

DOCUMENT CONTROL PROCEDURE

Effective Date: 10/27/87

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Preparer

10/23/87  
Date

**SUPERSEDED**  
BY TWS-QAS-QP-06.1, R0  
11/23/89 by

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## DOCUMENT CONTROL PROCEDURE

### 1. PURPOSE

This procedure sets forth requirements for the preparation, identification, review, approval, revision, distribution, storage, and control of Quality Level I or II documents generated in the support of the Nevada Waste Storage Investigations (NNWSI) Project.

### 2. SCOPE

Quality Assurance (QA) documents are those Quality Level I or II documents generated as a result of experiments, tasks, or projects that support the Nevada Nuclear Waste Storage Investigations. QA documents include work plans, detailed procedures and instructions, data forms, research and development documents, and project documents. Documents which become records shall be maintained in accordance with the Records Control Procedure, TWS-MSTQA-QP-09.

### 3. RESPONSIBILITY

- 3.1 The Technical Project Officer (TPO) shall have the overall responsibility for document control in accordance with the requirements of this procedure.
- 3.2 The QA Support (QAS) shall have the overall responsibility for any documents that provide quality assurance controls and evidence of system quality effectiveness, such as audit reports, nonconformance reports, and corrective actions.
- 3.3 The QAS is responsible for issuance and distribution control of plans and procedures comprising the NNWSI QA Program Plans and Procedures Manual.
- 3.4 The Project Leaders (PL's), Principal Investigators (PI's), and Quality Assurance Liaison (QAL) for each organization performing work in the NNWSI project have the responsibility for controlling documents prepared and maintained within the organization.

#### 4. GENERAL REQUIREMENTS

##### 4.1 Document Identification

Documents must be properly identified for filing, storage, and retrieval purposes. An example of an assigned identification that may be used is described below.

TWS-INC-11-10/78-10

where

- TWS - Nevada Nuclear Waste Storage Investigations (formerly Terminal Waste Storage - TWS).
- INC-11 - Originator; may be ESS, INC-7, INC-11, MST-QA, E-8, WX-4, etc. Also indicates resident file.
- 10/78 - Date (month and year originated).
- 10 - Number assigned to provide a unique identifier.

##### 4.2 Procedure Identification

Technical procedures for the NNWSI Project shall consist of technical Work Plans (WP's), Detailed (technical) Procedures (DP's), while quality assurance (QA) procedures shall consist of the Quality Assurance Program Plan (QAPP), QA Program Index, and Quality (administrative) Procedures (QP's). All NNWSI Project procedures (with the exception of the LANL-NNWSI-QAPP) shall be identified as described below.

TWS-INC-WP-01, R1

where

- TWS - Nevada Nuclear Waste Storage Investigations.
- INC - Procedure originator. Other originators may be ESS, QAS, WX, ES-NP, or E-8.

- WP - Document identifier. Identifiers shall be as follows:
  - WP = Work Plan
  - DP = Detailed (technical) Procedure
  - QP = Quality (administrative) Procedure
- 01 - Document number is assigned by QAS (example shows Work Plan number 1).
- R1 - Document revision number.

The identification must be unique and shall not change when revisions are required, except that the revision number shall be changed. Each investigator shall be responsible for assuring that current procedures are being used.

#### 4.3 Distribution

Distribution shall be determined by the document originator. The TPO and the QAS will be on distribution for all NNWSI Project Quality-Related documents.

#### 4.4 Storage and Access Control

Storage and Access control shall be in accordance with the NNWSI Records Control Procedure, TWS-MSTQA-QP-09.

#### 4.5 Revisions

Revisions to Project documents shall be controlled in the same manner as the original document. Revisions shall be reviewed and approved by the same persons who performed the original review and approval or, in their absence, by the organization's assigned alternate or by a person assigned by the TPO. Revised documents shall be distributed promptly to personnel on the original distribution list.

### 5. QA PROGRAM PLAN

- 5.1 The TPO shall have the responsibility for presentation of the QA Program Plan (QAPP) and coordination with line management prior to issuance.

5.2 The QAPL,\*\* QAL, and QAS collectively are responsible for assuring that procedures meet project requirements.

5.3 The front page shall include the

- document title,
- document identification and revision number, and
- approval signatures (TPO, QAPL, QAS) and dates.

## 6. WORK PLANS AND SCIENTIFIC INVESTIGATION PLANS\*

### 6.1 Work Plans (WPs)

6.1.1 Original preparation of a WP shall be the responsibility of technical personnel as directed by the TPO or his technical staff.

6.1.2 The WPs shall be reviewed and approved by Project Leader, QAPL, and TPO.

6.1.3 WPs shall be prepared and approved before work begins.

6.1.4 The front page shall include the

- document title,
- document identification and revision number, and
- approval signatures (Project Leader, QAPL, TPO) and dates.

### 6.2 Scientific Investigation Plans (SIPs)

6.2.1 A Scientific Investigation Plan (SIP) shall be prepared, reviewed, and approved prior to beginning an investigation.

6.2.2 The SIP shall include the following information, as specified in NVO-196-17, Section III:

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\* All bold material indicates CR No. 015

\*\* The QAPL was previously referred to as the QAIM

- overall purpose for the work,
- identification of the factors and concerns important for planning and performance of the investigation,
- description of the work to be performed,
- brief description of supporting previous work including any assigned QA levels, and
- a level of detail that would allow determination of the QA level for the work described in the SIP.

**6.2.3** The SIP shall be prepared by the principal investigator (PI) responsible for the investigation.

**6.2.4** The SIP shall be technically reviewed by a competent scientist who has not participated in its preparation. Review comments and subsequent comment resolutions shall be documented on a standard document review form. The revised SIP and the document review form showing resolutions of comments shall become a part of the formal QA record.

**6.2.5** The cover page of the SIP shall include:

- document title;
- document identification and revision numbers; and\*\*
- approval signatures and dates of preparer/PI, technical reviewer, QAL, TPO, QAPL, WMPO Project Quality Manager, and WMPO Branch Chief.

## **7. PROCEDURES AND INSTRUCTIONS**

**7.1** For operations that have become standardized, Detailed (technical) Procedures (DP's) shall be prepared by technical personnel as directed by the TPO or his technical staff. Operations where techniques are still being developed will be described in notebooks and reviewed and approved in accordance with Section 11 of this procedure.

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\* All bold material indicates CR No. 015

\*\* Effective date deleted from cover sheet. WMPO approval needed on each SIP prior to implementation.

7.2 Quality Procedures (QP's) required to supplement the Los Alamos NNWSI QAPP will be prepared as described in the QAPP, NNWSI-QP-01 and as determined by the QAIM in coordination with the QAS.

7.3 Procedures shall be coordinated with the Los Alamos participating organizations for review and concurrence by line management.

7.4 The front page of Detailed Procedures shall include:

- document title,
- document identification and revision numbers,
- preparer's and technical reviewer's approval signature, and\*
- project office (QAPL and TPO) approval signatures.\*

7.5 The front page of Quality Procedures (QP's) shall include:

- document title,
- document identification and revision numbers, and
- approval signatures (QAPL, TPO, and Preparer) and dates.

## 8. CORRESPONDENCE

Correspondence that relates to Quality Level I or II activities shall be brought into the document control system at the discretion of the TPO.

## 9. CALIBRATION RECORDS

9.1 Calibration records shall be prepared in accordance with TWS-QAS-QP- 12.1, Measurement and Test Equipment. Records shall include:

Calibration Data and Certificates - On file for each piece of Measurement and Test Equipment (M&TE) included in the program.

Calibration Form - To be sent to the QAS as notification that M&TE is brought into the system; also required for recalibration.

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\* Indicates CR No. 010

Calibration Labels - To be affixed on all M&TE. The label may be affixed in the vicinity of the M&TE when size or functional characteristics of the M&TE preclude direct application.

Master Inventory File - To be maintained by the QAS with information sent by the instrument holder; a computer print-out shall be made available to the TPO on a monthly basis.

Calibration Procedures - Calibration of M&TE shall be accomplished according to written procedures that have had technical and QAS approval.

Recall Master File - To be maintained by the QAS. Divisional M&TE custodians will be notified by computer print-out, on a monthly basis, of all M&TE due (or overdue) for recalibration.

## 10. PERSONNEL CERTIFICATIONS

10.1 For staff members, written certifications shall be reviewed, signed, and dated by the appropriate group leader, or the appropriate supervisor.\*

10.2 For technicians and other NNWSI participants, certifications shall be signed by the staff member responsible for the task involved, Technicians shall be trained as found necessary by the staff member, depending on the technician's education and prior experience.

10.3 Certifications shall be kept on file as evidence of personnel qualifications (See TWS-MSTQA-QP-08).

## 11. LABORATORY NOTEBOOKS AND LOGBOOKS\*\*

11.1 Bound laboratory notebooks shall be used to document the performance of scientific investigations and experiments. Investigations require professional judgment and/or trial and error methods and may culminate in

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\* Indicates CR No. 018  
\*\* Indicates CR No. 016

the preparation of detailed technical procedures (DPs). Repetitive experiments are performed following DPs. The work recorded in the notebooks shall be done by the principal investigator (PI) or be done by qualified personnel following the PI's instructions. Documentation shall distinguish clearly between investigations and work done following a DP. The level of documentation shall be sufficient that another similarly qualified individual could use the notebook to retrace the investigation and confirm the results or, with the DP, could repeat the experiment and achieve similar results, without recourse to the individual who performed the work.\*\*\*

11.2 Logbooks shall provide written records of repetitive activities such as calibrations, data runs, and down time for specific instruments and withdrawals from the inventory of controlled materials in a core library. Logbooks may also be used to record information about samples received for analysis. Logbooks may be bound or loose-leaf format.

11.3 The front of each notebook shall contain the following information:

- TWS number assigned by the group office,
- name of the person to whom the book is assigned, and
- group identification and starting date for the notebook's use in the indicated spaces.

11.4 The front of each logbook shall contain the following information:

- TWS number if only NNWSI work is to be recorded, otherwise the unique LANL identification number assigned by the group office;
- name of the instrument, activity, or samples to be documented; and
- group identification and starting date for the logbook's use.

11.5 When data are kept in print-out or other loose-leaf form, each page shall be consecutively numbered. The data sets shall be uniquely identified.

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All bold indicates CR No. 016

\*\*\* CR No. 016 superceded CR No. 002 in this section

- 11.6 All entries shall be made in ink. Successive entries shall be made on consecutive pages, leaving no open spaces for additional entries on partially filled pages. When revisions are made, the original entry shall be lined out, initialed, and dated by the individual making the revision. The original entry shall remain legible.
- 11.7 Entries shall be signed and dated by the originator on the date the entries are made.
- 11.8 Notebooks shall be technically reviewed, signed, and dated at least quarterly by a staff member or technician who understands and could perform the task but who has not been assigned to the task. A notebook shall be reviewed, signed, and dated before an official report is submitted for publication containing data from that notebook.
- 11.9 Logbooks shall be reviewed, signed, and dated at least semiannually by a staff member or technician who is familiar with the documented instrument, samples, or activity but has not made the majority of the entries. The reviewer will inspect for obvious errors and incomplete entries.
- 11.10 Completed notebooks and logbooks to which TWS numbers have been assigned shall be submitted to the Record Processing Center for duplication, as complete records.

## 12. DRAWINGS

Drawings shall be controlled in such a manner that out-of-date drawings are identified. Control measures for drawings shall be established by the originating organization to assure drawings are of the latest revision and have been approved by the appropriate level of management.

## 13. TECHNICAL PUBLICATIONS

- 13.1 Technical publications include any of the LA-series reports or publications in scientific journals that have been prepared by staff members assigned to the project.

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\* Indicates CR No. 016

13.2 Publications shall be subject to technical review and approval by Los Alamos technical personnel in accordance with the detailed procedure on this subject (TWS-QAS-QP-07), and the appropriate review required by the scientific journal when applicable. The approval method shall include documented review and approval by personnel not directly associated with the work.

#### 14. DATA PACKAGES

14.1 Data packages represent an accumulation of data for a sample or subtask, prepared by staff members who have the responsibility for the task.

14.2 The package shall be subject to review and approval by Principal Investigator and Quality Assurance Line (QAL) personnel.

#### 15. COMPUTER SOFTWARE

Computer software purchased externally or developed internally shall be controlled in accordance with NNWSI SOP-03-02. Software Quality Assurance or as interpreted by LANL implementing procedure.\*

#### 16. PURCHASE DOCUMENTS

Purchase documents shall be prepared, reviewed, and approved in accordance with the NNWSI Procurement Procedures, TWS-MSTQA-QP-06.

#### 17. REPORTS

QA reports include Audit Reports, Nonconformance Reports, etc., and shall be prepared, reviewed, and approved in accordance with QA Program Plan and appropriate QA Procedures.

#### 18. MATERIAL AND EQUIPMENT CERTIFICATIONS

18.1 Required material and equipment certifications shall be prepared by the organizations that perform the tests on the material and equipment.

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\* Indicates CR No. 001

18.2 These certifications shall be reviewed and approved by QAL personnel and the requestor.

SUPERSEDED

ATTACHMENT A

INSTRUCTIONS FOR USING THIS NOTEBOOK

Fill in this information:

THIS NOTEBOOK IS USED BY: \_\_\_\_\_

GROUP: \_\_\_\_\_ STARTING DATE: \_\_\_\_\_

DATE EACH DAY'S ENTRY      RECORD ALL EXPERIMENTAL WORK  
SIGN EACH DAY'S ENTRY      RECORD ALL NEW CONCEPTS

AS SOON AS A CLASSIFIED ENTRY IS MADE IN THIS NOTEBOOK IT MUST BE PROPERLY MARKED AND SAFEGUARDED AS DESCRIBED IN THE "OFFICE PROCEDURES MANUAL".

This book is an official record for which you are responsible. Its purpose is to assist you in keeping accurate record of technical work, calculations, experiments, ideas, etc., and to provide the United States Government with a means of reviewing our work, both while it is in progress and when it is completed, and, if necessary, to prove in court that work was done on definite dates in order to support applications for patents, or to defend patents issued, as a result of our work.

IT IS RECOMMENDED THAT THE PROCEDURES LISTED BELOW BE FOLLOWED WHEN USING THIS BOOK:

1. Record all experimental work, calculations, sketches, and the like DIRECTLY in this book.
2. Make successive entries on consecutive pages.
3. Do not start a new page until the previous one is full or has been so marked that no additional entries can be made on it.
4. At the end of each day sign and date the material you have entered in the book on that day.
5. Have the entries in the book witnessed and dated, preferably by someone who has observed and understood the actual work recorded.
6. After an entry has been signed and dated, DO NOT make any changes, interlineations, deletions, or additions. Make a new entry for corrections and refer back to the original entry.
7. Do not erase or blot out any entry at any time. Before an entry has been signed and dated, changes may be made but care must be taken not to obliterate what was written originally; simply indicate any deletion by a single line through the material to be deleted.
8. Record everything—better too much than too little.
9. Do not remove any pages from this book.

It is the responsibility of the one using this book to see that it is marked with the correct classification and properly safeguarded as soon as a classified entry is made in it.

This notebook is the property of the U.S. Government—if you terminate your employment at the Los Alamos National Laboratory you must turn this notebook over to your group office or must send it to the CRMO Records Center.

WHEN THIS NOTEBOOK IS COMPLETE, SEND IT TO: LOS ALAMOS NATIONAL LABORATORY RECORDS CENTER, CRMO, MS 322.

University of California, Los Alamos National Laboratory, Los Alamos, N.M. 87545

DOCUMENT CONTROL PROCEDURE

Effective Date 3/19/85

**SUPERSEDED**

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3/19/85  
DATE

## DOCUMENT CONTROL PROCEDURE

### 1. PURPOSE

This procedure sets forth requirements for the preparation, identification, review, approval, revision, distribution, storage, and control of Quality Level I or II documents generated in the support of the Nevada Nuclear Waste Storage Investigations (NNWSI) project.

### 2. SCOPE

Quality Assurance (QA) documents are those Quality Level I or II documents generated as a result of experiments, tasks, or projects which in any way support the Nevada Nuclear Waste Storage Investigations. QA documents include, but are not limited to, work plans, detailed procedures and instructions, data forms, and project records. Project records shall also be maintained in accordance with the Records Control Procedure, TWS-MSTQA-QP-09.

### 3. RESPONSIBILITY

3.1 The technical project officer (TPO) shall have the overall responsibility for document control in accordance with the requirements of this procedure.

3.2 The QA manager shall have the overall responsibility for any documents that provide quality assurance controls and evidence of system quality effectiveness, such as audit reports, nonconformance reports, corrective actions, and acceptance verification.

### 4. GENERAL REQUIREMENTS

#### 4.1 Document Identification

Documents must be properly identified for filing, storage, and retrieval purposes. An example of an assigned identification that may be used is described below:

TWS-INC11-10/78-10

where:

TWS = Nevada Nuclear Waste Storage Investigations  
(Formerly Terminal Waste Storage - TWS).

INC11 = Originator; may be ESS, INC-11, MST-QA, E-8,  
WX-4, etc. Also indicates resident file.

10/78 = Date (month and year originated)

10 = Number assigned to provide a unique identifier

#### 4.2 Procedure Identification

Procedures for the NNWSI project shall consist of technical Work Plans, technical Detailed Procedures, and quality assurance procedures such as the Quality Assurance Program Plan, Program Index, and Detailed QA Procedures. All NNWSI project procedures shall be identified as described below:

TWS-INC-WP-01, R0,

where:

TWS = Nevada Nuclear Waste Storage Investigations  
(Formerly TWS)

INC = Procedure originator. Other originators  
may be ESS, MSTQA, WX, DAD/NP, or E-8.

WP = Document identifier. Identifiers shall  
be as follows:

WP = Work Plan

DP = Detailed Procedure

QP = Quality Procedure

01 = Document number (example shows  
Work Plan number 1).

R1 = Document revision number

The identification must be unique and shall not change when revisions are required, except that the revision number shall be changed. Each investigator shall be responsible for assuring that current procedures are being used. The quality assurance organization shall monitor compliance by periodic surveillance and audits.

Procedure identification shall be applied by quality assurance before final approval.

4.3 Distribution

Distribution shall be determined by the document originator. The TPO and the Quality Assurance Manager will be on distribution for all NNWSI project documents.

A copy of the current listing of procedures and work plans shall be forwarded to WMPO/NV by MST-9 QA..

4.4 Storage and Access Control

Storage and Access control shall be in accordance with the NNWSI Records Control Procedure, TWS-MSTQA-QP-09.

4.5 Revisions

Revisions to project documents shall be controlled in the same manner as the original document. Revisions shall be reviewed and approved by the same persons who performed the original review and approval or, in their absence, by assigned personnel. Revised documents shall be distributed promptly to personnel on the original distribution list.

5. QA PROGRAM PLAN

- 5.1 The TPO shall have the responsibility for preparation of the QA Program Plan.
- 5.2 The Plan shall be reviewed and approved by a review board, consistent with section 1. of the QA Program Plan.
- 5.3 The front page shall include the
  - o document title
  - o document identification and revision number, and
  - o approval signatures and dates.

6. WORK PLANS

- 6.1 Original preparation of Work Plans shall be the responsibility of technical personnel as directed by the TPO or his technical staff.
- 6.2 The Work Plans shall be reviewed and approved by a review board, consistent with section 1. of the QA Program Plan.
- 6.3 Work Plans shall be prepared and approved before work begins.

- 6.4 The front page shall include the
- o document title
  - o document identification and revision number
  - o approval signatures and dates
  - o indication of quality level(s)

## 7. PROCEDURES AND INSTRUCTIONS

- 7.1 For operations that have become somewhat standardized, Detailed Procedures shall be prepared by technical personnel as directed by the TPO or his technical staff. Operations where techniques are still being developed will be described in notebooks and reviewed and approved in accordance with Section 11 of this procedure.
- 7.2 Procedures shall be reviewed and approved by QA, technical management, and independent technical personnel.
- 7.3 The front page shall include the
- document title
  - document identification and revision number
  - approval signatures and dates
  - indication of quality level(s)

## 8. CORRESPONDENCE

Correspondence that relates to Quality Level I or II activities shall be brought into the document control system at the discretion of the TPO.

## 9. CALIBRATION RECORDS

- 9.1 Calibration records shall be prepared in accordance with the Quality Assurance Manual. Records shall include:
- Calibration Data and Certificates - On file for each piece of Measurement and Test Equipment (M&TE) included in the program.
- Calibration Cards - To be sent to MST-9 QA as notification that M&TE is brought into the system; also required for recalibration.

Calibration Labels - To be affixed on all M&TE. The label may be affixed in the vicinity of the M&TE when size or functional characteristics of the M&TE preclude direct application.

Master Inventory File - To be maintained by MST-9 QA with information sent by the instrument holder; a computer print-out shall be made available to the TPO on a monthly basis.

Calibration Procedures - Calibration of M&TE shall be accomplished according to written procedures that have had technical and QA approval.

Recall Master File - To be maintained by MST-9 QA. Divisional M&TE custodians will be notified by computer print out on a monthly basis of all M&TE due (or overdue) for recalibration..

## 10. PERSONNEL CERTIFICATIONS

- 10.1 For staff members, written certifications shall be reviewed, signed, and dated by the TPO, the appropriate group leader, or the appropriate supervisor.
- 10.2 For technicians and other NNWSI participants, certifications shall be signed by the staff member responsible for the task involved. Technicians shall be trained as found necessary by the staff member, depending on the technician's education and prior experience.
- 10.3 Certifications shall be kept on file as evidence of personnel qualifications (See TWS-MSTQA-QP-08).

## 11. LABORATORY NOTEBOOKS

- 11.1 Technical staff members and technicians shall maintain laboratory notebooks in accordance with instructions in the front of the notebook.
- 11.2 Entries shall be signed and dated by the originator on the day such entries are made.
- 11.3 Notebooks shall be peer reviewed, signed, and dated at least every six months by a staff member who is capable of performing the task but who has not been assigned to the task. Laboratory notebooks shall always be reviewed, signed, and dated before an official publication is made

using the data in the notebook.

- 11.4 Notebooks shall include any information that may be pertinent to the project.
- 11.5 Revisions shall be crossed out, initialed, and dated.
- 11.6 Entries shall be made in ink.
- 11.7 When data is kept in loose-leaf form, each page shall be numbered and the notebook shall be bound before issuance of the technical report.

## 12. DRAWINGS

Drawings shall be controlled in such a manner that out-of-date drawings are identified. Control measures shall be established to assure drawings are of the latest revision and have been approved by the appropriate level of management.

## 13. TECHNICAL PUBLICATIONS

- 13.1 Technical publications include any of the LA-series reports or publications in scientific journals that have been prepared by staff members assigned to the project.
- 13.2 Publications shall be subject to technical review and approval by Los Alamos technical personnel in accordance with the detailed procedure on this subject (TWS-MSTQA-QP-07), and the appropriate review required by the scientific journal when applicable. The approval method shall include documented review and approval by personnel not directly associated with the work.

## 14. DATA PACKAGES

- 14.1 Data packages represent an accumulation of data for a sample or sub-task, prepared by staff members who have the responsibility for the task.
- 14.2 The packages shall be subject to review and approval by technical and QA personnel.

## 15. COMPUTER SOFTWARE

Computer software, purchased externally or developed internally, shall be controlled in such a manner that only the latest approved versions or revisions can be used. If previous versions are used,

special dispensation for that use must be obtained in writing from the lowest level of management that is responsible for the work. This level of management shall be defined by agreement between quality assurance and technical managements.

16. PURCHASE DOCUMENTS

Purchase documents shall be prepared, reviewed, and approved in accordance with the NNWSI Procurement Procedures, TWS-MSTQA-QP-06.

17. REPORTS

Reports include Audit Reports, Nonconformance Reports, etc., and shall be prepared, reviewed, and approved in accordance with QA program requirements.

18. MATERIAL AND EQUIPMENT CERTIFICATIONS

18.1 Required material and equipment certifications shall be prepared by the organizations that perform the test on the material and equipment.

18.2 These certifications shall be reviewed and approved by quality assurance and the requestor.