

SATISFACTORY FINDINGS:

The CNWRA Directors requested that the element managers (EMs) retrieve active scientific notebooks (scientific notebooks that had entries from December 31, 1998 to present) from their staff for their various activities. After the EM reviewed the notebooks they were given to CNWRA QA staff for this surveillance activity that started on August 3, 2000. This surveillance covered the review of active scientific notebooks that have been archived, in-process, and copied scientific notebooks for compliance to QAP-001, *SCIENTIFIC NOTEBOOK CONTROL*, Revision 3 as instructed by the Center of Nuclear Waste Regulatory Analyses (CNWRA) Director of Quality Assurance (QA). This review of 188 scientific notebooks lasted until August 31, 2000. It took this period of time to review the scientific notebooks listed on the attached spreadsheets due to the travel and workload commitment of the CNWRA staff.

A scientific notebook review checklist based on QAP-001 requirements was generated and used as a guide for the review. For the scientific notebooks that were archived the review results were documented on the checklist form by QA. The cognizant EM reviewed the scientific notebook and form for the discrepancies that were identified. After the discrepancies were corrected the EM signed and dated the review form stating that all discrepancies have been corrected. The archived scientific notebooks with the form were placed back in the QA Records room. Most of the in-process scientific notebooks were collected and reviewed by the element managers and then given to QA for review. The discrepancies were identified by post-it notes and given back to the element managers or staff members for corrections. The review of copied scientific notebooks consisted of retrieving the copied notebook out of the QA files and noting the discrepancies as UNSATISFACTORY FINDINGS.

Out of the 49 **archived** notebooks checked nine had no discrepancies. Out of the 139 **in-process** notebooks checked 48 had no discrepancies.

UNSATISFACTORY FINDINGS:

Discrepancies found in CNWRA scientific notebooks are as follows:

Archived scientific notebooks (49 reviewed)

- 32- contained cross outs that did not have initials/date.
- 24- had missing or no ending statement as required by procedure
- 8- contained entries not signed/dated
- 6- had missing or incomplete initial statements
- 5- used pencil to make entries or comments
- 2- did not have complete header/footer information
- 1- had some text covered
- 1- used white out to make correction

UNSATISFACTORY FINDINGS: (continued from page 2 of ⁴ 8) *9/15/2000*

In-process scientific notebooks (139 total)

(8 - were not available at this time and 17 - were copied scientific notebooks)

- 64- contained cross outs that did not have initials/date.
- 15- contained entries not signed/dated
- 9- had missing or incomplete initial statements
- 8- used pencil to make entries or comments
- 6- had page numbers missing or covered
- 3- Electronic notebooks had missing or no ending statement as required by procedure

I have also recorded the discrepancies found during the review of the copies of scientific notebooks located in the QA Records room so that the appropriate follow-up actions can be initiated as necessary:

- SN 175 - Crossouts need initials and date on pages: 10, 20, 21, 28, 29, 32, 40, and 43. Signature and date on entries needed.
- SN 181 - Crossouts need initial and date on pages: Front, 4, 5, 9, 10, 11, 13, 14, 16, 19, 91, 94, 96, 98, 99, 101, 104, 105, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 133, 134, 135, 137, 138, 139, 140, 141, and 142.
- SN 189 - Crossouts need initial and date on pages between 27 and 28, 35, 39, 67, 68, 94, 97, 101, 108, 110, 114, 115, 116, 160, 161, 168, 170, 239, and 261. Page numbers not always copied or covered
- SN 141 - Needs initial statement, Crossouts need initial and date on pages: 6, 18, 13, 17, 19, 22, 36, 59, 67, 71, 83, 93, 94, 103, 110, 117, 119, 124, 125, 126, 131, 137, 143, 149, 155, 161, 169, 174, 175, 192, 193, 200, and 204. Information added, but not signed and dated on pages: 96, 197, and 199.
- SN 358 - Page numbers covered, Crossouts need initial and date on pages: 12, 21, 45, and 50.
- SN 359E - No initials, SN3 not in header or footer, last note not signed or dated.
- SN 261 - Crossouts need initial and date on pages: 8, 13, 15, 16, 21, 23, 27, 34, 37, 39, 40, 41, 43, 44, 51, 56, and 82.

UNSATISFACTORY FINDINGS: (continued from page 3 of 4)

- SN 312 - Crossouts need initial and date on pages: 31 and on page dated 3/23/2000 in second copy. No last review statement for second copy, page numbers not copies for second copy. The second copy has later dates than first copy. *3/23/2000*
- SN 268 - Crossouts need initial and date on pages: 6, 25, and 33.
- SN 363 - Crossouts need initial and date on pages: 2, 6, 9, 10, 11, 13, 15, 17.
Attachment pages crossouts: 32, 35, 40, 42, 56, 57, 87, 88, 112, 114, 171, 118, 121, 123, 126, 145, 149, 152, and 153.
- SN 338 - Crossouts need initial and date on page: 5.
- SN 375 and 376- Pages not numbered. Needs initial statement. No signature an date entries.
- SN 353 - O.K.
- SN 344 - O.K.

In addition the QAP-001 procedure requires that laboratory and field activities initial and in-process entries include equipment and materials to be employed during the experiment, including any necessary design or fabrication of experimental equipment. Measuring and test equipment to be identified by item and its calibration status documented. This information was not being documented as required.

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES



SCIENTIFIC NOTEBOOK REVIEW CHECKLIST RECORD

Scientific Notebook No.: _____

Accomplished

1. Initial entries per QAP-001

2. Dating of entries

3. Corrections (crossed out, one line through w/initials/date)

4. White out not used

5. Page number visible on original notebook

6. In process entries per QAP-001

7. Figure numbers present

8. Text visible

9. Electronic Scientific Notebook changes initialed and dated

10. Permanent ink or type only

11. Signing of entries (not required on each page)

12. Statement at the end of electronic Scientific Notebook print outs—"No original text removed"

13. Electronic media in the scientific notebook properly labeled

Discrepancies have been identified. Yes _____ No _____

Checker: _____

Date: _____

The discrepancies identified in this Scientific Notebook Review Checklist have been addressed by: _____

Signature _____

Date _____

25/11

Scientific Notebook Reviews

Review Date	Notebook Number	ARCHIVED NOTEBOOKS CONTAINED THE FOLLOWING PROBLEMS:										
		X-Outs (Initial&Date)	Ending Statement	Initial Statement	Pencil Used	Entry Signed/Dated	Text Covered	Use of White out	Page Nos	In-process entries	Fig. Nos Text covered (Initial&Date)	ESN Changes Ink/Typed Electronic Media
8/14/00	163	(No discrepancies)										
8/11/00	170	(No discrepancies)										
8/14/00	221	Yes										
8/11/00	239	(No discrepancies)										
8/14/00	244	Yes										
8/14/00	246	(No discrepancies)										
8/14/00	252											
8/11/00	278	(No discrepancies)										
8/11/00	282											
8/10/00	284	Yes										
8/10/00	285	Yes										
8/8/00	289	Yes										
8/8/00	291	Yes										
8/8/00	295	Yes										
8/14/00	299	Yes										
8/8/00	301	Yes										
8/8/00	302	Yes										
8/8/00	305	Yes										
8/8/00	306	Yes										
8/8/00	310	Yes										
8/8/00	315	Yes										
8/7/00	324	Yes										
8/7/00	326	Yes										
8/7/00	329	Yes										
8/7/00	332	Yes										
8/8/00	342	Yes										
8/7/00	343	Yes										
8/9/00	345	Yes										
8/9/00	346	Yes										
8/10/00	354	(No discrepancies)										
8/8/00	357	(No discrepancies)										
8/7/00	361	Yes										
8/11/00	362	Yes										
8/4/00	365	Yes										
8/4/00	370	Yes										
8/4/00	372	Yes										
8/3/00	381	Yes										
8/3/00	115E	Yes										
8/8/00	115E	Yes										
8/9/00	115E (2/2000-7/2000)	Yes										
8/10/00	115E WFO	Yes										
8/9/00	115E(10/99-7/2000)	Yes										
8/11/00	115E(7/99)	Yes										
8/14/00	214E	Yes										
8/10/00	256E	(No discrepancies)										
8/18/00	274E	Yes										
8/10/00	311E	Yes										
8/8/00	317E	Yes										
8/11/00	322E	(No discrepancies)										

Correction tape used with Figures Added entries not signed & dated

Header/Footer Info

Header/Footer Info

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Scientific Notebook Reviews

INPROCESS REVIEW OF SCIENTIFIC NOTEBOOKS FOUND THE FOLLOWING PROBLEMS:

Review Date	Notebook Number	X-Outs (Initial&Date)	Ending Statement	Initial Statement	Pencil Entry Used	Entry Signed/Dated	Text Covered	Use of White out	Page Nos	In-process entries	Fig. Text Nos covered	ESN Changes (Initial&Date)	Ink/ Typed	Electronic Media
8/17/00	9	Yes												
8/25/00	99	Yes												
8/25/00	110		(No discrepancies)											
8/25/00	121		(No discrepancies)											
8/25/00	127		(No discrepancies)											
8/25/00	133				Yes									
8/18/00	149		(No discrepancies)											
8/25/00	172		(No discrepancies)											
8/25/00	189	Yes												
8/25/00	209					Yes								
8/25/00	212		(No discrepancies)											
8/25/00	220		(No discrepancies)											
8/25/00	224	Yes				Yes								
8/25/00	227		(No discrepancies)											
8/25/00	240		(No discrepancies)											
8/29/00	248	Yes												
8/25/00	255	Yes												
8/25/00	262	Yes		Yes										
8/25/00	263	Yes				Yes								
8/29/00	265	Yes												
8/17/00	269		(No discrepancies)											
8/25/00	273	Yes												
8/18/00	275	Yes												
8/25/00	276					Yes								
8/25/00	279		(No discrepancies)											
8/25/00	280	Yes												
8/22/00	281		(No discrepancies)											
8/29/00	283	Yes												
8/18/00	286	Yes												
8/30/00	287		(No discrepancies)											
8/17/00	288	Yes												
8/16/00	290		(No discrepancies)											
8/28/00	292	Yes				Yes			Yes					
8/25/00	294	Yes												
8/25/00	296	Yes							Yes					
8/18/00	297	Yes												
8/16/00	298	Yes				Yes								
8/25/00	300		(No discrepancies)											
8/29/00	303	Yes												
8/16/00	304		(No discrepancies)											
8/29/00	307		(No discrepancies)											
8/30/00	308		(No discrepancies)											
8/25/00	309	Yes			Yes									
8/29/00	313		(Not used at this time)											

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Scientific Notebook Reviews

INPROCESS REVIEW OF SCIENTIFIC NOTEBOOKS FOUND THE FOLLOWING PROBLEMS:

Review Date	Notebook Number	X-Outs (Initial&Date)	Ending Statement	Initial Statement	Pencil Used	Entry Signed/Dated	Text Covered	Use of White out	Page Nos	In-process entries	Fig. Text Nos covered	ESN Changes (Initial&Date)	Ink/ Typed Media	Electronic
8/18/00	314		(No discrepancies)											
8/28/00	316	Yes												
8/16/00	320	Yes												
8/25/00	321	Yes				Yes								
8/25/00	325		(No discrepancies)											
8/16/00	328	Yes												
8/15/00	330	Yes												
8/25/00	331	Yes												
8/30/00	333	Yes												
8/30/00	334		(No discrepancies)											
8/30/00	335		(No discrepancies)											
8/25/00	336		(No discrepancies)											
8/25/00	337	Yes												
8/18/00	340	Yes												
8/18/00	341	Yes												
8/25/00	347	Yes												
8/28/00	348	Yes					(Notebook number recorded wrong (378 instead of 348) on pages)							
8/25/00	349	Yes												
8/25/00	350	Yes				Yes								
8/28/00	351		(No discrepancies)											
8/16/00	352	Yes							Yes					
8/18/00	355		(No discrepancies)											
8/29/00	356					Yes								
8/30/00	360	Yes												
8/17/00	366	Yes		Yes										
8/25/00	367	Yes												
8/16/00	368	Yes												
8/25/00	369			Yes										
8/30/00	371		(Not available at this time)											
8/30/00	374		(No discrepancies)											
8/18/00	377	Yes												
8/29/00	378	Yes							Yes					
8/25/00	382	Yes												
8/29/00	383	Yes												
8/28/00	384	Yes							Yes					
8/25/00	385	Yes												
8/25/00	386		(No discrepancies)											
8/25/00	387								Yes					
8/9/00	388	Yes												
8/17/00	389	Yes												
8/16/00	390					Yes								
8/25/00	391		(No discrepancies)											
8/30/00	392		(No discrepancies)											
8/25/00	393			Yes			Yes							
8/25/00	394		(No discrepancies)											
8/30/00	395		(Not used at this time)											
8/21/00	398	Yes												

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28/1/00

Scientific Notebook Reviews

INPROCESS REVIEW OF SCIENTIFIC NOTEBOOKS FOUND THE FOLLOWING PROBLEMS:

Review Date	Notebook Number	X-Outs (Initial&Date)	Ending Statement	Initial Statement	Pencil Used	Entry Signed/Dated	Text Covered	Use of White out	Page Nos	In-process entries	Fig. Text Nos covered	ESN Changes (Initial&Date)	Ink/ Typed Media	Electronic
8/29/00	398		(No discrepancies)											
8/16/00	399	Yes												
8/21/00	400	Yes												
8/25/00	401		(No discrepancies)											
8/29/00	402		(Returned unused)											
8/22/00	403		(No discrepancies)											
8/29/00	404		(No discrepancies)											
8/30/00	406		(Not available at this time)											
8/29/00	407		(No discrepancies)											
8/28/00	408								Yes					
8/28/00	409		(No discrepancies)											
8/28/00	410		(No discrepancies)											
8/31/00	411	Yes												
8/30/00	412		(Not used at this time)											
8/30/00	413		(Not available at this time)											
8/17/00	414		(No discrepancies)											
8/29/00	415	Yes												
8/29/00	417		(No discrepancies)											
8/30/00	419		(Not available at this time)											
8/25/00	420		(No discrepancies)											
8/25/00	037-2		(No discrepancies)											
8/30/00	141*	Yes			Yes				Yes					
8/30/00	163E*		Yes											
8/30/00	175*	Yes							Yes					
8/30/00	181*	Yes											Yes	
8/30/00	185E		(Not available at this time)										Yes	
8/30/00	189*	Yes												
8/29/00	250E		(No discrepancies)										Yes	
8/30/00	261*	Yes												
8/30/00	268*	Yes												
8/30/00	312*	Yes	Yes											
8/30/00	318E		(No discrepancies)											
8/30/00	338*	Yes											Yes	
8/30/00	344*		(No discrepancies)											
8/30/00	353*		(No discrepancies)											
8/30/00	358*	Yes												
8/30/00	359E*								Yes					
8/30/00	363*	Yes												
8/30/00	364E		(Not used at this time)											
8/16/00	373E		Yes											
8/30/00	375*			Yes					Yes				Yes	
8/30/00	376*			Yes					Yes				Yes	
8/30/00	380E		(Not available at this time)											
8/29/00	396E		(No discrepancies)											
8/30/00	405E		(No discrepancies)											
8/30/00	416E		(Not available at this time)											
8/30/00	418E		(Not available at this time)											
8/25/00	88E*		(No discrepancies)											(Reviewed copies of pages 314 to 326 only)

* = QA Copy of notebook reviewed

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