

# REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8108110253 DOC. DATE: 81/08/04 NOTARIZED: NO DOCKET #  
 FACIL: 50-263 Monticello Nuclear Generating Plant, Northern States 05000263  
 50-282 Prairie Island Nuclear Station, Unit 1, Northern States 05000282  
 50-306 Prairie Island Nuclear Station, Unit 2, Northern States 05000306

AUTH. NAME: MAYER, L.O. AUTHOR AFFILIATION: Northern States Power Co.  
 RECIP. NAME: RECIPIENT AFFILIATION: Office of Nuclear Reactor Regulation, Director

SUBJECT: Responds to Generic Ltr 81-01 re qualification of insp, exam & testing & auditing personnel. Schedules for implementation & corresponding schedule for Reg Guide 1.14b encl. Reg guide implementation scheduled for 811231.

DISTRIBUTION CODE: A0015 COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 14  
 TITLE: General Distribution for after Issuance of Operating License

## NOTES:

	RECIPIENT			COPIES			RECIPIENT			COPIES	
	ID CODE/NAME			L	T		ID CODE/NAME			L	T
ACTION:	ORB #2 BC	04		13	13		ORB #3 BC	04		13	13
INTERNAL:	D/DIR, HUM FAC	08		1	1		DIR, DIV OF LIC			1	1
	I&E	06		2	2		NRC PDR	02		1	1
	DELD	11		1	0		OR ASSESS BR	10		1	0
	RAD ASMT BR			1	1		REG FILE	01		1	1
EXTERNAL:	ACRS	09		16	16		LPDR	03		1	1
	NSIC	05		1	1		NTIS			1	1
	Add. QAR			L	E						
				1	1						

AUG 14 1981

TOTAL NUMBER OF COPIES REQUIRED: LTR 56 ENCL 54

SF

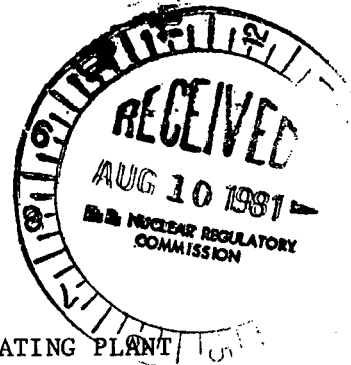


Northern States Power Company

414 Nicollet Mall  
Minneapolis, Minnesota 55401  
Telephone (612) 330-5500

August 4, 1981

Director of Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Washington, D C 20555



MONTICELLO NUCLEAR GENERATING PLANT  
Docket No. 50-263 License No. DPR-22

PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
Docket No. 50-282 License No. DPR-42  
Docket No. 50-306 License No. DPR-60

Qualification of Inspection, Examination, and Testing  
and Auditing Personnel

All licensees of operating plants were mailed a letter dated May 4, 1981, (Generic Letter 81-01) from Mr. Eisenhut, Director, Division of Licensing, Office of Nuclear Reactor Regulation, which requested committal to specific regulatory positions of Regulatory Guide 1.58, Revision 1, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel" and full committal to Regulatory Guide 1.146, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plant", or submission of an alternative proposal of complying with 10 CFR 50, Appendix B, regarding qualification of affected test, inspection, and examination personnel, and auditing personnel, with a schedule of implementing the alternative methods.

Northern States Power Company has elected to observe the requirements for the second option in regard to test, inspection and examination personnel and, in addition, commit to Regulatory Guide 1.146 for Quality Assurance auditors.

As an alternative to Regulatory Guide 1.58, Enclosures (1) - (3) are submitted in response to the May 4, 1981 request. Schedules for implementing each proposal are included as part of the enclosure. Enclosure (4), which

8108110253 810804  
PDR ADOCK 05000263  
P PDR

A001  
3  
1/1  
ADD: L E  
QAB 1 1

NORTHERN STATES POWER COMPANY

Dir NRR  
Page 2

August 4, 1981

is a corresponding schedule for Regulatory Guide 1.146 and has a planned implementing date of December 31, 1981, is hereby submitted for the same reason.



L O Mayer, PE  
Manager of Nuclear Support

LOM/bd

cc: J G Keppler  
G Charnoff  
Resident Inspector  
Monticello  
Prairie Island

Enclosures:

- (1) Qualification of Inspection Personnel
- (2) Qualification of Examination Personnel
- (3) Qualification of Test Personnel
- (4) Schedule for Certification of Auditors & Lead Auditors

## QUALIFICATION OF INSPECTION PERSONNEL

### 1.0 Introduction

#### 1.1 Scope

Due to the large number of inspection requirements related to verification of conformance for nuclear plant items (structures, systems, and components), measures must be established that ensure satisfactory performance of inspection personnel. This document intends to establish minimum qualification standards and education and experience levels for inspection personnel, and adherence to the stated requirements will ensure that individuals qualified or certified under its provisions will perform professionally on a calculable level.

#### 1.2 Applicability

The requirements of the following subsections do not apply to personnel performing plant operation inspections, periodic inspections of maintenance and modification, inspections of technical services, inspection of radioactive material packages, and inspection of emergency equipment. These personnel may be qualified based only on experience and training applicable to the area of the inspected activity and upon training in inspection methods.

All test personnel who perform quality control type inspections, including in-service inspection, inspection of non-routine maintenance, inspection of modifications, and receipt inspection, shall be qualified and certified in accordance with the requirements of the following Subsections.

### 2.0 General Requirements

#### 2.1 Planning

A plan or schedule shall be developed for staffing, indoctrination and training of an adequate number of personnel to perform the required inspections, and shall allow adequate time for assignment or selection and training of the required personnel.

#### 2.2 Training

The need for formal training programs shall be determined, and such training programs shall be conducted as required to qualify personnel who perform inspections. On-the-job participation shall also be included in the program, with emphasis on first-hand experience gained through actual performance of inspections. Records of training, when used as a basis for certification, shall be maintained.

### 2.3 Certification of Qualification

Qualification of personnel performing quality control type inspections shall be certified in writing on an appropriate form, including the following information:

- (1) employer's name
- (2) identification of person being certified
- (3) level of capability within each activity
- (4) activities certified to perform
- (5) basis for certification, including:
  - (a) records of education, experience and training
  - (b) test results, where applicable
  - (c) results of capability demonstration
- (6) results of periodic evaluations, when required
- (7) results of physical examinations whenever required for special purposes
- (8) signature of employer's designated representative
- (9) date of certification, and its expiration, if applicable.

### 3.0 Certification Requirements

#### 3.1 Functional Qualifications

Certification of quality control inspection personnel performing quality control type inspections shall be based upon meeting the capability requirements for the respective level of certification. Three levels of certification may be 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.

##### 3.1.1 Level I Personnel Capabilities

A Level I person shall be capable of performing and documenting the results of inspections that are required to be performed in accordance with documented procedures, acceptance criteria, and/or industry practices as defined in such documented procedures. In addition, a Level I person shall be familiar with tools and equipment to be employed and proficient in their use, and be capable of determining if equipment calibration status is current and inspection procedures are approved.

##### 3.1.2 Level II Personnel Capabilities

A Level II person shall have all of the capabilities of a Level I person for the inspection category or class in question. Additionally, a Level II person shall have demonstrated capabilities in planning inspections including preparation and setup of related equipment, as appropriate; in supervising or maintaining surveillance

over the inspections; in supervising and certifying lower-level personnel; in evaluating the validity and acceptability of inspection results; and in the drafting and reporting of such results.

3.1.3 Level III Personnel Capabilities

A Level III person shall have all of the capabilities of a Level II person for the inspection category or class in question. In addition, the individual shall also be capable of evaluating the adequacy of specific programs used to train and certify personnel, and reviewing and approving inspection procedures to determine the adequacy of such procedures to accomplish inspection objectives.

3.2 Education and Experience Qualifications

In addition to the functional qualifications necessary for a specific level of certification, education and experience requirements shall be considered with recognition that other factors commensurate with the scope, complexity, or special nature of the activity may provide reasonable assurance that a person can competently perform a particular task. Other factors which may demonstrate capability in a given job are previous performance and/or satisfactory completion of capability testing, both of which would indicate that some of the requirements below could be waived with appropriate documentation.

3.2.1 Level I

- Two years of related experience in equivalent inspection activities, or
- High school diploma or General Education Degree equivalent, and six months of related experience in equivalent inspection activities, or
- Completion of college level work leading to an Associate Degree in a related discipline plus three months of related experience in related inspection activities.

3.2.2 Level II

- One year of satisfactory performance as a Level I in the corresponding inspection category or class, or
- High school diploma or General Education Degree equivalent, and three years of related experience in equivalent inspection activities, or
- Completion of college level work leading to an Associate Degree in a related discipline plus one year of related experience in equivalent inspection activities, or

- Graduation from a four-year college plus six months of related experience in equivalent inspection activities.

### 3.2.3 Level III

- Six years of satisfactory performance as a Level II in the corresponding inspection category or class, or
- High school diploma or General Education Degree equivalent, and ten years of related experience in equivalent inspection activities; or high school diploma (GED equivalent) and eight years of experience in equivalent inspection activities with at least two years as a Level II and with at least two years associated with nuclear facilities; or, if not, at least sufficient training to be acquainted with the relative quality assurance aspects of a nuclear facility, or
- Completion of college level work leading to an Associate Degree and seven years of related experience in equivalent inspection 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
- Graduation from a four-year college plus five years of related experience in equivalent inspection 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.

## 4.0 Performance of Activities

### 4.1 Participation by Non-Certified Personnel

Personnel who are assigned the responsibility and authority to perform quality control related inspections, as addressed in Subsection 1.2, should have as a minimum the level of capability described in Subsection 3.1. When a single inspection requires implementation by a team or group, personnel not meeting the certification requirements of this document may be used in data-taking assignments or in plant or equipment operation for the sole purpose of inspection provided they are supervised or overseen by a certified individual participating in the inspection. These personnel should have a sufficient level of training to ensure an acceptable level of competence in the performance of their activities.

5.0 Records

A file for records of personnel certifications shall be established and maintained by the employer. Such records will include the documentary requirements of Subsection 2.3.

6.0 Schedule for Certification of Inspection Personnel

6.1 The following tentative dates are established to provide a general guideline for accomplishing its respective milestone. Although strict adherence to the schedule would ensure meeting the deadline date of December 31, 1983, some objectives enroute will probably require additional time, and some, less. The intent here is to maintain as much flexibility as possible yet preventing the dispensation of some of the more basic elements found in the implementation of a new program.

6.2	<u>Step</u>	<u>Date</u>	<u>Goal</u>
	1	1 Sep 81	Draft corporate directive for review
	2	1 Nov 81	Incorporate comments into Quality Assurance Plan
	3	15 Nov 81	Promulgate corporate directive
	4	22 Nov 81	Draft divisional directives for review
	5	8 Dec 81	Promulgate divisional directives
	6	1 May 82	Identify practical input for inclusion in divisional instructions
	7	1 Jun 82	Draft divisional instructions for review
	8	4 Aug 82	Promulgate divisional instructions
	9	1 Oct 82	Identify and establish qualification standards for all categories and classes of inspectors. Includes administrative and practical standards.
	10	1 Dec 82	Identify training programs from standards including administrative and practical training.
	11	1 Feb 83	Determine outside contractual services required and dates available.
	12	1 Jun 83	Establish certification records for all affected individuals.
	13	1 Aug 83	Establish training schedule consistent with plant operations.
	14	31 Dec 83	Conduct training and certification on a continuous basis.



## QUALIFICATION OF NONDESTRUCTIVE EXAMINATION PERSONNEL

### 1.0 General

Personnel performing radiographic (RT), magnetic (MT), liquid penetrant (PT), eddy current (ET), neutron radiographic (NRT), and leak testing shall be qualified in accordance with the provisions of the American Society of Nondestructive Testing Recommended Practice No. SNT-TC-1A, June 1975 Edition. Supplements to SNT-TC-1A should be utilized to provide standardization in personnel qualifications.

### 2.0 Schedule for Certification of Examination Personnel

The following tentative dates are established to provide a general guideline for accomplishing its respective milestone. Although strict adherence to the schedule would ensure meeting the deadline date of December 31, 1983, some objectives enroute will probably require additional time, and some, less. The intent here is to maintain as much flexibility as possible, yet preventing the dispensation of some of the more basic elements found in the implementation of new requirements in an existing program.

<u>Step</u>	<u>Date</u>	<u>Goal</u>
1	1 Sep 81	Draft corporate directive for review
2	1 Nov 81	Incorporate comments into Quality Assurance Plan
3	15 Nov 81	Promulgate corporate directive
4	21 Nov 81	Draft divisional directive revision for review
5	7 Dec 81	Promulgate revision to divisional directive
6		Draft divisional instruction revision for review
7	4 Aug 82	Promulgate divisional instruction(s)
8	1 Jun 83	Establish certification records for all affected individuals
9	1 Aug 83	Establish a training schedule consistent with plant operations
10	31 Dec 83	Conduct training and certification on a continuous basis

## QUALIFICATION OF TEST PERSONNEL

### 1.0 Introduction

#### 1.1 Scope

Due to the large number of tests required to verify conformance of nuclear plant items (structures, systems, and components), measures must be established that ensure satisfactory performance of test personnel. This document intends to establish minimum qualification standards and education and experience levels for test personnel, and adherence to the stated requirements will ensure that individuals qualified or certified under its provisions will perform professionally on a calculable level.

#### 1.2 Applicability

The requirements for certification in the following Subsections do not apply to personnel performing tests of an operational nature, such as pre-operational tests, system and component operability tests, and in-service inspection testing of pumps and valves. These personnel shall be qualified based upon the applicable provisions of Regulatory Guide 1.8, Revision 1.

Personnel performing tests that are not of an operational nature, such as containment leak rate tests, air filter tests, and tests associated with determining chemical and physical properties shall be qualified and certified as testing personnel in accordance with the requirements of the following Subsections.

### 2.0 General Requirements

#### 2.1 Planning

A plan or schedule shall be developed for staffing, indoctrinating, and training an adequate number of personnel to perform the required tests and shall allow adequate time for assignment, selection, and training of the required personnel.

#### 2.2 Training

The need for formal training programs shall be determined, with training activities being conducted as required to qualify personnel to perform tests. On-the-job participation shall also be included in the program, with emphasis on first-hand experience gained through actual performance of tests. Records of training, when used as a basis for certification, shall be maintained.

#### 2.3 Certification of Qualification

Certification of testing personnel shall be in writing on an appropriate form, including the following information:

- (1) employer's name
- (2) identification of person being certified
- (3) level of capability within each activity
- (4) activities certified to perform
- (5) basis for certification, including:
  - (a) records of education, experience and training
  - (b) test results, where applicable
  - (c) results of capability demonstration
- (6) results of periodic evaluations
- (7) results of physical examinations, whenever required for special purposes
- (8) signature of employer's designated representative
- (9) date of certification, and date of certification expiration, if applicable.

### 3.0 Certification Requirements

#### 3.1 Functional Qualifications

Certification of testing personnel performing tests of a nature defined in Subsection 2.1 (i.e. tests not operational in nature) shall be based upon meeting the capability requirements for the respective level of certification. Three levels of certification may be 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.

##### 3.1.1 Level I Personnel Capabilities

A Level I person shall be capable of performing and documenting the results of tests that are required to be performed in accordance with documented procedures, acceptance criteria, and/or industry practices as defined in such documented procedures. In addition, a Level I person shall be familiar with tools and equipment employed and proficient in their use, and be capable of determining if equipment calibration status is current and test procedures are approved.

##### 3.1.2 Level II Personnel Capabilities

A Level II person shall have all of the capabilities of a Level I person for the test category or class in question. Additionally, a Level II person shall have demonstrated capabilities in planning tests including preparation and setup of related equipment, as appropriate; in supervising or maintaining surveillance over the tests; in supervising and certifying lower level personnel; and in evaluating the validity and acceptability, with subsequent reporting, of tests results.

### 3.1.3 Level III Personnel Capabilities

A Level III person shall have all of the capabilities of a Level II person for the test category or class in question. In addition, the individual shall also be capable of evaluating the adequacy of specific programs used to train and certify test personnel, and reviewing and approving test procedures to determine the adequacy of such procedures to accomplish test objectives.

## 3.2 Education and Experience Qualifications

In addition to the functional qualifications necessary for a specific level of certification, education and experience requirements shall be considered with recognition that other factors commensurate with the scope, complexity, or special nature of the activity may provide reasonable assurance that a person can competently perform a particular task. Other factors which may demonstrate capability in a given job are previous performance and/or satisfactory completion of capability testing, both of which would indicate that some of the requirements below could be waived with appropriate documentation.

### 3.2.1 Level I

- Two years of related experience in equivalent testing activity, or
- High school diploma or General Education Degree equivalent, and six months of related experience in equivalent testing activities, or
- Completion of college level work leading to an Associate Degree in a related discipline and three months of related experience in equivalent testing activities.

### 3.2.2 Level II

- One year of satisfactory performance as a Level I in the corresponding test category or class, or
- High school diploma or General Education Degree equivalent, and three years of related experience in equivalent testing activities, or
- Completion of college level work leading to an Associate Degree in a related discipline and one year of related experience in equivalent testing activities, or
- Graduation from a four-year college plus six months of related experience in equivalent testing activities.

### 3.2.3 Level III

- Six years of satisfactory performance as a Level II

- in the corresponding test category or class, or
- High school diploma or equivalent General Education Degree, and ten years of related experience in related testing activities; or a high school diploma (or equivalent General Education Degree) and eight years of experience in equivalent testing activity with at least two years as a Level II and with at least two years 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
- Completion of college level work leading to an Associate Degree and seven years of related experience in 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
- Graduation from a four-year college plus five years of related experience in equivalent inspection 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 aspects of a nuclear facility.

#### 4.0 Performance of Activities

##### 4.1 Participation by Non-Certified Personnel

Personnel who are assigned the responsibility and authority to perform tests that are not operational in nature, should have, as a minimum, the level of capability described in Subsection 3.1. When a single test requires implementation by a team or group, personnel not meeting the certification requirements of this document may be used in data-taking assignments or in plant or equipment operation for the sole purpose of testing, provided they are supervised or overseen by a certified individual participating in the test. These personnel should have sufficient training to ensure an acceptable level of competence in the performance of their activities.

#### 5.0 Records

A file for records or personnel certifications shall be established and maintained by the employer. Such records will include the documentary requirements of Subsection 2.3.

#### 6.0 Schedule for Certification of Test Personnel

- 6.1 The following tentative dates are established to provide a general guideline for accomplishing its respective milestone. Although strict adherence to the schedule would ensure meeting the deadline date of December 31, 1983, some objectives enroute will probably

require additional time, and some, less. The intent here is to maintain as much flexibility as possible yet preventing the dispensation of some of the more basic elements found in the implementation of a new program.

6.2	<u>Step</u>	<u>Date</u>	<u>Goal</u>
	1	1 Sep 81	Draft corporate directive for review
	2	1 Nov 81	Incorporate comments into Quality Assurance Plan
	3	15 Nov 81	Promulgate corporate directive
	4	22 Nov 81	Draft divisional directives for review
	5	8 Dec 81	Promulgate divisional directives
	6	1 May 82	Identify practical input for inclusion in divisional instructions
	7	1 Jun 82	Draft divisional instructions for review
	8	4 Aug 82	Promulgate divisional instructions
	9	1 Oct 82	Identify and establish qualification standards for all categories and classes of test personnel. Includes administrative and practical standards.
	10	1 Dec 82	Identify training programs from standards including administrative and practical training.
	11	1 Feb 83	Determine outside contractual services required and dates available.
	12	1 Jun 83	Establish certification records for all affected individuals.
	13	1 Aug 83	Establish a training schedule consistent with plant operations.
	14	31 Dec 83	Conduct training and certification on a continuous basis.

Schedule for Certification of Quality Assurance Auditors

The following tentative dates are established to provide a general guideline for accomplishing its respective milestone. Although strict adherence to the schedule would ensure meeting the deadline of December 31, 1981, some objectives enroute will probably require additional time, and some, less. The intent here is to maintain as much flexibility as possible, yet preventing the dispensation of some of the more basic elements found in the implementation of new requirements in an existing program.

<u>Step</u>	<u>Date</u>	<u>Goal</u>
1	1 Nov 81	Promulgate revision to Quality Assurance Plan
2	7 Nov 81	Promulgate revision to corporate directive
3	14 Nov 81	Promulgate revision to divisional directives
4	21 Nov 81	Promulgate revision to divisional instructions
5	28 Nov 81	Determine outside contractual services required and dates available
6	7 Dec 81	Establish certification records for affected individuals
7	14 Dec 81	Establish training schedule consistent with divisional schedule
8	31 Dec 81	Conduct training and certification on a continuous basis.