

PROCEDURE FOR CERTIFICATION OF
INSPECTORS OF HANDLING EQUIPMENT
AND RIGGING



ENGINEERING &
RESEARCH DEPT.

Procedure for Certification of
Inspectors of Handling Equipment
And Rigging

NO.

CD 10.2

REV. NO.

0

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REV. NO.	DATE		PREPARED BY		REVIEWED BY		A. PROVED BY		REMARKS
	ISSUED	PLACE IN EFFECT	SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE	DATE	
0	2/1/78	2/1/78	E. B. Edwards	12/30/77	J. A. Clewley 1/2/78	1/2/78	[Signature]	1/2/78	
					[Signature]	1/2/78			



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1.0 PURPOSE

1.1 The purpose of this procedure is to:

- (1) Ensure that Construction Division Inspectors of Handling Equipment and Rigging (hereinafter referred to as "Rigging Inspectors") are qualified to perform their assigned work at PBAPS.
- (2) Define the scope of a Rigging Inspector's responsibilities and authority.
- (3) Provide a means of certifying the qualification of Rigging Inspectors.

2.0 SCOPE

2.1 This procedure applies to all inspections of handling equipment and rigging performed by the Construction Division at PBAPS, as required by CD 13.1.

3.0 REFERENCES

- 3.1 ERDP 5.1 - Procedure for Preparation of Engineering and Research Department Procedures.
- 3.2 CDIP-22 - Procedure for Indoctrination and Training of Construction Division Personnel in QA/QC Requirements.
- 3.3 CD 13.1 - Procedure for Handling Q-Listed Items.
- 3.4 ANSI N45.2.6, 1973 - Qualifications of Inspection, Examination, and Testing Personnel for Construction Phase of Nuclear Power Plants.
- 3.5 PBAPS Quality Assurance Plan, Volume I, Section 10.
- 3.6 NRC Regulatory Guide No. 1.58 - August, 1973.

4.0 RESPONSIBILITIES

- 4.1 The General Superintendent of the Construction Division is responsible for approving the "Certificate of Qualification of Construction Division Inspectors of Handling Equipment and Rigging" forms (Exhibit CD 10.2 - I)
- 4.2 The Mechanical Section Superintendent is responsible for approving the "Evaluation of Job Performance" form for each Rigging Inspector.
- 4.3 The Mechanical Supervisor - Field Construction is responsible for preparing the "Evaluation of Job Performance" form for any Level III Rigging Inspection activities by the Rigging Foreman. (See Footnote on Pg. 11 of 11)



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The Rigging Foreman is responsible for:

- (1) Making rigging inspection assignments to the various qualified individuals in his group.
- (2) Preparing a "Certificate of Qualification" form for the initial certification and any subsequent re-certifications of the qualified individuals in his group.
- (3) Preparing and maintaining qualification forms as requested by the Construction Division Engineer-Quality Assurance (E-QA)
- (4) Arranging for repair or disposal, as required, of any damaged handling equipment or rigging, and updating his records accordingly.
- (5) Arranging for P.E. Co. Medical Department to initially certify Rigging Inspectors' vision examination results and to perform annual vision examinations.
- (6) Preparing a periodic performance evaluation for each Rigging Inspector.
- (7) Approving the "Record of Construction Division Rigging Inspection Assignments" form (Exhibit CD 10.2 - V).

4.5

The Level III Inspector of Handling Equipment and Rigging is responsible for reviewing and approving inspection programs proposed by Level II, or other Level III, Rigging Inspectors.

4.6

The Engineer-QA is responsible for:

- (1) Arranging for indoctrination and training required for the Rigging Inspector.
- (2) Maintaining a file for all forms CD 10.2-II, CD 10.2-III, CD 10.2-IV, and CD 10.2-V.
- (3) Notifying the Rigging Foreman to prepare or update the documents listed in 4.5(2), as required, to keep each Rigging Inspector's qualifications current.

4.7

The Level II Rigging Inspector is responsible for:

- (1) Checking and inspecting the handling equipment and rigging used by the Construction Division in the handling operations defined in CD 13.1.
- (2) Determining the disposition of any items found damaged.



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- (3) Preparing an inspection program for any handling equipment or rigging for which an acceptable inspection program is not available.
- (4) Preparing "Record of Construction Division Rigging Inspection Assignments" forms as required.

5.0 PREREQUISITES

5.1 None

6.0 PROCEDURE

6.1 SELECTION OF INSPECTORS

6.1.1 The individuals assigned as "Inspectors of Handling Equipment and Rigging (Rigging Inspectors)" shall be Construction Division riggers who have attained as a minimum the rating of Rigger, First Class.

6.2 ASSIGNMENT AND DUTIES

6.2.1 Riggers from the Mechanical Field Forces Branch shall be assigned as Rigging Inspectors by the Rigging Foreman.

6.2.2 Rigging Inspectors shall check and inspect, as required, the handling equipment and rigging which is used by the Construction Division or its subcontractors in the handling operations covered by CD 13.1. The type and frequency of inspections are detailed in CD 13.1; the Rigging Inspector shall inspect and verify conformance to the procedure and any additional inspection criteria. The Rigging Inspector shall document his inspections by signing and dating the appropriate procedural forms provided by CD 13.1.

6.3 CERTIFICATION OF RIGGING INSPECTORS

6.3.1 Construction Division Rigging Inspectors shall be certified as being qualified to perform their assigned work. The certification shall be supported by appropriate measures such as training, evaluation, and periodic review, to assure the initial and continued proficiency of each Rigging Inspector. The effective period of certification shall not exceed two years. At the end of the effective period of certification, each Rigging Inspector shall be recertified in accordance with this procedure.

6.3.2 All Construction Division Rigging Inspectors shall be certified to either Level II or Level III as defined in Table I of ANSI N45.2.6 - 1973 (see Appendix I).



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6.3.3

The qualifications of personnel for initial certification and recertification shall be documented by the Rigging Foreman on the "Certificate of Qualification of Construction Division Inspectors of Handling Equipment and Rigging - PBAPS" (Exhibit CD 10.2-I). The various sections of the form shall be completed as follows:

Activity Qualified to Perform shall be one or more of the items listed under "Project Function" in Table I, ANSI N45.2.6 - 1973 (See Appendix I).

Level of Capability shall be either Level II or III as listed in Table I, ANSI N45.2.6 - 1973. The education and experience requirements specified in Paragraph 3.1, ANSI N45.2.6 - 1973, for the various levels of capability should not be treated as absolute, when other factors provide reasonable assurance that a person can competently perform a given task.

Effective Period of Certification shall begin on the date the Certificate is signed by the General Superintendent of the Construction Division. The effective period of certification shall not exceed two years.

Basis Used for Certification shall include:

- (a) Education, High School: List the name of the high school from which the individual graduated; also, list the city and state in which the high school is located, and the year of graduation.
- (b) Education, College: List the initials of the degree, the name of the institution granting the degree, and the year of graduation. Also, list the name of each undergraduate and graduate school attended with the starting and completion dates.
- (c) Other Education/Training: List any that is related to nuclear and/or inspection work, with name and location of the school, length of training, and the year that the training occurred.
- (d) Employment Record: List in chronological order each Philadelphia Electric Company position held, noting job title and dates of position.
- (e) Rigging and/or Inspection Experience: Briefly describe any significant areas of previous experience.

Vision Requirements Verified: P.E. Co. Medical Department shall verify that the Rigging Inspector meets the vision requirements of Paragraphs 3.2.1(1) and (2), ANSI N45.2.6 - 1973. The initial vision certification shall be noted on the Rigging Inspector's Certificate



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of Qualification and shall be signed by a Company Physician.

Approval: The General Superintendent shall approve and sign the Certificate of Qualification form.

- 6.3.4 The executed copies of the Certificate of Qualification forms shall be kept in the Construction Division personnel files.
- 6.3.5 Subsequent yearly vision examinations shall be performed and recorded on the "Construction Division Rigging Inspection Personnel Vision Examination Schedule" (Exhibit CD 10.2 - III). Evidence of the yearly examination shall be attached to the individual's Certificate of Qualification form and shall be retained in the Construction Division personnel files. The Construction Division Engineer - Quality Assurance (E-QA) shall maintain a Vision Examination Schedule for all Rigging Inspectors.
- 6.3.6 The E-QA shall maintain a list of "Personnel Certified As Qualified Inspectors of Handling Equipment and Rigging" (Exhibit CD 10.2 - II).

6.4 TRAINING

- 6.4.1 All Rigging Inspectors shall receive periodic indoctrination and training in QA/QC requirements in accordance with CDIP-22. Training shall include indoctrination in: (1) CD 13.1 and other related Construction Division Procedures, (2) the applicable codes and standards, and (3) the duties and responsibilities of a Rigging Inspector.
- 6.4.2 If the Rigging Inspector's background and experience is such that he lacks the necessary skill and knowledge in the use of any tools, gages, instruments, or any other inspection equipment that he may be required to use, the E-QA shall arrange for the Rigging Inspector to be given the necessary training in the use of such equipment. When the training is complete, the E-QA shall document its completion by recording it in the "Other Training" section of the Rigging Inspector's Certificate of Qualification form.
- 6.4.3 The E-QA shall administer and document the Indoctrination and Training Program in accordance with CDIP-22.

6.5 INSPECTION PROGRAM

- 6.5.1 The Rigging Inspector shall make frequent and periodic inspections of the handling equipment and rigging as required by CD 13.1. Inspections shall be performed in accordance with the program described therein.



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- 6.5.1.1 If there is no inspection program available for a particular piece of handling equipment or rigging, a Level II or Level III Rigging Inspector shall prepare a proposed inspection program which will ensure compliance with the various codes and specifications associated with the item. He shall submit the proposed inspection program to an independent Level III Rigging Inspector for review.
- 6.5.1.2 The Level III Rigging Inspector shall review the proposed inspection program for compliance with the various codes and specifications associated with the particular piece of handling equipment or rigging. If the Level III Rigging Inspector determines that the proposed inspection program will satisfactorily ensure the integrity of the item, he shall sign his approval.
- 6.5.1.3 The inspection program, approved by a Level III Rigging Inspector, shall form the basis of all subsequent repetitive inspections of the same piece of handling equipment or rigging. The program may also be used to perform similar inspections on other items in the same general classification (i.e., one inspection program for all wire rope chokers).
- 6.5.2 The Rigging Inspector shall condemn any handling equipment or rigging which he finds to be damaged or not in accordance with the applicable inspection criteria.
- 6.5.2.1 If the Rigging Inspector condemns a particular piece of handling equipment or rigging, he shall indicate in the catalog (CD 13.1) that it is not available for service, shall tag the item accordingly, and shall discuss the proposed resolution with the Rigging Foreman.
- 6.5.2.2 If the item can be repaired, the Rigging Foreman shall arrange for the repair work to be performed. When repairs are complete, the Rigging Foreman shall have the item recertified by qualified testing personnel and re-inspected by the Rigging Inspector. If the re-inspection is satisfactory, the item may be released for use in quality controlled handling operations, and the file of certification papers and the catalog shall be updated accordingly.
- 6.5.2.3 If the item cannot be satisfactorily repaired, the Rigging Foreman shall arrange for it to be discarded or destroyed. The file of certification papers and the catalog shall be revised accordingly to indicate that the item is no longer available for service.
- 6.6 RECORD OF INSPECTION ASSIGNMENTS
- 6.6.1 Each Rigging Inspector shall document his inspection assignments by completing a "Record of Construction Division Inspections of Handling Equipment and Rigging" form (Exhibit CD 10.2 - V) and submitting it to the Rigging Foreman. A form shall be submitted at least yearly.



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6.6.2 The Rigging Foreman shall review and approve each form submitted by the Rigging Inspectors under his supervision. He shall forward the approved originals to the E-QA for placement in the E-QA's "Rigging Inspector" file.

6.7 EVALUATION OF PERFORMANCE

6.7.1 The Rigging Foreman shall prepare an evaluation of the job performance of each Rigging Inspector in his group using the "Evaluation of Job Performance" form (Exhibit CD 10.2 - IV). Evaluation shall be performed at the time of initial certification and at periodic intervals not to exceed two years. The evaluation shall include a review of the Rigging Inspector's current level of capability, the activities he is currently qualified to perform, his knowledge and observance of the applicable procedures and specifications, and any other pertinent facts. The Rigging Foreman shall forward his evaluation, through the Mechanical Supervisor of Field Construction, to the Mechanical Section Superintendent.

6.7.1.1 If the Rigging Foreman is also a certified Rigging Inspector, the evaluation of his job performance shall be prepared by the Mechanical Supervisor of Field Construction and forwarded to the Mechanical Section Superintendent.

6.7.2 The Mechanical Section Superintendent shall review the evaluation prepared by the Rigging Foreman (or Mechanical Supervisor of Field Construction). He shall review the capability of each Rigging Inspector and shall indicate his evaluation by marking the appropriate space in the "Approval" section of the form and entering his signature and date.

6.7.2.1 If it is determined that the capabilities of a Rigging Inspector are in accordance with the qualifications specified for the job, his certification as a qualified inspector of handling equipment and rigging may be continued for a period not to exceed two years.

6.7.2.2 If it is determined that the capabilities of a Rigging Inspector are not in accordance with the qualifications specified for the job, he shall be so notified and shall be removed from the list of certified Rigging Inspectors until such time as he has been trained in the needed skills and has been re-certified as being qualified to perform the work. A new Certificate of Qualification form shall be prepared by the Rigging Foreman to document the re-certification of the Rigging Inspector and shall be filed in the Construction Division personnel files.



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- 6.7.2.3 If it is determined that the capabilities of a Rigging Inspector exceed the qualifications for his current level of certification, the Rigging Foreman may recommend that the Rigging Inspector be certified for a higher level of capability. The Rigging Foreman shall note his recommendation and any substantiating evidence in the "Recommended Level of Capability" section of the Evaluation of Job Performance form and shall forward the completed form to the Mechanical Section Superintendent. If the Mechanical Section Superintendent concurs with the change, he shall so indicate by marking the appropriate space in the "Approval" section of the form and entering his signature and date.
- 6.7.3 The completed "Evaluation of Job Performance" forms shall be placed in the files of the E-QA.
- 7.0 DOCUMENTATION
- 7.1 The "Certificate of Qualification of Construction Division Inspectors of Handling Equipment and Rigging - PBAPS" form (Exhibit CD 10.2 - I) shall document the credentials and qualification level of each Rigging Inspector.
- 7.2 The "Personnel Certified as Qualified Inspectors of Handling Equipment and Rigging" form (Exhibit CD 10.2 - II) shall document in summary the qualification status of all Rigging Inspectors.
- 7.3 The "Vision Examination Schedule" form (Exhibit CD 10.2 - III) shall document that all Rigging Inspectors fulfill the requirement of an annual vision examination.
- 7.4 The "Evaluation of Job Performance" form (Exhibit CD 10.2 - IV) shall document the Rigging Inspector's performance.
- 7.5 The "Record of Construction Division Inspections of Handling Equipment and Rigging" form (Exhibit CD 10.2 - V) shall document the Rigging Inspector's inspection assignments.
- 7.6 Current copies of the "Record of Inspections of Handling Equipment and Rigging", the "List of Certified Rigging Inspector", and the "Vision Examination Schedule" shall be maintained in the site QC file



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EXHIBITS

Exhibit No.

Title

CD 10.2-I	Certificate of Qualification of Construction Division Inspectors of Handling Equipment and Rigging
CD 10.2-II	Personnel Certified as Qualified Inspectors of Handling Equipment and Rigging
CD 10.2-III	Vision Examination Schedule - Construction Division Inspectors of Handling Equipment and Rigging
CD 10.2-IV	Evaluation of Job Performance - Handling Equipment and Rigging Inspection
CD 10.2-V	Record of Construction Division Inspections of Handling Equipment and Rigging

9.0

ATTACHMENTS

Number

Title

Appendix I	Minimum Levels of Capability Required to Perform Various Project Functions as Defined in Table I of ANSI N45.2.6 - 1973
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FOOTNOTE:

The title "Rigging Foreman" is used in this procedure to designate the position of the field man in charge of all Construction Division rigging and handling activities, regardless of his job title.



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CERTIFICATE OF QUALIFICATION OF CONSTRUCTION DIVISION INSPECTORS OF HANDLING EQUIPMENT AND RIGGING

Prepared by: _____
Rigging Foreman

NAME _____ PAYROLL NO. _____ SOCIAL SECURITY NO. _____

ACTIVITY QUALIFIED TO PERFORM: _____

LEVEL OF CAPABILITY: _____

EFFECTIVE PERIOD OF CERTIFICATION: FROM _____ TO _____
(Certification not to exceed 2 yrs.)

BASIS USED TO CERTIFICATION:

EDUCATION:

High School: Graduated from _____ High School
City & State _____

College: Degree: _____

Degree: _____

Schools Attended: _____

Other Training: _____

Employment Record:

POSITION	DATE	POSITION	DATE

Testing and/or Inspection experience: _____

VISION REQUIREMENTS VERIFIED

I certify that the employee named above had a vision examination on this date and that his vision meets the requirements of ANSI N45.2.6 - 1973, Paragraph 3.2

P.E. CO. PHYSICIAN

DATE

We certify that the statements in this record are correct and that the individual named above is qualified to perform the activities listed, in accordance with ANSI N45.2.6 - 1973.

Signed: _____ Date: _____
General Superintendent

EXHIBIT CD 10.2 -II

CD 10.2
December 10, 19

PERSONNEL CERTIFIED AS
QUALIFIED INSPECTORS OF HANDLING
EQUIPMENT AND RIGGING

Mechanical Section

Riggers Group

Prepared by: _____
Rigging Foreman

NAME	PAYROLL NUMBER	LEVEL OF CAPABILITY		EFFECTIVE PERIOD OF CERTIFICATION	
		II	III	START	EXPIRE

EXHIBIT CD 10.2 -III

CD 10.2
December 16, 197

VISION EXAMINATION SCHEDULE
CONSTRUCTION DIVISION INSPECTORS OF
HANDLING EQUIPMENT AND RIGGING

Prepared by: Rigging Foreman

NAME	PAYROLL NUMBER	MOST RECENT VISION EXAMINATION	NEXT SCHEDULED VISION EXAMINATION

CONSTRUCTION DIVISION
PEACH BOTTOM ATOMIC POWER STATION

EVALUATION OF JOB PERFORMANCE

INSPECTION OF HANDLING EQUIPMENT AND RIGGING

NAME OF INSPECTOR

PAYROLL NUMBER

RECOMMENDED LEVEL OF CAPABILITY (In accordance with ANSI N45.2.6 - 1973). If recommended level of capability is different from the level which the Inspector is currently assigned, note the reasons for change.

ACTIVITIES FOR WHICH THE INSPECTOR IS QUALIFIED

YES NO

- 1. Approve inspection and test procedures
- 2. Implement inspection and test procedures
- 3. Evaluate inspection and test results
- 4. Reporting of inspection and test results

EVALUATION OF INSPECTOR'S KNOWLEDGE AND OBSERVANCE OF PROCEDURES AND SPECIFICATIONS -

ADDITIONAL COMMENTS:

Prepared by: _____ Date: _____

Rigging Foreman

EXHIBIT CD 10.2-IV

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APPROVAL:

I have reviewed the evaluation of the job performance of the Inspector named above and have determined that:

- _____ The capabilities of the Inspector are in accordance with the qualifications specified for the job and approve extension of his current certification as a qualified inspector for a period not to exceed two years.

- _____ The capabilities of the Inspector are not in accordance with the qualifications specified for the job and that he shall be removed from the list of certified inspectors until such time as he has received the additional training noted below.

- _____ The capabilities of the Inspector exceed the requirements of his current level of certification and I approve the change of his certified level of capability as indicated on Page 1.

Section Superintendent

Date

ADDITIONAL TRAINING REQUIRED:

December 16, 1977

EXHIBIT CD 102V

DATE:

P.R. NO. _____ SOC. SEC. NO. _____

RECORD OF CONSTRUCTION DIVISION
INSPECTIONS OF HANDLING EQUIPMENT AND RIGGING

PEACH BOTTOM ATOMIC POWER STATION

PART	DATE COMPLETE	DESCRIPTION	Level II Evaluate and/or Report Inspection and Test Results		Level III Approve Inspection and Test Procedures		RIGGING FOREMAN APPROVAL	DATE
			Yes/No	Yes/No	Yes/No	Yes/No		

The undersigned certifies that
the individual named above performed
the duties listed while assigned to
the Construction Division Riggers

APPENDIX I

Minimum Levels of Capability Required to Perform
 Various Project Functions as Defined in Table I
 of ANSI N 45.2.6 - 1973

PROJECT FUNCTION	LEVEL OF CAPABILITY		
	I	II	III
Implement inspection and test procedures.	X		
Evaluate inspection and test procedures.		X	
Reporting of inspection and test results		X	
Approve inspection and test procedures			X

NOTE: The following is an explanation of the duties of the various levels of Construction Division Inspectors of Rigging and Handling Equipment as defined in ANSI N45.2.6-1973.

LEVEL I RIGGING INSPECTOR - Construction Division will not certify any Rigging Inspectors to Level I. All duties normally assigned to a Level I Inspector will be performed by Level II Inspectors.

LEVEL II RIGGING INSPECTOR

- (1) Examine, inspect, witness, and verify first hand that a piece of rigging or handling equipment is inspected in accordance with an approved procedure and predetermined quality requirements.
- (2) Evaluate the results of inspections or tests performed by others (subcontractors, technicians, etc.) to determine their acceptability.
- (3) Prepare an inspection program for any handling equipment or rigging for which an acceptable inspection program is not available.

LEVEL III RIGGING INSPECTOR - May perform any or all of the functions assigned to a Level II Inspector and, in addition, may:

- (1) Approve the inspection programs prepared by Level II, or other Level III, Inspectors.
- (2) Approve work procedures and personnel qualification records of contractors who perform inspections or tests.