND ROCK MASS PROPERTIES ARE UNQUALIFIED OR LEVEL 3 IN THE R.B.  FRACTURE PROPERTIES ARE <del>NOT</del> NOT INCLUDED IN WMPO APPROVED R.B.	S. BAUER L. COSTAN
T-205		If the material property data is not taken from NNWSI reference property or design database, has the data choice been justified in the PDM or DIN?	S	REFERENCE PROPERTIES WERE USED FOR ANALYSES	S. BAUER L. COSTAN

(9) Auditor Signature

(10) Date

*Barbara W. [Signature]*  
*John [Signature]*

7/29/88  
7/22/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-206	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. B	If the code is not certified or documented in accordance with DQP 3-2 what steps were taken to verify the code?	S	ALL CODES ARE CERTIFIED FOR LEVEL 2 ANALYSES, UNLESS THE TASK IS TO DOCUMENT OR VERIFY A CODE.	S. BAUER L. COSTIN
T-207		Is the QA level for this activity appropriate for the results or data?	S	EXAMINED PDM'S UNDER WBS AND THE QA LEVEL <del>FOR</del> WAS APPROPRIATE FOR THE RESULTS	S. BAUER L. COSTIN
T-208		What criteria were used for selecting the QA level for this activity?	S	QALIAS AND THE LOGIC DIAGRAM IS USED TO ASSIGN QA LEVELS	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

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7/28/88  
88/07/2  
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-209	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	<p>What criteria were used for selecting the analysis method for this activity?</p> <p>1. Were alternative methods considered?</p> <hr/> <hr/> <hr/> <p>2. What criteria were used for disqualifying an alternative method?</p> <hr/> <hr/> <hr/>	S  S   S	<p>SANDIA AND CONTRACTOR EXPERIENCE WITH CODES.</p> <hr/> <p>ALTERNATIVE CODES ARE UNDER CONSIDERATION AT SANDIA. THESE CODES INCLUDE BLOCK AND DISJUNCT ELEMENT MODELS</p> <hr/> <p>EXISTING CODES HAVE BEEN CERTIFIED UNDER DOP 3-2 AND HAVE THE NECESSARY CAPABILITIES TO PERFORM ANALYSES. AS ALTERNATIVE CODES ARE CERTIFIED THEY WILL BE MADE AVAILABLE FOR ANALYSES</p>	<p>S. BAUER L. COSTIN</p> <hr/> <p>S. BAUER L. COSTIN</p> <hr/> <p>S. BAUER L. COSTIN</p>
			(9) Auditor Signature	(10) Date	

*John P. Timmer*

7/28/88  
88/02/7

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-210	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. B	What was the basis for any modifications made to a computer code for this activity?	S	NO MODIFICATIONS WERE MADE. DOP 3-2 COVERS CODE MODIFICATIONS.	S. BAUER L. COSTIN
T-211		What procedure was used for reverifying a computer code if modifications were made to the code for this activity?	S	NO MODIFICATION WERE MADE. DOP 3-2 COVERS CODE MODIFICATION AND VERIFICATION	S. BAUER L. COSTIN
T-212		Was a critiera established for selecting verification problems for a code which was modified for this activity?	S	NO MODIFICATIONS WERE MADE. DOP 3-2 COVERS CODE MODIFICATION AND VERIFICATION.	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

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7/28/88  
7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 213	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	What criteria were used for determining if the code modifications for this activity requires that the code be reverified?	S	NO MODIFICATIONS WERE MADE. DOP 3-2 COVERS CODE VERIFICATION.	S. BAUER L. COSTIN
T 214		Were modified versions given a unique designation which is identified in the analysis output?	S	NO MODIFICATIONS WERE MADE. DOP 3-2 COVERS CODE VERIFICATION → VERSION DESIGNATION	S. BAUER L. COSTIN
T 215		What procedures were used to document computer code modifications for this activity?	S	NO MODIFICATIONS WERE MADE. DOP 3-2 SPECIFIES CODE DOCUMENTATION STANDARDS	S. BAUER L. COSTIN

(9) Auditor Signature: *[Signature]*  
 (10) Date: 7/28/88  
*[Signature]* P. Fumiani 7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-216	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. B	Was the version of the computer code identified for this activity the current, verified, baselined version?	S	CODES WERE CERTIFIED FOR LEVEL 2 ANALYSES.	S. BAUER L. COSTIN
T-217		What criteria/justification was used for selecting a non-baselined or non-verified code for this activity?	S	ONLY CERTIFIED CODES WERE USED.	S. BAUER L. COSTIN
T-218		Is a verification plan developed for code and model modifications made for this activity?	S	DOP 3-2 REQUIRES VERIFICATION FOR CODE MODIFICATIONS.	S. BAUER L. COSTIN
				(9) Auditor Signature	(10) Date

*By W. J. [Signature]*  
*John P. [Signature]*

7/28/88  
7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-219	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. II	What acceptance criteria is applied to code verification activities?	S	NO ACCEPTANCE CRITERIA REQUIRED BY PROCEDURE. VERIFICATION DOCUMENTATION REQUIRES PEER REVIEW.	S. BAUER L. COSTIN
T-220		What procedure, method, or software tool is used to track code modifications?	S	DOP 3-2 USES SOFTWARE CHANGE FORMS TO DOCUMENT MODIFICATIONS. THE METHOD OF IMPLEMENTING CHANGE IS DEPENDENT ON INDIVIDUAL PREFERENCE (EDITOR, SOFTWARE TOOL).	S. BAUER L. COSTIN
T-221		Is there sufficient documentation of software modifications to allow a qualified, outside individual to independently reproduce, review, and/or repeat an analysis?	S	NO MODIFICATIONS HAVE BEEN MADE TO TEST MODIFICATION PROCEDURE TO DETERMINE IF IT IS TRACEABLE.	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

*John P. Murray*

7/28/88

88/82/7

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-222	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. B	<p>Is there adequate documentation in the PDM or DIM file to allow a qualified, outside individual to independently reproduce, review, or verify the results from an analysis?</p> <p><u>OBSERVATION TO BE WRITTEN</u></p> <p><u>- PDM 71.013 FOR EXAMPLE</u></p> <p><u>SEE OBSERVATION NO. 88-06-17</u> <u>8/1.9-26-88</u></p>	<p>S</p> <p>X</p> <p>8/1.</p> <p>9-26-88</p>	<p>FOR IN HOUSE SUL WORK</p> <p>THE INPUT AND OUTPUT FILES ARE KEPT IN MASS STORE AND NOT KEPT IN PDM FILE. INPUT AND OUTPUT FILE DOCUMENTATION SHOULD ONLY BE IN FILE AT FILE CLOSEOUT AS PER COP'S.</p>	<p>S. BAUER L. COSTIN</p>
T-223		<p>Are individuals involved in the technical review of computer analyses adequately qualified and experienced in the execution of the computer code to determine that the input/output from the analysis is correct and consistent with the problem statement in the PDM or DIM?</p>	<p>S</p>	<p>PI'S <del>OR</del> OR CONTRACT'S CHECKING WORK ARE FAMILIAR WITH THE CODES</p>	<p>S. BAUER L. COSTIN</p>
			(9) Auditor Signature	(10) Date	

*[Handwritten Signature]*  
John P. Sullivan

7/28/88  
7/28/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-224	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	What criteria is used to determine if a peer review is required or justified?	S	DOP SPECIFIES PEER REVIEW REQUIREMENTS	S. BAUER L. COSTIN
T-225		What steps are taken to ensure that outside contractors are qualified to perform the tasks assigned to them?	S	SIGNOFF ON TASK ACCEPTANCE MEMO CERTIFIES THE QUALIFICATIONS OF THE ANALYSTS PERFORMING THE WORK. SUB CONTRACTOR RESUMES ARE SUPPLIED WITH CONTRACT DOCUMENTS	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

*W. J. ...*  
*John P. ...*

7/28/88  
7/28/88

(1) Organization SNL

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-226	Rock Mass Analysis 1.2.4.2.1.1.S, Rev. D	<p>Are the qualifications of the analysts performing analyses at SNL and at outside contractors commensurate with the level of expertise required for an analysis?</p> <hr/> <hr/> <hr/> <p>If not, is a qualified individual responsible for checking the input/output for each analysis?</p> <hr/> <hr/> <hr/>	S	<p>RESUMES WERE CHECKED AND QUALIFICATIONS WERE ADEQUATE.</p> <hr/> <hr/> <hr/> <p>THE SUBCONTRACTORS DESIGNATE A SUPERVISOR RESPONSIBLE FOR CHECKING THE WORK IN THE TAKE ACCEPTANCE MEMO</p> <hr/> <hr/> <hr/>	S. BAUER L. COSTIN

(9) Auditor Signature

(10) Date

*[Handwritten Signature]*

7/20/88  
7/20/88



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-1	DOP 8-1, Rev. B Para. 2.0	Verify that the storage of samples in the SNL NNWSI Project Samples Library (SNPLS) is covered by approved procedures.  Auditor Note: During Audit 87-5, SNL did not have a procedure for this activity (proposed DOP 8-2) and was denoted by audit Observation No. 2.	S	8-1 DOP 8-1, REV. B, "SAMPLE IDENTIFICATION AND HANDLING REQUIREMENTS" AND  DOP 8-2, REV. 0, "OPERATION OF THE SNL NNWSI PROJECT OPERATING PROCEDURE"  COMMENT: IDENTIFICATION AND CONTROL OF ITEMS (CRITERIA 8) IS COVERED IN DOP 13-1  ALSO SNL-NNWSI-QAPP, REV 0 AND DOP 13-1, REV 0 IDENTIFY "IDENTIFICATION AND CONTROL" FOR LEVEL I ITEMS ONLY. THIS WILL CONSTITUTE AN OBSERVATION	* FN
8-2	Para. 4.1.1	Verify that once received by SNL, sample identification has been maintained from receipt thru disposal. Also verify for SNL generated samples.  <u>CONT. OF ITEM 8-2 SUMMARY</u> ALSO VERIFIED LOG IN AND STORAGE OF NBS AL OXIDE STANDARD, SAMPLE NO SRM-674-A-1-1 WHICH WAS STORED IN THE SAMPLE LIBRARY  NOTE: SNL GENERATED SAMPLES ARE REFERED TO IN CHECKLIST QUESTION 8-4 THE CHAIN OF CUSTODY FORMS FOR THE 19 SAMPLES AND THE AL OXIDE ARE ATTACHED	S	8-2 REVIEWED EVIDENCE FOR 19 SAMPLES** COLLECTED AT YULLA MTN (SEE ATTACHED IDENT LIST), LOGGED IN, LOGGED OUT TO USNM, RETURNED AND LOGGED IN, THE SAMPLES WERE LOCATED IN BIO LAB SAMPLE STORAGE BUILDING 823 (CONT. IN COL 5)	FN + BS

(9) Auditor Signature J.A. Ullrich (10) Date 7/26/88

\*\* THE FOLLOWING SAMPLES WERE EXAMINED  
ALL BEGIN WITH THE PREFIX: IOAE-  
5Y, 23W, 31X, 31Z, 7Z,  
21W, Y, X, 36Z, 11Z, 49W

\* FRAN NIMICK (FN)  
LARRY SCHWARTZ (BS)

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-3	DOP 8-1, Rev. D  Para. 5.1.1.2 and 5.1.2.2	Verify that sample identification is traceable to documents, including but not limited to, logs, test records, inspection documents, and nonconformance records.  CONTINUATION OF COLTS; AND WAS FOUND IN CORE LIBRARY. PHOTOS OF COLLECTED ROCKS WERE ALSO IN LB ROS. 5 OTHER SAMPLE BOXES WERE SELECTED AND TRACKED IN CORE LOG BOOK IN CORE LIBRARY AND TO LOG BOOKS  IN THE DRML, SAMPLES WERE: USWG1 5723.0 - 5781.5 CONTENT OF BOX GRAMMED USWG1 2206.0 USWG1 1512.0 USWG2 3108.9 USWG4 1509.1	S	8-3 # THE SAMPLES DESCRIBED IN AUDIT ITEM 8-2 WERE TRACEABLE BY USE OF THE CHAIN OF CUSTODY FORM  G1-17856 SLA 20 TO NNWSI SANDIA I M TURF SAMPLE DESCRIPTION FORM EPO007 PG 8 (RECORD VOL I TO VOL II)  RANDOM SAMPLE 13A FROM LOG BOOK ROS IN DRML (CONTINUED TO COL 5)	* FN/BS
8-4	Para. 5.1.2.2	Verify that SNL samples are linked to a collection report that includes the following information:  <ul style="list-style-type: none"> <li>o EP number and revision for which the sample was collected</li> <li>o Unique sample identification</li> <li>o Sampling date and time</li> <li>o Purpose of sampling</li> <li>o Field observations</li> <li>o References to relevant maps, photographs, or logs</li> <li>o Name and signature of collector</li> </ul>	N/A	8-4 ONLY ONE COLLECTION REPORT ON FILE TO THIS PROCEDURE. AUDITEE STATED AND REPORT INDICATED THE WORK IS QA LEVEL III <del>RECORDED</del> JAN 7 28-85 THIS WORK IS RECORDED IN LOG BOOK 51-LOG IN THE DRML NOT AUDITED	BS

(9) Auditor Signature *J. A. Ulrich* (10) Date 7-28-88

# SEE ATTACHED OBSERVER INQUIRY FORMS \* SEE CHECKLIST PAGE 63

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-5	DQP 8-1, Rev. D Para. 5.2.2	Verify that chain-of-custody forms have been completed for:  <ul style="list-style-type: none"> <li>o SNL collected samples</li> <li>o Received (non-SNL origination) samples</li> </ul>	S  S	8-5 2. SEE ATTACHED COC FORMS FOR SAMPLE A1-212.7 AND C-SNL-KRD/A1-EP7-1  1. REFER TO AUDIT ITEM 8-2 FOR INFORMATION	BS *
8-6	Para. 6.2	Verify that the following records have been submitted to the DRMS by the SNL PI or a designated representative thereof:  <ul style="list-style-type: none"> <li>o Original sample collection report(s)</li> <li>o Original chain-of-custody form(s) and photocopies of the form(s) after each sample transfer</li> <li>o Related nonconformance report(s), if any</li> <li>o That these records are in a physical form acceptable to the DRMS as specified in DQP 11-3</li> </ul>	X**  S  N/A  S	SEE SDR NO. 174  8-6 REVIEWED DOCUMENTATION FOR TWO SAMPLE SERIES 1) A-1-212.7 FROM LOG VOL I THE SAMPLE HAS BEEN DIVIDED INTO A1, A2, AND B, A1 & A2 WERE TRANSFERRED TO UO5NM, B IS IN THE LAB  2) G-1-2996.9-SLB-LOG VOL I DIVIDED INTO A1, A2 & B REST SAME AS ABOVE  NO RELATED NONCONFORMANCES	FN

(8) Auditor Signature James A. Waeth (10) Date 7/29/88

\* SEE CHECKLIST PAGE 63  
 \* DURING REVIEW OF DOCUMENTS FOR CRITERIA 2, 7 AND 4, WE OBSERVED LINE OUTS AND SCRIBES. NOTED, THREE EXAMPLES OF SEVERAL WERE PR 229599, CHAIN-OF-CUSTODY FORMS DATED 2-22-89 AND N/C 87-)

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-7	SNL-NMNSI-QAPP, Rev. 0 Para. 8.1.1	Verify that measures have been established for identification and control of items.	S	DATA FILE IN BASEMENT B.1.1 514024687 REVIEWED EQUIPMENT LIST FOR EP-0010 EXPIMENT THE IDENTIFICATION NUMBERS ON PAGE 6. NUMBERS CHECKED FOR METTLER BAL AND THERMOMETER ALSO UNDER ER 0002 INSTRUCTIONS HAVE ADDED TO THE SHIPPING LIST FOR PACKAGING INSTRUCTIONS PLUS THE EQUIPMENT IS IDENTIFIED BY SERIAL NUMBER AND DESCRIPTION DOC No 11138 SEE NOTE BELOW	* BS/FN
8-8	Para. 8.2.3.4	Verify that provisions have been made for the control of item identification consistent with the planned duration and conditions of storage such as: <ul style="list-style-type: none"> <li>o Maintenance or replacement of markings and identification records resulting from damage during shipping, handling, or storage</li> <li>o Updating existing records</li> </ul>	S	8.2.3.4 - ANNUAL INVENTORY CHECK WHERE IDENTIFICATION IS CHECKED AND STICKERS REPLACED. DOP 13-1 ALSO COVERS 4.3.1  NOTE: METTLER BAL PC 4400 A2 5447 Keithley Model 873 Digital Thermometer SER 191587 Weight Set SNLA 390 30g - 1Kg " " " 391 3g - 500g	BS/FN
				Auditor Signature <u>J.A. (Illegible)</u> Date <u>8-11-88</u>	

\* SEE CHECKLIST Pg 63

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-9	SNL-NNWSI-QAPP, Rev. 0 Para. 8.2.3.4.3	Verify that items that do not conform to specified requirements have been identified as nonconforming.  Note: QA Level II and III not included in Para. 8.3.3 identification requirements.	N/A	8.2.3.4.3 REFER TO DOP 13-1 CHECKLIST WHICH COVERS ITEM IDENTIFICATION AND STORAGE  NOT AUDITED	FN/BS
8-10	Para. 8.3.3.1	Verify that item identification relates the item to the applicable design or specifying document.	N/A	8.3.3.1 SAME AS 8.2.3.4.3 ABOVE  NOT AUDITED	FN/BS

(9) Auditor Signature J. U. Maeth (10) Date 7-29-88

WMPO AUDIT CHECKLIST NO. 88-06-01

N-QA-044  
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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
8-11	SNL-NWISI-QAPP, Rev. 0 Para. 8.3.3.3	Verify that controls are in place to prevent use of items for which the shelf or operating life has expired.	N/A	8.3.3.3 SAME AS 8.2.3.4.3  NOT AUDITED	BS *

(9) Auditor Signature Ju White (10) Date 7-29-88

\* SEE CHECKLIST Pg 63



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-1	QAP 10-1, Rev. 0 Para. 3.1.1	Verify that the QA Coordinator has established a schedule of surveillances.	S	Reviewed Surveillance Schedule dated 7/8/88 - Six surveillances have been completed for FY 88 at this time	Rick Pinski
10-2	Para. 3.2.2	Verify the surveillance team leader has planned the surveillance and documented that planning. The documentation shall include, as a minimum, the information listed in this paragraph.	S	Reviewed the following (2) surveillance reports: Surveillance #s - 588-1 " " SNL - DOP 38-88-1 Information listed in this paragraph was found in the surveillance reports	✓
				(9) Auditor Signature: <u>Frederick Q. Kitch</u>	(10) Date: <u>7-25-88</u>



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-3	QAP 10-1, Rev. 0 Para. 3.2.4	Verify the surveillance team members have, whenever practical, prepared checklists for the performance of the surveillance.	S	Checklists were prepared for surveillance report numbers WES-588-1 and SNL-DAL 3-8-88-1	Rick Kish
10-4	Para. 3.4.1	Verify the surveillance team leader has prepared a surveillance report which contains, as a minimum, the information listed in this paragraph.	S	Reviewed the two (2) surveillance reports listed above. All the information listed in this paragraph is in the surveillance report	✓
				Frederick J. Koch	7/25/88
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-5	QAP 10-1, Rev. 0 Para. 3.4.2	Verify the surveillance report has been signed by the team leader and sent to the individuals listed in this paragraph.	S	Surveillance Report Two WES-588-1 and GAIL-DOP 3-8-88-1 were signed and sent to the individuals listed in this paragraph.	Dick Pugh
10-6	Para. 4.1	Verify the records in this paragraph have been submitted to the SNL NNWSI Records Management System by the individual indicated.	S.	The records listed in this paragraph have been submitted to the SNL NNWSI RMS - Verified by distribution. List on the records and review of same in the records center.	
				Frederick J. Kirtch	7/25/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-6-1	NVO-1967, Rev 5 Paragraph 18.7	Verify technical member or members of the QA surveillance team shall be familiar with the plan for the scientific investigation	N/A	<p>Per discussion with Mr. Back, when scientific investigations are performed a qualified technical individual will be a part of the surveillance team.</p> <p>NONE HAVE BEEN IMPLEMENTED</p> <p>SEE audit Report</p> <p>Statement of Effectiveness</p> <p>8.7. 9-26-88</p> <p><i>Frederick G. Keith</i> 7/26/88</p>	<p>Lick Back</p>

(9) Auditor Signature

(10) Date

*S. Heaney*

7/27/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
10-6-2	NW-146-17, REV 5 Paragraph 1.8.1	Verify SNL has or will perform surveillance(s) of all scientific investigations(s).	N/A	<p>The present surveillance schedule was reviewed and did not contain a surveillance of any scientific investigation(s). This was discussed with Mr. Pich and will be incorporated into the surveillance schedule at the next revision.</p> <p>NOT IMPLEMENTED AT THIS TIME</p> <p>See Audit Report Statement of Effectiveness 27.9-2688</p> <p><i>Frederick G. Pich</i> 7/26/88</p>	Dick Pich

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-1	DOP 11-1, Rev. D Para. 4.1.1	<p>Verify that the PI ensures that: <b>SEE NOTE</b></p> <ol style="list-style-type: none"> <li>Users of the EP and <del>EPs</del> are familiarized, trained, and certified in the use of all necessary procedures prior to the conduct of Level I or II work on the EP, and that documentation is provided to the SNL NNSI Project QA Coordinator.</li> <li>A task definition statement (TDS) has been completed and filed in the SNL NNSI Project RMS prior to work being performed by SNL employees outside of the SNL NNSI Project Department.</li> </ol> <p>VERIFY TDS FOR EP-004</p> <p><u>NOTE:</u> IT HAS BEEN DETERMINED DURING THE AUDITING PROCESS THAT ETPs (EQUIPMENT TEST PROCEDURES) HAVE NOT BEEN DEVELOPED ON THIS PROJECT AT THIS TIME.</p>	S	<p>- VERIFIED THAT EP-0007 PERSONNEL HAVE HAD ADEQUATE TRAINING.</p> <p>- VERIFY THAT J.R. CONNELLY OF UOENM HAS CERTIFICATION ASSOCIATED WITH EP-0007.</p> <p>- VERIFIED CETS FOR SIX (6) INDIVIDUALS AT UOENM.</p> <p>- VERIFIED TDS'S FOR EP-0004 &amp; EP-0007</p>	FRAN NIMIK
<p>(9) Auditor Signature <i>L. H. Camp</i> (10) Date 7/28/88</p>					



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-3	DOP 11-1, Rev. B Para. 4.4	Verify that the persons listed below have reviewed and approved the original and subsequent revisions of EPs and ETPs. <ul style="list-style-type: none"> <li>o The author of the EP and ETP, if different from the PI.</li> <li>o The PI.</li> <li>o An independent technical reviewer.</li> <li>o Other independent technical reviewers (as determined necessary by the PI or division supervisor of the PI).</li> <li>o SNL NNWSI Project QA Coordinator, or delegate.</li> <li>o SNL Division Supervisor of the PI, or delegate.</li> <li>o SNL NNWSI Project Department Manager.</li> <li>o DOE/WMPO (For version 0 of QA Level I ETPs and subsequent revisions of a technical nature only).</li> </ul>	S	REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE: EP-0001 REV.0 EP-0002 REV A EP-0004 REV0 EP-0006 REV.0 EP-0007 REV.0	PERSONS REVIEWED
(9) Auditor Signature <u>W. H. Camp</u> (10) Date <u>7/28/88</u>					

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-4	DQP 11-1, Rev. D Para. 5.2	<p>Verify that the author of EPs or <del>EPs</del> have described the activities to be performed in sufficient detail to provide reasonable understanding of the technical objectives, unless already provided in the applicable study plan. A description of each activity will include the following:</p> <ol style="list-style-type: none"> <li>1. Management</li> <li>2. Experiment and Equipment - Test Methods</li> <li>3. Measuring and Operating Equipment</li> <li>4. Sample Custody and Sample/Site History (if applicable)</li> <li>5. Sample/Site Preparation</li> <li>6. Use of Logbooks</li> <li>7. Analyses</li> <li>8. Related Experiments and Equipment Tests</li> </ol>	S	<p>REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE</p> <p>EP-0001 REV.0</p> <p>EP-0002 REV.A</p> <p>EP-0006 REV.0</p> <p>EP-0007 REV.0</p>	FRAN HINAK
<p>(9) Auditor Signature <u>R. N. Camp</u> (10) Date <u>7/23/88</u></p>					



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-5	DOP 11-1, Rev. B Para. 5.3.1	Verify that EP and ETPs have been assigned QA levels.	S	REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE: EP-0001 REV.0, EP-0002 REV.0 EP-0004 REV.0, EP-0006 REV.0 EP-0007 REV.0	PROCEEDS REVIEW
11-6	Para. 5.3.2	Verify that the EPs and <del>EP</del> specify that the PI reserves the right to perform technical surveillances in accordance with SNL NNWSI Project QAP 10-1 and that the SNL NNWSI Project QA organization reserves the right to perform QA audits. <u>EP-004 (LEVEL I)</u>  <u>corrected during audit</u> <u>no SDR</u>	S X 8-1-88	REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE: EP-0001 REV.0, EP-0002 REV.0 EP-0007 REV.0, EP-0004 REV.0 EP-0006 REV.0 SDR **	BARRY SCHWARTZ
				(9) Auditor Signature <u>W.H. Camp</u>	(10) Date <u>7/25/88</u>

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-7	DUP 11-1, Rev. D Para. 5.4.3	Verify that technical procedures are prepared to control data acquisition and sample/site preparation activities supporting EPs and ETPs. EPs and ETPs will contain a list of TPs even if a TP is not yet written.	S	REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE: EP-0007 REV.0, EP-0006 REV.0 EP-004 REV.0, EP-0002 REV. A EP-0001 REV.0	PROCEEDURE REVIEW
11-8	Para. 5.4.4.2.3	Verify that a software verification is performed and documented prior to data acquisition. EP-0002 <sup>II</sup> , EP-0007 <sup>II</sup>	S	VERIFIED COMPLIANCE OF SOFTWARE VERIFICATION FOR EP-0002 (ONLY SOFTWARE @ IN SAMPLE)	BARRY SCHWARTZ
(9) Auditor Signature <i>U.N. Camp</i>				(10) Date 7/25/88	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-9	DQP 11-1, Rev. D Para. 5.4.4.2.3	Verify that the EP or <del>EP</del> defines the method of documentation of verification and state that the PI must provide the user of application software written approval of the verification results prior to the use of the application software in QA Level I or II activities.	S	REVIEWED THE FOLLOWING EP'S FOR COMPLIANCE: EP-0002 REVA, EP-0006 REV.0 EP-0007 REV.0	FRAN NIAIK.
11-10	Para. 5.4.4.2.4	Verify that if data interpretation using models is required, the models must be validated prior to usage, in accordance with SNL NNSI Project DQP 3-2. EP-0002, EP-0007	NOT AUDITED N/A	VERIFIED THAT NO MODELS ARE IDENTIFIED IN EP-0007. VERIFIED THAT NO ANALYSIS RELATED TO THIS TESTS, HAVE BEEN PERFORMED FOR EP-0002.	FRAN NIAIK.
(9) Auditor Signature <u>C. H. Camp</u> (10) Date <u>7/28/88</u>					

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-11	DQP 11-1, Rev. D Para. 5.8	Verify that, in addition to SNL NARS I Project familiarization and certification, any specific training necessary for implementation of EP's, KPP's, and associated TPs will be defined.	S	REVIEWED THE FOUNDATION EP'S FOR COMPLIANCE; EP-0001 REV.0, EP-0002 REV.0, EP-0004 REV.0, EP-0006 REV.0 EP-0007 REV.0	Processes Reviews
11-12	Para. 5.9	Verify that the EP and KPP request that the user(s) of the BP and KPP report nonconformances to the PI as soon as possible.	S	REVIEWED THE FOUNDATION EP'S FOR COMPLIANCE; EP-0001 REV.0, EP-0002 REV.0, EP-0004 REV.0, EP-0006 REV.0 EP-0007 REV.0	Processes Reviews
(9) Auditor Signature <u>Col N. Crump</u> (10) Date <u>7/28/88</u>					

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-13	DOP 11-2, Rev. D Para. 5.1.1	Verify that the following entries are entered into logbook(s) prior to the start of any experiment and equipment test and whenever changes dictate: a. Title or identifier and revision of EP or EPE and TPs. ✓ b. Title and version number of application software used in data acquisition or reduction. → c. Activity location (company name, address, building, room, or specific field location). ✓ d. List of items to be used (including traceability information such as manufacturer name and lot number, make, model, serial number, or unique identifier of items traceable to calibration records).  EP-0007 (TRAVEL)	S  W/A NOT APPLICABLE S  S	VERIFIED COMPLIANCE VIA LOG BOOK FOR EP-0007 REVD AND SAMPLE DESCRIPTION FORM # G1-2589-5D  VERIFIED TRACEABILITY METHODS USE IDENTIFIED AS A "CHAIN-OF-CUSTODY FORM" SAMPLE-A1-2127-A1	FRANK WILK   J.R. CONNOLLY UOFNM
(9) Auditor Signature <i>W.H. Camps</i> (10) Date 7/28/88					



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-14	DQP 11-2, Rev. D Para. 5.1.3	Verify that the following entries for equipment tests are defined as acceptance/rejection test in the ETP:  a. Indication of acceptance or rejection of the equipment, as measured against performance criteria defined in the ETP. b. Name of individual making the evaluation (printed and signed, including date and time).  _____  _____	N/A NOT APPLICABLE	NO ETP'S HAVE BEEN DEVELOPED.	BARRY SCHWARTZ
11-15	Para. 5.1.3	Verify that corrections to logbook entries are made by the following:  a. Draw a single line thru the incorrect entry without completely obliterating the incorrect entry b. Insert the correction above or adjacent to the incorrect entry. c. Initials of the person making the correction. d. Date of correction.  (TRUDEL)  _____  _____	S	VERIFIED COMPLIANCE TO REQUIREMENTS AND FOUND ACCEPTABLE LAB. FROM EP-0007 LOGBOOK  @ UOFNM	FRAN NIBIK
			(9) Auditor Signature W.H. Camp (10) Date 7/23/88		

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-16	DQP 11-3, Rev. A Para. 5.1	Verify that the PI has filled out a DRMS Index and Tracking Sheet when Rev. 0 of an experiment and equipment test procedure is approved and then has provided it to DRMS staff.  <del>(DOWN STAIRS)</del>	S	EP-0007 WAS INDEXED ON 2/24/86. VERIFIED COMPLIANCE. ALSO EP-0002 & EP-0004	BARRY SCHWARTZ
11-17	Para. 5.5	When the PI determines that the data gathering activity is complete (or the data set has been cancelled), verify that the PI has requested DRMS Records Administrator to begin the closing process for the DRMS data set.	N/A NOT AUDITED	NO CLOSING OF DATA SETS HAVE BEEN ACCOMPLISHED.	BARRY SCHWARTZ
(9) Auditor Signature <u>W. H. Camp</u> (10) Date <u>7/28/83</u>					



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-14	CRITERIA 11 GENERAL	DOES THE AUDITEE CONDUCT APPROPRIATE TRAINING AND CERTIFICATION OF TEST PERSONNEL?	S	SEE ANSWER OF QUESTION # 11-6	FRAN WITNIK
11-15	CRITERIA 11 GENERAL	ARE INDEPENDENT REVIEWS OF TEST PLANS AND PROCEDURES PERFORMED TO IDENTIFY POTENTIAL ERRORS, UNCERTAINTY SOURCES, AND SPECIFIC CONTROL PARAMETERS?	S	THE EP'S ARE REVIEWED FROM A TECHNICAL ASPECT AS IDENTIFIED ON PROCEDURE COURSE	GARDY SCHWARTZ
				W.H. Camp	7/28
				(9) Auditor Signature	(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-17	CRITERIA II GENERAL	DOES THE AUDITEE'S TEST PROGRAM REQUIRE THAT STATE OF THE ART TEST PROCEDURES/INSTRUCTIONS BE PEER REVIEWED?	S	Through objective evidence all Test Procedures/Instructions were peer reviewed.	FRAN NIMIK
11-18	CRITERIA II GENERAL	ARE TEST PROCEDURES REVIEWED BY THE QA DEPARTMENT PRIOR TO ISSUE?	S	Through objective evidence from the EP's, QA Dept reviews prior to issue. The SNL TP's do not need QA Dept. Approval	FRAN NIMIK
<p>(9) Auditor Signature <i>Wendell B. Wilson</i></p>				<p>(10) Date <i>07/27/98</i></p>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
11-19	CRITERIA II GENERAL	DOES THE AUDITER'S TEST PROGRAM SPECULATE THE MINIMUM DOCUMENTATION REQUIRED FOR EACH TYPE OF TEST?	S	Verified through objective evidence from the EP's, the minimum documentation required for each type of test.	F. NIMICK
11-20	CRITERIA II	ARE TEST RESULTS EVALUATED FOR ACCEPTABILITY BY A DESIGNATED INDIVIDUAL; - PROCEDURAL ACCEPTABILITY - EVALUATED FOR DATA ACCEPTANCE?	S	Verified through objective evidence the test results are evaluated for acceptability. Ex. NNWSI-Sandia-IM TUFF Sample Description Form for EP-0007, Rev. 0, 02/09/88 with Stamp of acceptance on 02/11/88, by P.B. Nimick.	F. NIMICK
				[Signature] 07/27/88 (9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
12-1	SNL-NHWISI-QAPP, Rev. 0 Para. 12.1	Verify SNL has established procedures to ensure that tools, gages, instruments, and other measuring and testing equipment used in inspections, tests, and experiments are calibrated at established periods and handled, stored, and maintained to ensure continued accuracy.	S	DOP 12-1, Rev A, Measuring and Test Equipment Control recently issued on 7-21-88	Perry Swartz
12-2	Calibration Service Suppliers	Verify SNL is not using the "Primary Standards Lab" as a source for calibration services (refer to WMPO letter JB-2752, C. Certs to TPOs, dated 9/17/87).	S	(Rock Mechanics Lab) SNL is not performing any level 1 and/or II but did perform a level III experiment in May/June using calibrations traceable back to PS2. Although it is not a violation at this time it poses a potential problem when and if the lab performs level 1 and/or II activities  Frederick J. Reith 7/28/88	For Price Wolfgang Williams Mike McNamee

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
13-1	DQP 13-1, Rev. 0 Para. 4.0	Verify that the PI prepared specific instructions for activities related to handling, shipping, identification, and storage for items and materials.  <i>*NOTE: For QA Level I only.</i>  <u>NOT APPLICABLE AT THIS TIME 02/12/88</u>	N/A	Verified through objective on Et: <u>QNER Order to SNL for an Omega Digital Thermometer use 02/01/88 with R. H. Price - PI properly filled out the instructions QL III</u>  <u>QNER Order to SNL for transducers, thermocouples and force cells calibration services on 04/27/87 with R. H. Price as PI QL III. I traced back to 5/1/82 - 4/06/87, vol 2 Data entry.</u>	B. M. Schwartz
13-2	Para. 4.1	Verify that some form of identification is used for the item or material.	S	<u>Reference to Audit Item NO. B-7 and B-8.</u>	B. M. Schwartz
				<u>William B. Wauson 07/20/98</u>	
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
13-3	DQP 13-1, Rev. 0 Para. 4.3.1	Verify that packaging of particular items or materials is properly done and specified as to the manager by the PI or requestor.	S	Refer back to Audit Item No. 93-1.	B.M. Schwartz
13-4	Para. 4.3.2	If special handling tools are used, verify that the operators are certified.	N/A	As of now there have been no need for special handling tools to be used.  NOT APPLICABLE B.M.	B.M. Schwartz
				William B. Mansel 07/28/88	
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
13-5	DQP 13-1, Rev. 0 Para. 4.4	Verify that SLI 6970, "General Storage of Property and Material," instructions are properly followed.	S	SLI 6970, 8/27/82 replaces 7/17/80 is available in the Director's office, SNL 6300 Dept.	B.M. Schwartz C.M. DESOUZA
13-6		Verify that the procedure worked to is the most recent.	S	Verified through objective evidence that this procedure worked to is of the most recent. Rt. Barry M. Schwarc, 6313 Dept. Copy No. 016, DQP 13-1, Rev. 0.	B.M. Schwartz
				<i>Wendell B. Mansel</i>	07/28/88
				(9) Auditor Signature	(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
13-7	Guidelines for the Evaluation of Safety for HLNW Rep. Proj., Rev. 8, Oct. 1986 <u>Criterion XIII - Handling Storage and Shipping</u>	Determine that inventory access control safeguards prevent unauthorized access to storage areas.	N/A	As of now there are no <del>access</del> protective other safeguards to prevent unauthorized access to storage areas. Investigation should be taken as a result of <del>the</del> <del>to the</del> <del>locked</del> <del>gate</del> <del>to</del> <del>the</del> <del>entry</del> <del>to</del> <del>the</del> <del>area</del> <del>is</del> <del>not</del> <del>for</del> <del>area</del> <del>protective</del> <del>the</del> <del>area</del> <del>around</del> <del>07/24/88</del>	B. M. Schmitt
13-8		Verify that any required environmental controls are maintained and checked for performance tolerances.	N/A	As of now there are no need for environmental controls for issues and materials received. Investigation should be <del>not</del> <del>allow</del> <del>for</del> <del>any</del> <del>handling</del> <del>equipment</del> <del>environmental</del> <del>controls</del> <del>around</del> <del>07/24/88</del>	B. M. Schmitt
13-9		Are lifting and handling devices periodically "Load Tested" and inspected for damage? Are records maintained for these activities?	N/A	As of now there are no special lifting and handling devices used. Investigation should be carried out for <del>lifting</del> <del>and</del> <del>handling</del> <del>devices</del> <del>around</del> <del>07/24/88</del>	B. M. Schmitt
				<i>Walter B. Schmitt</i>	07/24/88
				(9) Auditor Signature	(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
15-1	QAP 15-1, Rev. 0 Para. 5.1.4 and 5.1.6.1	Verify a log is established and maintained by the QA Coordinator in accordance with these paragraphs.	S	A review of the FY88 NCR log was performed and found to be satisfactory (SIX (eight NCRs have been corrected))	Pro Richard
15-2	Para. 5.1.6.2	Verify the QA Coordinator has reviewed the NCR log on a monthly basis.	S	The log provides objective evidence that the QA Coordinator has reviewed the NCR log on a monthly basis	↓
				Frederick G. Kitch	7/27/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
15-3	QAP 15-1, Rev. 0 Para. 5.1.7.2	Verify the QA Coordinator has forwarded the original NCR to the project QA personnel if the organization responsible for the item or activity is not SNL.	N/A not applicable	No NCR's have been written outside of the SNL Organization	Bob Richard
15-4	Para. 5.1.7.3	Verify that QA Coordinator has sent a copy of the NCR to the QASC, the responsible WMPO Branch Chief and SNL's TPO.  See SDR 167	X SDR No. 167	There is no objective evidence that NCR's have been distributed to the QASC, the responsible WMPO Branch Chief and SNL's TPO	↓  Frederick J. Smith 7/27/88

(9) Auditor Signature

(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
15-5	QAP 15-1, Rev. 0 Para. 5.2	Determine and verify the identification and segregation of nonconforming items.  If so, refer to this paragraph.	N/A not applicable	No nonconforming items have been identified by SNL at this time.	Richard
15-6	Para. 5.3	Determine and verify the identification and suspension of nonconforming activities.  If so, refer to this paragraph.	S	NCR No SNL-87-2, dated 7/15/87, stopped work under SNL contract 04-0964. The QA Coordinator has approved suspension as stated in the NCR.	Y
				Frederick J. Ruth	7/27/88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
15-7	QAP 15-1, Rev. 0 Para. 5.4.5	Verify for nonconforming items, the disposition of the NCR has ensured the items listed in this paragraph.	Not applicable	No nonconforming items have been identified at this time	Bob Richards
15-8	Para. 5.4.6	Verify for nonconforming activities, the disposition of the NCR has ensured the items listed in this paragraph.	S	A review of NCR No SNL-88-3 was performed and all the elements of Para 5.4.6 are addressed.	↓
<p>(9) Auditor Signature <i>Fredrick J. Ruth</i></p>				<p>(10) Date <i>7/27/88</i></p>	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
15-9	QAP 15-1, Rev. 0 Para. 5.4.7	Verify the disposition has signed and dated Part III of the NCR.	5	A random sample of 4 NCRs were reviewed and all dispositions had been signed and dated on Part III (NCR Nos. SNL-87-1, 88-1 (88-2, 88-6))	By Richard
15-10	Para. 5.4.10	Verify that nonconforming items involving repair or use-as-is dispositions have been forwarded to WMPO for review and approval.	Not applicable	No nonconforming items involving repair or use-as-is dispositions have been identified at this time.	↓
				Frederick J. Ruth	7/27/88
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
16-1	SNL-NNWSI-QAPP, Rev. 0 Para. 16.2	In the case of significant conditions adverse to quality, verify that measures specified in a procedure will assure that the cause of the condition is determined and action is taken to preclude recurrence.	S	<del>DAL 16-1, Paragraph 4.2</del>	Dob Richards
16-2		Verify if any CARs have been written, and if so, have they been documented in accordance with Para. 16.2?	S	Car No SNL-881 on 7/21/88 - No response has been received at this time (due 7-1-88) Has not been issued yet	↓
				Frederick J. Smith	7/28/88
				(9) Auditor Signature	(10) Date



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
16-3	SNL-NNWSI-QAPP, Rev. 0 Para. 16.4	Verify copies of corrective action documents for QA Level I and II activities have been sent to the WMPO and QASC.	S	Copies of CAR No. SNL-88-1 will be sent to WMPO and QASC.	Richardson
16-4		Review trend analysis reports to determine if CARs are included. <i>No need for trending at this time as very few audit findings and NCR's have been written. Requirement will be in the next revision of the SNL QAPP for NCRs.</i>	S SOK SOK No	<i>JOK</i> <del>See Audit Item Two</del> <i>JOK</i> <del>see Element 18, Audits</del> <del>No trending analysis has been performed. Need a trending analysis procedure</del> SEE OBSERVATION NO. 88-06-03 8.9. 9-14-88 <i>Fredrick J. Ruth</i> 7/28/88	

(9) Auditor Signature

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
16-5	SNL-NNWSI-QAPP, Rev. 0 Para. 16.4	Verify CARs are sent to appropriate levels of SNL management for action.	S	Car No SNL-88-1 has not been issued yet	Profr Richards
16-6	QAP 16-1 Rev. 0 Paragraph 4.2.2	The QA Coordinator shall monitor the CAR log.	S	The QA Coordinator has signed the log indicating in monthly review	↓
				<p><i>Fredrick J. Rutch</i> 7/88/88</p>	
				(9) Auditor Signature	(10) Date



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-2	DQP 17-1, Rev. 0 Appendix D Para. 2.1.2	Verify that QA Level I and II documents meet the requirements of Para. 2.1.2 thru 2.1.7.  <i>Reason</i> Possibly clarify statement as to meaning of External Dept + Program vs. incoming in the Dept. @310.	S	<p>① SNL, 4/14/87, Norman to Subramanian, M. TAYLOR RMS # SL# 000571, Acc # SL# 100623, QLI</p> <p>② SNL, 12/11/86, Carr to Subramanian, M. TAYLOR RMS # SL# 000074, Acc # SL# 100086, QLI</p> <p>③ SNL, 10/31/86, MacDougall, RMS # SL# 000482, Acc # 100534 (QLI) <del>Ad. Dept. 10/31/86, MacDougall, RMS # SL# 000482, Acc # 100534, QLI</del></p> <p>④ SNL, 4/02/86, Schwartz to Richards, RMS # SL# 001010, Acc # SL# 101062, QLI <del>Ad. Dept. 4/02/86, Schwartz to Richards, RMS # SL# 001010, Acc # SL# 101062, QLI</del></p>	
17-3	Para. 2.2.1.3	Verify that the Records Coordinator enters the document RMS number in the RMS assignment logbook.  <i>Reason</i> Clarify why two diff. notebooks are used for to tie into the RMS assignment logbook.  Ex. RMS # SL# 001869 Acc # SL# 101921 Best Avail. Copy - Stamped Start - Stamped 8/14/86 - Stevens - G313 to Distr. Revised NNSI Iss. hierarchy, SCP outline, short titles & Iss v INs, & other Assort. Det.	S	<p>⑤ Traceability of SNL Calibr. of Calipers</p> <p>⑥ SNL, 01/06/87, Zech to Sinnock Proposed Case of action &amp; Develop. of the Site Eng. Properties Data Base. RMS # SL# 000827, Acc # SL# 100879, QLI <del>Ad. Dept. 01/06/87, Zech to Sinnock, RMS # SL# 000827, Acc # SL# 100879, QLI</del></p> <p>MC</p>	

(9) Auditor Signature W. H. Combs (10) Date 7/27/88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-4	DQP 17-1, Rev. 0 Appendix B  Para. 2.2.1.5	Verify that the documents are placed in a protected, secure holding area for temporary storage prior to completion of processing.	S	FIRE 2 HOUR RATED SAFE	M. TANG
17-5	Para. 2.2.1.6	Verify that the Records Coordinator is maintaining a sequential log of RMS numbers.	S	VERIFIED THAT THE RC IS MAINTAINING A # SEQUENTIAL LOG THRU THE ASSIGNMENT LOGBOOK  MC	

(9) Auditor Signature /li. +1. Camp (10) Date 7/27/82









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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-10	DQP 17-1, Rev. 0 Appendix D  Para. 2.1.1	Verify that the Records Coordinator has checked the Inventory list against the contents of the transfer box to ensure that the actual contents match the "Digital" contents of the box.	S	Examples SL 000955, SL 001038, SL 001328  VERIFIED COMPLIANCE  AND IT WAS FOUND  SATISFACTORY	May T
17-11	Para. 2.1.2	Verify that the Records Coordinator has received from MASSF the Diskette Receipt Acknowledgment Form(s).	S	VERIFIED COMPLIANCE  SEE ATTACHMENT @ P104          mc	May T

(9) Auditor Signature *W.H. Camp* (10) Date *7/27/88*

**DISKETTE RECEIPT ACKNOWLEDGEMENT FORM**

Date:

To: NNWSI Microfilming and Archival Storage Services  
Facility  
Holmes & Narver Engineering Records Library  
Bldg. 310, Nevada Test Site  
Mecury, Nevada 89023

From: SNL Department 6310 NNWSI Records Center

Subject: Receipt of QARMS Diskette(s) labeled:

NAME MEDIA  
SL\*30011\*05-05-88\*TX>M  
\_\_\_\_\_  
\_\_\_\_\_

Signed: [Signature] Dated: 11 MAY 1988

\*\*\*\*\*

**VERIFICATION OF RECEIPT**

I have received the QARMS Diskette(s) identified above.

Signed: Lisa H Robinson Dated: 5/25/88

Please return a verified copy of this acknowledgement form to:

SNL Department 6310 NNWSI Records Center  
Sandia National Laboratories  
Division 6316  
Albuquerque, New Mexico 87185

Thank You.

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17-12	DQP 17-1, Rev. 0 Appendix D Para. 2.3.1	Verify that the Records Coordinator has maintained a one-to-one correspondence between a Digital "Box" and the physical unit transferred to the MAGSP.	S	<p>Transmitted Box 52 f 30013, N/A 51 Orig. Rec. Dup'd box. <input checked="" type="checkbox"/> Receipt Ack'd. (No sig.)</p> <p>Verbatim of Receipt, <del>from</del> (No sig.)</p> <p>② Transmitted Box 52 f 30011 - N/A 51 Orig. Rec. Rec'd. <del>from</del></p> <p><input checked="" type="checkbox"/> Rec. Ack'd. Fin, 5/11/88 + Verif. of Rec. 5/25/88 M. TANIG</p>	
17-13	Para. 2.4.1	Verify that the Records Coordinator completes the Cross Reference Slip Sheet with the identification of the one-of-a-kind item and its permanent storage location.	S	See ref. p. 102A - 17-8 Item	ME

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-14	DOP 17-2, Rev. A Para 4.2.A	Verify that the DRMS Coordinator has ensured that this DOP is understood by the DRMS staff.	S	05/02/88 Training of: Familiariz. + Trng F/ the Data Ker. Mgmt Syst. (DRMS) given by B. Schwartz letter 05/03/88 Schwartz to Koj	Barry Schwartz
17-15	Para. 4.1.C	Verify that the DRMS Coordinator has sent the completed original logout/return forms to the RA (staff) for filing in the DRMS System Notebook for logout and return of notebooks	S	<p>Verified through obj. evidence:</p> <p>① Run + TRI @ SNL Notebook # 5VLOA-02-21-87, Vol. 2 only, 6/13/88, Ret. 6/13/88, by Glenn</p> <p>② Run + SNL @ TRI, Notebook # LOS-A-6/30/86, Vol. 1 of 1, by Yolanda Hubbard, 3/19/87, Ret. 4/6/87 by Yolanda Hubbard.</p> <p>③ Run + SNL @ TRI, Notebook # LOS-A-05/21/81, Vol. 1 of 1, by Yolanda Hubbard, 3/05/87, Ret. 3/9/87 by Yolanda Hubbard</p>	

MC

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17-16	DOP 17-2, Rev. A Para. 4.2.D	Verify that the DRMS Coordinator has provided the working set copy of each closed Data Set Notebook to the SNL NNSI Project RMS Staff within 10 working days of its closed date.	N/A	NOT APPLICABLE NO DATASET NOTEBOOKS HAVE BEEN CLOSED AS YES.	B. SCHWARTZ
17-17	Para. 5.1	Verify that when the RA receives records with a transmittal sheet from the DC, the RA will initiate Document Transfer Sheets for each record, answer all questions on the transmittal sheet, and return the the transmittal sheet to the DC within 10 working days of receipt.	S	VERIFIED COMPLIANCE THROUGH THE REVIEW OF DOCUMENT TRANSFER SHEETS  MC	B. SCHWARTZ



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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-20	DOP 17-2, Rev. A Para. 5.2.6.A.2	Verify that the records are filed in the working and master Data-Set Notebooks after computer input is completed.	S	VERIFIED DATASET- NOTE BOOK 5/1/07-03/01/81 INDEX & TRACKING, DATA INDEX	B. SCHWARTZ
17-21	Para. 5.3.4	Verify that a back-up log is kept by the RA indicating the type of computer media, the date and time of back-up, and the initials of the RA performing the back-up. A log entry will be made (in black indelible ink) each working day for data files and whenever the DMS computer program is changed for program files. If no changes to data files are made during the day, a back-up is not made, however, the log will contain a statement that no changes were made. The log will be kept in the same file cabinet as the back-ups at the working location of the RA.	S	VERIFIED COMPLIANCE THROUGH THE REVIEW OF BACKUP LOG.	MC





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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-23	DOP 17-1 Para. 5.5 Appendix B Para. 2.3.1	Verify why there is a conflict in the correction of records (RC vs. authorized person).  <u>A CLARIFICATION OF THE PROCEDURE IS NEEDED. AN OBSERVATION WILL BE WRITTEN!</u> <u>SEE OBSERVATION NO. 88-06-01</u>	OAS <del>N/A</del> X S 8/18/88	THERE SEEMS TO BE NO CONFLICT IN THE CORRECTION OF RECORDS.	M. TANG
17-24	Para. 5.4.1	Determine why a QA document would be deleted from the document type list.	N/A NOT AUDITED	NO DOCUMENTS HAVE BEEN ELIMINATED FROM THE LIST AT THIS TIME.	M. TANG.



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17-28	SNL-KNWSI-QAPP, Rev. 0 Para. 5.3.2.2	Verify that the QA records are protected from unauthorized access and that the Records Coordinator maintains a list of authorized project personnel. Verify that a check-in and check-out is provided.	<p>8/18-18 X S</p>	<p>AT THIS TIME THE RC HAS NOT ESTABLISHED A LIST OF AUTHORIZED PERSONNEL TO PROTECT THE RECORDS FROM UNAUTHORIZED ACCESS. NOT SYSTEM IS ESTABLISHED TO CHECK PERSONNEL IN OR OUT OF RECORDS STORAGE FACILITY. <del>AN SDR</del> <del>BE CORRECTED BY Agency 8-1-88</del> Corrected during audit</p>	M. TARK

MC

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-27	CRITERIA 17 GENERAL	DOES THE AUDITEE HAVE AN APPROVED "RECORDS MANAGEMENT PLAN"?	S	DEVELOPED, AND IN THE INITIAL REVIEW STAGES OF APPROVAL WITH IMPLEMENTING PROCEDURE AP-1.7Q	M. TANG
17-28	CRITERIA 17 GENERAL	DOES THE PROGRAM CLEARLY DEFINE WHAT RECORDS ARE TO BE GENERATED AND RETAINED?	S	YES, IN DOP 17.1 APPENDIX A	M. TANG.
			MC W.D. Camp	7/27/88	(9) Auditor Signature
				(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-29	CRITERIA 17 GENERAL	DOES THE PROGRAM CLEARLY DEFINE THE RESPONSIBILITIES OF QA IN THE RECORDS PROGRAM?	N/A NOT AUDITED	NO OBJECTIVE EVIDENCE, DUE TO THE PROGRAM JUST BEING DEVELOPED	M. TANG
17-30	CRITERIA 17 GENERAL	REVIEW A SAMPLE OF THE QA RECORDS FOR: - LEGIBILITY - AUTHENTICATION - PROPER FILING AND RETRIEVABILITY - CONTROLLED ACCESS PROVISIONS <del>RECORDS</del> WMC	S	DURING AUDIT PROCESS A REVIEW OF APPROX. 50 DOCUMENTS WAS ACCOMPLISHED. ALL DOCUMENTS WERE FOUND TO BE ACCEPTABLE	M. TANG
				W.H. Camp	7/27/88
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-31	CRITERIA 17 GENERAL	HAS THE RESPONSIBILITY TO VERIFY RECORD ADEQUACY AND COMPLETENESS BEEN CLEARLY DEFINED?	S	YES, CLEARLY DEFINED IN DOP 17-1 REV.0	M. TINE
17-32	CRITERIA 17 GENERAL	ARE RECORDS LEGIBLE AND IDENTIFI- ABLE TO AN INDEX?	S	THE "MASTER LISTING OF FINANC. CODES" IDENTIFIES THE INDEX.	
			W.H. Camp	7/27/88	
			(6) Auditor Signature	(10) Date	

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
17-33	CRITERIA 17 GENERAL	CHECK THE RECORDS FACILITY, ENVIRONMENTAL CONTROL EQUIPMENT FOR PROPER CALIBRATION STATUS.	N/A NOT APPLICABLE	DUE TO THE DUAL STORAGE METHOD OF FILING RECORDS, NO SPECIFIC HUMIDITY CONTROL ARE PRESENT, OTHER THAN BUILDING NORMAL AIR-CONDITIONING	M. TANG
17-34	CRITERIA 17 GENERAL	DOES THE AUDITEE'S QA RECORDS PROGRAM PROVIDE FOR THE INTERM STORAGE OF COMPLETED RECORDS FROM TIME OF COMPLETION UNTIL TIME OF ENTRY INTO PERMANENT STORAGE?	S	IT WAS OBSERVED DURING THE AUDIT THAT A 2 HOUR FIRE RATED SAFE, IS LOCATED IN THE RECORDS FACILITY.	
				C. H. Camp	7/27/88
				(9) Auditor Signature	(10) Date

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, NA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-1	SNL-MNISI-QAPP, Rev. 0  Para. 18.1  QAP 18-1, Rev. 0, Para. 1.0-2.0	Verify that audits are being performed on a periodic basis to verify compliance with all aspects of the QA program regarding QA Level I and II activities and to determine the effectiveness of the program.	S	Verified through objective evidence from FY 87 and FY 88 Audits. Ex. ① New England Research, NER 88-1 Audit, QL II. ② Parsons Brinckerhoff, Quade & Douglas, PB 88-1 Audit, QL II. ③ IT Corp., ITC 88-1 Audit, QL II. ④ IT Corp., ITC 88-2 Audit, QL II. See Item 18-1 at 8-15-88	Richard M. Baehr
18-2	Para. 18.2  QAP 18-1, Rev. 0, Para. 4.1.1	Verify that internal, external, and supplemental QA audits are scheduled in a manner that shall provide coverage and coordination with ongoing QA program activities.	S	Verified through objective evidence from FY 87 and FY 88 Audit Schedules. 8-15-88 See Item 18-1 A. RECOMMENDATION TO INCLUDE the month of Sept. for FY 88 Audit Schedules and have revised to show.	R.M. Baehr
Lowell B. Mansel 07/27/88 (9) Auditor Signature					



WMPO AUDIT CHECKLIST NO. 88-06-01

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(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-3	SNL-MMMSI-QAPP, Rev. 0 Para. 18.3 <i>QAP-18-1, Rev. 0, para 4.2</i>	Verify that the audit plan, personnel, and selection of the audit team are within the guidelines of the audit preparation process.	S	<i>Verified through objective evidence <del>from Audit Item No. 18-1-A.</del> S.N. 8-15-88</i>	R. Bachr
18-4	Para. 18.4 <i>QAP-18-1, Rev. 0, Para 4.3</i>	Verify that audits are performed in accordance with a procedure using checklists as early in the life of the activity as practical and shall be continued at intervals consistent with the schedule for accomplishing the activity.	S	<i>Verified through objective evidence of audits NER 88-1, P888-1, ITC 88-1, ITC 88-2.</i>	R. M. Bachr
<i>William B. Mansel</i>				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-5	SNL-NWNSI-QAPP, Rev. 0  Para. 18.5	Verify that an audit report was compiled by the audit team, signed by the lead auditor, issued within 30 working days, and contained the pertinent information regarding the audit.  <u>SEE SDR-166</u>	X	Through objective evidence, the MAC/EC, MAC 08-1, AUDIT QLI, INTERNAL SNL 07-1 and SNL 08-1 AUDITS, showed NO report out for MAC 08-1 and SNL 08-1 since the 30 day limit, also, the SNL 07-1 was past the 30-day limit. SEE ITEM 18-5-A and SDR-166  Observation for controlling filing dates for the audit report from 07/27/88 the SNL-QAPP and SNL QAP-18-1, 30 days for QAPP and 15 days for QAP.	R. Baehr
18-6	Para. 18.6	Verify that the adequacy of audit responses have been evaluated by the appropriate organization.	S	Verified through objective evidence of audit PB-08-1, this was the only audit with findings for FY88 AUDITS and UNM-87-06 for FY87 AUDITS.	R.M. Baehr
18-7	Para. 18.7 SNL-QAP-18-1, Rev. 9 Para. 4.5	Verify that follow-up action was performed to determine corrective action was taken.  <u>SEE SDR NO. 171</u>	07/28/88 WMB S X	Verified through objective evidence that the PB-08-1 AUDIT for corrective action will be verified. For the UNM-87-01 audit, the contract was closed and corrective action was verified. THE INTERNAL showed delinquent by 3 findings on up action on the other 9 findings. Wendell R. Whorl 07/27/88	R.M. Baehr  FORM 18-5-A 18-7-8

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18-8	SNL-NNOISI-QAPP, Rev. 0 Para. 18.8 <i>QAR-18-1, Rev. 0, Para. 5.0</i>	Verify that the audit records control the appropriate information included together which are to be QA records.	S	<i>Verified through objective evidence of audits UNM-87-01, ITC 98-1, ITC 88-2, FE 88-1, and BNI 88-1 Audits.</i>	R. Baehr
18-9	Para. 18.9	Verify that copies are properly distributed to appropriate personnel and organizations.  <i>* Will request a letter of Gertz to Hunter to have DOE/WMPO RQM on the Distribution List for audit reports.</i>	S	<i>ITC-88-1, AUDIT, 10/20/87 ITC-88-2, AUDIT, 5/02/88 Bechtel 87-1 AUDIT, 06/23-26/87 See Item 18-9-A For objective evidence. H. Y. 8-1-86</i>	R. M. Bucher
(9) Auditor Signature <i>Wendell E. Mansel</i>				(10) Date <i>07/27/88</i>	



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S. X. N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
18-11	Guidelines For the Eval. of QA Prog For HLENW Rep. Proj. Rev. 1, October 1986 <u>Given XVIII -</u> <u>AUDITS</u>	Verify audit schedules for reasonable freq., i.e. (A) Are major contractors audited more frequently than minor ones? (Bechtel, PBQD)  (B) Are <del>audit</del> <sup>with 07/26/88</sup> audits timed with consid- eration of major activities, milestones, or deliverables?  Do corrective action responses address root causes and their corrective actions?	S  S	Verified through objective evidence on the FY87 and FY88 Audit Schedules, all contractors are audited annually major and minor.  Same as above.	R.M. Becker  R.M. Becker
18-12		Do trend analysis reports exist? SEE RE 84 OBSERVATION NO. <u>98-06-03</u> 89. 7-28-88	S	Verified through objective evidence of PB88-1 and UH M87-01 AUDITS.	R.M. Becker
18-13		Do trend analysis reports exist? SEE RE 84 OBSERVATION NO. <u>98-06-03</u> 89. 7-28-88	N/A	As of now there has been no need for trending audits. A recommendation is to be made to handle trending audits through a procedure.	R.M. Becker
18-14		Do audit reports address all applicable criteria, appear timely, and contain effectiveness assessment statements?	S	See ITEM 18-1-A.	R.M. Becker
				<u>Wendell B. Munnell</u>	<u>07/26/88</u>
				(9) Auditor Signature	(10) Date

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-1	Tuff Data Base 1.2.1.3.1.S, Rev. II	Verify the technical data transmitted to the Project is in fact the same data that was transmitted from the Local Records Center.	S	DA0003A water level data for VE25 pit 1 and DA0003D lithologic units were checked and found to be the same.	G. Reutman M. Krebs-Jacobsen S. Douglas
T-2		Verify the procedure used to track the use of technical data so that participants can be notified of changes.	S	Work request forms and job logs for DA0003A and DA0003D were checked and provide adequate traceability. There have been no changes to the SEPOB information at partition Q1 at this time. There has only been one request for data from the Q1 partition at this time.	G. Reutman M. Krebs-Jacobsen S. Douglas
				Margaret C. Buske 7-29-88	
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-3	Tuff Data Base 1.2.1.3.1.S, Rev. B	Verify traceability of data to their sources. Verify the QA level of that data.	S	<p style="text-align: center;">Audit Item</p> <p>Data in T-1 were traced to their sources. The QA levels were TBD in file.</p>	C. Reubman
T-4		Verify documentation for the retrieval and reporting of data to authorized users. Verify the traceability, where necessary, of any product to its source data base version and ultimately to the original (authorized) reference(s) from which the data derive.	S	<p>The documentation is available in work request form. The documents in T-1 were checked.</p>	C. Reubman
			(9) Auditor Signature	(10) Date	

Margaret C. Banks 7-29-88

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 5	Tuff Data Base 1.2.1.3.1.S, Rev. B	Verify the documentation for listing authorized users. Verify the documentation for addition and/or deletion of authorized user(s) to the system.	S	There are 4 authorized users. Documentation was checked for both additions & deletion.	C. Pautman M. Krelbs-Jorgensen S. Daugler
T-6		Verify that the internal SNL users of the technical data have in fact documented how the changed data affects the use to which it was put originally.	S	No data in the SEPAB has been changed to date. Any additions/changes to the data base are covered DOP 3-7 Rev. 1.	C. Pautman M. Krelbs-Jorgensen
				Margaret C. Burke 7-29-88	
				(9) Auditor Signature	(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-7	Tech Data Base 1.2.1.3.1.S, Rev. II	Follow-up of SNI responses to observations 8, 10, and 11 of WMPO Audit 87-5. Verify the documentation of the quality level identifiers in the Technical Data Base. If these identifiers are "to be determined" or "indeterminate" verify the process by which these items are made credible (qualified) and available for Project level use.	S	The Technical Data Advisory Group (TDAG) and the Technical Systems Advisory Group are giving guidance for what belongs in US EIR and SEPDB. Internal procedures are in place for both the EIR and SEPDB. The SEPDB contains TBD item identifiers for QA level. These are being checked internally by JNL through BOP 3-11	J. Schelling C. Rautman
T-8		Verify the screening of incoming data for proper authorization prior to input.	S	The data authorizations Audit Item # for the items in T-1 were signed by Larry Hayes (USGS TPO)	C. Rautman M. Krebs- Espersen
				(9) Auditor Signature	(10) Date

Margaret C. Drake 7-29-88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 9	Tuff Data Base 1.2.1.3.1.S, Rev. D	Verify the establishment of utility software change control procedures, input of data to the data base, data base management, and internal auditing procedures. In what state of development are they?	NA	This ties back to the modified work plan. Since the work plan has been modified (new title "Site & Engineering Properties Data Base (FY 88)) these items are no longer applicable.	C. Rautman
T 10		To what work plan is this activity being accomplished? Who is the principal investigator for this work plan? Has the name of the WBS element been changed?  <u>SEE OBSERVATION NO. 88-06-05</u> <u>8/9-26-88</u>	S X 9/24 9-26-88	The 88 version of the Modified Work Plan is being used. This has not been approved. C.A. Rautman is the PI. The name of the WBS element has been changed to Site & Engineering Properties Data Base. See Audit Item #3-2 from Steve Davis.  Margaret C. Beaka 7-29-88	C. Rautman M. Krebs- Jaspercau

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, WA	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 11	Tuff Data Base 1.2.1.3.1.S, Rev. B	The work plan identifies several planned procedures. What is the status of the development of these procedures?	NA	The procedures under the DOD have been scrapped.  not applicable	C. Paulman M. Krebs- Jaspersen
T 12		Has an updated user's manual been published?	NA	Since the TUFF Data Base no longer exists, no updated users manual has been published.  not applicable	C. Paulman M. Krebs- Jaspersen
				Margaret C. Paulman 7-29-88	
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-- 12-1	DOP 3-11 Rev 0	Verify use of Data Abstraction Forms for the submission of data into the SEPDB.	S	Verified SI/LOIA-6/24/80 → DA 0033 SI/LOIA-3/29/82 → DA 0033	Berry Swartz Fran Nims Chris Ruffalo
T- 12-2		Verify the use of a technical review of a data type SAND document.	S	Verified	
T- 12-3		Verify use of data compilation forms for the preparation of data for entry into the SEPDB.	S	Data compilation forms are Appendix A of report. Reviewers do a spot-check of a sample of the data. Verified Checked data from the data records files thru the data compilation forms to the SEPDB QI printouts for SI/LOIA-6/24/80 → DA 0033 SI/LOIA-3/29/82 <del>7/29/82</del>	

(9) Auditor Signature

(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-13	Surface Facilities 1.2.4.3.2.5, Rev. II	<p>Verify the documentation for establishing the criteria used to develop the conceptual designs for the surface facilities.</p> <hr/> <hr/> <hr/> <p>Verify the documentation that justifies and establishes the Special Studies for Advanced Conceptual Design. To what quality level are they being conducted? Has the quality level been properly assigned? Is the QA level of the study consistent with the QA level of the DIM?</p> <hr/> <hr/> <hr/>	S	<p>The work plan <sup>1-2482-86</sup> for surface facilities and the DIMs for various activities establish the criteria. The RDR is referenced in the BECHTEL contract.</p> <hr/> <hr/> <hr/> <p>Work Plan 12432-87 establishes the Special Studies. They are being conducted to a QA Level II. The DIMs for <sup>ESAND88-7051</sup> the PMP study (DIM16) and the SAND87-7082 (DIM 28) <del>have</del> - QA Level II. The quality level has been assigned by the HNUWI QA Level Assignment sheet on the back of the work plan which is in accordance with the procedure QAP 2-3.</p>	R. Hill H. Hordayal P. Hill H. Hordayal
Margaret C. Benda				7-29-88	
(9) Auditor Signature				(10) Date	

X1

(1) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 15	Surface Facilities 1.2.4.3.2.S, Rev. II	<p>For reports that have been published to support ACP of the repository facilities, has data been used which was collected without the controls of a QA plan? Has data been collected without approved procedures in place?</p> <hr/> <p>SEE SDR NO. 176</p>	X	<p>Yes. SANDBB-7051 "Probable Maximum Flood (PMF) Control Study" The DIM to (016) to control this problem was prepared incorrectly. See SDR NO. 176</p>	H. Madryall
T 16		<p>How has this data been handled? (Refer to SOP-03-03 controls)</p> <hr/> <p>SEE SDR NO. 176</p>	X	<p>There has been no attempt at this point to qualify the data used in SANDBB-7051. See SDR NO. 176</p>	H. Madryall
			(9) Auditor Signature	(10) Date	

Margaret C. Burke 7-29-88

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-17	Surface Facilities 1.2.4.3.2.S, Rev. D	How are reviews for studies documented? What are the mechanisms for selecting the type of review that studies receive? What procedures are involved to show review/approval process? <i>What are the qualifications of the reviewers and how are they documented.</i>	S	Reviews for studies conducted by Ecdote are conducted and documented in accordance with DOP 6-2. For the review of SAND 88-7051, the Department 6310 Manuscript Review Sheet was initiated 3-22-88 and approved 4-4-88. It contained several "white out" corrections. The procedure lacks the mechanism for review. The reviewer and referee certifications were on file and are adequate. [See R. Pope, H. MacDougall, and Subra.]	H. MacDougall
T-18		Are assumptions necessary to perform the necessary study activities adequately described and reasonable? Where necessary, are the assumptions identified for subsequent verification as the detailed study activities are completed?	S	The assumptions used for the SAND 88-7051 are listed under section 2 of the report. Five comments were made on the assumptions during the SANDIA DOP 6-2 review. These comments are documented and resolved on the BNI Job No 16039 form dtd 10-23-87.	H. MacDougall
				Margaret C. Burke	7-29-88
				(9) Auditor Signature	(10) Date

(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T 19	Surface Facilities 1.2.4.3.2.S, Rev. D	Are the applicable reference documents, such as codes, standards, and regulatory requirements, properly selected and identified, and were their requirements incorporated in the study?	S	SAND 88-7051 lists the applicable reference documents. These references are also contained in the closest records on micro film record R-415-C-110. The codes were properly selected and the requirements were incorporated in the study.	H. Neasey R. Hill
T 20		Does documentation exist for the applicability or appropriateness of the assumptions used and planned methods?	S	The reviews for SAND 88-7051 and the DIM 15 Design Review checklist includes items concerning the assumptions and the basis for design.	H. Neasey R. Hill
				Margaret C. Benke	7-29-88
				(9) Auditor Signature	(10) Date



(3) AUDIT ITEM NO.	(4) QUALITY ELEMENT & REFERENCE	(5) STANDARD QUALITY REQUIREMENTS AUDIT GUIDELINES	(6) RESULTS S, X, N/A	(7) SUMMARY OF INVESTIGATION	(8) PERSON CONTACTED
T-21	Surface Facilities 1.2.4.3.2.S, Rev. 0	Is the study output reasonable compared to the assumptions? How is this verified?	S	SAND 88-7051 underwent a review in accordance with DOPG-2. This review was documented in a Department 6310 Manuscript Review Sheet approved 4/4/88. The comment sheets showed no evidence that the reviewers found inconsistencies between the assumptions and conclusions in the study.	H. Madrugall R. Hill
T-22		Is the state of the art sufficiently advanced to permit the development of the study as specified? How is this verified?	S	The state of the art is verified by the review referenced in Audit Item No T-21 (above). The study used U.S. Weather Service by dramatic report Report No 498 Sept 1977 (Reprinted in 1984) for the development of the Probable Maximum Precipitation. This is referenced in the ANSI Standard 2.8 "American National Standard for Determining Design Basis Flooding at Power Reactor Sites."	H. Madrugall R. Hill
				Margaret C. Beale 7-29-88	
				(9) Auditor Signature	(10) Date