

NUCLEAR WASTE MANAGEMENT PROGRAM  
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Subject: APPENDIX C - "REQUIREMENTS FOR THE QUALIFICATION<sup>s</sup>  
OF INSPECTION AND TEST PERSONNEL"

Approved: FEB 10 1989

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## 1.0 GENERAL

The following are the requirements for the qualification of personnel who perform inspection and testing to verify conformance to specified requirements for the purpose of acceptability. The requirements for the qualification of personnel performing nondestructive examination are specified in Appendix D.

## 2.0 FUNCTIONAL QUALIFICATIONS

Three levels of qualification are utilized depending on the complexity of the functions involved. The requirements for each level are not limiting with regard to organizational position or professional status but, rather, are limiting with regard to functional activities.

### 2.1 LEVEL I PERSONNEL CAPABILITIES

A Level I person is capable of performing and documenting the results of inspections or tests that are required to be performed in accordance with documented procedures, acceptance standards, and/or industry practices as defined in user's written procedures.

### 2.2 LEVEL II PERSONNEL CAPABILITIES

A Level II person has all of the capabilities of a Level I person for the inspection or test category or class in question. Additionally, a Level II person has demonstrated capabilities in planning inspections and tests; in setting up tests, including preparation and setup of related equipment, as appropriate; in supervising and certifying lower level personnel; and in evaluating the validity and acceptability of inspection and test results.

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### 2.3 LEVEL III PERSONNEL CAPABILITIES

A Level III person has all of the capabilities of a Level II person for the inspection, test category or class in question. In addition, the individual is capable of evaluating the adequacy of specific programs used to train and certify inspection and test personnel whose qualifications are covered by this section.

### 3.0 EDUCATION AND EXPERIENCE QUALIFICATIONS

These education and experience requirements are considered with recognition that other factors commensurate with the scope, complexity, or special nature of the inspection or test activity provide reasonable assurance that a person can competently perform a particular task. Other factors which demonstrate capability in a given job are previous performance or satisfactory completion of capability testing. These factors and the basis for their equivalency are documented.

#### 3.1 LEVEL I EDUCATION AND EXPERIENCE REQUIREMENTS

- o Two years of related experience in equivalent inspection or testing activities; or
- o High school graduation and six months of related experience in equivalent inspection or testing activities; or
- o Completion of college level work leading to an associate degree in a related discipline plus three months of related experience in equivalent inspection or testing activities.

#### 3.2 LEVEL II EDUCATION AND EXPERIENCE REQUIREMENTS

- o One year of satisfactory performance as a Level I in the corresponding inspection or test category or class; or
- o High school graduation plus three years of related experience in equivalent inspection or testing activities; or
- o Completion of college work leading to an associate degree in a related discipline plus one year of related experience in equivalent inspection or testing activities; or
- o Graduation from a four-year college plus six months of related experience in equivalent inspection activities or testing activities.

#### 3.3 LEVEL III EDUCATION AND EXPERIENCE REQUIREMENTS

- o Six years satisfactory performance as a Level II in the corresponding inspection or test category or class; or
- o High school graduation plus ten years of related experience in equivalent inspection or testing activities; or high school graduation plus eight years of experience in equivalent inspection or testing activities with at least two years associated with nuclear facilities; or, if not, at least sufficient training to be acquainted with relevant Quality Assurance aspects of a nuclear facility; or

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- o Completion of college level work leading to an associate degree and seven years of related experience in equivalent inspection or testing activities with at least two years of this experience associated with nuclear facilities, or, if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility; or
- o Graduation from a four-year college plus five years related experience in equivalent inspection or testing activities with at least two years of this experience associated with nuclear facilities or, if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear or comparable facility.

#### 4.0 CERTIFICATION

##### 4.1 QUALIFICATION REQUIREMENTS

The LLNL-YMP designates those inspection and test activities that require qualified inspection and test personnel and the minimum qualification requirements for such personnel. Further, the responsible organization establishes written procedures for the qualification of inspection and test personnel and for the assurance that only those personnel who meet the established requirements are permitted to perform inspection and test activities. If a single inspection or test requires implementation by a team or a group, then personnel who do not meet the requirements of this section may be used in data-taking assignments or in repository or equipment operation, provided they are supervised or overseen by a qualified individual.

##### 4.2 PERSONNEL SELECTION

Personnel selected to perform inspection and test activities have the experience or training commensurate with the scope, complexity, or special nature of the activities.

##### 4.3 INDOCTRINATION

Provisions are made for the indoctrination of personnel as to the technical objectives and requirements of the applicable codes and standards, elements of the Quality Assurance Program Plan, and procedures that are to be employed.

##### 4.4 TRAINING

The need for a formal training program are determined, and such training activities are conducted as required to qualify personnel who perform inspection and tests. On-the-job training is included also in the program, with emphasis on first-hand experience gained through actual performance of inspections and tests. Training is provided with regard to those changes to the QAPP and implementing procedures that affect previous training.

#### 4.5 DETERMINATION OF INITIAL CAPABILITY

The capabilities of a candidate for certification is initially determined by a suitable evaluation of the candidate's education, experience, training, and either test results or capability demonstration in accordance with the organization's personnel qualification procedure.

#### 4.6 EVALUATION OF PERFORMANCE

The job performance of inspection and test personnel is reevaluated at periodic intervals not to exceed three years. Reevaluation includes evidence of continued satisfactory performance or redetermination of capability. If during this evaluation, or at any other time, it is determined by the responsible organization that the capabilities of an individual are not in accordance with qualification requirements specified for the job, then that person is removed from that activity until such time as the required capability has been demonstrated. Any person who has not performed inspection or testing activities in his qualified area for a period of one year is reevaluated and a redetermination of their capability made in accordance with the organization qualification procedure.

#### 4.7 CERTIFICATION OF QUALIFICATION

The qualification of personnel is certified in writing in an appropriate form, including the following information:

- o Employer's name.
- o Identification of person being certified.
- o Activities certified to perform.
- o Basis used for certification that includes such factors as:
  - Education, experience, and training (when necessary).
  - Test results (where applicable).
  - Results of capability demonstration.
- o Results of periodic evaluation.
- o Results of physical examinations (when required).
- o Signature of employer's designated representative who is responsible for such certification.
- o Dates of certification and certification expiration.

#### 4.8 PHYSICAL

The LLNL-YMP identifies any special physical characteristics needed in the performance of each activity, including the need for initial and subsequent physical examinations.