


# QUALITY ASSURANCE PROCEDURE

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|  <p>Franklin Research Center<br/>A Division of The Franklin Institute<br/>20th and Race Streets, Phila., Pa. 19103 (215) 448-1000</p> <p><b>QUALITY ASSURANCE PROCEDURE</b></p> | QAP No. 4-2   | Page 1 of 3    |
|  | Date Issued 9/1/83  | Effective Date |
|  | Revision Number 0   | Review Date    |
|  | <input checked="" type="checkbox"/> Prepared <i>J. J. Paulson</i><br><input checked="" type="checkbox"/> Approved <i>Andrew J. Maggione</i> |                |
| <p><b>TITLE</b> QUALIFICATION OF NED PERSONNEL PERFORMING ACTIVITIES AFFECTING QUALITY</p>   | <p>Concurred By</p>   |                |

## 1.0 PURPOSE

- 1.1 This procedure establishes the method for determining and documenting that Nuclear Engineering Department (NED) personnel have adequate experience and training to perform quality-related activities.

## 2.0 RESPONSIBILITIES

- 2.1 The Director of the Nuclear Engineering Department shall require that personnel involved with quality-related activities complete a Personnel Qualification Record.
- 2.2 Project Managers shall ensure that personnel performing quality-related activities have adequate training or understanding of the activity to be able to perform the tasks involved.
- 2.3 The TBU managers for TBUs performing quality-related activities shall arrange for updating Personnel Qualification Records at least once per year.

## 3.0 DEFINITIONS

- 3.1 Qualification (Personnel) refers to the characteristics or abilities gained through education, training, or experience as measured against established requirements that qualify an individual to perform a required function.
- 3.2 Quality-Related Activity refers to inspection, testing, engineering, and engineering evaluation activities requiring quality assurance.

#### 4.0 INSTRUCTIONS

##### 4.1 Personnel Qualification Record

4.1.1 Each person performing quality-related activities shall complete a Personnel Qualification Record (Exhibit I). This record shall list (1) education, including degree and non-degree curricula pertaining to the work; (2) related work experience with FRC and former employers; (3) accreditations, licenses, and certifications; (4) on-the-job training; and (5) significant projects completed that would indicate enhanced skills. The person shall sign and date the end of Section I when the form is completed.

4.1.2 The Personnel Qualification Record of personnel continuing to perform quality-related activities shall be updated yearly. (Personnel who are not generally involved in quality-related activities may update the record at time of beginning a new task or yearly, as appropriate.) The TBU managers for those TBUs performing quality-related activities shall arrange for updating the Personnel Qualification Records.

4.1.3 A copy of each Personnel Qualification Record shall be maintained in the NED file. A second copy shall be issued to the Manager of Quality Assurance. Only the revised copy of the Personnel Qualification Record shall be retained.

##### 4.2 Verification of Training and Experience

4.2.1 Project Managers are responsible for determining that personnel performing quality-related activities are adequately trained for the efforts. Training may be in the form of education, work experience, certification, or demonstrated skills. The Project Managers may determine adequacy of training by evaluation of Personnel Qualification Records or by day-to-day experience with their personnel. Where deficiencies in training are recognized, the Project Manager shall take appropriate action such as choosing more qualified personnel to perform the effort or instructing the person(s) in the methodology or approach to be taken. Where such special instruction is required and given, the subject of the instruction and a short summary shall be documented on the Personnel Qualification Record.

4.2.2 The TBU or Project Manager shall verify the adequacy of the personnel performing quality-related activities by completing Part II of the Personnel Qualification Record. The TBU or

Project Manager shall circle the skills that the person is qualified to perform. Where a person does not meet the general requirements listed but is considered to be adequately trained, the TBU or Project Manager shall indicate the reason for acceptability in the comments area provided. The TBU or Project Manager shall sign and date the completed form. Skills other than those listed on the forms may be documented in Part II of Section H of the Personnel Qualification Form.

6.0 CROSS REFERENCE

10CFR50 Appendix B, Criterion II

7.0 COUNSEL AND REVIEW CONTACT

7.1 Manager - Quality Assurance

8.0 DISTRIBUTION

8.1 Manager - Quality Assurance

8.2 Director of Nuclear Engineering Department

8.3 Manager(s) of Affected Organizational Units

8.4 Project Managers

EXHIBIT I

PERSONNEL QUALIFICATION RECORD

NAME: \_\_\_\_\_ Date of Record \_\_\_\_\_  
EMPLOYEE NO. \_\_\_\_\_

PART I LISTING OF TRAINING

A. EDUCATION

| College | Degree | Date  |
|---------|--------|-------|
| _____   | _____  | _____ |
| _____   | _____  | _____ |
| _____   | _____  | _____ |
| _____   | _____  | _____ |

B. SHORT COURSES

| Title | Given By | Date Completed |
|-------|----------|----------------|
| _____ | _____    | _____          |
| _____ | _____    | _____          |
| _____ | _____    | _____          |
| _____ | _____    | _____          |
| _____ | _____    | _____          |
| _____ | _____    | _____          |

C. LICENSES, ACCREDITATIONS, CERTIFICATES

| Title | Issued By | Date  |
|-------|-----------|-------|
| _____ | _____     | _____ |
| _____ | _____     | _____ |
| _____ | _____     | _____ |
| _____ | _____     | _____ |
| _____ | _____     | _____ |

PERSONNEL QUALIFICATION RECORD (Cont.)

D. WORK EXPERIENCE SUMMARY

| Effort | From  | To    |
|--------|-------|-------|
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |
| _____  | _____ | _____ |

Employee's Signature \_\_\_\_\_

E. ON-THE-JOB TRAINING (SPECIAL)

| Subject/Summary | Instructor | Date  |
|-----------------|------------|-------|
| _____           | _____      | _____ |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
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PERSONNEL QUALIFICATION RECORD (Cont.)

E. ON-THE-JOB TRAINING (SPECIAL)

| Subject/Summary | Instructor | Date  |
|-----------------|------------|-------|
| _____           | _____      | _____ |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |
| _____           |            |       |

PART II PERSONNEL QUALIFICATION - VERIFICATION OF TRAINING

(Skills circled indicate satisfactory training and experience)

| A. <u>Test Performance and<br/>Test Setup (Supervised)</u>   | Test<br>Type                      | Comments   |
|--|-----------------------------------|--|
| General Requirements - high school diploma and 2 years' experience in applicable testing with demonstrated ability.  | LOCA<br>Aging<br>Seismic<br>Other | _____<br>_____<br>_____<br>_____                   |
| B. <u>Test Performance and<br/>Test Setup (Supervisor)</u>   | Test<br>Type                      | Comments   |
| General Requirements - high school diploma and 6 years' experience in applicable testing with demonstrated capability to direct others and recognize testing problems. | LOCA<br>Aging<br>Seismic<br>Other | _____<br>_____<br>_____<br>_____<br>_____<br>_____ |
| C. <u>Test Design</u>  | Test<br>Type                      | Comments   |
| General Requirements - engineering degree (or equivalent) in appropriate discipline with 4 years' experience in testing or related field.                              | LOCA<br>Seismic<br>Other          | _____<br>_____<br>_____<br>_____<br>_____<br>_____ |

PERSONNEL QUALIFICATION RECORD (Cont.)

D. Inspection (Incoming, Post-Test, Pre-shipment)

Comments

General Requirements - high school diploma and 2 years' experience with similar equipment. (Note: more stringent requirements must be met for post-test teardown inspection. Requirements of test performance supervisor should be met.)

Inspection  
(Incoming  
Post-test  
Pre-shipment)

Post-test  
teardown

E. Engineering (Analysis, Subject to Independent Verification)

Comments

B.S. in Engineering; one or more years' experience in related field, and training or demonstrated ability in analysis involved.

Aging  
analysis

Failure  
analysis

F. Engineering (Qualification Review)

Comments

B.S. in Engineering (or equivalent); one or more years' experience in related field. Demonstrated knowledge of qualification activities under review.

General Environ-  
mental Qualification  
Seismic Qualification  
Instrumentation Qual.  
Valve Operator Qual.  
Motor Qual.  
Cable Qual.

G. Engineering (Independent Review)

Comments

B.S. in Engineering (or equivalent) three or more years' experience in related field, superior understanding of concepts under review.

Environmental  
Qualification General  
Aging Programs  
Seismic Programs

H. Verification of Training for Other Activities

Description of Activity

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PERSONNEL QUALIFICATION RECORD (Cont.)

General Requirements

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Adequacy Verified 

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Description of Activity

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General Requirements

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Adequacy Verified 

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Description of Activity

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General Requirements

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Adequacy Verified 

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Signature of TBU or Program Manager  
Verifying Training

Date 

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Forms prepared 8/83