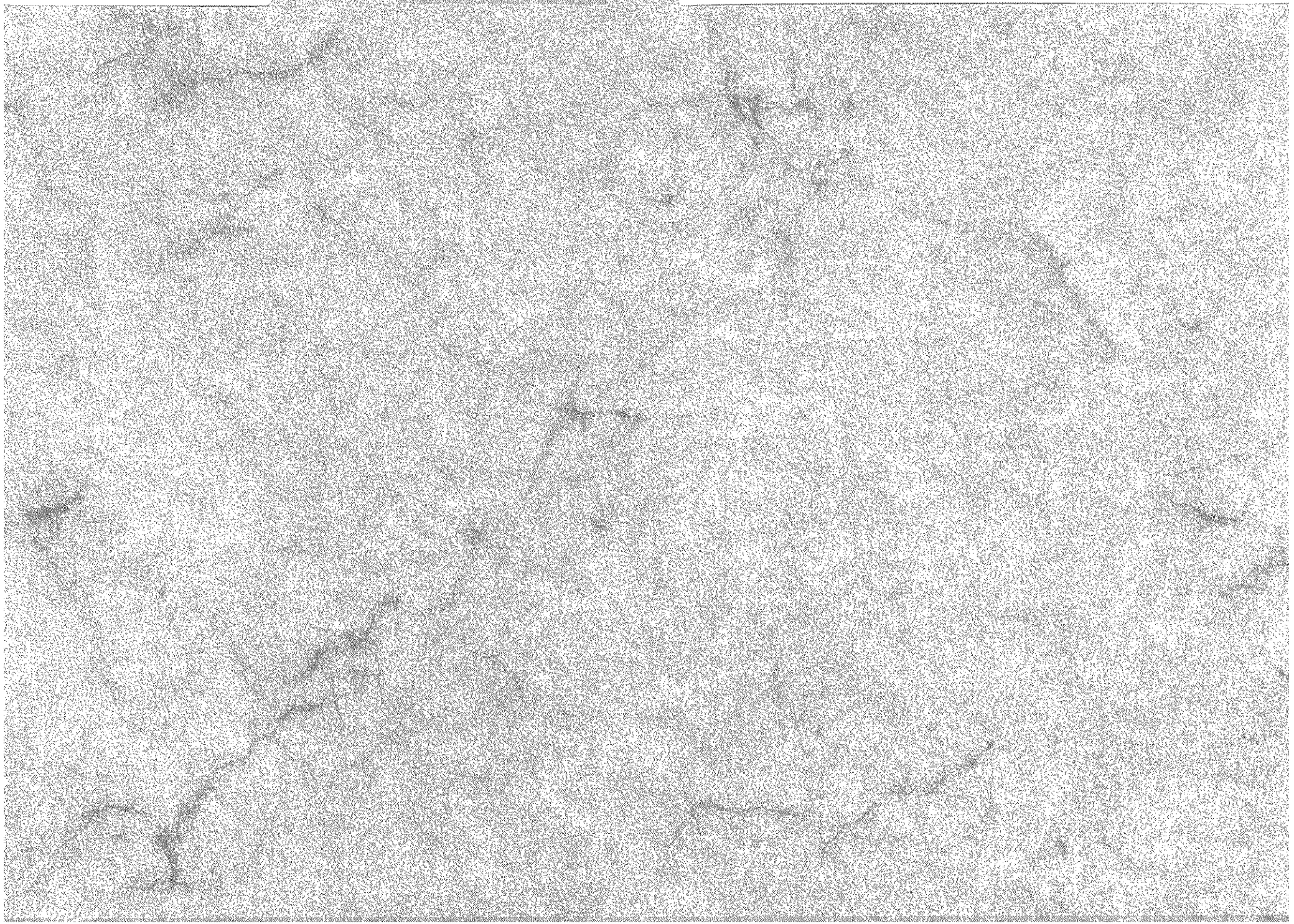


Category E-D, Moisture Barrier Examinations

Tab E - Inspector Certification Records

Examiner	Method	Level
Stephen Davis	VT-3	III
John Webster	VT-3	II

Sward, Chris A.

From: Deeds, Paul
Sent: Thursday, May 25, 2000 12:36 PM
To: Sward, Chris A.
Cc: Deeds, Paul; Schwartz, John; O'Toole, William; Villani, Luciano N.; Skonieczny, John
Subject: S & L

I have reviewed the following Sargent & Lundy Examination Procedures and find them acceptable for use at Indian Point:

1.IP-2-CISI-001 Rev. 1 Containment Inspection Per ASME Section XI IWE VT-1 Visual Examinations

2. IP-2-CISI-002 Rev 1 Containment Inspection Per ASME Section XI IWE VT-3 Visual Examinations

I have also reviewed the following Sargent & Lundy personnel certification packages and find the the following individuals acceptable for use at Indian Point in the NDE Methods listed below:

1. Stephen Davis [redacted] VT-1 & VT-3 Level II

2. John C. Webster [redacted] VT-1 & VT-3 Level III

EXHIBIT A

CONTAINMENT ISI VT EXAMINER

CERTIFICATION RECORD

This record certifies that

Name: Stephen Davis

SSN: [redacted]

has been examined in accordance with Project Instruction IP2-CISI-003, Revision 0 and has demonstrated the ability to perform the duties of VT Examiner for the methods listed below and is hereby certified to the level noted.

Method	Level
VT-1	III
VT-3	III

Certified by:

Name: R. L. Lurtz Date: 5-23-00

Position: QA Manager

Expiration Date: 5/23/05

EXHIBIT B

CONTAINMENT ISI VT EXAMINER

VISION EXAMINATION RECORD

Name: Stephen L. Davis

SSN: [redacted]

Near Distance:

Natural or corrected near-distance vision of 20/25 or greater Snellen fraction in at least one eye by reading words or characters with letters 0.022 inches in height on a standard Jaeger test chart at a distance of not less than 12 inches, or by equivalent method.

Method: ☒ Jaeger Test Chart Character height verified: ☐
☒ Alternate (describe) Snellen

Acuity: 20/20

☐ Acceptable ☒ Acceptable With Correction ☐ Unacceptable

Far Distance:

Natural or corrected far-distance vision of 20/30 or greater Snellen fraction, or equivalent, in at least one eye.

Acuity: 20/30

☒ Acceptable ☐ Acceptable With Correction ☐ Unacceptable

Color Perception:

Demonstrates capability of distinguishing and differentiating contrast between colors

Method:

☒ Ishihara color plates
☐ Alternate (describe) _____

☐ Acceptable ☐ Unacceptable

Testing Conducted by:

Name: _____ Title: OD

Address: ACCU VISION CENTER
809 E. ROLLINS RD.
ROUND LAKE BEACH, IL 60073
(847) 223-2020

Signature: Scott D. Pruyt O.D. Date: 5/18/00

EXHIBIT C

CONTAINMENT ISI VT EXAMINER

EDUCATION RECORD

Name: Stephen Davis

SSN: [redacted]

HIGH SCHOOL & COLLEGE EDUCATION			
NAME & LOCATION OF SCHOOL	TYPE OF SCHOOL	DATES ATTENDED	GRADE/ DEGREE ACHIEVED
Round Lake Senior High School Round Lake, IL	High School	1971 - 1975	Graduate

Records Attached:

- ☐ Transcript
- ☒ Diploma
- ☐ Letter
- ☐ Telephone Memorandum
- ☐ Other _____

Verified by: R. L. Kurtz Date: 5-23-00

Round Lake Senior High School

Round Lake Area Schools

Round Lake, Illinois

This Certifies That

Stephen Lawrence Davis

has completed the Course of Study prescribed by the Board of Education for the High School Department and is therefore entitled to this

Diploma

Given at Round Lake, Illinois, this 7th day of June A. D. 19[illegible]

Norma L. Douglas
PRESIDENT BOARD OF EDUCATION

Clifford Houghton Jr.
SUPERINTENDENT

Alma L. Kyes
SECRETARY OF BOARD OF EDUCATION

Ronald Gehmann
PRINCIPAL

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD

Name: Stephen Davis

SSN: [redacted]

I. RELATED WORK EXPERIENCE						
COMPANY & JOB TITLE	WORK PERFORMED	HOURS	FROM		TO	
			MO.	YR.	MO.	YR.
See attached resume.						

STEPHEN L. DAVIS
Materials Engineering Division
Project Engineer

EDUCATION

ASME Section XI Code Training
QC Inspector
ANSI N45.2.6 Mechanical As-Built Examiner

PROFICIENCIES

ASME Section XI IWE/IWL
Piping and Support ISI
Snubber ISI
Repair - Replacement
Paradox, Access and dBase databases
Microsoft Excel and Word
WordPerfect
Ami Pro
Autocad
Autocad LT
Auto Sketch

EXPERIENCE

Mr. Davis has 17 years of experience in the Nuclear Power Industry functioning as ISI Coordinator, Snubber Coordinator, Repair Replacement Coordinator, VT Level III Examiner, As-Built Walkdown Examiner, Snubber Test Analyst, Work Analyst, Procedure Writer, Designer, QC Inspector and Pipefitter. He is certified to operate various Snubber Test equipment and train others to be operators. Mr. Davis is experienced in Visual Basic programming language, has written programs for Commonwealth Edison to support visual inspection at the Zion Station.

Mr. Davis is experienced in writing ISI and IWE/IWL program plans, basis documents, relief requests and implementing procedures to meet the requirements of ASME Section XI.

Mr. Davis' experience also includes writing programs for pen based computers for visual inspection of piping and supports for the ISI and Snubber programs. Programs were written in visual basic programming language for computers used in the field to record visual inspections. The program enabled inspection results to be printed, eliminating the need to write the inspection by hand. The inspections are automatically recorded in the visual inspection database, allowing the ISI coordinator to track the inspections in the ISI program.

His specific experience includes:

- **Braidwood Station (1998)**
  - Created the ISI database that has become the corporate standard for all Commonwealth Edison sites. Created the IWE/IWL implementing procedures.

- **D. C. Cook Station (1998 - 1999)**
  - Revised the ISI Program Plan, Basis Document, ISI isometric drawings and the ISI database. Worked with plant personnel to revise the implementing procedures for ISI.

- **Braidwood Station (1997 - 1998)**
  - Performed a detailed review of the IWE/IWL program plan and design basis documents; revised the Relief Requests and the Program Plan for NRC submittal; reviewed the IWE/IWL drawings and had the drawings revised to reflect the design configuration; created the database to track the inspections performed during the outages; worked on revising sections of the ISI Program Plan to NRC submittal.

- **Zion Station (1997 - 1998)**
  - Performed a design basis review of the ISI program; assigned as Site VT Level III Inspector; reviewed the IWE/IWL design basis document and drawings created by the A/E; reviewed the tendon surveillance program for compliance with the new requirements for IWE/IWL; revised the Repair/Replacement program to include the requirements for IWE/IWL per the requirements of the 1992 Edition 92 Addenda of ASME Section XI; created forms and tables for the ISI database for visual inspection and drawing access to enhance capability.

- **Zion Station (1995 - 1997)**
  - ISI Program Engineer. Responsibilities included the revision of the Zion Third Interval ISI inspection program; creation of the ISI Component Database; revision of the ISI Inspection program procedures to incorporate the requirements of the 1989 ASME Section XI Code; revision and review of relief requests submitted to the NRC; and scheduling and implementation of ISI Code Inspections.

  - Repair/Replacement Program Engineer. Responsibilities included revision to the Repair/Replacement Program and Procedures to incorporate the 1989 ASME Section XI Code requirements; tracking of the repair/replacement activities; and review of materials and inspections to meet ASME Code requirements.

  - Snubber Program Engineer. Responsibilities included testing and inspection of hydraulic and mechanical snubbers; review of snubber testing and inspection results; tracking of the Lisega snubber replacement; and modification and coordination of snubber outage work.

    Component Support Program Engineer. Responsibilities included inspection of component supports for ASME Code requirements; review of repairs to component supports; tracking of supports for inspection frequency.

  - IWE/IWL Program Engineer. Responsibilities included working with A/E locating the design drawings used to create the IWE/IWL drawings; review of Containment ISI program plan; revised existing site procedures to incorporate the IWE/IWL requirements.

  - Site VT Level III Inspector. Responsibilities included review of all visual inspector's certifications; and review of all inspections for acceptance and tracking of examination requirements.

- **Zion Station (1988 - 1995)**
  - Snubber Replacement Modification and Snubber PM Program. Responsibilities included field walkdowns, ECN review, snubber testing, work analyst, VT inspections, parts procurement, liaison to Craft personnel. Assisting Tech staff in analyzing for PSA and

hydraulic snubber failure. Worked with Tech staff to revise the Tech Spec Surveillance Program for snubber testing. Also coordinated the installation of, created the software validation plan, performed the software validation testing, and wrote the software validation report for the API/Barker STB 200 Snubber Test Bench.

- **Monticello Station (1988)**
  - Responsibilities included procedure writing for Instrument Air quality testing in response to NRC Generic Letter 88-14, using specifications in ANSI/ISA 7.3. Also responsible for tracking maintenance information for all safety-related air operated valves from vendor specifications and comparing that information with the current preventative maintenance procedures. Additionally, responsible for performing ISI configuration control, VT inspections and constructibility walkdowns as required by the client.

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD (cont.)

Name: Stephen Davis

SSN: [redacted]

II. PREVIOUS CERTIFICATIONS

COMPANY	METHOD	LEVEL	BY TEST		CODE OR SPEC.	YEAR REC'D
			YES	NO		
Com Ed	VT-1, VT-2, VT-3/4	III	✓		ASME XI	1995-1998
Com Ed	VT-1, VT-2, VT-3/4	II	✓		ASME XI	1991-1995
Com Ed	VT-1, VT-2, VT-3/4	II	✓		ASME XI	1988-1989

EXHIBIT F

CONTAINMENT ISI VT EXAMINER

EXAMINATION RECORD

Name: Stephen Davis

SSN: [redacted]

I. INDIVIDUAL EXAMINATION RESULTS

METHOD	LEVEL	EXAM	GRADE	DATE	EXAMINED BY
VT	III	Basic	98%	5/22/00	C. Sward
VT-1	III	Specific	100%	5/22/00	C. Sward
VT-1	III	Method	100%	5/22/00	C. Sward
VT-3	III	Specific	97%	5/22/00	C. Sward
VT-3	III	Method	95%	5/22/00	C. Sward
VT-1	III	Demonstration	100%	5/21/00	C. Sward
VT-3	III	Demonstration	100%	5/21/00	C. Sward

II. COMPOSITE SCORE

METHOD	LEVEL	BASIC (LEVEL III)	GENERAL/ METHOD	SPECIFIC	PRACTICAL/ DEMONSTR.	COMPOSITE
VT-1	III	98%	100%	100%	100%	99%
VT-3	III	98%	95%	97%	100%	97%

Basic Examination

Name Stephan L. Davis Date 5/21/00

Weighing Factor 25% Grade 49/50 = 98%

Graded by Chris Sward Date 5/22/00

THIS IS A CLOSED BOOK TEST

Instructions:

This test is divided into three parts. The first part is 20 questions relating to S&I Procedures and an understanding of SNT-TC-1A. The second part is 15 questions relating to applicable equipment, techniques, materials, fabrication. The third part is 15 questions relating to principles of various visual examinations as defined in ASME Section XI. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

Stephen L Davis
Level III Candidate

5/21/00
Date

R E Lusty
Q.A. Manager

5/23/00
Date

VT-1 Method Examination

Name Stephen L Davis Date 5/21/00

Weighing Factor 25% Grade 100%

Graded by Bob Guard Date 5/22/00

THIS IS A CLOSED BOOK TEST

Instructions:

This test is divided into three parts. The first part is 30 questions on fundamentals and principles. The second part is 15 questions relating to application of techniques and procedures. The third part is 20 questions relating interpretation of specifications. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

Level III Candidate — Date 5/21/00

Q.A. Manager — Date 5/23/00

VT-1 Specific Examination

Name Stephen L. Davis Date 5/21/00

Weighing Factor 25% Grade 100%

Graded by [illegible] Date 5/22/00

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 30 questions relating to standards, specifications, procedures and codes relating to the VT-1 examination method as defined in ASME Section XI, 1992 Edition, !992 Addenda. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

[signature] 5/21/00

~~Level III Candidate~~ ~~Date~~

[signature] 5/23/00

~~Q.A. Manager~~ ~~Date~~

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: Steve Davis

SSN: [redacted]

Date of Examination: 5/21/00

Examination Method: VT-1

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	25
9. Sign and date form	5	5
10. Form complete and legible	5	5

Instructor's Signature: Chris Sward Date: 5/21/00

VT-3 Method Examination

Name Stephen L. Davis Date 5/21/00

Weighing Factor 25% Grade 95% (62/65)

Graded by Chris Durand Date 5/22/00

THIS IS A CLOSED BOOK TEST

Instructions:

This test is divided into three parts. The first part is 30 questions on fundamentals and principles. The second part is 15 questions relating to application of techniques and procedures. The third part is 20 questions relating interpretation of specifications. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

Level III Candidate — Date 5/21/00

Q.A. Manager — Date 5/23/00

VT-3 Specific Examination

Name Stephen L. Davis Date 5/21/00

Weighing Factor 25% Grade 97% (29/30)

Graded by [illegible] Date 5/22/00

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 30 questions relating to standards, specifications, procedures and codes relating to the VT-3 examination method as defined in ASME Section XI, 1992 Edition, !992 Addenda. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

[signature] 5/21/00

~~Level III Candidate~~ ~~Date~~

[signature] 5/23/00

~~Q.A. Manager~~ ~~Date~~

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: Steve Davis

SSN: [redacted]

Date of Examination: 5/21/00

Examination Method: VT-3

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	25
9. Sign and date form	5	5
10. Form complete and legible	5	5

Instructor's Signature: Mike Durand Date: 5/21/00

EXHIBIT A

CONTAINMENT ISI VT EXAMINER

CERTIFICATION RECORD

This record certifies that

Name: John C. Webster

SSN: [redacted]

has been examined in accordance with Project Instruction IP2-CISI-003, Revision 0 and has demonstrated the ability to perform the duties of VT Examiner for the methods listed below and is hereby certified to the level noted.

Method	Level
VT-1	II
UT-3	II

Certified by:

Name: [signature] Date: 5/23/2000

Position: VT Level III

Expiration Date: ~~5/17/2001~~ 5/17/2003 5/24/2000

EXHIBIT B

CONTAINMENT ISI VT EXAMINER

VISION EXAMINATION RECORD

Name: John C. WEBSTER

SSN: [redacted]

Near Distance:

Natural or corrected near-distance vision of 20/25 or greater Snellen fraction in at least one eye by reading words or characters with letters 0.022 inches in height on a standard Jaeger test chart at a distance of not less than 12 inches, or by equivalent method.

Method: ☒ Jaeger Test Chart Character height verified: ☐

☐ Alternate (describe) _____

Acuity: 20/20 OU

☒ Acceptable ☐ Acceptable With Correction ☐ Unacceptable

Far Distance:

Natural or corrected far-distance vision of 20/30 or greater Snellen fraction, or equivalent, in at least one eye.

Acuity: 20/15 OU

☐ Acceptable ☒ Acceptable With Correction ☐ Unacceptable

Color Perception:

Demonstrates capability of distinguishing and differentiating contrast between colors

Method:

☒ Ishihara color plates 10/10 OU

☐ Alternate (describe) _____

☐ Acceptable ☐ Unacceptable

Testing Conducted by:

Name: JOHN M. FRON, O.D. Title: _____

Address: FAMILY EYECARE OF LOCKPORT
1053 EAST 9TH ST.
LOCKPORT, IL 60441

Signature: [signature] Date: 5-17-00

EXHIBIT C

CONTAINMENT ISI VT EXAMINER

EDUCATION RECORD

Name: John C. WEBSTER

SSN: [redacted]

HIGH SCHOOL & COLLEGE EDUCATION			
NAME & LOCATION OF SCHOOL	TYPE OF SCHOOL	DATES ATTENDED	GRADE/ DEGREE ACHIEVED
H.L. Richards	H.S.	76-80	Diploma
Moreside Valley Comm. Col	Comm Col	80-83	A.A.S
Athens STATE College	STATE Col.	84-86	B.S.

Records Attached:

- ☐ Transcript
- ☐ Diploma
- ☒ Letter
- ☐ Telephone Memorandum
- ☐ Other _____

Verified by: _____ Date: _____

Sargent & Lundy LLC

Peter J. Meehan
Manager, Human Resources Division
312/269-3573

VERIFICATION OF ACADEMIC CREDENTIALS FORM

September 9, 1999

Office of the Registrar
Moraine Valley Community College
10900 S. 88th Avenue
Palos, Illinois 60465

John Caldwell Webster, Social Security No. [redacted] is presently employed with our firm and has indicated the following information relative to your institution. The individual's signature authorizing the release of this information is enclosed. We would appreciate the return of your verification and completion of this information in the enclosed self-addressed envelope.

		Yes	Correction
Dates of Attendance	**From** Sept., 1980		
	To Dec. 1983	☒	
Date Degree Conferred	1983	☒	
Type of Degree	Associates - NDT	☒	

(The next next two lines should be completed only if individual has received two degrees from this institution.)

Date Degree Conferred	☐	
Type of Degree	☐	

Was attendance during the above dates full time or part time? Some full time, some part time

Were any disciplinary problems cited? ☐ Yes ☒ No

If yes, please indicate nature of disciplinary problem. _____

Place Seal of Institution Here

Registrar: Wendy Manser

Date: 9-13-99

Sargent & Lundy LLC

Peter J. Meehan
Manager, Human Resources Division
312/269-3573

VERIFICATION OF ACADEMIC CREDENTIALS FORM

July 31, 1997

Office of the Registrar
Athens State College
Athens, AL 35611-1902

John C. Webster, Social Security No. [redacted] is presently employed with our firm and has indicated the following information relative to your institution. The individual's signature authorizing the release of this information is enclosed. We would appreciate the return of your verification and completion of this information in the enclosed self-addressed envelope.

		Yes	Correction
Dates of Attendance	**From** February 1984		
	To June 1986	☒	
Date Degree Conferred	1986	☒	
Type of Degree	B.S. Nondestructive Testing	☒	

(The next next two lines should be completed only if individual has received two degrees from this institution.)

Date Degree Conferred	☐	
Type of Degree	☐	

Was attendance during the above dates full time or part time? full & part time

Were any disciplinary problems cited? ☐ Yes ☒ No

If yes, please indicate nature of disciplinary problem. _____

Place Seal of Institution Here

Registrar: Danielle Anderson

Date: 8/6/97

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD

Name: John C. Webster

SSN: [redacted]

I. RELATED WORK EXPERIENCE						
COMPANY & JOB TITLE	WORK PERFORMED	HOURS	FROM		TO	
			MO.	YR.	MO.	YR.
SEE Attached Resume						

John C. Webster
5/24/00

Sargent & Lundy LLC

JOHN C. WEBSTER
Materials Engineering Division
Senior Engineer

EDUCATION

B.S. Nondestructive Testing & Computer Science, Athens State College - 1986

CERTIFICATIONS

NAVSEA 250-1500-1 (Welding Specification) & Mil-STD-2132 (Base Material Specification)
Level III Examiner in all NDT methods
ComEd Level II VT 1 and 2

PROFICIENCIES

Nondestructive Engineering/Testing
Vendor Surveillance/Inspection/Auditing
Procurement/Material Control/Expediting
Alloy Identification
Deficiency Tracking & Resolution
Procurement & Technical Specifications
ASME B31.1 (Power Piping)
ASME Sections I, V, VIII, IX Specialist
ASME Code Interpretations
Quality Engineering/Quality Control
Technical Procedure Writing
Computer Proficient

RESPONSIBILITIES

Mr. Webster is a Senior Engineer with leadership responsibilities relating to non-destructive examination (NDE) and inspection programs for fossil and nuclear power plants. Specific duties include developing and coordinating programs in response to new code requirements, particular service conditions, developing fitness-for-use assessments, and providing expert field evaluations. Additional responsibilities include: performing source surveillance, inspection and auditing at contractor facilities; developing NDE programs in response to various code and regulatory requirements, verifying acceptability of programs and procedures, coordinating related activities and conducting in-plant system surveillance's. Performed independent third party evaluations on NDE discrepancies.

EXPERIENCE

Midwest Generation – Edison International

- Provided expert QA/QC oversight to heavy wall ASME piping replacement projects. Reviewed contractor welding, heat-treating and NDE procedures for compliance to ASME BPVC Sections I, V, IX, B31.1, procurement and specified contracts. Performed, verified & witnessed NDE inspections. Visual Testing (VT), Liquid Penetrant (PT), Magnetic Particle (MT) Radiography (RT), and Ultrasonic inspections (UT) including final approval of radiographs for the client. Established hold and witness points.

American Electric Power

- Performed investigations and provided resolutions to non-conforming conditions identified at the plant. Responsible for identifying/initiating work to be done to modify/repair equipment. Evaluated NDE results for acceptability.

ComEd

- Provided tracking of team Design Change Packages (DCP) as well as preparation, oversight of implementation and final DCP closeouts. Technical lead for developing and implementing an initial effort for piping systems examination/inspections in accordance with ASME code. Reviewed technical requirements and related procedures for code, design and client compliance. Supervisor responsible for coordinating work activities and administering evaluation results among system engineering, maintenance and operations and construction. Extensive knowledge was required in design and material specifications, code boundary classifications, and pressure testing requirements. Developed a working knowledge of configuration control issues

and of ComEd's computer network system (EWCS).

Westinghouse Bettis Atomic Power Laboratory,
Senior Engineer

- Performed surveillance audits including equipment assessment and capabilities at Naval Nuclear Contractor and subcontractor facilities. Identified/verified quality procedure conformances as well as review of record management. Witness and performed hands-on inspections of welds and other related components. Administered examinations in accordance with NAVSEA 250-1500-1 (Weld Specifications) and MIL-STD-2132 (Base Material Specification). Qualified/Certified in Radiology, Ultrasonics, Magnetic Particle, Liquid Penetrant and Visual & Dimensional Inspection techniques in the Naval Nuclear Program. Developed and evaluated in-house and vendor procedures written to Naval Nuclear codes, ASME Boiler Pressure Vessel Code, ANSI and military specifications. Performed research & development using state of the art inspection techniques and imaging techniques. Cognizant engineer for alloy identification testing techniques. Assisted in the placement of technical requirement bid packages and final placement contracts for the manufacturing of Naval Nuclear cores with the vendor. Held a DOE Q clearance.

Lockheed-Aeronautical Space Company
Quality Engineer

- Responsible Engineer for the Preventive Maintenance-Evaluation Program and assessment of existing NDI equipment. Performed research & development of non-contact NDE of aircraft structures and advanced composite materials. Assisted with the development of an Automated Inspection System (computer programming to achieve real-time measurements), Advanced Instrumentation Standards and equipment evaluations. Authored operating procedures for several ongoing projects. Work performed in accordance with aerospace and military specifications.

PUBLICATIONS & AWARDS

- Acknowledged for editorial review of ASNT's Nondestructive Testing Handbook, second edition, Volume Nine, Special Nondestructive Testing Methods
- "Thermography detects aircraft composite defects," published in Design News, 45, 17 (1989), p.53 - 54
- "Detecting Defects in Graphite/Epoxy Materials," published in Sensors, 6, 9 (1989) p.52
- Awarded Westinghouse - Bettis Continuous Improvement Award (4/92 and 11/95)
- Awarded Westinghouse Achievement Award for Excellence in Business (10/96)

PROFESSIONAL SOCIETIES

- 1983 - Present, Active member of American Society of Nondestructive Testing (ASNT),
  - Held offices of Secretary 1987-88, Vice-Chairman 1988-89 and Chairman 1989-90 (Atlanta, GA ASNT Section) and
  - Secretary 1992-93, Vice-Chairman 1993 - 94, Chairman 1994-95 (Pittsburgh, PA ASNT section).
- "The Qualification of Nondestructive Testing Personnel in the Naval Nuclear Propulsion Program" (R.A. Nance) presented at the 1992 ASNT Fall Conference and Quality Testing Show and Conference.

- 1992 - Present, Active member of American Society of Testing and Material (ASTM), on the E7 Nondestructive Testing committee and actively participating in E7.01 (Radiology [X and Gamma]) methods, E7.03 (Liquid Penetrant and Magnetic Particle) methods, E7.06 (Ultrasonic) methods and E7.10 (Emerging NDT) methods subcommittees.

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD (cont.)

Name: John C. WEBSTER

SSN: [redacted]

II. PREVIOUS CERTIFICATIONS

COMPANY	METHOD	LEVEL	BY TEST		CODE OR SPEC.	YEAR REC'D
			YES	NO		
ComEd	VT-1, VT-2	II	✓		ASME XI	1997
Westinghouse Bettis-Naval Nuclear Program	RT, UT, PT, MT VT	III	✓		NAVSEA250-1500-1 Welding STD	1990-1997
Westinghouse Bettis Naval Nuclear Program	RT, UT, PT, MT	III	✓		MIL-STD-2132 Base Mtl Spec	1990-1997

EXHIBIT F

CONTAINMENT ISI VT EXAMINER

EXAMINATION RECORD

Name: John C. Webster

SSN: [redacted]

I. INDIVIDUAL EXAMINATION RESULTS

METHOD	LEVEL	EXAM	GRADE	DATE	EXAMINED BY
VT-1	II	General	95	5/23/2000	S. Davis
VT-1	II	Specific	100	5/23/2000	S. Davis
VT-1	II	Practical 1	97%	5/23/2000	S. Davis
VT-1	II	Practical 2	100	5/23/2000	S. Davis
VT-3	II	General	90%	5/23/2000	S. Davis
VT-3	II	Specific	93.33%	5/23/2000	S. Davis
VT-3	II	Practical 1	100	5/23/2000	S. Davis
VT-3	II	Practical 2	100	5/23/2000	S. Davis

II. COMPOSITE SCORE

METHOD	LEVEL	BASIC (LEVEL III)	GENERAL/ METHOD	SPECIFIC	PRACTICAL/ DEMONSTR.	COMPOSITE
VT-1	II	NA	95	100	① 97 ② 100	98%
VT-3	II	NA	90%	93.33	① 100 ② 100	95.83%

EXHIBIT E

CONTAINMENT ISI VT EXAMINER

TRAINING RECORD

Name: John C. Webster

SSN: [redacted]

TRAINING COURSES COMPLETED				
TYPE	LOCATION	HOURS	TRAINING DATE(S)	INSTRUCTOR SIGNATURE & DATE
VT-1	S+L Chicago office	6	5/19/2000	
VT-3	S+L Chicago office	6	5/19/2000	

VT-1 General Examination

Name John C. WEBSTER Date 5-23-2000

Weighing Factor 33.3% Grade 95 19/20

Graded by [signature] Date 5/23/2000

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 20 questions relating to the general requirements and basic principles of the VT-1 method. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

[signature] 5-23-00

Level II Candidate Date

[signature] 5/23/2000

Level III Date

VT-1 Specific Examination

Name John C. WEBSTER Date 5-23-00

Weighing Factor 33.3% Grade 100

Graded by Stephen L. DAVIS Date 5/23/2000

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 15 questions relating to the specific procedural and ASME Section XI requirements for the VT-1 method. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this specific test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

John C. Webster
Level II Candidate

5-23-00
Date

Level III

5/23/2000
Date

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: John C. Webster

SSN: [redacted]

Date of Examination: 5/23/2000

Examination Method: UT-1 PRAC 1

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	22 -3
9. Sign and date form	5	5
10. Form complete and legible	5	5

97%

Instructor's Signature: Stephen L. Davis Date: 5/23/2000

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: John C. webster

SSN: [redacted]

Date of Examination: 5/23/2000

Examination Method: VT-1 PIAC 2

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	25
9. Sign and date form	5	5
10. Form complete and legible	5	5

100%

Instructor's Signature: Stephen L. Davis Date: 5/23/2000

VT-3 General Examination

Name John C. WEBSTER Date 5-23-2000

Weighing Factor 33.3% Grade 90 18/20

Graded by Stephen L. Davis Date 5/23/2000

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 20 questions relating to the general requirements and basic principles of the VT-3 method. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this general test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

John C. Webster 5-23-00

Level II Candidate Date

Level III 5/23/2000

Date

VT-3 Specific Examination

Name John C. WEBSTER Date 5-23-00

Weighing Factor 33.3% Grade 93.33 14/15

Graded by Stephen L Davis Date 5/23/2000

THIS IS A CLOSED BOOK TEST

Instructions:

This test consists of 15 questions relating to the specific procedural and ASME Section XI requirements for the VT-3 method. Read each question and select the answer you feel is correct. There is only one correct answer for each question.

Upon completion of grading and review of this test, sign and date the following statement:

I acknowledge that this specific test is a requirement of ASME Section XI an SNT-TC-1A and is used to demonstrate my knowledge of the codes, standards, procedures and visual examination methods covered by this test.

John C. Webster 5-23-00

Level II Candidate Date

5/23/2000

Level III Date

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: John C. Webster

SSN: [redacted]

Date of Examination: 5/23/2000

Examination Method: VT-3 PIAC I

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	25
9. Sign and date form	5	5
10. Form complete and legible	5	5

100%

Instructor's Signature: Stephen R. Dunn Date: 5/23/2000

CONTAINMENT ISI EXAMINER CERTIFICATION

DEMONSTRATION EXAMINATION CHECKLIST

Name: John C. Webster

SSN: [redacted]

Date of Examination: 5/23/2000

Examination Method: VT-3 PIAC 2

Inspection Point	Point Value	Points Granted/ Comments
1. Select procedure - verify revision	10	10
2. Select form - verify revision	5	5
3. Record component number	5	5
4. Select equipment	5	5
5. Verify adequacy of lighting	10	10
6. Inspect component/ identify indications	15	15
7. Compare indications to acceptance criteria	15	15
8. Correctly record indications	25	25
9. Sign and date form	5	5
10. Form complete and legible	5	5

100%

Instructor's Signature: [signature]

Date: 5/23/2000

F

CONTAINMENT INSERVICE INSPECTION
PER ASME SECTION XI SUBSECTION IWE
VT-3 VISUAL EXAMINATIONS

Prepared by: _____ Date: 5/24/2000

Reviewed by: Chris Dward Date: 5/24/00

Approved by: Chris Dward for Bob Gerke Date: 5/24/00
Project Manager

Approved for Use
P.E Dwards
ConEd Lv. III
5/25/00

e. Any cracks or linear indications in metallic components.

f. Any unusual bulges on containment vessel or liner.

7.1.2 Coated or Painted Areas:

a. Any conditions that show evidence of flaking, peeling, blistering, discoloration, or other signs of distress.

b. Nicks or gouges that extend to the metal surface.

c. Evidence that the paint or coating is missing, wearing, or eroding.

7.1.3 Non-Coated Areas or Components:

a. Any evidence of cracking, discoloration, wear, pitting, arc strikes, gouges, dents, surface discontinuities, or other signs of surface irregularities.

7.1.4 Seals and Gaskets:

a. Any condition that shows evidence of wear, erosion, tears, surface cracks, and other defects that may violate the containment leak-tight integrity.

b. Any condition that would indicate the seal or gasket is dislodged or displaced from the designed position.

7.1.5 Moisture Barriers:

a. Any condition that shows evidence of wear, damage, erosion, tears, surface cracks, and other defects that may indicate damage or aging to the point that the barrier will not prevent intrusion of moisture.

b. Any condition that would indicate the moisture barrier is dislodged or displaced from the designed position.

7.2 Non-Recordable Conditions

VT-3

Conditions that are noted by the Examiner during the VT-1 Examination that, following his interpretation of the condition, is determined not to ~~be a Re~~cordable Indication may be recorded as an Non-Recordable Indication for informational purposes.

8. REFERENCES

8.1 Code of Federal Regulations; Title 10, Energy; Part 50, Domestic Licensing of Production and Utilization Facilities; Section 50.55a, Codes and Standards.

8.2 ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWE, 1992 Edition through 1992 Addenda.

8.3 IP2-CISI-003, "Containment Inservice Inspection - Certification for VT Examiners"

9. ATTACHMENTS

9.1 Form VT-3, Record of VT-3 Examination (2 pages)

Category E-D, Moisture Barrier Examinations

Tab F - Inspection Procedures

CONTAINMENT INSERVICE INSPECTION PER ASME SECTION XI SUBSECTION IWE

VT-3 VISUAL EXAMINATIONS

Prepared by: _____ Date: 5/25/00

Reviewed by: _____ Date: 5/25/00

Approved by: _____ for R. Gerke Date: 5/25/00
Project Manager

CONTAINMENT INSERVICE INSPECTION
VT-3 EXAMINATIONS

1. PURPOSE

This procedure provides instructions and recording criteria for the performance of VT-3 examinations during preservice and inservice Inspection of the steel liner of the Indian Point 2 (IP2) concrete containment.

2. SCOPE AND LIMITATIONS

2.1 The instructions and criteria contained herein establish the minimum requirements necessary to accomplish VT-3 examinations of Class MC pressure retaining components and their integral attachments, and of metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments.

2.2 These instructions and criteria are in compliance with ASME Boiler and Pressure Vessel Code, Section XI, Subsections IWA and IWE, 1992 Edition with 1992 Addenda.

2.3 The components to be examined under this procedure and the limits or boundaries of the examination are defined in the IP2 Containment Inservice Inspection Program Plan and inspection drawings referenced therein.

2.4 When a containment vessel or liner is painted or coated to protect surfaces from corrosion, examinations may be performed without removal of the paint or coating. However, removal of paint or coating may be required to facilitate further examination should indications be evident through the paint or coating. The purpose of examining painted or coated surfaces is to detect evidence of base metal degradation and not to evaluate the coating itself.

3. RESPONSIBILITIES

3.1 The Examiner shall perform the examinations and record the results as prescribed in this procedure. The Examiner shall be certified as a Level II or III VT-3 Examiner in accordance with Project Instruction IP2-CISI-003.

3.2 The Level III Examiner shall review the results of the examination and evaluate the conditions recorded, and initiate additional action as prescribed within this procedure. The Level III Examiner shall be certified as a Level III VT-3 Examiner in accordance with Project Instruction IP2-CISI-003.

4. DEFINITIONS

The following definitions are provided for use with this procedure.

4.1 Evaluation - the process of determining the significance of examination results, including the comparison of examination results with applicable acceptance criteria or previous results.

4.2 Examination – The process of making visual observation of an item, area, or component to detect imperfections.

4.3 Interpretation - The act of determining the nature or identity of an observed condition and its relevancy according to the examination criteria.

5. MATERIALS AND EQUIPMENT

Adequate illumination and such aids to examination as may be needed to properly examine the specific components shall be used and documented on Form VT-3.

5.1 A near distance vision test chart containing text with lower case characters without an ascender or descender (e.g., a,c,e,o), with maximum lower case height of 0.105 inches is required for procedure demonstration. Measurements of the near distance test chart shall be made once before initial use with an optical comparator (10X or greater) or other suitable instrument to verify that the height of a representative lower case character meets the height requirement.

5.2 It is not necessary to measure illumination levels on each examination surface when the same portable light source or similar installed lighting equipment is demonstrated to provide the specified illumination at the maximum examination distance. Battery powered portable lights may be used provided that they meet the maximum distance requirement of Section 6.1.1 and illumination level of Section 6.1.2

5.3 Borescopes, fiberscopes, mirrors, telescopes, closed circuit television, cameras or other devices may be used for remote examination, provided such devices or systems have a resolution capability at least equivalent to that attainable by direct visual examination, which is defined by Sections 6.1.1, 6.1.2 and 6.1.3.

5.4 Magnifying glasses, mirrors, gap gages, rulers, protractors, weld gages, and surface replication techniques may be used to supplement direct examination should the need arise.

6. EXAMINATION INSTRUCTIONS

6.1 Examination Conditions

6.1.1 Access to the component/item shall enable a direct examination within 48 inches of the surface, unless location, obstruction, safety or heath physics considerations render the component/item inaccessible for examination at this distance. In such cases, remote optical aids shall be used to achieve a resolution capability at least equivalent to that attainable by direct examination, and the remote examination and equipment used shall be demonstrated and documented.

6.1.2 Surface areas being examined shall be illuminated, if necessary, by auxiliary light sources to attain a minimum illumination level of 50 foot-candles.

6.1.3 When performing remote VT-3 examination, the maximum direct examination distance specified in Section 6.1.1 may be increased and the minimum illumination requirements specified in Section 6.1.2 may be decreased, provided that the conditions or indications for which the VT-3 examination is performed can be detected at the chosen distance and illumination.

6.1.4 Adequacy of this visual examination procedure shall be demonstrated at least once to confirm that the characters described in Section 5.1 can be viewed at the distance specified in Section 6.1.1 under lighting specified in Section 6.1.2.

6.1.5 The component surfaces to be examined shall be free of dirt, contaminants, grease, or other debris that could interfere with the examination.

a. Mechanical cleaning methods or approved cleaners/solvents shall be used to remove the interference prior to starting the examination.

b. If the component must be cleaned of unusual contaminants to ensure a complete examination, the nature of the contaminants shall be described (for information) on Form VT-3.

6.2 Areas to be Examined

VT-3 examinations shall be performed on the component types listed below. The specific components to be included shall be as specified in the Containment ISI Program Plan. The extent and limits of examination for each component shall be as specified in the inspection drawings.

6.2.1 Metallic Containment Surfaces and Components:

a. Accessible coated and non-coated surface areas, including structures that are parts of the reinforcement structure such as stiffening rings, manhole frames, and reinforcing around openings, will be included.

b. Attachment welds between structural attachments and pressure retaining boundary or reinforcing structure, except for non-structural and temporary attachments and minor permanent attachments, will be included.

6.2.2 Seals and Gaskets:

a. All accessible surfaces of seals and gaskets on containment airlocks, hatches, penetrations and other devices that are required to ensure containment leak tight integrity will be included. This examination generally will only be performed when the connection is opened for other activities.

6.2.3 Moisture Barriers:

a. All accessible surfaces of internal and external containment moisture barrier materials at concrete to metal surfaces that are intended to prevent intrusion of moisture against the pressure retaining metal containment shell or liner will be included. This may include caulking, flashing and other sealants as specified on the inspection drawings.

6.3 Conditions to Examine for

6.3.1 All areas and components shall be examined for the following general conditions:

a. Unusual contaminants or debris in and around the component

b. Mechanical damage including corrosion, wear, or erosion.

c. Loose or missing components.

d. Missing or incomplete welds.

e. Cracks or linear indications.

f. Bulges.

6.3.2 Painted or coated surfaces shall be examined for evidence of missing paint or coating, flaking, wear, erosion, blistering, peeling, discoloration, nicks or gouges that extend to the base metal and other signs that may indicate degradation of the substrate beneath the coatings.

6.3.3 Non-coated surfaces shall be examined for evidence of cracking, discoloration, pitting, excessive corrosion, nicks or gouges, dents, wear, surface discontinuities, and other surface irregularities.

6.3.4 Seals and gaskets shall be examined for evidence of wear, erosion, tears, surface cracks, physical displacement, and other defects that may indicate aging or damage.

6.3.5 Moisture barriers shall be examined for evidence of wear, damage, erosion, tears, surface cracks, physical displacement and other defects that may render it ineffective.

6.4 Data Recording

6.4.1 The Examiner shall record the results of the visual examination on Form VT-3. Each recording condition listed in the form shall be marked to record the condition as one of the following:

a. "RI" for Recordable Indications per the criteria of Section 7.1,

b. "NRI" for Non-Recordable Indications conditions per the criteria in Section 7.2,

c. "NI" if no indication were found, or

d. "NA" if the condition is not applicable for the subject component.

6.4.2 The recording criteria of Section 7.0 establish the minimum conditions that the visual examiner must record. The examiner is to interpret the observed conditions and record what is found as either "Recordable Indications" or as "Non-Recordable Indications." As a minimum, other observed conditions not specifically addressed herein should be recorded if relevant. This does not apply to minor surface blemishes such as scratches, fabrication marks, tool marks or other such conditions. Recording observed conditions according to this procedure does not establish either acceptance or rejection of the item/component containing the recorded conditions.

6.4.3 Upon completion of the examination and after finalizing the data in Form VT-3, the Examiner shall sign and date the form.

6.4.4 The Level III Examiner shall review "Recordable Indications" and "Non-Recordable Indications" and evaluate them to determine if nonconforming conditions exist. The designation of a nonconforming condition establishes the need for further evaluation and documentation in accordance with the applicable problem identification process.

a. Following the preliminary evaluation by the Level III Examiner, both "Recordable Indications" and "Non-Recordable Indications" may lead to the need for further evaluation or corrective measures.

b. The Level III Examiner shall make recommendations to the Station following his evaluation of the recordable indications. Such recommendations/ comments shall be documented on Form VT-3 or on other appropriate documents imposed by plant procedures. Form VT-3 must be traceable to these other documents. The Level III shall accomplish this by suitable annotation or reference to these other documents in the space provided for his comments on the form.

c. The Level III Examiner's recommendations may include, but are not limited to: "Accept-As-Is"; maintenance requests; repair; replacement; analytical evaluation; additional examinations or tests; adjustment; drawing/design changes; or other corrective measures deemed appropriate for the condition identified.

d. The Station may follow the Level III examiner's recommendations or may choose a different solution to correct the observed condition. However, the corrective action actually performed by the Station should be documented in accordance with the applicable station procedures. The documentation must be traceable to the original VT-3 examination report for close-out. If the Station elects (after suitable evaluation) to "Accept-As-Is", this must be documented and the document made traceable as described herein.

6.4.5 Upon completion of his evaluation and initiation of subsequent action as required, the Level III Examiner shall sign and date Form VT-3 and forward it to the Authorized Nuclear Inservice Inspector (ANII) for review or as otherwise directed by the ISI coordinator.

7. RECORDING CRITERIA

7.1 Recordable Indications

A Recordable Indication is a condition observed during the VT-3 examination that requires supplemental examination or analytical evaluation to accept it or one that requires repair, replacement or other corrective measures to allow further use. The conditions described in the following paragraphs shall be documented as "Recordable Indications."

7.1.1 General Conditions:

a. Any evidence of unusual contamination, foreign material or debris. Also, unusual contaminants removed prior to the visual examination must be recorded for information only.

b. Any corrosion or mechanical damage, such as erosion or wear, resulting in loss of metal. All corrosion, erosion and wear, as a minimum, shall be recorded for information.

c. Any loose, detached or missing parts.

d. Any evidence of service induced weld degradation (such as cracking, etc.). Construction conditions, such as undercut, weld spatter, etc. may be noted for information.

e. Any cracks or linear indications in metallic components.

f. Any unusual bulges on containment vessel or liner.

7.1.2 Coated or Painted Areas:

a. Any conditions that show evidence of flaking, peeling, blistering, discoloration, or other signs of distress.

b. Nicks or gouges that extend to the metal surface.

c. Evidence that the paint or coating is missing, wearing, or eroding.

7.1.3 Non-Coated Areas or Components:

a. Any evidence of cracking, discoloration, wear, pitting, arc strikes, gouges, dents, surface discontinuities, or other signs of surface irregularities.

7.1.4 Seals and Gaskets:

a. Any condition that shows evidence of wear, erosion, tears, surface cracks, and other defects that may violate the containment leak-tight integrity.

b. Any condition that would indicate the seal or gasket is dislodged or displaced from the designed position.

7.1.5 Moisture Barriers:

a. Any condition that shows evidence of wear, damage, erosion, tears, surface cracks, and other defects that may indicate damage or aging to the point that the barrier will not prevent intrusion of moisture.

b. Any condition that would indicate the moisture barrier is dislodged or displaced from the designed position.

7.2 Non-Recordable Conditions

Conditions that are noted by the Examiner during the VT-3 Examination that, following his interpretation of the condition, is determined not to be a Recordable Indication may be recorded as an Non-Recordable Indication for informational purposes. 2

8. REFERENCES

8.1 Code of Federal Regulations; Title 10, Energy; Part 50, Domestic Licensing of Production and Utilization Facilities; Section 50.55a, Codes and Standards.

8.2 ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWE, 1992 Edition through 1992 Addenda.

8.3 IP2-CISI-003, "Containment Inservice Inspection - Certification for VT Examiners"

9. ATTACHMENTS

9.1 Form VT-3, Record of VT-3 Examination (2 pages)

FORM VT-3
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3 EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

ZONE NUMBER: _____ DRAWING NO.: _____

EQUIPMENT USED: _____

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris					
7.1.1.b	Corrosion or mechanical damage					
7.1.1.c	Loose or missing parts					
7.1.1.d	Missing or incomplete welds					
7.1.1.e	Cracks or linear indications					
7.1.1.f	Bulges					
7.1.2	Damage or degradation evident through coating					
7.1.3	Degradation in uncoated areas.					
7.1.4	Damage or degradation of seal or gasket					
7.1.5	Damage or degradation of moisture barrier					

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: _____ Date: _____

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☐ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

_____

Signature: _____ Date: _____

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-3 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

No.	Comment	Initials

CONTAINMENT INSERVICE INSPECTION PER ASME SECTION XI SUBSECTION IWE

CERTIFICATION OF VT EXAMINERS

Prepared by: _____ Date: 5/18/00

Reviewed by: _____ Date: 5/18/00

Approved by: _____ Date: 5-18-00
Project Manager

CONTAINMENT INSERVICE INSPECTION CERTIFICATION OF VT EXAMINERS

1. PURPOSE

This procedure provides a written practice for qualification, training and certification of Sargent and Lundy personnel involved in visual examination activities (VT) performed for preservice and inservice inspection of the steel liner of the Indian Point 2 (IP2) concrete containment.

2. SCOPE

2.1 The instructions and criteria contained herein establish the minimum requirements for certification of examiners to perform VT-1 and VT-3 examinations of Class MC pressure retaining components and their integral attachments, and of metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments. This is considered a limited certification per IWA-2350 as it applies only to liner examination.

2.2 These instructions and criteria are in compliance with ASME Boiler and Pressure Vessel Code, Section XI, Subsections IWA and IWE, 1992 Edition with 1992 Addenda with specific relief as described herein.

2.2 This written practice is modeled after the requirements in ASNT Recommended Practice SNT-TC-1A, 1984 Edition. IP2 is committed to SNT-TC-1A, in lieu of ASNT CP-189 as prescribed by IWA-2310, per Relief Request No. 44.

3. DEFINITIONS

3.1 Certification - written testimony of qualification.

3.2 Experience - actual performance of visual examinations or observation of the condition of components conducted during work time resulting in the acquisition of skill and knowledge. Classroom and laboratory training time shall not be considered as experience.

3.3 Eye Exam - a vision test performed by a qualified person in accordance with the applicable provisions of this procedure.

3.4 Qualification - Demonstrated skill, training, knowledge and experience required for personnel to properly perform the duties of a specific job.

3.5 Training - the program developed to impart the knowledge and skills necessary for qualification.

3.6 VT Examination - examination performed to evaluate an item or component by visual observation.

3.7 Written Practice - the procedure written to control and administer personnel training, examination, and certification of the VT program. A set of guidelines to assist the employer in developing uniform procedures for the qualification and certification of nondestructive testing personnel to satisfy the employer's specific requirements.

4. QUALIFICATION LEVELS AND RESPONSIBILITIES

4.1 Trainee

The trainee is a person in the process of being qualified and certified to Level I. A trainee shall work with a certified individual and shall not independently conduct any tests, interpret or evaluate the results of a test or report test results.

4.2 Instructor

An individual who is NOT required to be certified but has the skills and knowledge to plan, organize, and present classroom, laboratory, or on-the-job training programs in accordance with course outlines. Per this procedure, a Level III VT Examiner qualifies as a VT Instructor.

4.3 Level I VT Examiner

4.3.1 A Level I Examiner may perform specific calibrations, specific tests, and specific evaluations for acceptance or rejection determinations according to written instructions and to record results.

4.3.2 The Level I Examiner shall receive the necessary instruction or supervision from a certified Level II or Level III individual.

4.3.3 A Level I Examiner cannot interpret examination results.

4.4 Level II VT Examiner

4.4.1 The Level II VT examiner may set up and calibrate equipment and interpret and evaluate results with respect to applicable codes, standards, and specifications.

4.4.2 The Level II Examiner shall be thoroughly familiar with the scope and limitations of the methods for which the individual is qualified and shall exercise assigned responsibility for on-the-job training and guidance of trainees and Level I personnel.

4.4.3 The Level II Examiner may prepare written instructions, and organize and report the results of VT examinations.

4.5 Level III VT Examiner

4.5.1 The duties of a Level III Examiner include establishing techniques and procedures; interpreting codes, standards, specifications, and procedures; and designating the particular test methods, techniques, and procedures to be used.

4.5.2 The Level III Examiner shall be responsible for the VT operations for which qualified and to which assigned, and shall be capable of interpreting and evaluating results in terms of existing codes, standards, and specifications.

4.5.3 The Level III Examiner shall have sufficient practical background in applicable materials, fabrication, and production technology to establish and to assist in establishing acceptable criteria where none are otherwise available.

4.5.4 The Level III Examiner shall have general familiarity with other appropriate NDE methods, and may train and examine VT Level I and II personnel for certification.

4.6 Quality Assurance (QA) Manager

4.6.1 The QA Manager shall be responsible for the certification of the Level III VT Examiner.

5. EDUCATION AND EXPERIENCE REQUIREMENTS

5.1 General

5.1.1 All levels of VT Examiners shall have at least a high school education, unless otherwise specified by the Level III Examiner.

5.1.2 Experience requirements for each level of VT Examiner may be met by documented VT examination experience or VT-related experience gained at facilities/sites.

5.2 Level I and II

5.2.1 Required experience hours for certification to Level I or II are listed in Table 1.

5.2.2 The required experience listed for Level II certification includes the experience that would have been required for Level I personnel. Therefore, for direct certification to Level II, only the total experience listed in for Level II must be met.

5.3 Level III

5.3.1 The education and experience requirements for Level III certification are:

a. High school graduate or equivalent plus 4 years of experience, or

b. Completion with a passing grade of at least 2 years of engineering or science study in an accredited university, college, or technical school plus 2 year of experience, or

c. 4-year college graduate in engineering or science study plus 1 year of experience.

6. TRAINING AND TESTING REQUIREMENTS

6.1 Vision Testing

6.1.1 All categories and levels of VT Examiners shall have their vision tested annually by qualified personnel.

6.1.2 The vision examination shall demonstrate natural or corrected near-distance acuity of 20/25 or greater Snellen fraction in at least one eye by reading words or identifying characters on a near-distance test chart, such as a Jaeger chart, with letters 0.022 inches in height at distance of not less than 12 inches.

6.1.3 The vision examination shall also demonstrate a natural or corrected far-distance acuity of 20/30 or greater Snellen fraction or equivalent in at least one eye.

6.1.4 The eye chart used for the examination shall be qualified once by measuring, with an optical comparator or other means, the height of a representative lower case character without ascender or descender to verify that it meets the requirements

of Section 6.1.2 for character height. The measurement of the characters shall be made once and documented and made traceable to the test chart.

6.1.5 All personnel shall demonstrate the capability to distinguish and differentiate contrast between colors used in the applicable examination method. Where an individual does not pass the general color test, the Level III or QA Manager shall evaluate that he is capable of distinguishing between colors applicable to the examination method and document his evaluation in the certification record.

6.1.6 The results of the applicable eye tests shall be recorded on the Vision Examination Record (Exhibit B or equivalent) by the qualified individual who administered the eye tests.

6.1.7 Candidates who fail to meet the specified physical requirements may be awarded limited certification. This limitation shall be noted on the certificate.

6.2 Training

6.2.1 Candidates for Level I or II certification must complete the minimum training requirements specified in Table 1.

6.3 Testing

6.3.1 Level I

A candidate for Level I certification must demonstrate understanding in the principals and procedural requirements as follows:

a. Pass a Level I General examination consisting of at least 20 questions on the requirements and basic principles of the applicable VT method.

b. Pass a Level I Specific examination consisting of at least 15 questions on procedural requirements and ASME Section XI requirements for the applicable VT method.

c. Pass a Level I Practical examination for the applicable VT method to demonstrate proficiency in the VT method. This test shall be graded using the applicable ten point checklist. A minimum of two (2) samples are required for VT-1 and VT-3 practical examination.

d. A minimum composite score of 80% must be attained. Each practical examination score must be at least 80%. A score as low as 70% on written examinations (General and Specific) may be accepted for certification or re-certification, provided the composite score is at least 80%. The composite score weighting factors are: General - 1/3, Specific - 1/3, Practical - 1/3.

6.3.2 Level II

A candidate for Level II certification must demonstrate understanding in the principals and procedural requirements as follows:

a. Pass a Level II General examination consisting of at least 20 questions on the requirements and principles of the applicable VT method.

b. Pass a Level II Specific examination consisting of at least 15 questions on procedural requirements and ASME Section XI requirements for the applicable VT method.

c. Pass a Level II Practical examination for the applicable VT method to demonstrate proficiency in selecting and performing the applicable VT tests and interpreting and evaluating the results. This test shall be graded using the applicable ten point checklist. A minimum of two (2) samples are required for VT-1 and VT-3 practical examination.

d. A minimum composite score of 80% must be attained. Each practical examination score must be at least 80%. A score as low as 70% on written examinations (General and Specific) may be accepted for certification or recertification, provided the composite score is at least 80%. The composite score weighting factors are: General - 1/3, Specific - 1/3, Practical - 1/3.

6.3.3 Level III

A candidate for Level III certification must demonstrate understanding in the principals and procedural requirements as follows:

a. Pass a written Basic examination with a minimum score of 80% consisting of:

(1) 20 questions showing an understanding of this written practice;

(2) 15 questions on equipment techniques, code requirements, practices and specifications common to VT-1 and 3; and

(3) 15 questions on general principles applicable to all VT examinations.

b. Pass a written Method examination with a minimum score of 80% on the applicable VT category consisting of:

(1) 30 questions on fundamentals, objectives, and principles;

(2) 15 questions on establishment and applications of techniques and procedures; and

(3) 20 questions on ability to interpret codes, standards and specifications.

c. Pass a written Specific examination with a minimum score of 80% in the applicable VT category consisting of 30 questions relating to S&L's VT procedures, practices, and policies.

d. Pass a Demonstration examination with a minimum score of 80% consisting of a Level II Practical examination in the appropriate VT category. This test shall be graded using the applicable ten point checklist.

e. A minimum score of 80% must be attained on each examination. The composite grade weighting factors are: Basic - 1/4, Method - 1/4, Specific - 1/4, Demonstration – 1/4.

6.4 Retraining

6.4.1 Retraining (i.e. initial VT training courses) of VT examiners is required when:

a. Their certification has been terminated and they are seeking reinstatement.

b. Their certification has been expired for more than one (1) year.

c. Failure to pass the certification or re-certification examinations more than twice.

d. Deemed necessary by the Level III.

7. CERTIFICATION

7.1 Certification of Level III VT Examiners shall be performed by the QA Manager. Certification for Level I and Level II VT Examiners shall be performed by a Level III VT Examiner or the QA Manager.

7.2 Certification Documents

The following documents shall be prepared and maintained for each certified individual for the duration of the certification period.

7.2.1 Certification Record

The Certification Record (Exhibit A or equivalent) shall include the following information:

a. Name of the certified individual.

b. Date of certification or re-certification.

c. Level of certification.

d. Statement indicating conformity to the qualification requirements of this procedure.

e. Approval signature of the Level III or authorized designee.

f. The expiration date of the certification, which shall be three (3) years for Level I and Level II Examiners and five (5) years for Level III Examiners.

7.2.2 Vision Examination Record

a. The near vision test result must be written out numerically, for example J-1 for the Jaeger test. An "OK" or check mark is not acceptable.

b. The far vision test result must be written out numerically, for example 20/20 for the Snellen test. An "OK" or check mark is not acceptable.

c. The test method used for color vision test must be identified. The extent of any limitations must be described.

7.2.3 Education Record

The candidate's educational history shall be provided on the Education Record (Exhibit C or equivalent). Evidence of the candidate's highest educational level must be submitted. The following are acceptable forms of documentation.

a. Transcript (original or copy) verified by the Level III or authorized designee.

b. Diploma (original or copy) verified by the Level III or authorized designee.

c. Letter from the educational institution (original or copy) verified by the Level III or authorized designee.

d. Telephone memorandum between the educational institution and the Level III or authorized designee.

e. Other objective documents may be acceptable at the discretion of the Level III.

7.2.4 Experience Record

In conjunction with a signed resume, the following are examples of acceptable documentation:

a. Experience Record (Exhibit D or equivalent) which tabulates related work experience.

b. Previous certification documents (original or copy) verified by the Level III.

c. Letters or work logs from current or previous employers where related experience was gained. These documents should contain period of employment, job responsibilities, certifications related to VT and signature of appropriate supervisor.

d. Other objective documents may be acceptable at the discretion of the Level III.

7.2.5 Examinations

Original graded examinations or the original examination answer cover sheets must be maintained. Graded examinations must be signed by the Level III or authorized designee. Other suitable evidence of successful completion of the examinations may be used in lieu of the original graded examinations or the original examination answer cover sheets, if deemed acceptable by the Level III.

a. When using results of examinations administered by an outside agency, such as EPRI, a copy of the certificate of satisfactory course completion shall be used in lieu of the original graded examination or the original examination answer cover sheets.

b. Sargent and Lundy will accept an EPRI Certificate of Completion as evidence of passing the equivalent examination required for personnel certified under this practice.

c. Graded examinations that are more than 1 year old are not acceptable for certification or re-certification.

7.3 Continued Certification

7.3.1 Annual review is required of each examiner's certification to maintain that certification. The review requires an updated vision examination and review of related activities. The annual review due date is one year (12 months), from the previous vision examination.

7.3.2 All certified Level I, Level II and Level III VT Examiners shall take a vision examination as described in Section 6.1 and provide the documentation required by Section 7.2.2 by the annual review date.

7.3.3 In addition, examiners shall provide evidence of involvement in at least two (2) examinations (either practical exercises or actual examinations) in each certified method.

7.3.4 The Level III Examiner (QA manager for Level III's certification) shall evaluate the list of related activities submitted by each examiner and determine its adequacy for continued certification.

7.3.5 The Level III (or QA manager) shall complete an Annual Certification Review Record (Exhibit G or equivalent) to document that a VT Examiner meets the continued certification requirements. This form shall be updated at approximately 12-month intervals. An updated copy of this form shall be forwarded to each VT Examiner for record and proof of active certification.

7.4 Re-Certification

7.4.1 Level I and Level II VT Examiners shall be re-certified every three (3) years.

7.4.2 Level III VT Examiners shall be re-certified every five (5) years.

7.4.3 Level I and Level II VT Examiners shall meet the experience and training requirements of Table 2 for re-certification.

7.4.4 Re-certification shall be by examination as described in Section 6.3.

7.4.5 Documentation for re-certification shall be in accordance with Section 7.2.

7.5 Termination/Suspension of Certification

7.5.1 VT certification may be terminated by the Level III for one of the following reasons:

a. Termination of employment,

b. Transfer permanently to another job function where VT certification is no longer required,

c. Failing a re-certification examination more than twice, or

d. Non-compliance with applicable requirements as determined by the Level III.

(1) If termination is considered due to incompetence, the Level III must fully review the individual's past performance. In addition, the

Level III must evaluate the individual's performance in a field examination. The individual shall be given prior notice as to the purpose of such field evaluation.

(2) In the event it is decided to terminate the certification for incompetence, a letter of termination shall be prepared by the Level III, which sets forth the detailed reasons for termination. The letter shall be filed and distributed to all relevant department heads.

e. Expiration of certification period.

7.5.2 VT certification shall be suspended under the following circumstances:

a Failure to pass or provide documentation of an acceptable vision test by the annual review due date.

b. Failure to provide satisfactory evidence of involvement in related activities by the annual review due date.

c. Failure to pass a re-certification examination.

d. Non-compliance with applicable requirements as determined by the Level III.

7.6 Reinstatement of Certification

7.6.1 Terminated certifications may be reinstated at the discretion of the Level III. As a basis of reinstatement, the individual must complete the initial VT training and pass the corresponding examinations.

7.6.2 Suspension of certification shall remain in effect until re-certification is required or the following conditions are met:

a. Successful completion of a "field" VT examination in the suspended category to the satisfaction of the Level III, if the suspension is solely due to the failure to meet the requirements for involvement in related activities.

b. Passing the applicable vision test if the suspension is solely due to the failure to provide documentation of having passed the vision test.

8. REFERENCES

8.1 Code of Federal Regulations; Title 10, Energy; Part 50, Domestic Licensing of Production and Utilization Facilities; Section 50.55a, Codes and Standards.

8.2 ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWA, 1992 Edition through 1992 Addenda.

8.3 American Society for Nondestructive Testing Recommended Practice SNT-TC-1A, 1984 Edition.

8.4 Relief Request No. 44, "Qualification of NDE Personnel," approved February 4, 2000.

9. ATTACHMENTS

9.1 Table 1, Minimum Experience and Training Requirements for Containment ISI VT Certification.

9.2 Table 2, Minimum Experience and Training Requirements for Containment ISI VT Re-Certification.

9.3 Exhibit A, Containment ISI VT Examiner Certification Record

9.4 Exhibit B, Containment ISI VT Examiner Vision Examination Record

9.5 Exhibit C, Containment ISI VT Examiner Education Record

9.6 Exhibit D, Containment ISI VT Examiner Experience Record (2 pages)

9.7 Exhibit E, Containment ISI VT Examiner Training Record

9.8 Exhibit F, Containment ISI VT Examiner Examination Record

9.9 Exhibit G, Containment ISI VT Examiner Annual Certification Review Record

TABLE-1
MINIMUM EXPERIENCE AND TRAINING REQUIREMENTS
FOR CONTAINMENT ISI VT CERTIFICATION

REQUIRED EXPERIENCE HOURS

	Level I		Level II	
	VT-1	VT-3	VT-1	VT-3
Minimum Hours in Specified Method	65	65	130	130
Minimum Hours in NDE (all methods)	130	130	270	270

REQUIRED TRAINING HOURS

Method	Training Required for Level I	Additional Training Required for Level II	Total Training Required for Level II
VT-1	2	4	6
VT-3	2	4	6

TABLE-2
MINIMUM EXPERIENCE AND TRAINING REQUIREMENTS
FOR CONTAINMENT ISI VT RE-CERTIFICATION

ADDITIONAL HOURS FOR RE-CERTIFICATION OF LEVEL I & LEVEL II VT EXAMINERS

Method	Experience Hours	Training Hours
VT-1	20	3
VT-2	20	3

EXHIBIT A

CONTAINMENT ISI VT EXAMINER

CERTIFICATION RECORD

This record certifies that

Name: _____

SSN: _____

has been examined in accordance with Project Instruction IP2-CISI-003, Revision 0 and has demonstrated the ability to perform the duties of VT Examiner for the methods listed below and is hereby certified to the level noted.

Method	Level
_____	_____
_____	_____

Certified by:

Name: _____ Date: _____

Position: _____

Expiration Date: _____

EXHIBIT B

CONTAINMENT ISI VT EXAMINER

VISION EXAMINATION RECORD

Name: _____

SSN: _____

Near Distance:

Natural or corrected near-distance vision of 20/25 or greater Snellen fraction in at least one eye by reading words or characters with letters 0.022 inches in height on a standard Jaeger test chart at a distance of not less than 12 inches, or by equivalent method.

Method: ☐ Jaeger Test Chart Character height verified: ☐

☐ Alternate (describe) _____

Acuity: _____

☐ Acceptable ☐ Acceptable With Correction ☐ Unacceptable

Far Distance:

Natural or corrected far-distance vision of 20/30 or greater Snellen fraction, or equivalent, in at least one eye.

Acuity: _____

☐ Acceptable ☐ Acceptable With Correction ☐ Unacceptable

Color Perception:

Demonstrates capability of distinguishing and differentiating contrast between colors

Method:

☐ Ishihara color plates

☐ Alternate (describe) _____

☐ Acceptable ☐ Unacceptable

Testing Conducted by:

Name: _____ Title: _____

Address: _____

_____

Signature: _____ Date: _____

EXHIBIT C

CONTAINMENT ISI VT EXAMINER

EDUCATION RECORD

Name: _____

SSN: _____

HIGH SCHOOL & COLLEGE EDUCATION			
NAME & LOCATION OF SCHOOL	TYPE OF SCHOOL	DATES ATTENDED	GRADE/ DEGREE ACHIEVED

Records Attached:

- ☐ Transcript
- ☐ Diploma
- ☐ Letter
- ☐ Telephone Memorandum
- ☐ Other _____

Verified by: _____ Date: _____

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD

Name: _____

SSN: _____

I. RELATED WORK EXPERIENCE						
COMPANY & JOB TITLE	WORK PERFORMED	HOURS	FROM		TO	
			MO.	YR.	MO.	YR.

EXHIBIT D

CONTAINMENT ISI VT EXAMINER

EXPERIENCE RECORD (cont.)

Name: _____

SSN: _____

II. PREVIOUS CERTIFICATIONS

COMPANY	METHOD	LEVEL	BY TEST		CODE OR SPEC.	YEAR REC'D
			YES	NO		

EXHIBIT E

CONTAINMENT ISI VT EXAMINER

TRAINING RECORD

Name: _____

SSN: _____

TRAINING COURSES COMPLETED				
TYPE	LOCATION	HOURS	TRAINING DATE(S)	INSTRUCTOR SIGNATURE & DATE

EXHIBIT F

CONTAINMENT ISI VT EXAMINER

EXAMINATION RECORD

Name: _____

SSN: _____

I. INDIVIDUAL EXAMINATION RESULTS					
METHOD	LEVEL	EXAM	GRADE	DATE	EXAMINED BY

II. COMPOSITE SCORE						
METHOD	LEVEL	BASIC (LEVEL III)	GENERAL/ METHOD	SPECIFIC	PRACTICAL/ DEMONSTR.	COMPOSITE

EXHIBIT G

CONTAINMENT ISI VT EXAMINER

ANNUAL CERTIFICATION REVIEW RECORD

This record certifies that

Name: _____

SSN: _____

has maintained his certification in accordance with Project Instruction IP2-CISI-003, Revision ___ for the methods and levels listed below.

Method	Level
_____	_____
_____	_____

Basis:

- ☐ Vision Examination (record attached)
- ☐ Experience (record attached))
- ☐ Other (describe) _____

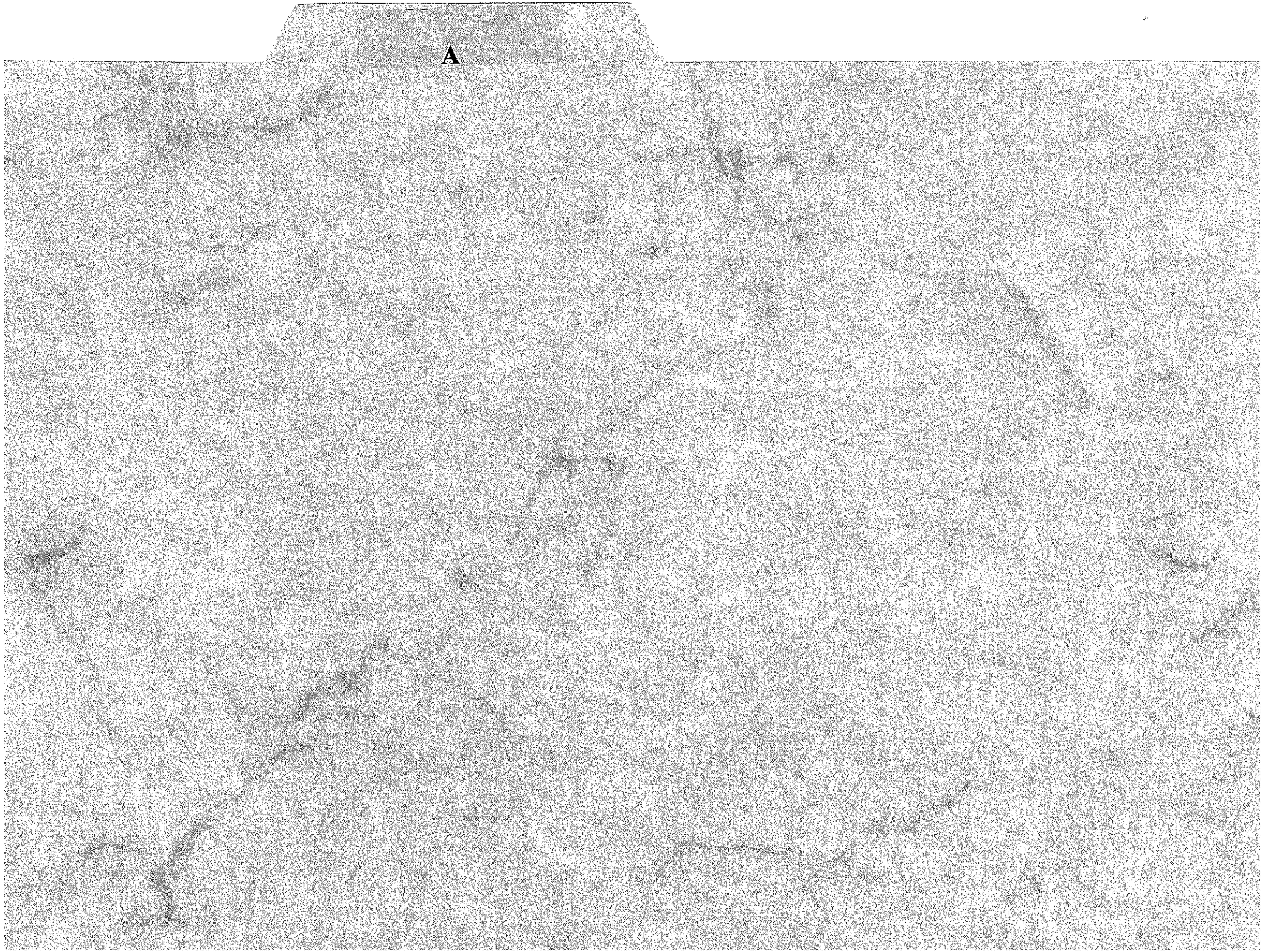
Certified by:

Name: _____ Date: _____

Position: _____

Appendix III

APPENDIX III
Examination Category E-G, Bolting VT-1

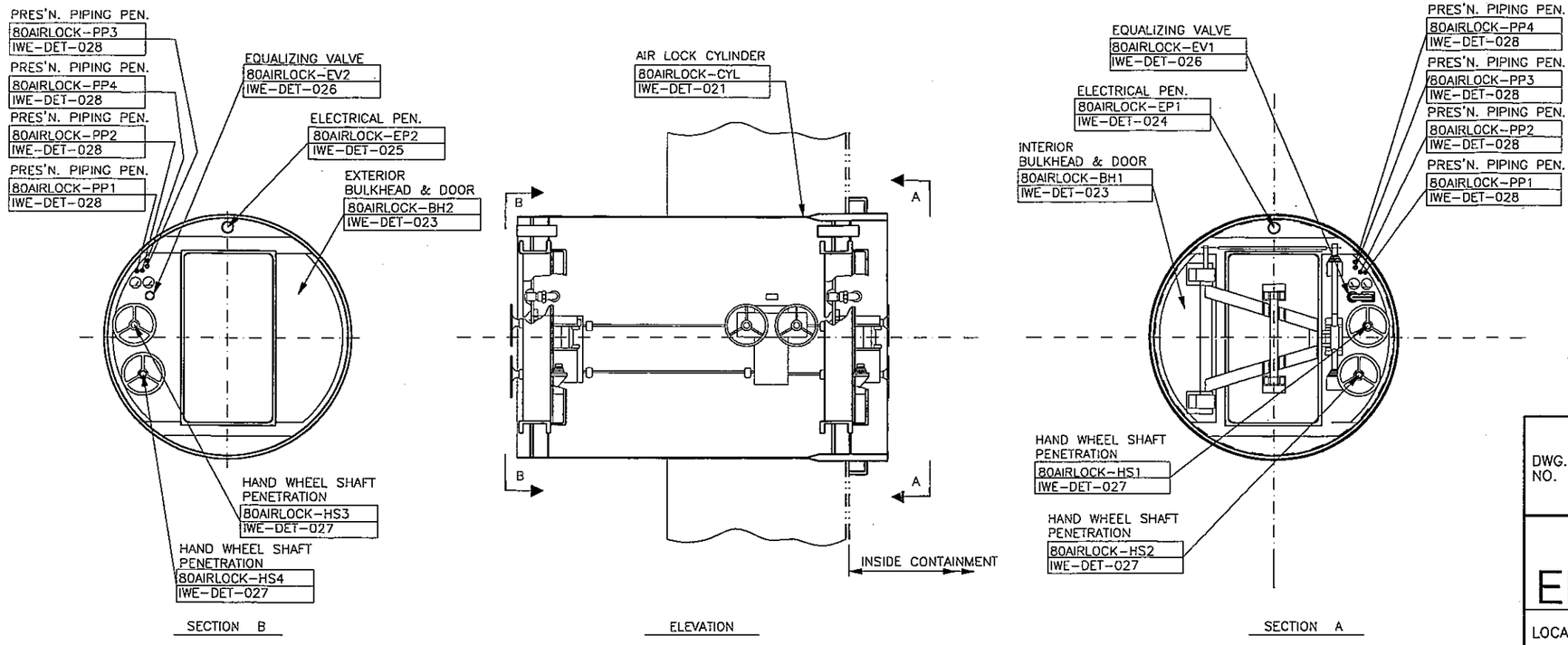

A

INDIAN POINT UNIT 2
CONTAINMENT INSERVICE INSPECTION
FIRST PERIOD EXAMINATIONS

Category E-G, Bolting Examinations

Tab A - Inspection Drawings

320791-00



PERSONNEL LOCK GENERAL ARRANGEMENT

NOTES:
1. SEE DRAWING 320820 FOR INDEX OF LINER INSPECTION DETAILS.
2. REFERENCE DESIGN DRAWING NUMBER 9321-F-1297.
3. REFERENCE CB&I DRAWING NUMBER 160 (CON ED 301925).

LEGEND:

80AIRLOCK-EP1 — COMPONENT ID
IWE-DET-024 — INSPECTION DETAIL NUMBER (NOTE 1)

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

REVISION
USE .1 SIZE TEXT ONLY

REVISION SIGNATURES	
REV	PROJECT ENGINEER
00	

DWG. NO. 320791-00

CON EDISON

DWG. TYPE COMPANY

DWG. SIZE D

LOCATION: INDIAN POINT UNIT 2

TITLE: CONTAINMENT ISI
GENERAL ARRANGEMENT
PERSONNEL LOCK
– APPROVALS –

ENGINEERING MANAGER:

PROJECT ENGINEER:

DESIGNER:

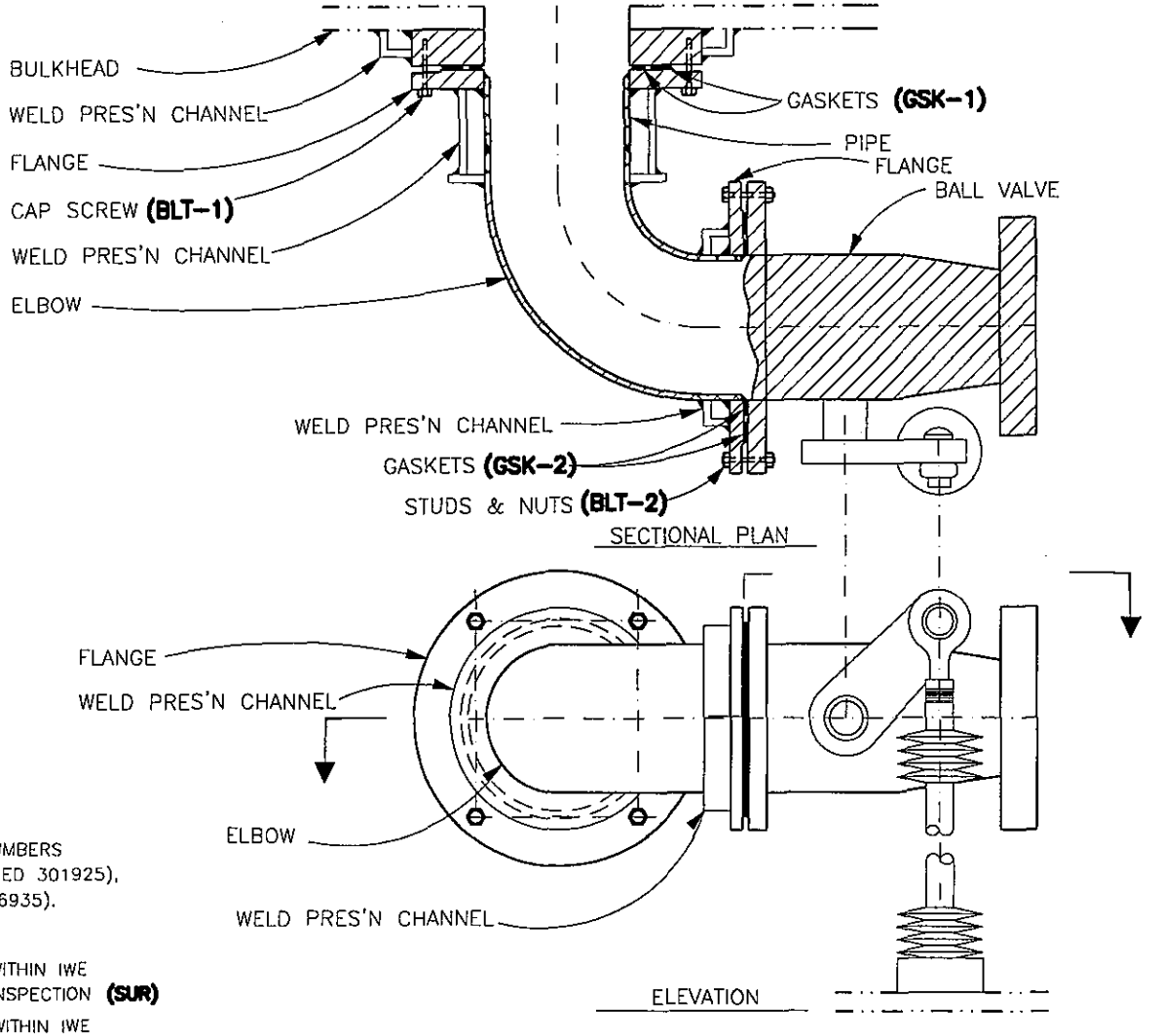
DRAWN BY: P CHAU

SCALE: NONE

DISCIPLINE CODE:

320791-00

320922-00



IWE-DET-026
AIR LOCK EQUALIZING VALVE
(95AIRLOCK-EV1 & 95AIRLOCK-EV2)
(80AIRLOCK-EV1 & 80AIRLOCK-EV2)

NOTES:
1. REFERENCE CB&I DRAWING NUMBERS 100 (1974M6958), 160 (CON ED 301925), 167 (34C683) & 168 (1974M6935).

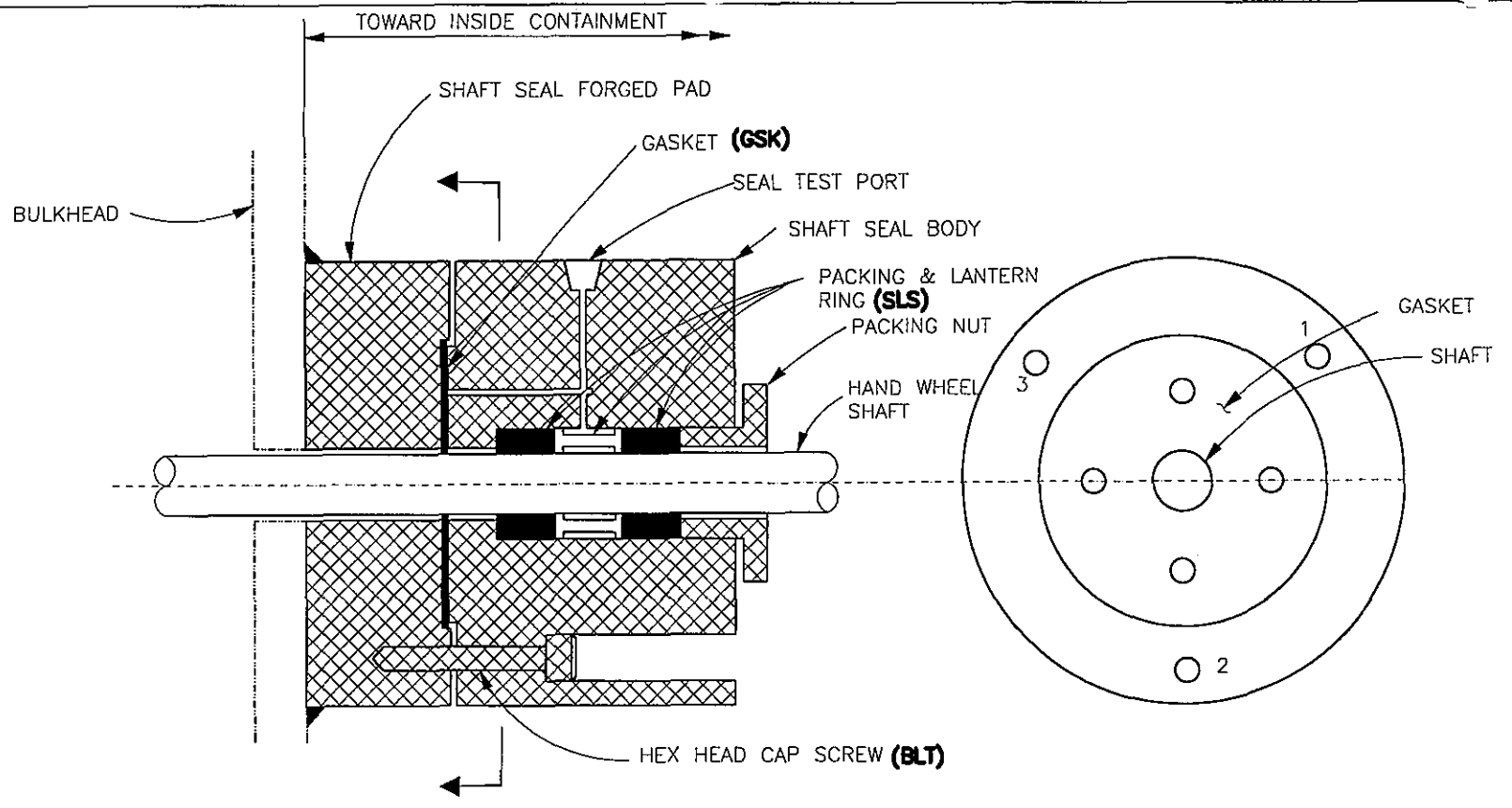
LEGEND:
- COMPONENT/SURFACE, WITHIN IWE BOUNDARY, REQUIRING INSPECTION **(SUR)**
- COMPONENT/SURFACE, WITHIN IWE BOUNDARY, INACCESSIBLE FOR INSPECTION

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

CON EDISON	DWG NO. 320922-00	ENGINEERING MANAGER:	REV. 00	REVISION USE .1 SIZE TEXT ONLY
	DWG SIZE: E TYPE:	PROJECT ENGINEER:	PROJECT ENGINEER:	
	LOCATION: INDAIN POINT UNIT 2	DESIGNER:		
TITLE: CONTAINMENT ISI LINER INSPECTION DETAIL IWE-DET-026		DRAWN BY:	REVISION SIGNATURE	SCALE: NONE / DISC. CODE:

320922-00

320923-00



NOTES:
1. REFERENCE CB&I DRAWING NUMBERS 100 (1974M6958), 160 (CON ED 301925) & 169 (36C812).

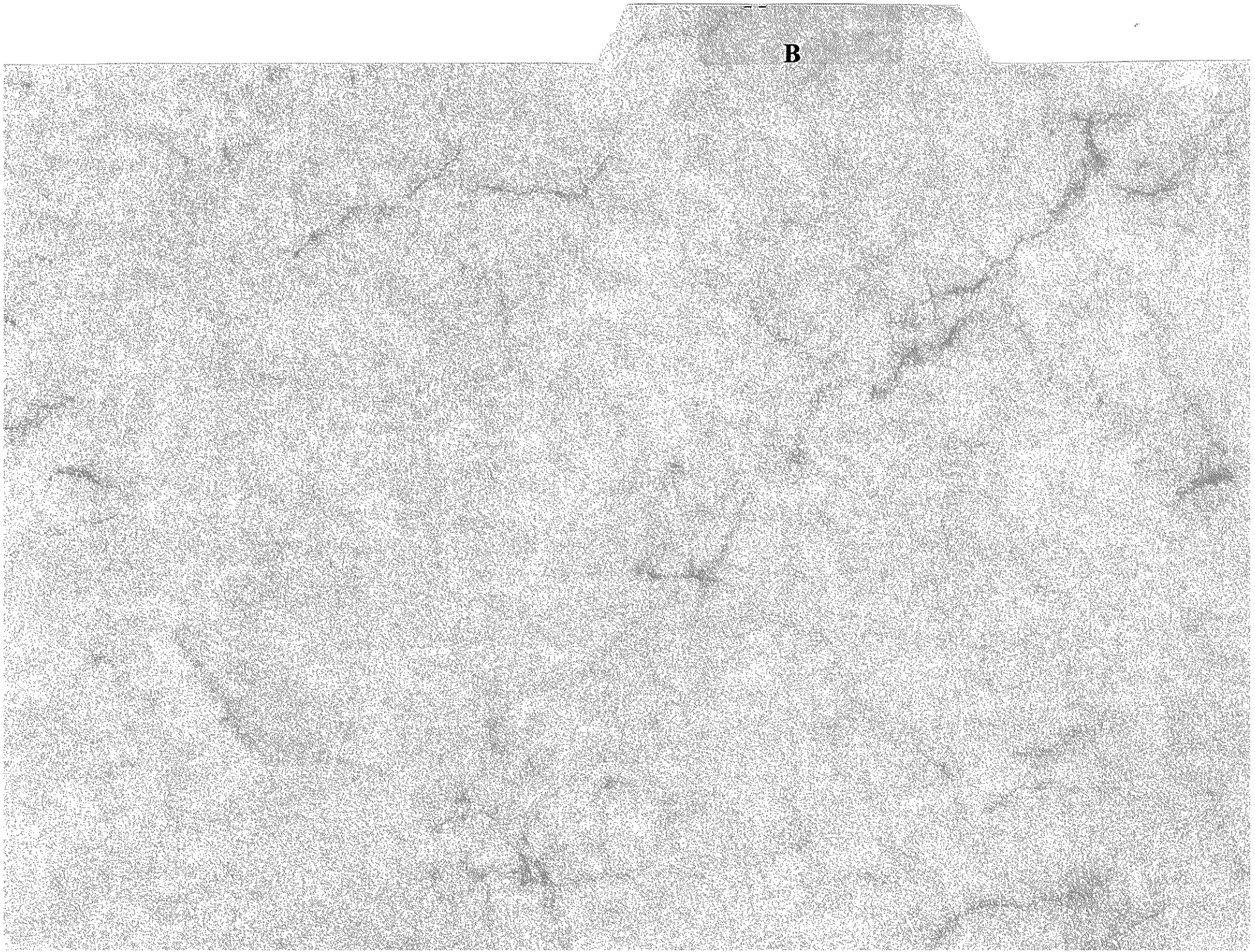
LEGEND:
- COMPONENT/SURFACE, WITHIN IWE BOUNDARY, REQUIRING INSPECTION (SUR)
- COMPONENT/SURFACE, WITHIN IWE BOUNDARY, INACCESSIBLE FOR INSPECTION

IWE-DET-027
AIR LOCK HAND WHEEL SHAFT PENETRATION
(95AIRLOCK-HS1, HS2, HS3 & HS4)
(80AIRLOCK-HS1, HS2, HS3 & HS4)

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

CON EDISON	DWG NO. 320923-00	ENGINEERING MANAGER:	REV. 00	REVISION USE .1 SIZE TEXT ONLY
	DWG SIZE: E TYPE: COMPANY	PROJECT ENGINEER:	PROJECT ENGINEER:	
	LOCATION: INDAIN POINT UNIT 2	DESIGNER:		
TITLE: CONTAINMENT ISI LINER INSPECTION DETAIL IWE-DET-027		DRAWN BY:	REVISION SIGNATURE	SCALE: / DISC. CODE:

320923-00


B

INDIAN POINT UNIT 2
CONTAINMENT INSERVICE INSPECTION
FIRST PERIOD EXAMINATIONS

Category E-G, Bolting Examinations

Tab B - Listing of Scheduled Exams

CATEGORY E-G

IWE COMPONENTS SCHEDULED BY OUTAGE

Containment Inservice Inspection Program
First Containment Inspection Interval
Outage 2000RFO

Component	Component Type Description	Detail Drawing	Cat.	Item	Schedule Int	Per	Out	Exam Scheduled	Outage	Relief Request	Inspect From Inside	Outside
80AIRLOCK-EV1												
BLT-1	4 Cap Screw at Bulkhead	IWE-DET-026	E-G	E8.10	1	1	1	VT-1	2000RFO	RR-49	☑	☐
BLT-2	4 Studs & nuts at Valve Flange	IWE-DET-026	E-G	E8.10	1	1	1	VT-1	2000RFO	RR-49	☑	☐
80AIRLOCK-EV2												
BLT-2	4 Studs & nuts at Valve Flange	IWE-DET-026	E-G	E8.10	1	1	1	VT-1	2000RFO		☑	☐
BLT-1	4 Cap Screw at Bulkhead	IWE-DET-026	E-G	E8.10	1	1	1	VT-1	2000RFO	RR-49	☑	☐
80AIRLOCK-HS1												
BLT	3 Cap Screw	IWE-DET-027	E-G	E8.10	1	1	1	VT-1	2000RFO	RR-49	☑	☐
80AIRLOCK-HS2												
BLT	3 Cap Screw	IWE-DET-027	E-G	E8.10	1	1	1	VT-1	2000RFO	RR-49	☑	☐

INDIAN POINT UNIT 2
CONTAINMENT INSERVICE INSPECTION
FIRST PERIOD EXAMINATIONS

Category E-G, Bolting Examinations

Tab C - Listing of Examination Results

CATEGORY E-G

IWE EXAMINATION RESULTS

Containment Inservice Inspection Program
First Containment Inspection Interval

Outage Number 2000RFO

Component	Outage Number	Exam	Complete	Limited Exam	Exam Date	Examined By	Report Number	Work Order Number	Results	Exam Notes
80AIRLOCK-EV1										
BLT-1	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
BLT-2	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
80AIRLOCK-EV2										
BLT-2	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
BLT-1	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
80AIRLOCK-HS1										
BLT	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
80AIRLOCK-HS2										
BLT	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
80AIRLOCK-HS3										
BLT	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.
80AIRLOCK-HS4										
BLT	2000RFO	VT-1	☑	☐	5/25/00	J. Webster		NP-99-11275	NI	Bolted connection inspected with bolting inplace and under tension.

D

Category E-G, Bolting Examinations

Tab D - Inspection Records

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION
W/O # NP-99-11275

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV 1 (BLT 1)
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320922-00
EQUIPMENT USED: Flashlight,

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓	*	(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV1 (BLT-1)

No.	Comment	Initials
①	Bolted Connection Inspected with Bolting In place And under TENSion	QW 5-25-00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80A Accumulator - EV1 (BLT-2) w/o # NP-99-11273
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320922-00
EQUIPMENT USED: Flashlight,

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5/25/00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: _____ Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EU 1 - (BLT-2)

No.	Comment	Initials
D	Bolted Connection inspected with Bolting Inplace And under Tension.	QW 5/25/00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV2 (BOLT) w/o # NP-99-11275
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320922-00
EQUIPMENT USED: _____

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: _____ Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV2 (BCT-1)

No.	Comment	Initials
1	Bolted Connection Inspected with Bolting In place And under TENSION.	[illegible] 5-25-00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION
w/o # NP-99-11273

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV2 (BLT 2)
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320922-00
EQUIPMENT USED: Flashlight,

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: [signature] Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - EV2 (BG2)

No.	Comment	Initials
1	Bolted Connection inspected with Bolting inplace And under TENSION.	[illegible] 5-25-00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION
wp # NP-99-11273

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS 1 (BLT)
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320923-00
EQUIPMENT USED: Flashlight

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: [signature] Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS1 (BLT)

No.	Comment	Initials
①	Bolted Connection inspected with Bolting Inplace and under tension	QW 5/25/00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

W/O # NP-99-11275

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock-HS2 (BLT)
ZONE NUMBER: IWE-068-005 DRAWING NO.: 320923-00
EQUIPMENT USED: Flashlight

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		①
7.1.4.b	Reduction in cross-sectional area.			✓		①
7.1.4.c	Bending, twisting, or deformation.			✓		①
7.1.4.d	Fractured bolting			✓		①
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		①
7.1.4.g	Conditions not per drawings or specification.			✓		①

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: _____ Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS 2 (BLT)

No.	Comment	Initials
1.	Bolted Connection Inspected with Bolting Inplace And Under tension	GW 5/25/00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION
W/O # N.P.-99-11273

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS 3 (BLT)
ZONE NUMBER: IWE - 068-005 DRAWING NO.: 320923-00
EQUIPMENT USED: _____

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John L. Webster John L. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: _____ Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS 3 (BLT)

No.	Comment	Initials
1	Bolted Connection Inspected with Bolting Inplace AND Under TENSION.	QW 5/25/00

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

STATION/UNIT: Indian Point 2 w/o # NP-99-11273 COMPONENT NO.: 80 Airlock - HS4 (BLT)
ZONE NUMBER: IWE-0C8-005 DRAWING NO.: 320923-00
EQUIPMENT USED: Flashlight

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris				✓	
7.1.1.b	Corrosion or mechanical damage				✓	
7.1.1.c	Loose connections				✓	
7.1.1.d	Loose or missing parts				✓	
7.1.1.e	Missing or incomplete welds				✓	
7.1.1.f	Cracks or linear indications				✓	
7.1.2	Damage or degradation evident through coating				✓	
7.1.3	Degradation in uncoated areas.				✓	
7.1.4.a	Deformed or sheared threads			✓		(1)
7.1.4.b	Reduction in cross-sectional area.			✓		(1)
7.1.4.c	Bending, twisting, or deformation.			✓		(1)
7.1.4.d	Fractured bolting			✓		(1)
7.1.4.e	Protective coatings on bolting				✓	
7.1.4.f	Leak tightness of bolted connection			✓		(1)
7.1.4.g	Conditions not per drawings or specification.			✓		(1)

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: John C. Webster John C. Webster Date: 5-25-00

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☒ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

Signature: _____ Level III Date: 5/25/2000

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

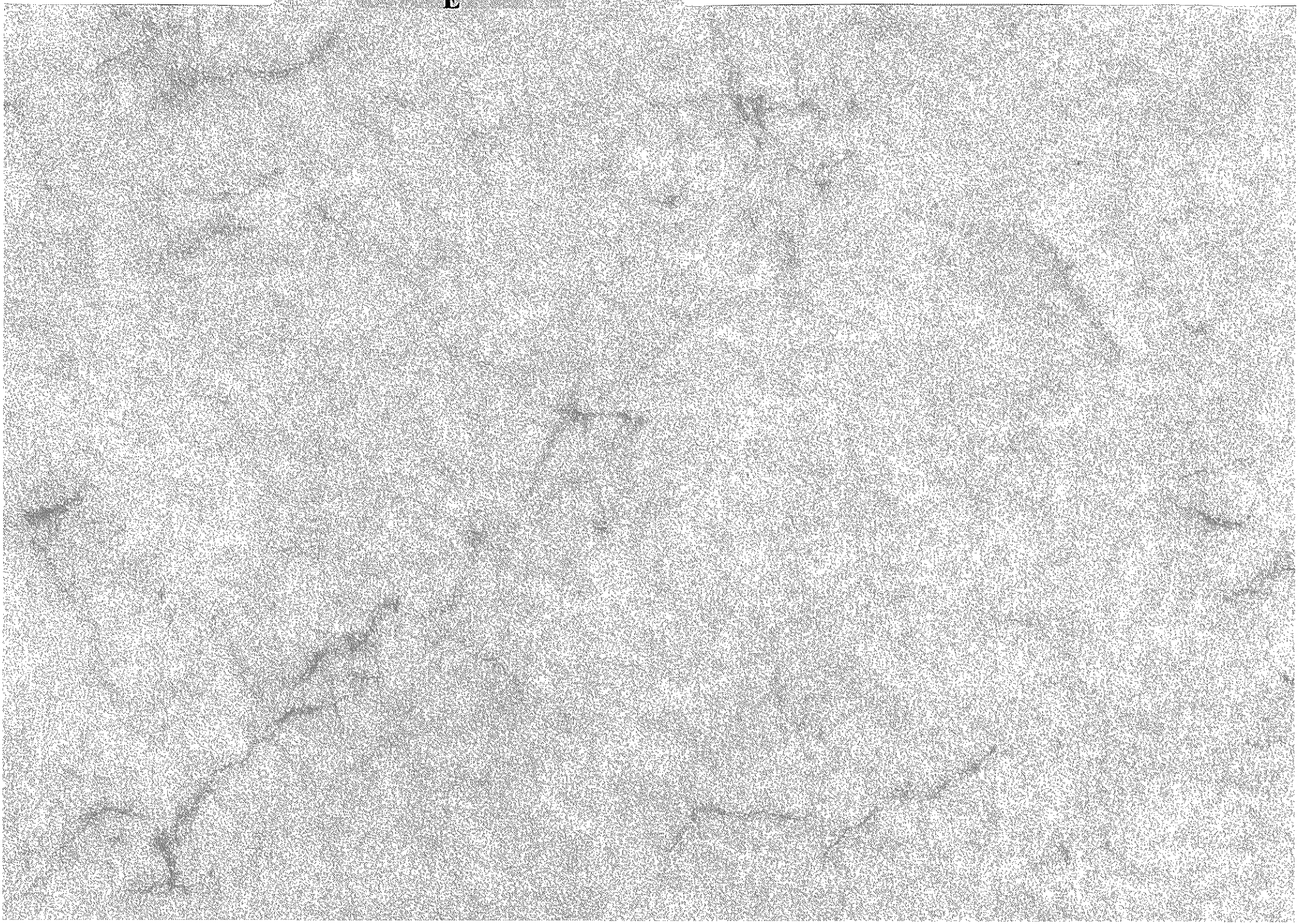
FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: 80 Airlock - HS4 (BLT

No.	Comment	Initials
①	Bolted Connection inspected with Bolting in place And under tension.	QW 5/25/00

E



Category E-G, Bolting Examinations

Tab E - Inspector Certification Records

Examiner	Method	Level
Stephen Davis	VT-1	III
John Webster	VT-1	II

See Appendix II for certification records.

Sward, Chris A.

From: Deeds, Paul
Sent: Thursday, May 25, 2000 12:36 PM
To: Sward, Chris A.
Cc: Deeds, Paul; Schwartz, John; O'Toole, William; Villani, Luciano N.; Skonieczny, John
Subject: S & L

I have reviewed the following Sargent & Lundy Examination Procedures and find them acceptable for use at Indian Point:

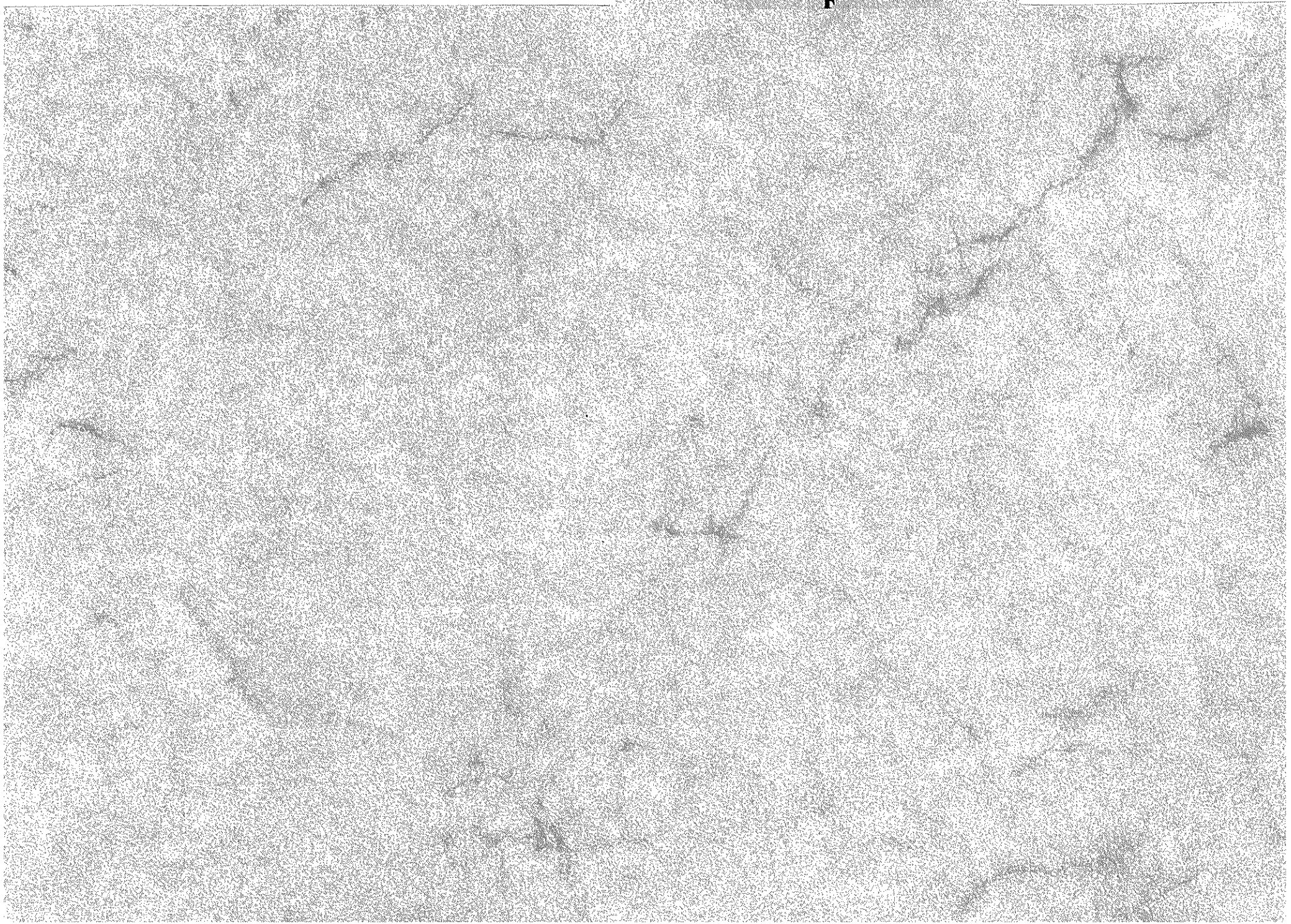
1.IP-2-CISI-001 Rev. 1 Containment Inspection Per ASME Section XI IWE VT-1 Visual Examinations

2. IP-2-CISI-002 Rev 1 Containment Inspection Per ASME Section XI IWE VT-3 Visual Examinations

I have also reviewed the following Sargent & Lundy personnel certification packages and find the the following individuals acceptable for use at Indian Point in the NDE Methods listed below:

1. Stephen Davis [redacted] VT-1 & VT-3 Level II

2. John C. Webster [redacted] VT-1 & VT-3 Level III



INDIAN POINT UNIT 2
CONTAINMENT INSERVICE INSPECTION
FIRST PERIOD EXAMINATIONS

Category E-G, Bolting Examinations

Tab F - Inspection Procedures

CONTAINMENT INSERVICE INSPECTION PER ASME SECTION XI SUBSECTION IWE

VT-1 VISUAL EXAMINATIONS

Prepared by: _____ Date: 5/24/2000

Reviewed by: Chris Sward Date: 5/24/00

Approved by: Chris Sward for R. Gerke Date: 5/24/00
Project Manager

Approved for Use
P.E. Ward
Cognizant Engineer
5/25/00

CONTAINMENT INSERVICE INSPECTION PER ASME SECTION XI SUBSECTION IWE

VT-1 VISUAL EXAMINATIONS

Prepared by: _____ Date: 5/24/2000

Reviewed by: _____ Date: 5/24/00

Approved by: _____ for R. Gerke Date: 5/24/00
Project Manager

CONTAINMENT INSERVICE INSPECTION
VT-1 EXAMINATIONS

1. PURPOSE

This procedure provides instructions and recording criteria for the performance of VT-1 examinations during preservice and inservice inspection of the steel liner of the Indian Point 2 (IP2) concrete containment.

2. SCOPE AND LIMITATIONS

2.1 The instructions and criteria contained herein establish the minimum requirements necessary to accomplish VT-1 examinations of Class MC pressure retaining components and their integral attachments, and of metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments.

2.2 These instructions and criteria are in compliance with ASME Boiler and Pressure Vessel Code, Section XI, Subsections IWA and IWE, 1992 Edition with 1992 Addenda.

2.3 The components to be examined under this procedure and the limits or boundaries of the examination are defined in the IP2 Containment Inservice Inspection Program Plan and inspection drawings referenced therein.

2.4 When a containment vessel or liner is painted or coated to protect surfaces from corrosion, examinations may be performed without removal of the paint or coating. However, removal of paint or coating may be required to facilitate further examination should indications be evident through the paint or coating. The purpose of examining painted or coated surfaces is to detect evidence of base metal degradation and not to evaluate the coating itself.

3. RESPONSIBILITIES

3.1 The Examiner shall perform the examinations and record the results as prescribed in this procedure. The Examiner shall be certified as a Level II or III VT-1 Examiner in accordance with Project Instruction IP2-CISI-003.

3.2 The Level III Examiner shall review the results of the examination and evaluate the conditions recorded, and initiate additional action as prescribed within this procedure. The Level III Examiner shall be certified as a Level III VT-1 Examiner in accordance with Project Instruction IP2-CISI-003.

4. DEFINITIONS

The following definitions are provided for use with this procedure.

4.1 Evaluation - the process of determining the significance of examination results, including the comparison of examination results with applicable acceptance criteria or previous results.

4.2 Examination – The process of making visual observation of an item, area, or component to detect imperfections.

4.3 Interpretation - The act of determining the nature or identity of an observed condition and its relevancy according to the examination criteria.

5. MATERIALS AND EQUIPMENT

Adequate illumination and such aids to examination as may be needed to properly examine the specific components shall be used and documented on Form VT-1.

5.1 A near distance vision test chart containing text with lower case characters without an ascender or descender (e.g., a,c,e,o), with maximum lower case height of 0.044 inches is required for procedure demonstration. Measurements of the near distance test chart shall be made once before initial use with an optical comparator (10X or greater) or other suitable instrument to verify that the height of a representative lower case character meets the height requirement.

5.2 It is not necessary to measure illumination levels on each examination surface when the same portable light source or similar installed lighting equipment is demonstrated to provide the specified illumination at the maximum examination distance. Battery powered portable lights may be used provided that they meet the maximum distance requirement of Section 6.1.1 and illumination level of Section 6.1.2

5.3 Borescopes, fiberscope, telescopes, closed circuit television, cameras or other devices may be used for remote examination, provided such devices or systems have a resolution capability at least equivalent to that attainable by direct visual examination, which is defined by Sections 6.1.1, 6.1.2 and 6.1.3.

5.4 Magnifying glasses, mirrors, depth gages, bolting thread pitch gages, surface replication techniques, weld gages, and other measuring devices may be used to supplement direct examination should the need arise.

6. EXAMINATION INSTRUCTIONS

6.1 Examination Conditions

6.1.1 Access to the component/item shall enable a direct examination within 24 inches of the surface, unless location, obstruction, or other considerations render the component/item inaccessible for examination at this distance. In such cases, remote optical aids shall be used to achieve a resolution capability at least equivalent to that attainable by direct examination, and the remote examination and equipment used shall be demonstrated and documented.

6.1.2 Surface areas being examined shall be illuminated, if necessary, by auxiliary light sources to attain a minimum illumination level of 50 foot-candles. For battery powered lighting sources, illumination levels shall be checked before and after each series of examinations, not exceeding 4 hours between checks.

6.1.3 When performing remote VT-1 examination, the maximum direct examination distance specified in Section 6.1.1 may be increased and the minimum illumination requirements specified in Section 6.1.2 may be decreased, provided that the conditions or indications for which the VT-1 examination is performed can be detected at the chosen distance and illumination.

6.1.4 Adequacy of this visual examination procedure shall be demonstrated at least once to confirm that the characters described in Section 5.1 can be viewed at the distance specified in Section 6.1.1 under lighting specified in Section 6.1.2.

6.1.5 The component surfaces to be examined shall be free of dirt, contaminants, grease, or other debris that could interfere with the examination.

a. Mechanical cleaning methods or approved cleaners / solvents shall be used to remove the interference prior to starting the examination.

b. If the component must be cleaned of unusual contaminants to ensure a complete examination, the nature of the contaminants shall be described (for information) on Form VT-1.

6.2 Areas to be Examined

VT-1 examinations shall be performed on the areas and surfaces described below for each of the component types specified in the ISI program documents.

6.2.1 Bolted Connections:

a. Examination shall include bolts, studs, nuts, bushings, washers, threads in base material, and flange ligaments between threaded stud holes.

b. Examination of bushings, threads, and ligaments is required only when the connection is disassembled or bolting is removed.

c. All visible surfaces shall be examined. Bolting may remain in place under tension when disassembly is otherwise not required.

d. Bolting materials shall be examined in accordance with the material specification for defects that may cause the bolted connection to violate the leak-tight or structural integrity.

6.2.2 Components Requiring Augmented Examination:

a. Examination shall include the visible surfaces of those areas specified in the inspection drawings, sketches or other program documents.

6.3 Conditions to Examine for:

6.3.1 All areas and components shall be examined for the following general conditions:

a. Unusual contaminants or debris in and around the component

b. Mechanical damage including corrosion, wear, or erosion.

c. Loose or missing components including fasteners, locking devices, vent caps, etc.

d. Cracks or linear indications.

6.3.2 Painted or coated surfaces shall be examined for evidence of missing paint or coating, flaking, wear, erosion, blistering, peeling, discoloration, nicks or gouges that extend to the base metal and other signs that may indicate degradation of the substrate beneath the coatings.

6.3.3 Non-coated surfaces shall be examined for evidence of cracking, discoloration, pitting, excessive corrosion, nicks or gouges, dents, wear, surface discontinuities, and other surface irregularities.

6.3.4 Bolted connections shall be examined for evidence of the following conditions:

a. Loose bolts, studs or nuts.

b. Deformed or sheared threads.

c. Reduction in cross-sectional area.

d. Bending, twisting, or deformation.

e. Cracks or fractures.

f. Other bolting conditions that do not meet material or design specification.

6.4 Data Recording

6.4.1 The Examiner shall record the results of the visual examination on Form VT-1. Each recording condition listed in the form shall be marked to record the condition as one of the following:

a. "RI" for Recordable Indications per the criteria of Section 7.1,

b. "NRI" for Non-Recordable Indications conditions per the criteria in Section 7.2,

c. "NI" if no indication were found, or

d. "NA" if the condition is not applicable for the subject component.

6.4.2 The recording criteria of Section 7.0 establish the minimum conditions that the visual examiner must record. The examiner is to interpret the observed conditions and record what is found as either "Recordable Indications" or as "Non-Recordable Indications." As a minimum, other observed conditions not specifically addressed herein should be recorded if relevant. This does not apply to minor surface blemishes such as scratches, fabrication marks, tool marks or other such conditions. Recording observed conditions according to this procedure does not establish either acceptance or rejection of the item/component containing the recorded conditions.

6.4.3 Upon completion of the examination and after finalizing the data in Form VT-1, the Examiner shall sign and date the form.

6.4.4 The Level III Examiner shall review "Recordable Indications" and "Non-Recordable Indications" and evaluate them to determine if nonconforming conditions exist. The designation of a nonconforming condition establishes the need for further evaluation and documentation in accordance with the applicable problem identification process (e.g. Condition Report Program).

a. Following the preliminary evaluation by the Level III Examiner, both "Recordable Indications" and "Non-Recordable Indications" may lead to the need for further evaluation or corrective measures.

b. The Level III Examiner shall make recommendations to the Station following his evaluation of the recordable indications. Such recommendations/ comments shall be documented on Form VT-1 or on other appropriate

documents imposed by plant procedures. Form VT-1 must be traceable to these other documents. The Level III shall accomplish this by suitable annotation or reference to these other documents in the space provided for his comments on the form.

c. The Level III Examiner's recommendations may include, but are not limited to: "Accept-As-Is"; maintenance requests; repair; replacement; analytical evaluation; additional examinations or tests; adjustment; drawing/design changes; or other corrective measures deemed appropriate for the condition identified.

d. The Station may follow the Level III examiner's recommendations or may choose a different solution to correct the observed condition. However, the corrective action actually performed by the Station should be documented in accordance with the applicable station procedures. The documentation must be traceable to the original VT-1 examination report for close-out. If the Station elects (after suitable evaluation) to "Accept-As-Is", this must be documented and the document made traceable as described herein.

6.4.5 Upon completion of his evaluation and initiation of subsequent action as required, the Level III Examiner shall sign and date Form VT-1 and forward it to the Authorized Nuclear Inservice Inspector (ANII) for review or as otherwise directed by the ISI coordinator.

7. RECORDING CRITERIA

7.1 Recordable Indications

A Recordable Indication is a condition observed during the VT-1 examination that requires supplemental examination or analytical evaluation to accept it or one that requires repair, replacement or other corrective measures to allow further use. The conditions described in the following paragraphs shall be documented as "Recordable Indications."

7.1.1 General Conditions

a. Any evidence of unusual contamination, foreign material or debris. Also, unusual contaminants removed prior to the visual examination must be recorded for information only.

b. Any corrosion or mechanical damage, such as erosion or wear, resulting in loss of metal. All corrosion, erosion and wear, as a minimum, shall be recorded for information.

c. Mechanical connections which do not "appear" or feel tight (secure) or where thread engagement is considered inadequate. Proper thread engagement is achieved when the end of the bolt is flush with the face of the nut.

d. Any missing parts (per the design drawing) or any loose or detached parts. Additionally, an obviously missing part, such as a component with several bolts with "lock washers" and one or more bolts without such washers shall be recorded.

e. Any evidence of service induced weld degradation (such as cracking, etc.). Construction conditions, such as undercut, weld spatter, etc. may be noted for information.

f. Any cracks or linear indications in metallic components.

7.1.2 Coated or Painted Areas

a. Any conditions that show evidence of flaking, peeling, blistering, discoloration, or other signs of distress.

b. Nicks or gouges that extend to the metal surface.

c. Evidence that the paint or coating is missing, wearing, or eroding.

7.1.3 Non-Coated Areas or Components

a. Any evidence of cracking, discoloration, wear, pitting, gouges, dents, surface discontinuities, or other signs of surface irregularities.

7.1.4 Bolted Connections

a. Deformed or sheared threads in the zone of thread engagement of bolts, studs or nuts.

b. Localized general corrosion that reduces the bolt or stud cross-sectional area.

c. Bending, twisting, or deformation of bolts or studs to the extent that assembly or disassembly is impaired.

d. Fractured bolts, studs, or nuts.

e. Evidence of degradation of protective coatings on bolting surfaces.

f. Evidence of air or liquid leakage near bolting that may violate leak tight or structural integrity.

g. Any bolting conditions that do not meet design/material specifications/or drawings.

7.2 Non-Recordable Conditions

Conditions that are noted by the Examiner during the VT-1 Examination that, following his interpretation of the condition, is determined not to be a Recordable Indication may be recorded as an Non-Recordable Indication for informational purposes.

8. REFERENCES

8.1 Code of Federal Regulations; Title 10, Energy; Part 50, Domestic Licensing of Production and Utilization Facilities; Section 50.55a, Codes and Standards.

8.2 ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWE, 1992 Edition through 1992 Addenda.

8.3 IP2-CISI-003, "Containment Inservice Inspection - Certification for VT Examiners"

9. ATTACHMENTS

9.1 Form VT-1, Record of VT-1 Examination (2 pages)

FORM VT-1
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

ZONE NUMBER: _____ DRAWING NO.: _____

EQUIPMENT USED: _____

Recording Conditions		RI	NRI	NI	NA	Comments
7.1.1.a	Contaminants or debris					
7.1.1.b	Corrosion or mechanical damage					
7.1.1.c	Loose connections					
7.1.1.d	Loose or missing parts					
7.1.1.e	Missing or incomplete welds					
7.1.1.f	Cracks or linear indications					
7.1.2	Damage or degradation evident through coating					
7.1.3	Degradation in uncoated areas.					
7.1.4.a	Deformed or sheared threads					
7.1.4.b	Reduction in cross-sectional area.					
7.1.4.c	Bending, twisting, or deformation.					
7.1.4.d	Fractured bolting					
7.1.4.e	Protective coatings on bolting					
7.1.4.f	Leak tightness of bolted connection					
7.1.4.g	Conditions not per drawings or specification.					

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: _____ Date: _____

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☐ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

_____

Signature: _____ Date: _____

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

No.	Comment	Initials

CONTAINMENT INSERVICE INSPECTION PER ASME SECTION XI SUBSECTION IWE

VT-1 VISUAL EXAMINATIONS

Prepared by: _____ Date: 5/18/00

Reviewed by: _____ Date: 5/18/00

Approved by: _____ Date: 5-18-00
Project Manager

CONTAINMENT INSERVICE INSPECTION
VT-1 EXAMINATIONS

1. PURPOSE

This procedure provides instructions and recording criteria for the performance of VT-1 examinations during preservice and inservice inspection of the steel liner of the Indian Point 2 (IP2) concrete containment.

2. SCOPE AND LIMITATIONS

2.1 The instructions and criteria contained herein establish the minimum requirements necessary to accomplish VT-1 examinations of Class MC pressure retaining components and their integral attachments, and of metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments.

2.2 These instructions and criteria are in compliance with ASME Boiler and Pressure Vessel Code, Section XI, Subsections IWA and IWE, 1992 Edition with 1992 Addenda.

2.3 The components to be examined under this procedure and the limits or boundaries of the examination are defined in the IP2 Containment Inservice Inspection Program Plan and inspection drawings referenced therein.

2.4 When a containment vessel or liner is painted or coated to protect surfaces from corrosion, examinations may be performed without removal of the paint or coating. However, removal of paint or coating may be required to facilitate further examination should indications be evident through the paint or coating. The purpose of examining painted or coated surfaces is to detect evidence of base metal degradation and not to evaluate the coating itself.

3. RESPONSIBILITIES

3.1 The Examiner shall perform the examinations and record the results as prescribed in this procedure. The Examiner shall be certified as a Level II or III VT-1 Examiner in accordance with Project Instruction IP2-CISI-003.

3.2 The Level III Examiner shall review the results of the examination and evaluate the conditions recorded, and initiate additional action as prescribed within this procedure. The Level III Examiner shall be certified as a Level III VT-1 Examiner in accordance with Project Instruction IP2-CISI-003.

4. DEFINITIONS

The following definitions are provided for use with this procedure.

4.1 Evaluation - the process of determining the significance of examination results, including the comparison of examination results with applicable acceptance criteria or previous results.

4.2 Examination – The process of making visual observation of an item, area, or component to detect imperfections.

4.3 Interpretation - The act of determining the nature or identity of an observed condition and its relevancy according to the examination criteria.

5. MATERIALS AND EQUIPMENT

Adequate illumination and such aids to examination as may be needed to properly examine the specific components shall be used and documented on Form VT-1.

5.1 A near distance vision test chart containing text with lower case characters without an ascender or descender (e.g., a,c,e,o), with maximum lower case height of 0.044 inches is required for procedure demonstration. Measurements of the near distance test chart shall be made once before initial use with an optical comparator (10X or greater) or other suitable instrument to verify that the height of a representative lower case character meets the height requirement.

5.2 It is not necessary to measure illumination levels on each examination surface when the same portable light source or similar installed lighting equipment is demonstrated to provide the specified illumination at the maximum examination distance. Battery powered portable lights may be used provided that they meet the maximum distance requirement of Section 6.1.1 and illumination level of Section 6.1.2

5.3 Borescopes, fiberscope, telescopes, closed circuit television, cameras or other devices may be used for remote examination, provided such devices or systems have a resolution capability at least equivalent to that attainable by direct visual examination, which is defined by Sections 6.1.1, 6.1.2 and 6.1.3.

5.4 Magnifying glasses, mirrors, depth gages, bolting thread pitch gages, surface replication techniques, weld gages, and other measuring devices may be used to supplement direct examination should the need arise.

6. EXAMINATION INSTRUCTIONS

6.1 Examination Conditions

6.1.1 Access to the component/item shall enable a direct examination within 24 inches of the surface, unless location, obstruction, or other considerations render the component/item inaccessible for examination at this distance. In such cases, remote optical aids shall be used to achieve a resolution capability at least equivalent to that attainable by direct examination, and the remote examination and equipment used shall be demonstrated and documented.

6.1.2 Surface areas being examined shall be illuminated, if necessary, by auxiliary light sources to attain a minimum illumination level of 50 foot-candles.

6.1.3 When performing remote VT-1 examination, the maximum direct examination distance specified in Section 6.1.1 may be increased and the minimum illumination requirements specified in Section 6.1.2 may be decreased, provided that the conditions or indications for which the VT-1 examination is performed can be detected at the chosen distance and illumination.

6.1.4 Adequacy of this visual examination procedure shall be demonstrated at least once to confirm that the characters described in Section 5.1 can be viewed at the distance specified in Section 6.1.1 under lighting specified in Section 6.1.2.

6.1.5 The component surfaces to be examined shall be free of dirt, contaminants, grease, or other debris that could interfere with the examination.

a. Mechanical cleaning methods or approved cleaners / solvents shall be used to remove the interference prior to starting the examination.

b. If the component must be cleaned of unusual contaminants to ensure a complete examination, the nature of the contaminants shall be described (for information) on Form VT-1.

6.2 Areas to be Examined

VT-1 examinations shall be performed on the areas and surfaces described below for each of the component types specified in the ISI program documents.

6.2.1 Bolted Connections:

a. Examination shall include bolts, studs, nuts, bushings, washers, threads in base material, and flange ligaments between threaded stud holes.

b. Examination of bushings, threads, and ligaments is required only when the connection is disassembled or bolting is removed.

c. All visible surfaces shall be examined. Bolting may remain in place under tension when disassembly is otherwise not required.

d. Bolting materials shall be examined in accordance with the material specification for defects that may cause the bolted connection to violate the leak-tight or structural integrity.

6.2.2 Components Requiring Augmented Examination:

a. Examination shall include the visible surfaces of those areas specified in the inspection drawings, sketches or other program documents.

6.3 Conditions to Examine for:

6.3.1 All areas and components shall be examined for the following general conditions:

a. Unusual contaminants or debris in and around the component

b. Mechanical damage including corrosion, wear, or erosion.

c. Loose or missing components including fasteners, locking devices, vent caps, etc.

d. Cracks or linear indications.

6.3.2 Painted or coated surfaces shall be examined for evidence of missing paint or coating, flaking, wear, erosion, blistering, peeling, discoloration, nicks or gouges that extend to the base metal and other signs that may indicate degradation of the substrate beneath the coatings.

6.3.3 Non-coated surfaces shall be examined for evidence of cracking, discoloration, pitting, excessive corrosion, nicks or gouges, dents, wear, surface discontinuities, and other surface irregularities.

6.3.4 Bolted connections shall be examined for evidence of the following conditions:

a. Loose bolts, studs or nuts.

b. Deformed or sheared threads.

c. Reduction in cross-sectional area.

d. Bending, twisting, or deformation.

e. Cracks or fractures.

f. Other bolting conditions that do not meet material or design specification.

6.4 Data Recording

6.4.1 The Examiner shall record the results of the visual examination on Form VT-1. Each recording condition listed in the form shall be marked to record the condition as one of the following:

a. "RI" for Recordable Indications per the criteria of Section 7.1,

b. "NRI" for Non-Recordable Indications conditions per the criteria in Section 7.2,

c. "NI" if no indication were found, or

d. "NA" if the condition is not applicable for the subject component.

6.4.2 The recording criteria of Section 7.0 establish the minimum conditions that the visual examiner must record. The examiner is to interpret the observed conditions and record what is found as either "Recordable Indications" or as "Non-Recordable Indications." As a minimum, other observed conditions not specifically addressed herein should be recorded if relevant. This does not apply to minor surface blemishes such as scratches, fabrication marks, tool marks or other such conditions. Recording observed conditions according to this procedure does not establish either acceptance or rejection of the item/component containing the recorded conditions.

6.4.3 Upon completion of the examination and after finalizing the data in Form VT-1, the Examiner shall sign and date the form.

6.4.4 The Level III Examiner shall review "Recordable Indications" and "Non-Recordable Indications" and evaluate them to determine if nonconforming conditions exist. The designation of a nonconforming condition establishes the need for further evaluation and documentation in accordance with the applicable problem identification process (e.g. Condition Report Program).

a. Following the preliminary evaluation by the Level III Examiner, both "Recordable Indications" and "Non-Recordable Indications" may lead to the need for further evaluation or corrective measures.

b. The Level III Examiner shall make recommendations to the Station following his evaluation of the recordable indications. Such recommendations/ comments shall be documented on Form VT-1 or on other appropriate

documents imposed by plant procedures. Form VT-1 must be traceable to these other documents. The Level III shall accomplish this by suitable annotation or reference to these other documents in the space provided for his comments on the form.

c. The Level III Examiner's recommendations may include, but are not limited to: "Accept-As-Is"; maintenance requests; repair; replacement; analytical evaluation; additional examinations or tests; adjustment; drawing/design changes; or other corrective measures deemed appropriate for the condition identified.

d. The Station may follow the Level III examiner's recommendations or may choose a different solution to correct the observed condition. However, the corrective action actually performed by the Station should be documented in accordance with the applicable station procedures. The documentation must be traceable to the original VT-1 examination report for close-out. If the Station elects (after suitable evaluation) to "Accept-As-Is", this must be documented and the document made traceable as described herein.

6.4.5 Upon completion of his evaluation and initiation of subsequent action as required, the Level III Examiner shall sign and date Form VT-1 and forward it to the Authorized Nuclear Inservice Inspector (ANII) for review or as otherwise directed by the ISI coordinator.

7. RECORDING CRITERIA

7.1 Recordable Indications

A Recordable Indication is a condition observed during the VT-1 examination that requires supplemental examination or analytical evaluation to accept it or one that requires repair, replacement or other corrective measures to allow further use. The conditions described in the following paragraphs shall be documented as "Recordable Indications."

7.1.1 General Conditions

a. Any evidence of unusual contamination, foreign material or debris. Also, unusual contaminants removed prior to the visual examination must be recorded for information only.

b. Any corrosion or mechanical damage, such as erosion or wear, resulting in loss of metal. All corrosion, erosion and wear, as a minimum, shall be recorded for information.

c. Mechanical connections which do not "appear" or feel tight (secure) or where thread engagement is considered inadequate. Proper thread engagement is achieved when the end of the bolt is flush with the face of the nut.

d. Any missing parts (per the design drawing) or any loose or detached parts. Additionally, an obviously missing part, such as a component with several bolts with "lock washers" and one or more bolts without such washers shall be recorded.

e. Any evidence of service induced weld degradation (such as cracking, etc.). Construction conditions, such as undercut, weld spatter, etc. may be noted for information.

f. Any cracks or linear indications in metallic components.

7.1.2 Coated or Painted Areas

a. Any conditions that show evidence of flaking, peeling, blistering, discoloration, or other signs of distress.

b. Nicks or gouges that extend to the metal surface.

c. Evidence that the paint or coating is missing, wearing, or eroding.

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a. Any evidence of cracking, discoloration, wear, pitting, gouges, dents, surface discontinuities, or other signs of surface irregularities.

7.1.4 Bolted Connections

a. Deformed or sheared threads in the zone of thread engagement of bolts, studs or nuts.

b. Localized general corrosion that reduces the bolt or stud cross-sectional area.

c. Bending, twisting, or deformation of bolts or studs to the extent that assembly or disassembly is impaired.

d. Fractured bolts, studs, or nuts.

e. Evidence of degradation of protective coatings on bolting surfaces.

f. Evidence of air or liquid leakage near bolting that may violate leak tight or structural integrity.

g. Any bolting conditions that do not meet design/material specifications/or drawings.

7.2 Non-Recordable Conditions

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8. REFERENCES

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RECORD OF VT-1 EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

ZONE NUMBER: _____ DRAWING NO.: _____

EQUIPMENT USED: _____

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7.1.2	Damage or degradation evident through coating					
7.1.3	Degradation in uncoated areas.					
7.1.4.a	Deformed or sheared threads					
7.1.4.b	Reduction in cross-sectional area.					
7.1.4.c	Bending, twisting, or deformation.					
7.1.4.d	Fractured bolting					
7.1.4.e	Protective coatings on bolting					
7.1.4.f	Leak tightness of bolted connection					
7.1.4.g	Conditions not per drawings or specification.					

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: _____ Date: _____

LEVEL III EXAMINER REVIEW:

Acceptable: Yes ☐ No ☐

Engineering Evaluation Required: Yes ☐ No ☐ Evaluation No.: _____

Comments: _____

_____

Signature: _____ Date: _____

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

Signature: _____ Date: _____

FORM VT-1 (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1 EXAMINATION

COMMENT SHEET

STATION/UNIT: Indian Point 2 COMPONENT NO.: _____

No.	Comment	Initials

Appendix IV

APPENDIX IV
Examination Category L-A, Concrete VT-3C & VT-1C