

Scientific Notebook Coordinator (SNC). The Scientific Notebook Coordinator (SNC) assigned by the Technical Manager will record the opening of new notebooks, the closure of completed notebooks, facilitate the completion of independent technical and QA reviews, monitor and control the custody of notebooks, and update the SND.

Scientific Notebook Database (SND). The Scientific Notebook Database (SND) is an informational database used to provide information on the status of scientific notebooks. A SNC assures the SND is accurate and current.

Scientific Notebook Supplement (SNS). A scientific notebook supplement (SNS) is a record, or collection of records, created while conducting the work covered in the scientific notebook that cannot be conveniently included in the scientific notebook, including, but not restricted to computer listings, floppy disks, compact disks, or large plots (any electronic media however, is considered a Non QA record). A scientific notebook supplement may also be a loose-leaf binder containing the items that cannot be conveniently included in the scientific notebook

Acronyms and definitions for terms used in this procedure may be found in the Glossary located at the Sandia National Laboratories (SNL) WIPP Online Documents web site.

2.0 Implementation Actions

2.1 Initial Training

Before recording observations or data in a SN, the notebook user must have completed the Qualification and Training Form NP 2-1-1. In addition, the notebook user must complete the training module for this procedure (NP 20-2, *Scientific Notebooks*).

2.2 Initiation of Scientific Notebooks

The principal investigator (PI) determines when a SN is to be used. A new SN is delivered by the SNC to the PI. Only SNs delivered by the SNC can be used to record work performed under the WIPP QA program. The SNC immediately records the opening of the new SN in the SND and upon input from the SN PI, records the review schedule of the SN in the SND. The PI is responsible for meeting the review deadlines, with the help of the SNC. The information recorded in a SN should be related, i.e., a single SN should not be used for recording information from different investigations, analyses, projects, etc. However, if several projects are sufficiently short (requiring only a few pages) and loosely related, they may be recorded in a single SN.

2.3 Requirements for Scientific Notebooks

The information recorded in a SN shall be related to a single research project. The PI is the judge as to when the clear organization of data is best served by segregating research activities of the research project into different notebooks.

Entries shall be recorded in the SN, preferably on the day the work is performed, in order to prevent any loss of information. Entries not made on the date the work was performed must display the date of the entry as well as the date of work performance.

NOTE: Field notebook entries may not be chronological if two or more people who need to enter information into the SN are working simultaneously, especially if they are not working in the same location. In such a case, the person who is not in the same location as the SN may record their information on an alternate paper source (e.g., Troll logbook or paper tablet) and either transcribe the

information into the SN or glue and tape the alternate pages into the SN (noting that the information is out of chronological order) as soon as possible. Entries shall be completed prior to the scheduled reviews.

Scientific Notebooks shall meet the requirements listed in Appendix A.

2.4 Corrections

Corrections to SN entries shall be made in accordance with NP 17-1, *Records*. All supplements, changes, or corrections shall include initials or signature and the date of the correction. If corrections are substantial (e.g. a paragraph or larger), an explanation shall be provided. Mistakes should be clearly lined-out, leaving the original entry legible, and initialed and dated. Mistakes should not be concealed or omitted from the SNs by using correction fluid or tape.

2.5 Supporting Documentation

Some research activities may produce documents such as computer outputs or alternative media, i.e., photographs, digital images, and magnetic media. A SN may not be the appropriate place to display these documents. In these circumstances, scientific notebook supplements (SNS) shall be used. Each SNS shall display the identifier of the SN with which the SNS is associated. Additionally, the SN shall document the existence and the identifier of the associated SNSs.

2.6 Security of Scientific Notebooks

The PI is responsible for the security of the SN until its submission to the WIPP Records Center, unless the PI transfers the SN to someone who accepts the responsibility for the SN security. NOTE: notebooks that must remain open due to pending data may be copied and stored in records as a 'safe' copy until the notebook data entry is complete and ready to be closed. The 'safe' copy should be stored in a one hour fire rated cabinet in records.

2.7 Technical and QA Reviews of Scientific Notebooks

An independent and knowledgeable technical review is the best way to ensure that the work described in the SN is technically sound and reproducible. Although the frequency of the technical and QA reviews is determined by the PI or technical manager, it should be as often as possible within reasonable limits. A monthly review is preferable, however reviews shall be performed every 6 months, at a minimum.

The technical and QA reviewers shall follow NP 6-1, *Document Review Process*, and use the associated Document Review and Comment (DRC) Form NP 6-1-1. The reviewer will as applicable list any supplemental binders or logbooks reviewed as part of the review on the DRC. Appendix B and C contain Technical and QA checklists for both field and laboratory SN reviews. The use of these checklists is not mandatory but is available for guidance for the requirements and criteria outlined in this procedure to complete the review. The technical and QA reviewers shall document in the SN that reviews were performed, what part(s) of the notebook(s) were reviewed, the comments/concerns, responses by the author(s), and that all comments were resolved. The completion of reviews shall be recorded in the SN followed by reviewer's signatures, and the SND shall be updated by the SNC. The technical and QA reviewers shall refer to the TP (or other planning document) and required documents to verify compliance of SN content.

The DRCs created from the reviews will be submitted to the WIPP Records Center after each review.

SNs and supporting documentation shall be reviewed by an independent, technically-qualified individual to verify technical adequacy and to ensure there is sufficient detail to:

1. retrace the investigations and confirm the results; or
2. repeat the investigation and achieve comparable results without recourse to the original investigator.

2.7.1 Logbooks (QA Only)

Logbooks used to record daily or prior-to-use quality affecting data (i.e. Balance Calibration, Oven Temperature) will require a QA review only, and should occur at a minimum every six months and at completion of the logbook. The review will be documented following NP 6-1, *Document Review Process*, and using the associated DRC Form NP 6-1-1. The QA reviewer shall document in the logbook that the review was performed and what part of the logbook was reviewed, followed by the reviewer's signature and date of review. The DRC created from the review will be submitted to the WIPP Records Center after each review.

2.7.2 Comment Resolution

It is important that resolution occur between the reviewer and the author within a reasonable period of time. The research activity may continue if review comments do not impact the quality of the work being performed. However, comment resolution should occur as quickly as possible. A DRC shall be used to report the reviewer comments and comment resolutions. The DRC forms shall be submitted to the WIPP Records Center after each review.

2.8 Closure of Scientific Notebooks

At the end of the SN, there shall be a brief wrap-up statement summarizing results or the identification of another document (e.g. another SN) describing such information, and the printed names and dated signatures of the principal investigator(s) and final technical and QA reviewer. If appropriate, a more detailed summary of results and reference(s) to related reports or papers may be included. Indicate if a new SN will be opened and identify the next SN by label. All remaining blank pages shall be crossed-out, initialed, and dated to prevent further entry or a statement made that no more entries will be made in the SN and that the remaining pages are blank and no further entries will be made.

A SN is closed out if:

1. the activity documented in the SN is completed and the SN is no longer needed,
2. it is determined that the entries in the SN are no longer of technical value (e.g. work cancelled), or
3. the SN is full and a new volume is opened to continue the investigation.

The PI is responsible for submitting the completed SN and supporting documentation to the WIPP Records Center and informing the SNC of the SN closure. The final SN entry shall be immediately followed by the printed names and dated signatures of the PI, the technical reviewer, and the QA reviewer. The final reviews will be conducted as described above in section 2.7 (Technical and QA Reviews of Scientific Notebooks).

Prior to the departure of a PI from the WIPP project, if possible, the PI's SNs should be reviewed and the reviewers' comments resolved. The SNs may then be closed and submitted to the WIPP Records Center or transferred to a new PI, in which case the new PI shall be identified in any current or subsequent SNs. If the reviews cannot be completed before the PI's departure, the new PI to whom the SN was transferred will fulfill the previous PI's SN responsibilities.

3.0 Records

The following records, generated through implementation of this procedure, shall be prepared and submitted to the WIPP Records Center in accordance with NP 17-1 (Records):

QA Record

- Scientific Notebook and supporting documentation
- Logbooks
- Form NP 6-1-1, Document Review and Comment (DRC)

Non Quality (NQ) Record

- Any electronic media associated with the SNS

4.0 Appendices

Appendix A contains requirements designed to improve the quality and consistency of SNs. These requirements are in addition to the general requirements stated in the main body of the procedure.

Appendix A: Requirements for SNL WIPP Scientific Notebooks

Appendix B: Laboratory Scientific Notebook Technical and QA Review Checklists

Appendix C: Field Scientific Notebook Technical and QA Review Checklists

Appendix A

Requirements for SNL WIPP Scientific Notebooks

Scientific Notebooks (SNs) create a permanent record that provides sufficient information for an independent person with adequate technical background to understand the work, evaluate the technical quality of the work, continue unfinished work, and reproduce the work and its primary results. The requirements are provided to improve the quality and consistency of these notebooks.

FORMAT, ENTRY AND PROTECTION: The PI or notebook owner determines the format, since some activities may require a ring-binder notebook to allow incorporation of computer output or alternative media. However, the following are requirements for implementation:

1. Use a bound notebook with consecutively numbered pages;
2. All entries shall be permanent, black or dark blue ink is preferred except when activities may require black lead or colored pencils, as in geologic mapping or core logging;
3. If corrections are substantial (e.g. a paragraph or larger), an explanation shall be provided;
4. Areas or pages left blank shall have a line drawn diagonally through the blank area with the PI's or authorized user's initials and date; and
5. Handling and storage of an SN is the responsibility of the PI and all authorized users; in general, when not in regular use, notebooks shall be stored in a secure area.

INTRODUCTION: Start the SN with an introduction, which shall include:

1. Unique scientific notebook identifying number determined by the PI;
2. Initiation date;
3. Table of Contents;
4. Work activity title;
5. Principal investigator(s) - notebook owner's name(s);
6. The identity of the associated Test Plan or other approved planning document describing the work to be performed. The work documented in the SN shall be done to the most current revision of the approved planning document;
7. Clear statement of the work objectives;
8. Identification of the previous SNs and the following SN (if more than one SN is used to record the work), which will be opened shortly before the current SN is completed. New data can be entered in the following SN before the reviews of the current SN are completed;
9. List of authorized users (if more than one individual will be making entries in the notebook); A sample of each user's printed name, signature, and initials;
10. QA and technical review frequency statements; and
11. Acronym list and/or a reference to the TP acronym section.
12. Identification of the computer programs used (name, version, platform) if applicable;

BODY: The body of the SN contains the technical data. The organization of this section shall be tailored to the particular activity. For example, the body could be broken into research activities, which contain data from a series of experiments, a group of measurements, or a series of chronological observations. The following information shall be included in the body of the SN as appropriate:

1. For each research activity, there shall be a detailed description of work, list of materials and apparatus, procedures, and results;
2. Identification of measuring and test equipment (M&TE) used, including serial numbers and pertinent equipment calibration information which may be listed in the SN or in the case of long term monitoring M&TE a reference to the location of the serial numbers and calibration information i.e. the calibration database;

3. The calibration or calibration check of the measuring and test equipment and if it passed its calibration or calibration check;
4. Identification of manufacturer name, lot number, expiration date (if applicable) of chemicals used to prepare samples and standard materials (used for instrument calibration or calibration check), and any specific non-standard handling control and maintenance;
5. Unique identifications for the samples generated;
6. Unique identifications for the standard material generated to calibrate or check the calibration of an instrument. The standard materials must be labeled to show the date, initials of the person who prepared them, and the SN identifier where their preparation is recorded (Laboratory only);
7. Documentation of all instrument maintenance, anomalies observed, or analytical problems encountered during data collection (in addition to the records made in the instrument logbook, if such document exists);
8. Description of the experimental or measurement system and process;
9. Identification of samples collected or used;
10. Description of relevant laboratory environmental conditions;
11. Identification of the method(s) used;
12. A description of changes made to methods described in the test plans or other planning documents, as appropriate;
13. A description of the potential sources of uncertainty and error in test plans, procedures, and parameters;
14. Listing or reference to data supplied by others;
15. Documents pasted or attached to the SN shall be labeled with the SN title and the page number of the SN where the document is inserted to ensure long term traceability (i.e. if the document becomes separated from the SN then the document can be easily identified and returned to the SN and page it was pasted to);
16. Every block of daily entries shall be dated. Each block of entries performed by one individual shall be initialed or signed and dated;
17. Each page of work shall be reviewed for clarity, accuracy, and quality control by the PI only if someone other than the PI has made an entry and signed and dated at the time of the review (Laboratory Notebooks Only).

Cross-referencing. A series of related research activities may have sufficient commonality that a single written description of some aspects of the work, such as a method, may be written in the first subsection describing the work, and subsequently referenced using page numbers. Each SN should be self-contained. However, if cross-referencing between SNs becomes necessary, a short paragraph shall be included that summarizes the method, experimental description, etc. being referenced. It is permissible to reference other notebooks that are primarily a logbook, e.g. balance calibrations, temperature logs, etc., and supporting documentation (e.g. SNS) in the SN.

TECHNICAL and QA REVIEWS: See section 2.7 of this document.

CLOSE-OUT: See section 2.8 of this document.

Appendix B

Laboratory Scientific Notebook Technical Review Checklist

Laboratory Scientific Notebook Title: _____

PI: _____

Technical Review

Requirements/Criteria	CRITERIA MET			Comments
	Yes	No	N/A	
1. Does the SN show the work related to one single investigation, analysis, or project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Is there a statement of the objectives and description of work to be performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are there enough details regarding the work performed, the observations made, and the results obtained to assure reproducibility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are the methods used clearly identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. If methods, procedures, or planning documents were modified, were the changes described appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Are preliminary data used in the investigation identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are the manufacturer names, lot numbers, expiration dates (if applicable) of chemicals used to prepare samples, and any specific non-standard handling control and maintenance identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Are all instrument anomalies and maintenance activities observed or analytical problems encountered during data collection clearly documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Were at least three (unless directed otherwise per the applicable SP) NIST traceable standards, covering the range of expected measurements, used for calibration? (NP 13-1 Section 2.4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Are the experimental conditions and environmental conditions of the laboratory documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Are potential sources of uncertainty and error in test plans, procedures, and parameters identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Did you verify a sample of calculation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Are data, tables, figures easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Are units appropriately included (e.g. in tables, calculations, graphs, data collection)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Laboratory Scientific Notebook QA Review Checklist

QA Review

Requirements/Criteria	CRITERIA MET			Comments
	Yes	No	N/A	
1. Is the SN referenced in the SND?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Have the notebook users completed the Qualification and Training form NP 2-1-1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have the notebook users completed the training module for Scientific Notebooks procedure (NP 20-2)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Is the appropriate planning document (e.g. Test Plan) active?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Is the most current version of the planning document (e.g. Test Plan) being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Is the appropriate planning document identified in the SN?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are the name, signature, and initials of each individual making entries in the SN documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Is the name of the responsible PI documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Are any previous and/or subsequent SNs identified and documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Are the measuring and test equipment identified (including serial number)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Are all the measuring and test equipment calibrated or checked for calibration before every use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Is there an indication of the acceptance/tolerance limit for calibration or calibration check of each instrument?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Are the computer programs used (name, version, platform) identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Are the manufacturer names, lot numbers, expiration dates (if applicable) of chemicals used to prepare samples, and any specific non-standard handling control and maintenance identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Does each sample have a unique identification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. If standard materials have been prepared to calibrate or check instrument calibrations, does each standard used to calibrate and check instrument have a unique identification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Are loose materials contained in the SN permanently attached inside the SN, and labeled with the SN title and page number of the SN where the material is attached?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Are the corrections in the notebook line out and initialed in accordance with NP 17-1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. Are associated SNSs documented and identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Are all technical reviews documented on a DRC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21. Was the technical reviewer "independent"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22. Is the frequency of this SN review appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix C

Field Scientific Notebook Technical Review Checklist

Field Scientific Notebook Title: _____
PI: _____

Technical Review

Requirements/Criteria	CRITERIA MET			Comments
	Yes	No	N/A	
1. Do the format and entry methods currently used in the SN conform to the requirements listed in Appendix A?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are the required introduction components listed in Appendix A included in the beginning of the SN?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are the required technical information components listed in Appendix A, where applicable, included in the SN?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are there enough details regarding the work performed, the observations made, and the results obtained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Are methods used and descriptions of tests clearly identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. If methods or procedures were modified, were the changes described appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are the manufacturer names, lot numbers, expiration dates (if applicable) of chemicals used for calibration or to prepare samples identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Are all equipment or instrument maintenance anomalies or analytical problems encountered during data collection clearly documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Are environmental conditions adequately described when deemed necessary?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Is a brief review statement by the MTL/WTL included as required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Did you verify a sample calculation (e.g. tubing tallies)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Are data, tables, figures easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Are units and reference points for measurements appropriately included (e.g. DTW, Troll and pump depths, gallons pumped)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Is there a written account of all activities associated with each well?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Are results of instrument calibrations included?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Is a sketch of the surface completion and downhole equipment configuration (showing dimensions) included for each test well (this does not include monitoring wells)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Are the applicable units designated for DTW measurements (e.g. M for Magenta, C for Culebra, DL for Dewey Lake, A for annulus)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Are discussions of the information and/or observations leading to decisions to initiate, terminate, or modify activities included?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Field Scientific Notebook QA Review Checklist

QA Review

Requirements/Criteria	CRITERIA MET			Comments
	Yes	No	N/A	
1. Is the SN referenced in the SND?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Have the notebook users completed the Qualification and Training form NP 2-1-1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have the notebook users completed the training module for Scientific Notebooks procedure (NP 20-2)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Is the appropriate planning document (e.g. Test Plan) active?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Is the most current version of the planning document (e.g. Test Plan) being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Is the appropriate planning document identified in the SN?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are the name, signature, and initials of each individual making entries in the SN stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Is the name of the responsible PI stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Are any previous and/or subsequent SNs identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Are the measuring and test equipment identified (including serial number)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Are all the measuring and test equipment being used in accordance with NP 12-1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Is there an indication of the acceptance/tolerance limit for calibration or calibration check of each instrument?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Are the computer programs used (name, version, platform) identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Are the manufacturer names, lot numbers, expiration dates (if applicable) of chemicals used to prepare samples, and any specific non-standard handling control and maintenance identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Are the samples prepared labeled with a unique identification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. If standard materials have been prepared to calibrate or check instrument calibrations, do they each have a unique identification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Are the loose materials contained in the SN permanently attached inside the SN and labeled with the SN title and page number of the SN where the material is attached?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Are corrections made in accordance with NP 17-1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. Are associated SNSs documented and identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Did the technical reviewer use a DRC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21. Was the technical reviewer "independent"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22. Is the frequency of this SN review appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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