Date Distributed:

THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

SUBGROUP ON REPAIRS and ALTERATIONS GENERAL

MINUTES

Meeting of January 15, 2013
Mobile, Alabama

"These minutes are subject to approval and are for committee use only. They are not to be duplicated or quoted for other than committee use."

The National Board of Boiler & Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614)888-8320
FAX: (614)847-1828

1. Call to Order

The meeting was called to order at 8:00 a.m. by Chairman P. Edwards

2. Announcements

Secretary J. McGimpsey presented the announcements of events for the week.

3. Adoption of the Agenda

A motion was made and unanimously approved to adopt the presented Agenda.

4. Approval of Minutes of July 17, 2012 meeting

A motion was made and unanimously approved to adopt the Minutes of the July 17, 2012 meeting.

5. Review of the Roster (Attachment 1, page 4-6)

The meeting was attended by 12 voting members with 2 not attending and the meeting had 14 visitors.

6. Action Items (Attachment 2 – 3, pages)

NB08–0322 ***Part 3 3.2 SG on Repairs and Alterations General –*** Add a new paragraph to 3.2 General Requirements for Repairs and Alterations to address change of service for a pressure vessel. These requirements should caution inspectors, owners, repair organizations and jurisdictional authorities of the inherent dangers involved when changing service. A new supplement should be added to address the specific requirements for repairs and alterations of pressure vessels that have been converted from one service to another. A task group representing all three parts of the NBIC has been formed under the leadership of Bob Wielgoszinski. Task group members from R & A are P. Edwards and B. Schulte. (Attachment 2, pages 7-15)

January 2013
A progress report and proposal was presented to the SG by R. Wielgoszinski. A motion was made to approve the proposal. The motion was followed by a discussion that resulted in the motion being withdrawn. R. Wielgoszinski will add a section for change of service from a high pressure boiler to a low pressure boiler and a Review and Comment ballot with the new proposal will be sent to the Main Committee, Subcommittees and Subgroups of Part 1, 2 and 3.

NB11–1201 ***Part 3, 1.8, SG on R/A General –*** Revise Part 3, 1.8 "NR" Accreditation requirements to include repairs to ASME Section III stamped components. Task Group Project Manager- C. Withers, P. Edwards, B. Schaefer, B. Wielgoszinski.

January 2103
A progress report on this Action Item was given by B. Wielgoszinski and P. Edwards.

NB12–0501 ***Part 3, 3.2.2 c) SG R/A General –*** Hydrostatic testing of pressure parts. Task Group Project Manager - B. Wielgoszinski (Attachment 3, page 16)

January 2013
A progress report was made by G. Galanes and a proposal on this action item was presented to the SG by R. Wielgoszinski. A motion was made to approve the proposal and following discussion, the motion was unanimously approved with a vote of 12-0-0.

7. New Business

The SG had no New Business items.

8. Future Meetings

July 15–19, 2013, Columbus, Ohio
January 13–17, 2014, San Antonio, TX

9. Adjournment

The meeting was adjourned at 9:50 am

Respectfully Submitted,

Jim McGimpsey
Secretary

Attendance List Repairs Alterations-General Subgroup

Meeting Date: January 15, 2013

Paul Edwards Director ASME Programs Shaw Stone & Webster, Inc. 150 Royall St, Canton, MA 02021 Ph: 617-589-5690 Fax: 617-589-5476 Email: paul.edwards@shawgrp.com	Attended: Yes ☒ No ☐ Initial	**Mike Webb** Xcel Energy Production Specialist III / Owner-User Inspector 9500 Interstate 76, Henderson, Colorado 80640 P: 303.628.2840 F: 303.628.2924 Email: mike.webb@xcelenergy.com	Attended: Yes ☒ No ☐ Initial
Jim Larson One CIS Insurance Company 2540 180th Street, East Port Lake, MN 55372 Ph: 952-226-2956 Fax: 952-226-2957 E-mail: JLARSON@ONECIS.COM	Attended: Yes ☒ No ☐ Initial	**Rick Valdez** ARB Inc. 3500 Pegasus Drive Bakersfield, CA 93308 Ph: 661-331-6024 Fax: 661-833-4409 Email: rvaldez@arbinc.com	Attended: Yes ☒ No ☐ Initial
Bryan Schulte NRG Maintenance Services 12307 Kurland Drive Houston, TX 77034 Ph: 713-795-1456 Fax: 713-795-1451 E-mail: bryan.schulte@nrgenergy.com	Attended: Yes ☐ No ☒ Initial	**Jim McGimpsey** The National Board 1055 Crupper Ave. Columbus, OH 43229 Ph: 614-888-8320 Fax: 614-847-1828 E-mail: jmcgimps@nationalboard.org	Attended: Yes ☒ No ☐ Initial
Ron Pulliam Babcock & Wilcox PGG 20 South Van Buren Barberton, OH 44203 Ph: 330-860-2856 Fax: Email: rlpulliam@babcock.com	Attended: Yes ☒ No ☐ Initial	**Brian Morelock** Eastman Chemical Company P.O. Box 511 B54D Kingsport, TN 37660 Ph: 423-229-1205 Fax: 423-229-6099 Email: morelock@eastman.com	Attended: Yes ☒ No ☐ Initial

Attendance List Repairs Alterations-General Subgroup

Meeting Date: January 15, 2013

Angelo Brammucci Alstom Power Inc. 2000 Day Hill Road Windsor, CT 06095 Ph: 860-285-9176 Fax:860-285- 2437 Email: angelo.c.bramucci@power.alstom.com	Attended: Yes ☒ No ☐ Initial	**Walt Sperko** Sperko Engineering 4803 Archwood Drive Greensboro. NC 27406 Ph: 336-674-0608 Fax: E-mail: sperko@asme.org	Attended: Yes ☒ No ☐ Initial
Benjamin Schaefer American Electric Power (AEP) Manager, Fossil Plant Quality Control American Electric Power 1 Riverside Plaza, 18th Floor Columbus, Ohio 43211 P: 614-716-1843 F: 614-716-3204 Email: bschaefer@aep.com	Attended: Yes ☒ No ☐ Initial	**Brian Boseo** Graycor Services LLC Two Mid America Plaza, Suite 400 Oakbrook Terrace, IL 60181 Ph: 630-684-3016 Fax: 630-684-7116 E-mail: brian_boseo@graycor.com	Attended: Yes ☒ No ☐ Initial
Ed Ortman Alstom R & D 175 Addison Road 9083-A1519 Windsor, CT 06095 Ph:860-285-2437 F: 860-285-3436 Email: Edward.m.ortman@power.alstom.com	Attended: Yes ☒ No ☐ Initial	**Larry McManamon** Great Lakes Apprenticeship Program 566 W. 95th Street Oak Lawn, IL 60453 Ph: 708.636.6656 Fax: E-mail: Lmac@gLabap.com	Attended: Yes ☐ No ☒ Initial
Frank Johnson PBF Energy - Toledo Refinery 9853 Mandell Road Perrysburg, OH 43551 Ph: 419-697-6502 Cell: 419-386-8450 E-mail: FrankJohnson@PBFEnergy.com	Attended: Yes ☒ No ☐ Initial	Name: Company: Address: City/State/Zip: Ph: Ext. Fax:	

1-14-2012 ATTendance RA General

✓	Mike Webb	Xcel Energy	303) 628-2840
✓	Angelo Bramucci	Alstom Power Inc.	860-285-9176
✓	ED ORTMAN	ALSTOM POWER	860 285 2437 edward.m.ortman@power.alstom.com
✓	RICK Valdez	ARB, INC.	rvaldez@arbinc.com 661 391-6024
✓	Brian Bosea	Graycor	brian_bosea@graycor.com
	Thomas White	NRG Energy	tom.white@nrgenergy.com
	RAY MILETTI	B&W Const. Co.	RLMILETTI@BABCOCK.com
✓	Frank Johnson	PBF Energy Toledo Refinery	Frank_Johnson@PBFEnergy.com
✓	RON PULLIAM	BABCOCK & WILCOX-P&G	RLPULLIAM@BABCOCK.com
	Chad Bryan	STATE OF TENN	ChadBryan@Tn.Gov
✓	BRIAN MORELOCK	EASTMAN	morelock@eastman.com
	BOB WIELGOSZINSKI	HSB of CT	ROBERT_WIELGOSZINSKI@HSBCT.com
	Marty Toth	Boiler Supply Co.	mtoth@boisco.com
	WAYNE JONES	ARISE	WAYNE.JONES@ARISEINC.COM
	Joe Frey	Stress Engineering	joe.frey@stress.com
	CHARLES WITHERS	NB	CWITHERS@NATIONALBOARD.ORG
	MARK ANDERSON	MARQUIP, LLC.	MARK.ANDERSON@MARQUIPWARDUNITED.COM
	DAREN DAILY	MARQUIP, LLC	DAREN.DAILY@MARQUIPWARDUNITED.COM
	David Martinez	FM GLOBAL	david.martinez@fmglobal.com
	RANDY CAUTHEN	APCOMPOWER INC.	randal.t.cauthen@power.alstom.com
✓	Ben Schaefer	American Electric Power	bschaefer@aep.com
✓	JIM LARSON	ONECIS INSURANCE	JLARSON@ONECIS.COM
	Jim Pillow	Common Arc Corp.	JPILLOW@COMMONARC.COM
	GEORGE GALONTI	DTS, Inc	ggalanis@diamondtechnical services.com
✓	PAUL EDWARDS	SHAW STONE & WEBSTER	PAUL.EDWARDS@SHAWGRP.COM
✓	WALT SPERKO	SPERKO ENG	SPERKO@ASME.ORG

Part 2 Revision
New Supplement 9

Supplement 9

Requirements for Change of Service

S9.1 Scope:

This Supplement provides requirements and guidelines to be followed when a change of service or service type is made to a pressure retaining item.

Whenever there is a change of service, the local jurisdiction where the pressure retaining item is to be operated shall be notified for acceptance, when applicable. Any specific jurisdictional requirements shall be met.

S9.2 Classification of Service Changes

S9.2.1 Service Contents

A change in service contents is considered to be any modification to the commodity or contents that the pressure retaining item was originally intended to contain when the pressure retaining item was constructed.

For example, a change:

a) From LP gas service to ammonia service.
b) From lethal to non lethal service.

S9.2.2 Service Type or Change of Usage

A change in service type is considered to be a change of how the pressure retaining item is being used.

For example, a change:

a) From above ground service to underground service for LP gas tanks.
b) From mobile or transport use to stationary use

S9.3 Factors to Consider

Before a change of service is to be made, the owner or user shall consider and evaluate the effects of the new operating conditions or environment on the existing condition and suitability for service of the

pressure retaining item. Various factors will have an impact on the reliability of the pressure retaining item in its new service environment. Changes can be successfully adopted providing there is an understanding of the effect on the pressure retaining item. However, there are some cases where changes are detrimental to the existing pressure retaining item. The owner or user should seek technical guidance of experienced personnel in appropriate areas affected by the change of service (e.g. design, metallurgy, or operations of the pressure retaining item).

The following is a listing of criteria that should be evaluated as appropriate. The criterion is not limited to that listed herein. Other factors may be considered as necessary;

1) Design Consideration:
   a) Thickness of existing vessel material
   b) Vessel or system flow rate or pressure
   c) Weight of vessel with new contents
   d) Existing or additional loads imposed on nozzles and highly stressed areas
   e) Change in pressure or temperature cycling
   f) Compliance to product or industry standards, such as ANSI K61, API 579, or NFPA 58

2) Material Consideration:
   a) Chemical and mechanical properties of existing material or any new material to be added or replaced to assure it has the required strength and toughness to withstand the pressure and temperature effects of the new environment.
   b) Effects of erosion or corrosion
   c) Time dependent effects on service life - creep or fatigue.

3) Environment
   a) Physical condition of the pressure retaining item
   b) Overpressure protection needs
   c) Regulatory environment - Verification of compliance to new or existing jurisdictional rules or regulations.

4) Operational History
   a) A review of current and past operational logs or records should be made to assure that no conditions existed where any further use would render the pressure retaining item hazardous or otherwise unsafe.
   b) Records to be obtained and reviewed would include Data Reports, Repair and Alteration Forms, Inspection reports.

5) Repairs and Alterations Made:

a) A review of any repairs, alterations, reratings, or reconfigurations that have been performed on the pressure retaining item, so as to assure that they will not have a detrimental impact on the intended use.

6) Proposed rework
   a) Any physical work to be performed to restore the material to the existing or intended state or to meet any requirements for the new operating conditions.
   b) Repairs and alterations shall be performed in accordance with NBIC, Part 3.
   c) The effects of heat applied as a result of welding or heat treatment on the material or shaped parts.
   d) The method and extent of any physical or non destructive examination should be considered.
   e) Any physical testing or pressure testing to be performed to determine of verify leak tightness or structural integrity of the pressure retaining item.
   f) The pressure retaining item shall meet the Code requirements for the new environment at the time of change.

7) Documentation
   a) Review existing records that are required to satisfy customer, user, or legal requirements.
   b) Review the need for any marking, stamping, or labeling required for the intended service.
   c) Review the need for developing or revising an inspection plan to ensure safe operation. Refer to Part 2, Section 1.5.2.1 Inspection Plan.

S9.4 Some Examples for Change of Service

The following is a typical list of examples of what constitutes a change in service and some factors to consider. Note: This list is not all inclusive. There may other service changes not mentioned.

Also, the listing of "Factors to Consider" is also not all inclusive. There may be other elements that can influence the safe and reliable operation.

The Owner shall check with the Jurisdiction where the pressure retaining item is to operate in the new environment, and review local building Codes, laws, and regulations for additional requirements or prohibitions against a change of service.

Some examples of Change of Service conditions	
Change	**Some Factors to Consider**
LP gas to ammonia	• PWHT of vessel during construction • Wet-fluorescent magnetic particle testing (WFMT) on

Some examples of Change of Service conditions	
Change	**Some Factors to Consider**
	all internal surfaces • Internal access of vessel is necessary. May need to install manhole.
Ammonia to LP gas	• NFPA-58, paragraph 5.2.1.5 should be consulted. i.e. restriction on maximum volume • Wet-fluorescent magnetic particle testing (WFMT) on all internal surfaces • Internal access of vessel is necessary. May need to install manhole. • Also see, NBIC Part 2, 2.3.6.4
LP gas service: from above ground to underground	• Requires alterations (additional nozzles). • Corrosion protection • See NFPA 58
LP gas to air receiver	• Assurance of vessel cleanliness. i.e. removal of mercaptan. • Appropriateness and number of inspection and drain openings. • Corrosion allowance
Boiler service: Steam to Hot Water	• May require replacement of smaller steam outlet nozzle with larger nozzle to accommodate condensate carryover • Change of Pressure Relief Device
Sulfur dioxide service. Sweet to sour gas service.	• Concern over hydrogen cracking
Inert to Oxidizing atmosphere	• Inspection for damage mechanisms that may be present from previous service life that is detrimental to the vessel in the new environment.
Lethal service to non-lethal	• Design conditions and suitability for service
DOT railcars or ICC transport tanks to stationary service	• Prohibited by DOT regulations (49 CFR 180) for permanent service. • Temporary stationary service permitted as per NFPA 58 • Inspection for damage mechanisms that may be present from previous service life that is detrimental to the vessel in the new environment.

S9.5 Documentation of Change of Service

Any records, forms, or reports required documenting the change of service event that may be required by contract or the jurisdiction where the pressure retaining item operates shall be completed as specified. Such documentation should be retained by the owner or user for future reference or use as needed.

1.4.5.1.1 GUIDE FOR COMPLETING NATIONAL BOARD BOILER INSTALLATION REPORT

1. INSTALLATION: Indicate the type and date of installation — new, reinstalled, or second hand.
2. INSTALLER: Enter the Installer's name and physical address.
3. OWNER-USER: Enter the name and mailing address of the owner-user of the boiler.
4. OBJECT LOCATION: Enter the name of the company or business and physical address where the installation was made.
5. JURISDICTION NO.: Enter the Jurisdiction number if assigned at the time of installation.
6. NATIONAL BOARD NO.: Enter the assigned National Board number.
   Note: Cast-iron section boilers do not require National Board registration.
7. MANUFACTURER: Enter the boiler manufacturer's name.
8. MFG. SERIAL NO.: Enter the assigned boiler manufacturer's serial number.
9. YEAR BUILT: Enter the year the boiler was manufactured.
10. BOILER TYPE: Enter the type of boiler, i.e., watertube, firetube, cast iron, electric, etc.
11. BOILER USE: Enter the service the boiler will be used for, i.e., heating (steam or water), potable water, etc.
12. FUEL: Enter the type of fuel, i.e., natural gas, diesel, wood, etc. If more than one fuel type, enter the types the boiler is equipped for.
13. METHOD OF FIRING: Enter the method of firing, i.e., automatic, hand, stoker, etc.
14. Btu/KW INPUT: Enter the Btu/hr or kw input of the boiler.
15. Btu/KW OUTPUT: Enter the Btu/hr or kw output of the boiler.
16. OPERATING PSI: Enter the allowed operating pressure.
17. ASME CODE STAMP(S): Check the ASME Code stamp shown on the code nameplate or stamping of other certification mark (specify).
18. STAMPED MAWP: Enter the maximum allowable working pressure shown on the nameplate or stamping.
19. HEATING SURFACE SQ. FT.: Enter the boiler heating surface shown on the stamping or nameplate. **Note:** This entry is not required for electric boilers.
20. CAST IRON: Enter the total number of sections for cast-iron boilers.
21. MANHOLE: Indicate whether the boiler has a manway.
22. SPECIFIC ON-SITE LOCATION: Enter the on-site location of the boiler in sufficient detail to allow location of that boiler.

23. PRESSURE RELIEF VALVE SIZE: Enter the inlet and outlet size of all installed boiler safety or safety relief valves.

24. PRESSURE RELIEF VALVE SET PRESSURE: Enter the set pressure of all installed boiler safety or safety relief valves.

25. PRESSURE RELIEF VALVE CAPACITY: Enter the capacity in either lbs. of steam per hour or Btu/hr for each installed boiler safety or safety relief valve.

26. MANUFACTURER: Enter the manufacturer of each installed boiler safety and safety relief valve.

27. LOW-WATER FUEL CUTOFF: Enter the manufacturer's name, type, number, and maximum allowable working pressure of all installed low-water fuel cutoff devices.

28. PRESSURE/ALTITUDE GAGE: Enter the dial range of the installed pressure or altitude gage, cutout valve or cock size, a maximum allowable working pressure, and gage pipe connection size. For steam boilers, indicate gage siphon or equivalent device installed.

29. EXPANSION TANK: Indicate code of construction of installed expansion tank, tank maximum allowable working pressure, and tank capacity in gallons.

30. VENTILATION AND COMBUSTION AIR: Indicate total square inches of unobstructed opening or total cubic feet per minute of power ventilator fan(s) available for ventilation and combustion air.

31. WATER LEVEL INDICATORS: Enter the number of gage glasses and/or remote indicators and connecting pipe size.

32. FEED WATER SUPPLY: Enter the total number of feeding means, connecting pipe size, stop and check valve size, and maximum allowable working pressure.

33. STOP VALVE(S): Enter the number of stop valves installed, valve size, and maximum allowable working

Add new paragraph:

1.5 Change of Service

See NBIC Part 2, Supplement 9 for requirements and guidelines to be followed when a change of service or service type is made to a pressure retaining item.

Whenever there is a change of service, the local jurisdiction where the pressure retaining item is to be operated, shall be notified for acceptance, when applicable. Any specific jurisdictional requirements shall be met.

37. ADDITIONAL REMARKS: Enter any remarks or comments you deem appropriate.

38. INSTALLER'S NAME AND SIGNATURE: Print installer name and registration number and sign completed report.

39. BOTTOM BLOWDOWN CONNECTIONS: Indicate number of valves, valve size, and MAWP. Indicate if piping run is full size to point of discharge.

40. EXTERNAL PIPING ASME CODE AND FUEL TRAIN: Indicate if external piping is ASME Code, if not, indicate what code or standard external piping is manufactured to. Indicate if the fuel train meets the requirements of CSD-1 or NFPA-85, If other indicate code or standard used.

Note: If a vessel has not been properly prepared for an internal inspection, the Inspector shall decline to make the inspection.

1.5.4 POST-INSPECTION ACTIVITIES

a) During any inspections or tests of pressure-retaining items, the actual operating and maintenance practices should be noted by the Inspector and a determination made as to their acceptability.

b) Any defects or deficiencies in the condition, operating, and maintenance practices of the pressure-retaining item shall be discussed with the owner or user at the time of inspection and recommendations made for correction. Follow-up inspections should be performed as needed to determine if deficiencies have been corrected satisfactorily.

c) Documentation of inspection shall contain pertinent data such as description of item, classification, identification numbers, inspection intervals, date inspected, type of inspection, and test performed, and any other information required by the inspection agency, jurisdiction, and/or owner-user. The Inspector shall sign, date, and note any deficiencies, comments, or recommendations on the inspection report. The Inspector should retain and distribute copies of the inspection report, as required.

d) The form and format of the inspection report shall be as required by the Jurisdiction. Where no Jurisdiction exists, forms NB-5, NB-6, or NB-7 (see NBIC Part 2, 5.3) or any other form(s) required by the inspection agency or owner-user may be used as appropriate.

Add new paragraph:
1.6 Change of Service
Supplement 9 provides requirements and guidelines to be followed when a change of service or service type is made to a pressure retaining item.
Whenever there is a change of service, the local jurisdiction where the pressure retaining item is to be operated, shall be notified for acceptance, when applicable. Any specific jurisdictional requirements shall be met.

3.2.5 CALCULATIONS

For alterations, calculations shall be completed prior to the start of any physical work. All design calculations shall be completed by an organization experienced in the design portion of the standard used for construction of the item. All calculations shall be made available for review by the Inspector accepting the design.

3.2.6 REFERENCE TO OTHER CODES AND STANDARDS

Other codes, standards, and practices pertaining to the repair and alteration of pressure retaining items can provide useful guidance. Use of these codes, standards and practices is subject to review and acceptance by the Inspector, and when required, by the Jurisdiction. The user is cautioned that the referenced codes, standards and practices may address methods categorized as repairs; however, some of these methods are considered alterations by the NBIC.

In the event of a conflict with the requirements of the NBIC, the requirements of the NBIC take precedence. Some examples are as follows:

(a) National Board *Bulletin* - National Board Classic Articles Series;

(b) ASME PCC-1, Guidelines for Pressure Boundary Bolted Flange Joint Assembly;

(c) ASME PCC-2, Repair of Pressure Equipment and Piping.

3.3 REPAIRS TO PRESSURE-RETAINING ITEMS

3.3.1 DEFECT REPAIRS

Add new paragraph:

3.2.7 Change of Service

See NBIC Part 2, Supplement 9 for requirements and guidelines to be followed when a change of service or service type is made to a pressure retaining item.

Whenever there is a change of service, the local jurisdiction where the pressure retaining item is to be operated, shall be notified for acceptance, when applicable. Any specific jurisdictional requirements shall be met.

b) The Inspector, with the knowledge and understanding of jurisdictional requirements, shall be responsible for meeting jurisdictional requirements and the requirements of this Code;

c) The "R" Certificate Holder's Quality System Program shall describe the process for identifying, controlling, and implementing routine repairs. Routine repairs shall be documented on Form R-1 with this statement in the Remarks section: "Routine Repair.";

d) Repairs falling within one or more of the following categories may be considered routine:

NBIC Item 12-0501

Background information in NBIC Part 3, 2011 Edition, 3.2.2

c) When ASME is the original code of construction, replacement parts subject to internal or external pressure fabricated by welding, which require inspection by an Authorized Inspector shall be fabricated by an organization having an appropriate ASME *Certificate of Authorization*. The item shall be inspected and stamped as required by the applicable section of the ASME Code. A completed ASME *Manufacturer's Partial Data Report* shall be supplied by the manufacturer;

The "R" Certificate Holder, using replacement parts fabricated and certified to an ASME Code edition and addenda different from that used for the original construction, shall consider and seek technical advice, where appropriate, for change or conflicts in design, materials, welding, heat treatment, examinations and tests to ensure a safe repair/alteration is performed. Note that work once classified as a repair could now be considered an alteration;

d) When the original code of construction is other than ASME, replacement parts subject to internal or external pressure, fabricated by welding, shall be manufactured by an organization certified as required by the original code of construction. The item shall be inspected and stamped as required by the original code of construction. Certification to the original code of construction, as required by the original code of construction or equivalent, shall be supplied with the item. When this is not possible or practicable, the organization fabricating the part shall have a National Board "R" *Certificate of Authorization*; replacement parts shall be documented on Form R-3 and the "R" Symbol Stamp applied as described in NBIC Part 3, Section 5.

Add new paragraph as follows; New paragraph shown is double underlined.

3.2.2 e)

"Replacement parts addressed by 3.2.2 c) or d) above shall receive a pressure test as required by the original code of construction. If replacement parts have not been pressure tested as required by the original code of construction prior to installation they may be installed without performing the original code of construction pressure test provided the owner, the Inspector and, when required, the Jurisdiction accept the use of one or a combination of the examination and test methods shown in Part 3, Section 4, paragraph 4.4.1 (for repairs) or 4.4.2 (for alterations). The R Certificate Holder responsible for completing the R Form shall note in the Remarks section of the R Form the examination(s) and test(s) performed, and the reason the replacement part was not tested in accordance with the original code of construction.