Title: ***VT-3 EXAMINATION***

Procedure Owner:	**Oscar Limpias / Vice President Engineering**	
	(Print Name / Title)	
Approved:		2/2/06
	(Procedure Owner Signature)	(Date)

Effective Date	**EN Common**	☐		**Effective Date Exception**	**ANO**		**PNPS**	
	ENN	☒	2/6/2006		**ECH**		**RBS**	
	ENS	☐			**GGNS**		**VY**	
					IPEC		**W3**	
					JAF		**WPO**	

Procedure Contains NMM REFLIB Forms: YES ☒ NO ☐

Basis Statement

ENN-NDE-10.03 Revision 1 includes:

- *Procedure reformatted per EN-AD-101 requirements.*
- PNPS requirements changed to reflect ISI interval change.
- Added reference to ASME Boiler & Pressure Vessel Code, Section XI, 2001 Edition, including 2003 Addenda
- Paragraph 1.0[4] Clarified paragraph to distinguish BWR VIP program
- Added reference to ENN Site Relief Requests
- Added reference to ENN-NDE-1.00
- *NDE personnel section added for consistency with ENN procedures.*
- Added requirement for documenting procedure qualifications
- Paragraph 5.2 [2] (c) clarified.
- PNPS VT-3 requirement for integral attachments removed.
- Revised examination report review requirements
- Revised obligations and commitments per EN-AD-101 requirements.
- Added sample NDE report forms with attributes for examinations.

Site and NMM Procedures Canceled or Superseded By This Revision

ENN-NDE-10.03 Revision 0

Process Applicability Exclusion (ENN-LI-100) / Programmatic Exclusion (ENS-LI-101)

All Sites: ☒ Specific Sites: ANO ☐ GGNS ☐ IPEC ☐ JAF ☐ PNPS ☐ RBS ☐ VY ☐ W3 ☐

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1.0 PURPOSE

[1] This procedure establishes the methods and requirements to be used for ASME Section XI VT-3 examination of components.

[2] The VT-3 examination shall be conducted to determine the general mechanical and structural condition of components and their supports, such as verification of clearances, settings, physical displacements, loosed or missing parts, debris, corrosion, wear, erosion, or the loss of integrity at bolted or welded connections.

[3] The VT-3 examination shall include examination for conditions that could affect operability or functional adequacy of snubbers, constant load and spring type supports.

[4] This procedure is not applicable to VT-3 examinations performed per the In-vessel Visual Inspection (IVVI) BWR VIP program.

2.0 REFERENCES

[1] Nuclear Regulatory Commission, 10 CFR Part 50, Industry Codes and Standards.

[2] ASME Boiler & Pressure Vessel Code, Section XI, 2001 Edition, including 2003 Addenda.

[3] ASME Boiler & Pressure Vessel Code, Section V and XI, 1998 Edition with Addenda through 2000.

[4] ASME Boiler & Pressure Vessel Code, Section V and XI, 1992 Edition, including 1992 Addenda.

[5] ASME Boiler & Pressure Vessel Code, Section XI, 1989 Edition no Addenda.

[6] ASME Boiler and Pressure Vessel Code, Code Cases

[7] ENN Site Specific Relief Requests, Reference Section 8.0

[8] Regulatory Guide 1.147 "Inservice Inspection Code Case Acceptability"

[9] ASME/ANSI OM Code, Part 4, 1988 edition and 1995 edition through 2000 Addenda

[10] ENN-NDE-1.00, Administrative Controls for Non-destructive Examination

[11] ENN-NDE-2.12, Certification of Visual Testing (VT) Personnel.

[12] ENN-NDE-10.01, VT-1 Examination

[13] ENN-NDE-10.02, VT-2 Examination

3.0 DEFINITIONS

[1] Reference ASME Boiler and Pressure Vessel Code, Sections V and XI, for the glossary of terms used in Nondestructive Examination (NDE).

4.0 RESPONSIBILITIES

4.1 SUPERVISOR

[1] The Supervisor, charged with the responsibility for NDE at each site, is responsible for implementation of this procedure.

4.2 ENTERGY NDE LEVEL III

[1] The Entergy Level III is responsible for development, interpretation and qualification of this procedure.

[2] The Entergy Level III is responsible for demonstration of this procedure to the ANII when requested.

4.3 NDE PERSONNEL

[1] Personnel performing examinations per this procedure shall be certified in accordance with a written certification program accepted by the site.

[2] Level II or III personnel shall be responsible for the examination and interpretation of results.

[3] Level I and trainee (Level IT) personnel may be used to assist in performing examinations. Final interpretation of collected data shall be the responsibility of the Level II or III examiners.

5.0 DETAILS

5.1 PRECAUTIONS AND LIMITATIONS

[1] None

5.2 PROCEDURE DEMONSTRATION

[1] Procedure demonstrations shall be documented and contain or reference the examination techniques required to meet the Code requirements in the following paragraphs.

[2] JAF, IPEC - ASME Sections XI, 1989 Edition.

(a) For procedural demonstration, the combination of access and lighting sufficient to resolve a 1/32" black line on an 18% neutral gray card may be used.

[3] JAF, IPEC, - ASME Section XI Subsection IWE and IWL, 1992 Edition including 1992 Addenda; VY - 1998 Edition with Addenda through 2000.

(a) For procedural demonstration, a near-distance vision test chart containing text with lower case characters without an ascender or descender meeting the requirements of ASME Section XI, IWA-2210 is required.

(b) Measurements of the 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 for the selected type size meets the requirements of Table IWA-2210-1.

(c) When performing remote visual examinations, the maximum direct examination distance specified in Table IWA-2210-1 may be extended and the minimum illumination requirements specified in Table IWA-2210-1 may be decreased provided that the conditions or indications for which the visual examination is performed can be detected at the chosen distance and illumination.

[4] PNPS – ASME Section XI 2001 Edition through 2003 Addenda

(a) For procedural demonstration, a test chart containing text with some lowercase characters, without an ascender or descender (e.g. a, c, e, o), that meets the requirements of Table IWA-2211-1 is required.

(b) Measurements of the test chart or card shall be made once before its initial use with an optical comparator (10x or greater) or other suitable instrument to verify that the height of the lowercase characters without an ascender or descender meets the specified requirements.

(c) Remote examination may be substituted for direct examination. The remote examination shall be demonstrated capable of resolving characters in accordance with Table IWA-2211-1. Additionally, the remote visual examination system shall be capable of distinguishing colors applicable to the component examinations be conducted.

5.3 EQUIPMENT

[1] The following or additional equipment may be used as determined necessary by the examiner:

(a) Flashlights / Drop Lights

(b) Light Meter

(c) Mirrors

(d) Magnifying Lenses

(e) Binoculars

(f) Telescopes

(g) Tape Measure / Six Inch Scales

(h) Borescopes

(i) Fiber Optics

(j) Cameras

5.4 ACCESS AND ILLUMINATION (LIGHTING)

[1] Accessibility

(a) JAF, IPEC - ASME Sections XI, 1989 Edition, no Addenda

(1) For component supports and component interiors, the visual examination may be performed remotely with or without optical aids to verify the structural integrity of the component.

(b) JAF, IPEC - ASME Section XI Subsection IWE and IWL, 1992 Edition including 1992 Addenda; VY - 1998 Edition with Addenda through 2000.

(1) For direct examination, the maximum examination distance of four feet shall apply to the distance from the eye to the surface being examined at an angle not less than 30 degrees.

(2) Remote examination may be substituted for direct examination. The remote examination shall be demonstrated to resolve the selected test chart characters in Table IWA-2210-1.

a. Remote examinations may use visual aids such as telescopes, binoculars, fiber optics, and cameras.

b. The remote visual examination system shall have the capability of distinguishing and differentiating between colors applicable to the requirements for the component examinations being conducted.

(c) PNPS – ASME Section XI 2001 Edition through 2003 Addenda

(1) There are no direct visual examination distance requirements, provided the examiner can resolve the characters (0.105 in.) specified in Table IWA-2211-1.

(2) Remote visual examination may be substituted for direct examination. The remote examination shall be demonstrated capable of resolving characters in accordance with Table IWA-2211-1.

(3) The remote visual examination system shall be capable of distinguishing the colors applicable to the component examinations being conducted.

[2] Illumination (Lighting)

(a) Illumination may be achieved by natural or artificial means. Flashlights, drop lights, or industrial lighting may be used.

(b) ASME Sections XI, 1989 Edition, no Addenda

(1) Lighting conditions (either natural or artificial) shall be adequate in order to illuminate areas to be examined for the detection of recordable conditions.

(c) ASME Section XI 1992 Edition, including 1992 Addenda and 1998 Edition with Addenda through 2000.

(1) The illumination of light source shall be measured using a calibrated light meter or the lighting verified to be adequate in resolving the lower case test characters of an approved test chart or character card meeting the requirements of ASME Section XI, IWA-2210.

a. The minimum illumination of a light source when using a light meter shall be 50-ft candles for inspection.

b. The illumination levels from battery powered portable lights shall be checked before and after each examination or series of examinations not to exceed four hours between checks.

c. Measurement of the illumination level on each examination surface is not necessary when the same portable light source or similar installed lighting equipment is demonstrated to provide the specified illumination at the maximum distance.

(d) PNPS – ASME Section XI 2001 Edition through 2003 Addenda

(1) Resolution of the specified characters (0.044 in.) can be used in lieu of illumination measurement to verify illumination adequacy.

(2) Minimum illumination of a light source when using a light meter shall be 50 ft-candles for inspection.

(3) If illumination measurement is performed, it is not necessary to measure the illumination level on each examination surface when the same portable nonbattery-powered (e.g. drop light) or similar installed lighting equipment is demonstrated to provide the illumination specified at the maximum examination distance.

(4) When illumination measurement is performed during the examination and a battery-powered light is used, the adequacy of the illumination level shall be checked before and after each examination or series of examinations, not to exceed 4 hr between checks.

5.5 SURFACE PREPARATION

[1] Visual examinations that require clean surfaces or decontamination for valid interpretation of results shall be preceded by appropriate cleaning processes.

[2] Mechanical or chemical cleaning processes may be used, if required, to remove contaminants such as carbon, rust, scale, or coatings.

[3] The presence of protective coatings, and general oxidation, unless flaking or thickness reduction has occurred, is acceptable for VT-3 examination of component supports.

5.6 EXAMINATION

[1] All relevant conditions observed during an examination that may require supplemental examination, corrective measures, repair, replacement or analytical evaluation shall be identified.

(a) Relevant conditions do not include fabrication marks, scratches, surface abrasion, material roughness and any other conditions acceptable by material, design and manufacturing specifications.

[2] Support Examination Boundaries

(a) The boundary of an integral attachment connected to a pressure-retaining component is the distance from the pressure-retaining component as indicated in attachment 9.7.

(b) The boundary of an integral support or non-integral support connected to the building structure is the surface of the building structure.

(c) The boundary of a non-integral support connected to a pressure-retaining component is the contact surface between the component and support.

(d) Where the mechanical connection of a non-integral support is buried within the component insulation, the support boundary may extend from the surface of the component insulation provided the support either carries the weight of the component or serves as a structural restraint in compression.

(e) The examination boundary of an intervening element shall include the attachment portion (welds, bolting, pins, clamps, etc.) of the intervening element to pressure retaining components, integral and non-integral attachments of pressure retaining components, and integral and non-integral supports. The examination boundary does not include the attachment of the intervening element to the building structure.

(f) All integral and non-integral connections within the IWF support examination boundary are included.

[3] Pump Casings and Valve Bodies (B-L-2 & B-M-2)

(a) Examine all interior surfaces of the valve or pump pressure-retaining boundaries.

(b) Examine all areas within the specified boundary for:

(1) Erosion / Corrosion

(2) Wear

(3) Crack-like surface flaws

[4] Component Supports (F-A)

(a) Examine all integral and non-integral connections, intermediate members within the IWF examination boundary including welded and bolted connections to the pressure retaining components, building structures, and at intermediate joints. Examination of component supports shall include:

(1) Deformation or structural degradation

(2) Integrity of mechanical (e.g., bolted) or welded connections

(3) Corrosion

(4) Wear

(5) Missing, detached or loose support items

(6) Degraded close tolerance machined or sliding surfaces

(7) Improper hot or cold positions of spring supports and constant load supports

(8) Misalignment

(9) Clearances of guides and stops

[5] Snubbers (ASME/ANSI OM Code, Part 4, 1988 edition and 1995 edition through 2000 Addenda)

(a) Examination of integral and non-integral attachments for Snubbers including lugs, bolting pins and clamps shall be examined in accordance with the above requirements for component supports. In addition, snubber examinations shall include:

(1) Signs of damage or impaired operability

(2) Load ratings, location, orientation, position setting and configuration

(3) Swing clearance

(4) Fluid level or indication of fluid level for hydraulic snubbers

(5) Structural connections

(6) Physical damage, leakage, corrosion or degradation from environmental exposure or operating conditions

(7) Loose fasteners, missing hardware, deformed members or disconnected components

(8) Restricted thermal movement (evidence of binding, misalignment or deformation)

[6] General Visual Examination of Containment Surfaces

(a) General Visual examinations shall be performed in accordance with the Sites Containment Inservice Inspection Program.

[7] Examination of Containment Surfaces (E-A)

(a) The examination may be made from either the inside or outside surface.

(b) The examination shall include structures that are parts of reinforcing structure, such as stiffening rings, manhole frames and reinforcement around openings.

(c) The inspected area, when painted or coated, shall be examined in accordance with the Sites Containment Inservice Inspection Program for evidence of:

(1) Flaking

(2) Blistering

(3) Peeling

(4) Discoloration

(5) Other signs of distress

(d) The inspected area, when not coated, shall be examined in accordance with the Sites Containment Inservice Inspection Program for evidence of:

(1) Cracking

(2) Discoloration

(3) Wear

(4) Pitting

(5) Excessive corrosion

(6) Arc strikes

(7) Gouges

(8) Surface discontinuities

(9) Dents

(10) Other signs of surface irregularities

[8] Examination of Containment Moisture Barriers (E-A, 1998 Edition with Addenda through 2000. / E-D, 1992 Edition including 1992 Addenda).

(a) Examination of moisture barriers include the internal and external containment moisture barrier materials at the concrete-to-metal interfaces intended to prevent the intrusion of moisture against the pressure retaining metal containment shell or liner.

(1) Examine the moisture barrier in accordance with the Sites Containment Inservice Inspection Program for evidence of:

a. Wear

b. Damage

c. Erosion

d. Tear

e. Surface cracks

f. Other defects that may violate the leak-tight integrity

[9] VY, PNPS - Examination of Containment Pressure Retaining Bolting

(a) Examination of Pressure Retaining Bolting is conducted to detect defects, which may cause the bolted connections to violate leak-tightness or structural integrity.

(b) Examination of bolted connections includes bolts, studs, nuts, bushings, washers, and threads in base material and flange ligaments between threaded stud holes.

(c) Examination of bushings, threads, and ligaments in base material of flanges is required only when the connection is disassembled.

(d) VT-3 Examination of pressure retaining bolting shall include the following attributes:

(1) Missing / Loose bolting

(2) Containment leak tightness

(3) Structural integrity

5.7 ACCEPTANCE CRITERIA

What must go into CR? Who decides?

[1] Components whose visual examination confirms the absence of the relevant conditions described in the examination section of this procedure shall be considered acceptable for continued service.

[2] Any relevant condition observed during an examination that may require supplemental examination, corrective measures, repair, replacement or analytical evaluation shall require engineering evaluation for continued service.

[3] Pump Casings and Valve Bodies (B-L-2 & B-M-2)

(a) The following relevant conditions must be recorded as unacceptable:

(1) Erosion or corrosion that reduces the pressure retaining wall thickness by more than ten percent (10%).

(2) Wear of mating surfaces that may lead to a loss of function or leakage.

(3) Crack-like surface indications developed in service or grown in size beyond that recorded during preservice visual examination.

[4] Component Supports (F-A)

(a) The following relevant conditions must be recorded as unacceptable:

(1) Deformation or structural degradation of fasteners, springs, clamps, or other support items

(2) Missing, detached, or loosened support items

(3) Arc strikes, weld spatter, paint, scoring, roughness, or general corrosion on close tolerance machined or sliding surfaces

(4) Improper hot or cold settings of spring supports and constant load supports

(5) Misalignment of supports

(6) Improper displacement settings of guides and stops

[5] Snubbers (ASME/ANSI OM Code, Part 4, 1988 edition and 1995 edition through 2000 Addenda)

(a) Snubbers

(1) Any visible signs of damage or impaired operability as a result of storage, handling, or installation.

(2) Load ratings, location, orientation, position setting and configuration (attachments, extension, etc.) are in accordance with design drawings and specifications.

(3) Adequate swing clearance is provided to allow snubber movement.

(4) For hydraulic snubbers, fluid is at the recommended level and is not leaking from the snubber system.

a. Hydraulic snubber fluid level less than the minimum amount required for actuation. Fluid level is considered acceptable when the fluid level is equal to or greater than the minimum amount that is sufficient for actuation at it's operating extension.

b. Fluid level for Lisaga snubbers is indicated by the color of the site glass.

(5) Structural connections such as pins, bearings, studs, fasteners and other connecting hardware; such as lock nuts, tabs, wire and cotter pins are installed correctly.

(6) Impaired functional ability due to physical damage, leakage, corrosion or degradation from environmental exposure or operating conditions.

(7) Snubbers shall be installed so that they can carry the load; i.e., loose fasteners, missing hardware, deformed members or disconnected components.

(8) Snubbers shall be installed in such a condition that they do not restrict thermal movement of the pipe or component.

a. Evidence of binding, misalignment or deformation.

[6] General Visual Examination of Containment Surfaces

(a) The Containment ISI program shall specify the site requirements for acceptance of General visual examinations.

[7] VT-3 Examination of Containment Surfaces (E-A)

(a) The Containment ISI program shall specify the site requirements for acceptance of VT-3 visual examinations.

(b) Acceptance of IWE examinations shall be by engineering evaluation or based on site-specific acceptance criteria for the visual examination of containment surfaces.

[8] Examination of Containment Moisture Barriers (E-A, 1998 Edition with Addenda through 2000. / E-D, 1992 Edition including 1992 Addenda).

(a) The Containment ISI program shall specify the site requirements for acceptance of VT-3 visual examinations.

(b) Moisture barriers with wear, damage, erosion, tear, surface cracks, or other defects that permit intrusion of moisture against inaccessible areas of the pressure retaining surfaces of the metal containment shell or liner shall be corrected.

[9] VY, PNPS - Examination of Containment Pressure Retaining Bolting

(a) Flaws or degradation identified during the performance of a VT-3 examination must be examined in accordance with the VT-1 examination method. The criteria in the material specification or IWB-3517.1 must be used to evaluate containment bolting flaws or degradation.

6.0 INTERFACES

[1] None

7.0 RECORDS

[1] Examination results shall be evaluated in terms of the applicable acceptance criteria and documented on Attachment 9.1 through 9.6 or similar forms.

[2] Examination reports shall be reviewed per ENN-NDE-1.00 requirements.

[3] Examination reports shall be processed per site requirements and as a minimum, shall include the following:

(a) NDE report number / Identification

(b) Examination procedure and revision

(c) Component examined

(d) Equipment used

(e) Examination results

(f) Names and certification levels of examination personnel

(g) Examination date

8.0 REQUIREMENTS AND COMMITMENT CROSS-REFERENCE

8.1 OBLIGATIONS AND COMMITMENTS IMPLEMENTED OVERALL

Step	Document	Commitment Number
[1]	Nuclear Regulatory Commission, 10 CFR Part 50, Industry Codes and Standards.	None
[2]	Entergy Quality Assurance Program Manual, Section B.11, "Special Process Control"	None
[3]	ASME Boiler & Pressure Vessel Code, Section XI, 2001 Edition, including 2003 Addenda.	None
[4]	ASME Boiler & Pressure Vessel Code, Section V and XI, 1998 Edition through 2000 Addenda.	None
[5]	ASME Boiler & Pressure Vessel Code, Section V and XI, 1992 Edition, including 1992 Addenda.	None
[6]	ASME Boiler & Pressure Vessel Code, Section XI, 1989 Edition no Addenda.	None

8.2 SECTION SPECIFIC OBLIGATIONS AND COMMITMENTS

Step	Document	Document Section	Commitment Number
[1]	ASME Boiler & Pressure Vessel Code, Section XI, 2001 Edition, including 2003 Addenda.	PNPS - Section 5.2, 5.4,	None
[2]	ASME Boiler & Pressure Vessel Code, Section V and XI, 1998 Edition through 2000 Addenda.	PNPS, VY - Section 5.2, 5.4, 5.6[9], 5.7[9]	None
[3]	ASME Boiler & Pressure Vessel Code, Section V and XI, 1992 Edition, including 1992 Addenda.	JAF, IPEC – Section 5.2, 5.4	None
[4]	ASME Boiler & Pressure Vessel Code, Section XI, 1989 Edition no Addenda.	JAF, IPEC - Section 5.2, 5.4	None

8.3 SITE SPECIFIC COMMITMENTS

Step	Site	Document	Document Section	Commitment Number
[1]	JAF	Third In-service Inspection Interval Relief Request.	Section 5.2, 5.4	RR-27
[2]	IP2	Third In-service Inspection Interval Relief Request	Section 5.2, 5.4	RR- 33, RR-42 and RR-49.
[3]	IP3	Third In-service Inspection Interval Relief Request	Section 5.2, 5.4	RR-3-1 (H), RR-3-5 (H) and RR-3-24 (C)
[4]	PNPS	Fourth In-service Inspection Interval Relief Request	Section 5.2, 5.4	PIL-05-R-002

9.0 ATTACHMENTS

> NOTE
> Sample forms used to implement this procedure are listed above. It is not mandatory that the forms included in this procedure be used. Equivalent forms may be used that contains all the required code information.

9.1 Sample VT-3 Examination Report (Pump Casings and Valve Bodies)

9.2 Sample VT-3 Examination Report (Component Supports)

9.3 Sample VT-3 Examination Report (Snubbers)

9.4 Sample VT-3 Examination Report (Containment Surfaces)

9.5 Sample VT-3 Examination Report (Containment Moisture Barriers)

9.6 Sample VT-3 Examination Report (Containment Pressure Retaining Bolting)

9.7 Support examination boundaries (Typical)

9.8 Integral attachment – component support detail (Typical)

ATTACHMENT 9.1 VT-3 EXAMINATION REPORT (PUMP CASINGS AND VALVE BODIES)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

Pump and Valve Attributes	Acc	Rej	N/A	Comments
Erosion / Corrosion	☐	☐	☐	
Wear	☐	☐	☐	
Crack-like surface flaws	☐	☐	☐	
Other	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.2 VT-3 EXAMINATION REPORT (COMPONENT SUPPORTS)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

Support Attributes	Acc	Rej	N/A	Comments
Deformed / degraded comp.	☐	☐	☐	
Mechanical / welded connection	☐	☐	☐	
Corrosion	☐	☐	☐	
Wear	☐	☐	☐	
Missing, loose support items	☐	☐	☐	
Degraded close tolerance surf.	☐	☐	☐	
Improper support settings	☐	☐	☐	
Misalignment	☐	☐	☐	
Clearances of guides/stops	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
Serial Number:	☐	☐	☐	
Required Setting =	☐	☐	☐	Actual Setting =

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.3 VT-3 EXAMINATION REPORT (SNUBBERS)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

Support Attributes	Acc	Rej	N/A	Snubber Attributes	Acc	Rej	N/A
Deformed / degraded comp.	☐	☐	☐	Damage or impaired operability	☐	☐	☐
Mechanical/welded connection	☐	☐	☐	Load, location, configuration	☐	☐	☐
Corrosion	☐	☐	☐	Swing clearance	☐	☐	☐
Wear	☐	☐	☐	Structural connections	☐	☐	☐
Missing, loose support items	☐	☐	☐	Physical damage / degradation	☐	☐	☐
Degraded close tolerance surf.	☐	☐	☐	Loose/missing/deformed comp	☐	☐	☐
Improper support settings	☐	☐	☐	Restricted thermal movement	☐	☐	☐
Misalignment	☐	☐	☐	Other	☐	☐	☐
Clearances of guides/stops	☐	☐	☐		☐	☐	☐
Other	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
Serial Number:	☐	☐	☐	Fluid level -	☐	☐	☐
Required Setting =	☐	☐	☐	Actual Setting =	☐	☐	☐

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.4 VT-3 EXAMINATION REPORT (CONTAINMENT SURFACES)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

Painted / Coated Surfaces	Acc	Rej	N/A	Non-Painted Surfaces	Acc	Rej	N/A
Flaking	☐	☐	☐	Cracking	☐	☐	☐
Blistering	☐	☐	☐	Discoloration	☐	☐	☐
Peeling	☐	☐	☐	Wear	☐	☐	☐
Discoloration	☐	☐	☐	Pitting	☐	☐	☐
Other signs of distress	☐	☐	☐	Excessive corrosion	☐	☐	☐
Other	☐	☐	☐	Arc strikes	☐	☐	☐
	☐	☐	☐	Gouges	☐	☐	☐
	☐	☐	☐	Surface discontinuities	☐	☐	☐
	☐	☐	☐	Dents	☐	☐	☐
	☐	☐	☐	Signs of surface irregularities	☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐
	☐	☐	☐		☐	☐	☐

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.5 VT-3 EXAMINATION REPORT (CONTAINMENT MOISTURE BARRIERS)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

Moisture Barriers Attribute	Acc	Rej	N/A	Comments
Wear	☐	☐	☐	
Damage	☐	☐	☐	
Erosion	☐	☐	☐	
Tear	☐	☐	☐	
Surface cracks	☐	☐	☐	
Leak-tight integrity	☐	☐	☐	
Other	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.6 VT-3 EXAMINATION REPORT (CONTAINMENT PRESSURE RETAINING BOLTING)

Work Document:	Component:	Report No.:
System:	Drawing:	Page of
Line #:	☐ Direct ☐ Remote ☐ Light Meter (☐ N/A)	Equipment:

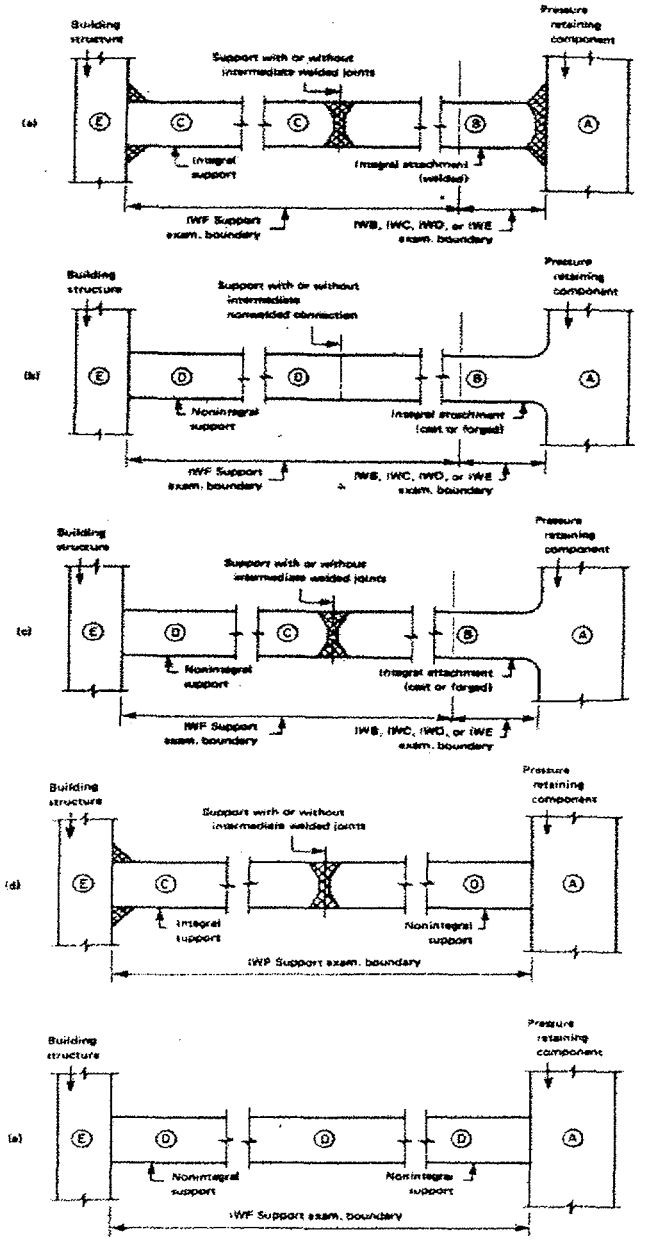
Containment Bolting Attributes	Acc	Rej	N/A	Comments
Missing / Loose bolting	☐	☐	☐	
Containment leak tightness	☐	☐	☐	
Structural integrity	☐	☐	☐	
Other	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Acceptance Criteria: ASME Section XI 1998 Edition, 2000 Addenda

Remarks:

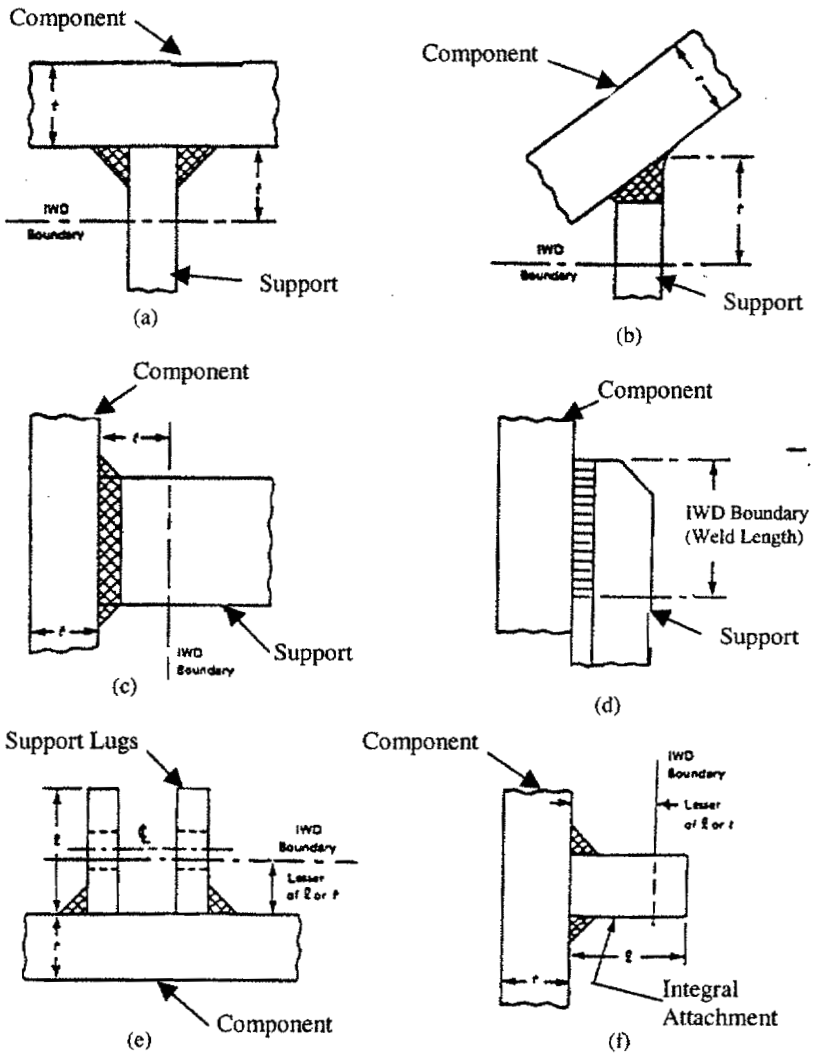
Examiner Level Date	Examiner Level Date
Review Level Date	ANII Date

ATTACHMENT 9.7 SUPPORT EXAMINATION BOUNDARIES (TYPICAL)



ILLUSTRATIONS OF TYPICAL SUPPORT EXAMINATION BOUNDARIES

ATTACHMENT 9.8 **INTEGRAL ATTACHMENT – COMPONENT SUPPORT DETAIL**



Integral Attachment – Component Supports