Date Distributed: December 17, 2012

THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

SUBGROUP ON INSPECTION SPECIFIC

AGENDA

Meeting of January 15, 2013
Mobile, Alabama

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** – 1:00 p.m.

2. **Announcements**

3. **Adoption of the Agenda**

4. **Approval of Minutes of July 17, 2012**

5. **Review of the Roster (Attachment 1)**

6. **Action Items (Attachment 2)**

NB07-0910 ***Part 2 S6, SG Inspection Specific*** - Review DOT supplement. A task group of S. Staniszewski (Chair), G. McRae and J. Riley has been assigned. This specific Supplement should be reviewed by task group for completeness and accuracy. (No Attachment)

July 2007

A progress report was given. Changes to the DOT glossary were approved previously due to approved public review comments.

January 2008

A progress report was given by Mr. Staniszewski. The Task Group is comprised of S. Staniszewski (Chair), G. McRae, and J. Riley. R. Wacker was assigned to replace Mr. Riley on the Task Group. The task group has met twice to discuss the public review comments received from the 2007 edition and in the process 11 more issues were identified.

July 2008

A progress report was given and the task group was altered.

January 2009

A progress report. An advanced notice of proposed rulemaking by the D.O.T. under Docket # PHMSA 2005-21351 is scheduled to be released by June 30, 2009.

July 2009

A progress report was given. Mr. Staniszewski reported that the docket did not make its release date.

January 2010

A progress report was given.

July 2010

Mr. Staniszewski gave a progress report. The document is currently under review from the legal department. At the end of the year there will be an advance notice of rulemaking.

January 2011

A progress report was given.

July 2011

A written progress report provided by Mr. Staniszewski was given by Mr. Cook.

January 2012

A progress report was given by Mr. Staniszewski. The advanced notice of proposed rulemaking process has concluded and the DOT is evaluating the public review comments.

July 2012

A progress report was given by Mr. Cook.

January 2013

Mr. Staniszewski is expected to report.

NB08-0321 ***Part 2 1.5SG on Inspection Specific*** **-** In paragraph 1.5 Inspection Activities, add verbiage to address change of service for a pressure vessel. These requirements should caution inspectors, owners, and jurisdictional authorities of the inherent dangers involved when changing service. A new supplement or new Subject under 2.3.6, Description and Concerns of Specific Types of Pressure Vessels, should be added to address the specific requirements for inspection of pressure vessels that have been converted from one service to another. A Task Group of all three parts of the NBIC has been formed under the leadership of Bob Wielgoszinski. Task group members from Inspection are G. McRae, R. Reetz, R. Wacker, D. Cook, and J. Getter. (See Attachment 2, pp. 1-6)

July 2008

A task group was assigned.

January 2009

A progress report was given.

July 2009

A progress report was given.

January 2010

A progress report was given.

July 2010

A progress report was given.

January 2011

A progress report was given by Mr. Cook.

July 2011

A progress report was given by Mr. Cook. The Task Group met and is developing wording.

January 2012

No progress at this time. The joint Task Group working on NB08-0321, NB08-0701 & NB08-0703 is scheduled to meet later this afternoon.

July 2012

A progress report was given by Mr. Wielgoszinski. A proposed Supplement 9 for Part 2 "Change of Service" was presented for comment and discussion.

January 2013

Mr. McRae is expected to report

NB08-0701 ***Part 2 S7 SG on Inspection Specific*** - Add a requirement for change of service from above ground to below ground installation of LPG tanks. We also need requirements for how to inspect these tanks. A task group of G. McRae (Lead), G. Galanes, J. Getter, M. Huffman, V. Mullins, J. Riley, D. Cook, J. Richardson and V. Newton has been assigned. (Attachment 2, pp. 2-15)

January 2008
A progress report was given and a task group was assigned.

July 2008
A progress report was given..

January 2009
A progress report was given. This item will be discussed in conjunction with NB08-0321.

July 2009
A progress report was given. This action item will be worked on simultaneously with the task group assigned to NB08-0320, NB08-0321 and NB08-0322.

January 2010
No progress at this time.

July 2010
Mr. McRae gave a progress report.

January 2011
A report was given.

July 2011
A report was given by Mr. Cook. A listing of possible requirements was discussed by the Sub-Group.

January 2012
Mr. Cook presented a paper with proposed changes. After a great deal of discussion and many recommendations from the Sub-Group, the Task Group will continue to work on the requirements.

July 2012
A report was given by Mr. Mullins. After discussion, a motion was made to accept the proposal. The motion was unanimously approved. This item was approved to go out for letter ballot to the NBIC Committee. The ballot failed.

January 2013
Mr. McRae is expected to report.

NB12-1801 ***Part 2, 5.5.2-5.5.3,SG Inspection Specific*** - Replacement of stamping during inservice inspection. (Attachment 2, pp. 16-24)

July 2012
A task group of Mark Mooney(chair), Robert Dobbins, Tim Barker, Dominic Canonico and Daren Daily was assigned.

7. **New Business**

8. **Future Meetings**

   July 15-19, 2013, Columbus, Ohio
   January 13-16, 2013, San Antonio, Texas

9. **Adjournment**
   Respectfully Submitted,

   Bill Smith
   Secretary

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ATTACHMENT 1

SG on Inspection Specific

Member	Title	ExpirDate	Interest Category
Barker, Timothy		1/31/2015	Auth Inpection Agencies
Clark, Marshal		1/31/2013	General Interest
Dobbins, Robert		2/28/2014	Auth Inpection Agencies
Getter, Jim		8/31/2015	Manufacturer
McRae, Greg		8/31/2015	Manufacturer
Mooney, Mark		7/31/2014	Auth Inpection Agencies
Mullins, Virgil		7/31/2014	Manufacturer
Riley, Jim		8/31/2015	Users
Schwartzwalder, Mike	Vice Chair	8/31/2015	NB Certificate Holders
Smith, Bill	Secretary		
Staniszewski, Jr., Stanley	Chair	8/31/2015	Regulatory Authorities

Total Members: 10

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 or vice versa

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.

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 there are other elements that can influence the safe and reliable operation.

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

Change	Some Factors to Consider
LP gas to ammonia	• PWHT of vessel during construction • Wet-fluorescent magnetic particle testing (WFMT) on all internal surfaces • Internal access of vessel is necessary. May need to install manhole.

Change	Some Factors to Consider
Ammonia to LP gas	• NFPA-58 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
Sulfur dioxide service. Sweet to sour gas service.	• Concern over hydrogen cracking
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.

NBIC Part 2

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.

NBIC Part 1

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.

NBIC Part 3

Add new paragraph:

1.9 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.

ATTACHMENT 2

COMMITTEE CORRESPONDENCE

COMMITTEE: NBIC

TO: NBIC

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

FROM: Robin Hough
NBIC Secretary

SUBJECT: Letter Ballot NB08-0701 MC

DATE: September 27, 2012

Committee Members:

Letter ballot NB08-0701 MC has now closed. The ballot has failed. Per the NBIC procedure 7.1 all NBIC revisions need a 2/3 majority to be approved. This item will now appear on the agenda for the next meeting for more discussion.

11	Approved
9	Disapproved
1	Abstained
0	Not Voting
3	Not Returned

:rmh

(7)
1/9

Ballot Votes NB08-0701 MC

Name	Email	Votes	Vote Date
Robert Wielgoszinski	Robert_Wielgoszinski@hsbct.com	Abstention	09/24/12
Benjamin Anthony	banthony@dlt.state.ri.us	Approve	09/05/12
Bob Reetz	breetz@nd.gov	Approve	08/30/12
Frank Hart	fhart@furmanite.com	Approve	08/27/12
James Pillow	jpillow@commonarc.com	Approve	08/27/12
Jim Riley	jim.riley@conocophillips.com	Approve	09/13/12
Jim Sekely	jsekely@comcast.net	Approve	08/25/12
Lawrence McManamon	lmac@glabap.com	Approve	08/27/12
Michael Richards	hmrichar@southernco.com	Approve	08/28/12
Paul Bourgeois	pcbourge@travelers.com	Approve	08/28/12
Ralph Pate	ralph.pate@labor.alabama.gov	Approve	09/06/12
Ronald Pulliam	rlpulliam@babcock.com	Approve	09/04/12
Bryan Schulte	bryan.schulte@nrgenergy.com	Disapprove	08/31/12
Craig Hopkins	chopkins@seattleboiler.com	Disapprove	09/04/12
Domenic Canonico	canonicod@epbfi.com	Disapprove	08/24/12
George Galanes PE	ggalanes@diamondtechnicalservices.com	Disapprove	08/24/12
John Richardson	jwrichar@aol.com	Disapprove	09/09/12
Mark Mooney	mark.mooney@libertymutual.com	Disapprove	09/27/12
Michael Webb	mike.webb@xcelenergy.com	Disapprove	09/07/12
Paul Edwards	paul.edwards@shawgrp.com	Disapprove	09/06/12
Raymond Snyder	raymond.snyder@ariseinc.com	Disapprove	08/29/12
Don Cook	dcook@hq.dir.ca.gov	Not Voted	N/A
Gary Scribner	Gary.Scribner@dfs.dps.mo.gov	Not Voted	N/A
Stanley Staniszewski	stanley.staniszewski@dot.gov	Not Voted	N/A

Ballot Comments NB08-0701

Name	Document	Comment	Date Created
Mark Mooney		Michael Webb has some very good points that should be addressed.	09/27/2012
Robert Wielgoszinski		So many negatives. I will wait for the revised proposal.	09/24/2012
John Richardson		I believe there are too many open questions, as evidenced in the comments, for this item to move forward.	09/09/2012
Michael Webb	Comments NB08-0701, 9-7-12.pdf	I have too many unresolved questions and vote, "disapprove". I offer the attached comments either for clarification or as suggestions for adoption.	09/07/2012
Robin Hough	NBIC 08-0701.9-6-12.pdf	Gentlemen: Attached is a revised version of the document for you to review.	09/06/2012
Paul Edwards		This is a worthy effort, however I believe the comments need to be addressed prior to publication.	09/06/2012
Craig Hopkins		Many compelling comments below.	09/04/2012
Ronald Pulliam		Also agree with Mr. Pillow's comments, particularly about defining the blast media and the extent. Some media could actually peen defects over and leave them undetected.	09/04/2012
Bryan Schulte		I vote to disapprove the NB08-0701 letter ballot, for the following reasons: Item 1: suggest either eliminating the 2nd sentence or adding additional methods for determining if the tank was previously used for anhydrous ammonia service. Item 3: is corrosion due to removed valves the only corrosion of concern? Item4: define "original material" or use another term. Item 5: Better definition / specification of standpipe and domed sleeve requirements. 2nd sentence requires "to grade", 3rd sentence requires "top of grade". Item 12: define / refer to application process and define "original coating".	08/31/2012
Greg McRae		The following are Proposed changes to NB08-0701,S7.0: same line numbers as document. Proposed: 2) Using the proper blasting media the container shall be blasted to bare metal so an inspection can be performed under the guidelines of this supplements. Comment: 3) if will be very difficult to make internal inspection of the propane tanks. the girth seams are off set joints. UW 13.1. The internal surface of the tank will likely be covered a petroleum based material that accumulates over years of service. Proposed: 4) Any unused connection shall be plugged using a forged steel plug and welded in place. Proposed: 8) The support	08/29/2012

	legs, lifting lugs or other attachments may remain in place. All attachments shall be welded around their entire periphery to avoid corrosion. Proposed: 12)Any coating and touch up coating used at the time of installation shall be suitable for underground corrosion protection.	
Raymond Snyder	I agree with Domenic comments	08/29/2012
Michael Richards	Can vote 'Approved' with slight wording change in Item 9 'All attachment fillet welds shall be visually inspected prior to vessel coating as noted in Item 12.'	08/28/2012
Michael Richards	Can vote 'Approved' with slight wording change in Item 9 'All attachment fillet welds shall be visually inspected prior to vessel coating as noted in Item 12.'	08/28/2012
James Pillow	JPillow 8/27/12 I approve but have questions and comments for consideration, perhaps on a future item. Item 1-Is anhydrous ammonia the only substance that turns brass blue? Item 2-Use of only the word "blasted" leads one to ask "with sand, water, other type grit"? Perhaps say "cleaned with abrasive to bare metal" or something similar. Also, is the vessel to be cleaned only on the inside, outside, or both? Item 8-Is removing the attachment allowed? If allowed, is attachment to be ground flush? Think about clarifying - "if attachment remains or is not ground flush, it shell be welded 360 degrees around the attachment to prevent . . ", etc. Item 11 Is the head thickness to be the existing or the thickness on the original MDR? Item-This is nit picky, but can a word, or phrase other than "burial" be used?	08/27/2012
Michael Webb	I have several comments and abstain only to allow the project manager to respond: Item 3- Question / Comment: Verify "NO" internal corrosion…while the container was out of service? While I am not very familiar with these vessels, they appear to have very limited access to assert a verification process as indicated; possibly visually using varying direct and indirect methods through not used connections. Does this infer no internal corrosion what so ever, or does this mean beyond the manufacturer's indicated corrosion allowance, or is it identifying no internal corrosion is allowed? If there is a presence of internal corrosion and the identified valves are in place, is the presumption then that the vessel has not degraded further so it is acceptable? I believe the implication is a condition assessment or that a suitability for extended service evaluation is completed prior to other repair activities taking place. However, I can not be sure…. Last comment here, does this compliment or compete with the current information presented in Part 2, Section 6, S7.8.5 CORROSION? Item 4- Proposed revision to read: Any unused connection located on the storage container shall be	08/24/2012

	eliminated from future service by welding, using a material meeting the requirements of the container's original code of construction and the requirements for REPAIRS as described in the NBIC Part 3, Section 3. When a connection is removed, a flush patch meeting the requirements of 3.3.4.6 shall be met. Item 5- Question: Is there a standard or workmanship requirement for the attachment of the indicated, "multivalve" to the standpipe? Is this multivalve typically a threaded connection, welded connection, or either? I am not familiar with this and I believe I can envision what is described but this is not clear. Would the guidance offered herein be more clear with the inclusion of a simple sketch indicating the standpipe, withdrawal connection, profile of grade, typical industry-type anode attachment methods, and extended nameplate standoff if applicable? Item 8- Question- The second sentence: All attachment welds shall "encircle" the attachment to prevent crevices… Is this to say that all attachment welds shall be fully welded, leaving no areas open to further corrosion? Without some required cathodic protection (see item 9), is the concern for corrosion below ground moot? Item 9- Comment: If there is a requirement to provide connections (which are what?) for the sacrificial anodes representing cathodic protection, should there not be a requirement to use them? Is cathodic protection a requirement for underground service? As an inspection activity, should the presence of a sacrificial anode / cathodic protection be an initial inspection item? Item 10- Comment: If the proposed language of item 4, or something similar representing Part 3 requirements is adopted, this item identifying any welded repairs be completed by an "R"-Certificate Holder may not be needed. Item 11- Comment- As a changed service to underground, does the stamping requirements need to be profiled to allow some method of extended attachment to a location above ground? I am unfamiliar how nameplates for underground vessels / containers may be attached to verify something below ground; possibly attached to the required standpipe's domed sleeve. Proposed item 13 (item 12 if current item 10 is removed) - I would concede that this may not be needed but is offered for comment; un-necessary or otherwise: Examination methods shall be directly applied. No indirect acceptance examination is allowed. Inspection activities of the work and verification of stamping shall be prior to the container being buried underground.	
George Galanes PE	I am voting disapprove on this ballot because I believe items 2,4, and 10 should be re-worded. I am providing the suggested changes below for your consideration; Proposed Revisions: 2. The container shall be grit blast cleaned in	08/24/2012

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(11)

	preparation for inspection under the guidelines of this Supplement. 4. Unused connections located on the container shall be sealed by welding a forged plug or completely removed by installation of a flush patch plate. The flush patch plate shall be of the same thickness and type as the original container shell material. 10. Welding shall be performed by an organization in possession of a current National Board R-Certificate of Authorization.
Domenic Canonico	There are too many questionable conditions that may not be easily resolved. I do not support placing a piece of equipment into service which can contaminate the area surrounding it's burial site. If this item should pass the end of 2nd sentence ---"original material" should be clarified. What is "the original material? Is it the same material specification?

10/9/12

Comments: NB08-0701

I clearly recognize the efforts made to introduce inspection activities where there may have been none. I have too many unresolved questions and vote, "disapprove". I offer the attached comments either for clarification or as suggestions for adoption.
-Mike Webb 9-7-12

S7.9 REQUIREMENTS FOR CHANGE OF SERVICE FROM ABOVE GROUND TO UNDERGROUND SERVICE

Comment / Question:
Regarding the revised effort dated R-Sept. 6, 2012 following the supplement title, "S7.9 REQUIREMENTS FOR CHANGE OF SERVICE…", the following introduction was stated:

"ASME LPG storage vessels may be *altered* (changed) from above ground (AG) service to underground (UG) service subject to the following conditions:"

Does the reference to the change of service from above ground to underground suggest that the definition for alteration needs to be revised?

In my opinion the paragraph introduction should be revised to the more general statement shown above with the word "changed" re-introduced as shown above within the parenthetical.

Item 2-
Question:
This item refers to using a proper blasting media to prepare the container for an inspection under the guidelines of this supplement. Is this language specifically aligning the inspection activities to S7.1 b) as an underground vessel?
For purpose of Supplement continuity, may I propose the paragraph S7.1 b) be revised to read:

b) The application of this Supplement to vessels used in underground storage will be necessary when evidence of leakage or structural damage to the vessel has been observed or reported, when the vessel has been dug up and is to be returned to its underground location, or prior to the vessel's service being changed from above-ground to underground service".

Rational: Without the specific mention of the "change of service", the initial inspection activities *preparing* a vessel for underground storage may be interpreted as not needed as the vessel has not yet been dug up as currently stated at Part 2, S7.1 b).

Item 3-
Question:

a) As stated in other comments, the efforts to "verify" the absence of corrosion when the access to the internal surface is very limited and may not be dutifully possible? As indicated, girth seams are offset and may hide something that can not be recognized…practically, thereby inadvertently compromising a "verification of *no* corrosion". For that matter, there is the potential that some minor pitting may have been in place from original storage or fabrication that is out of view still compromising the assertion of "verification".

   Should the language at item 3 be relaxed to allow for safeguards to be practicably introduced such as:

   "When vessel connections have evidence of leakage or corrosion, or unused connections have been opened, the internal condition of the vessel shall be examined by any means suitable in providing meaningful results to afford assurance an unsafe condition does not exist."?

b) Does the method of verification need to be accepted, and if so by whom?
c) Is this verification demonstrated in a report and shown to the owner, user, or an Inspector representing the jurisdictional authority as suggested at @ Part 2, S7.1 a) or S7.2 a-4)?
d) Is the verification reported on a Form NB-7 shown in Part 2, 5.3.6? If not, is there a required report representing the change of service and the interests of the jurisdictional authority, if required?

Item 4-
Question:
Depending on the configuration of the unused connections identified in the first sentence, the welding may be outside of the Code –boundary of the vessel. The question of weld quality comes into play as does the qualification of the repair organization.

a) If the unused connection is a threaded connection originally welded to the vessel by the Manufacturer, is the intent of the guidance of the first sentence to merely seal weld a threaded plug or to render by welding the connection is seal welded shut?
b) Is the weld quality in plugging the unused connections to coincide with the requirements of the vessel's original code of construction?

7/9/13

c) There is no reference as to what qualifications are needed by the repair organization seal welding the plugs into the noted connections until item 11 is introduced. For purposes of continuity, should the information introduced at item 11 ("All welding shall be performed by an organization possessing a current "R"-Certificate of Authorization…") be introduced prior to item 4 or within the content of item 4?

The guidance of item 4 further offers as an alternative to enlist the flush patch as a method to completely remove unused connections from further service. The ensuing guidance then offers no further requirements other than the flush patch material shall be the same thickness of the vessel being weld repaired. Simply, I would propose that the language in item 4 be revised to read:

"Any unused connection located on the storage vessel shall be eliminated from future service by seal welding a plug into the connection, using a material meeting the requirements of the vessel's original code of construction and the requirements for REPAIRS as described in the NBIC Part 3, Section 3. When a connection is removed from the vessel, a flush patch meeting the requirements of 3.3.4.6 shall be met".

Rationale: The requirements of thickness, joint efficiency, weld quality, NDE, the WPS, welder qualification, and acceptance testing or examination are all intrinsic.

Item 5:
Comment:
Admittedly, I am not familiar with LPG-vessels. With that admission, the language regarding connections between the current proposed language of item 4 and item 5 seem confusing. Are the connections indicated in item 5, fill / charge-connections? In my opinion the connections indicated by either item; or specifically item 5, should be more distinct for those unknowledgeable such as me.

Item 8-
Comment / Question:
The N-BD nameplate indicated suggests (I think) an "R"-Certificate Holder's nameplate; using a continuous weld, be welded to the vessel.

Question: Regarding the above, is this seal welding of the nameplate a result of a presumed welded repair activity previously identified at item 4 or is this a requirement because of the "change of service"?

Within the proposed item 8, the additional stamping requirements indicated by the reference to Part 3, 5.7 asks the "R"-Certificate Holder to place the repair nameplate adjacent to the original Manufacturer's stamping or nameplate. Additionally as I interpret this item 8, all of the original manufacturer's information (9-items) *shall* be included on the repair nameplate, in addition to the requirements shown in Part 3, Figure 5.7.5-a.
All of this is required FOR A VESSEL THAT WILL BE LOCATED OR RE-LOCATED UNDERGROUND with no apparent above ground reference? IS THIS THE EXPECTATION?

Other Questions:

a) Does the "Change of Service" above ground (AG) to underground (UG) warrant a nameplate as possibly suggested *without* the reference to a welded repair?
b) If "a"-above is no, should the language of item 8 be revised to begin as, "When welding is required, the "R" Certificate Holder completing the welding activity shall attach the repair nameplate…" ?
c) When a Change of Service from Above Ground to Underground is contemplated, should there be a provision that would allow either:
    1) The original nameplate attached to the LPG-vessel being relocated underground, be removed and attached to a disclosed location above ground and witnessed by the jurisdictional authority; if required, per Part 2, 5.2.
    2) A facsimile of the original Manufacturer's tag be relocated and attached to a disclosed location above ground and witnessed, if required, per Part 2, 5.2.
d) The original Manufacturer's nameplate may not be stainless steel. How is this tag protected underground?
e) If the requirements for locating the repair tag adjacent to the original Manufacturer's nameplate as referenced in Part 3, 5.7.2 c) are upheld; and both are buried, should a secondary repair tag located and attached at a disclosed location above ground be considered?
f) When welding is required for an underground vessel, should the use and location of a secondary tag (if allowed) and for that matter, "the change of service" be fully described on the required Form R-1 meeting the instructions of Part 3, 5.2.1?

Item 10:
Comment- If a provision for cathodic protection *shall* be added, should the attachment be by welding?
Rationale: A mechanical connection may compromise the effort for protection; if used. Anywhere a mechanical connection can be eliminated would make the cathodic protection more reliable.

NB08-0701

S7.9 REQUIREMENTS FOR CHANGE OF SERVICE FROM ABOVEGROUND TO UNDERGROUND SERVICE

ASME LPG storage vessels may be altered from aboveground (AG) service to underground (UG) service subject to the following conditions.

1. Vessels that have been previously used in anhydrous ammonia service are not permitted to be converted to LPG service.

2. The outside surface of the vessel shall be cleaned to bare metal for an external inspection of the vessel under the guidelines of this Supplement. Prior to placing underground, the outside surface of the vessel shall be prepared consistent with the paint manufactures specification and coated with a coating suitable for UG service. Any touch-up coating shall the same coating material. All corrosion shall be repaired in accordance with the NBIC.

3. Verify that here is no internal corrosion due to valves having been removed while the container was out of service.

4. Any unused connections located on the vessel shall be closed by seal welding around a forged plug or moved using a flush patch. If a flush patch is used the material shall be the same material thickness and material grade as the original code of construction.

5. All connections on top of the vessel, except for the liquid withdrawal opening, shall be replaced with a riser pipe with multi-valve suitable for UG LPG service. The valve shall be enclosed in a protective housing and placed underground in accordance with jurisdictional requirements.

6. The liquid withdrawal opening shall be located within the protective housing.

7. The liquid level tube in the multivalve shall be the length required according to jurisdictional requirements.

8. The NBIC nameplate shall be made of stainless steel and continuous welded to the vessel wall. The nameplate shall also have the information from the original nameplate. This shall include the manufactures name, container serial number, National Board number, if registered with the NBIC, MAWP, year built, head and shell thickness be stamped for "UG service", the "liquid level tube length= ____ inches" and the National Board "R" stamp. The original manufactures nameplate shall remain attached to the vessel. See Part 2-5.2, Part 3-5.7 for additional stamping requirements.

9. The support legs and lifting lugs may remain in place and shall be welded around the entire periphery to prevent crevices that create a potential area for corrosion. Unused attachments shall be removed and welds ground flush.

10. A connection shall be added for the attachment of an anode for cathodic protection.

11. All welding shall be performed by a qualified "R" stamp holder using a qualified welding procedure.

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Requested Revisions and Additions

CURRENT WORDING – NBIC Part 2, SECTION 5 5.2 – 5.2.3

5.2 REPLACEMENT OF STAMPING DURING INSERVICE INSPECTION

5.2.1 AUTHORIZATION

a) When the stamping on a pressure-retaining item becomes indistinct or the nameplate is lost, illegible, or detached, but traceability to the original pressure-retaining item is still possible, the Inspector shall instruct the owner or user to have the stamped data replaced. All re-stamping shall be done in accordance with the original code of construction, except as modified herein. Requests for permission to re-stamp or replace nameplates shall be made to the Jurisdiction in which the pressure-retaining item is installed. Application must be made on the Replacement of Stamped Data Form, NB-136 (see 5.3.2). Proof of the original stamping and other such data, as is available shall be furnished with the request. Permission from the Jurisdiction is not required for the reattachment of nameplates that are partially attached. When traceability cannot be established, the Jurisdiction shall be contacted.

b) When there is no Jurisdiction, the replacement of stamped data shall be authorized and witnessed by a National Board Commissioned Inspector and the completed Form NB-136 (see 5.3.2) shall be submitted to the National Board.

5.2.2 REPLACEMENT OF STAMPED DATA

a) The re-stamping or replacement of data shall be witnessed by a National Board Commissioned Inspector and shall be identical to the original stamping.

b) The Re-stamping or replacement of a code symbol stamp shall be performed only as permitted by the governing code of construction.

c) Replacement nameplates shall be clearly marked "replacement".

5.2.3 REPORTING

Form NB-136 shall be filed with the Jurisdiction (if required) or the National Board by the owner or user together with a facsimile of the stamping or nameplate, as applied, and shall also bear the signature of the National Board Commissioned Inspector who witnessed the replacement.

PROPOSED CHANGES– NBIC Part 2, SECTION 5, 5.2 – 5.2.3

5.2 REPLACEMENT OF STAMPING ~~DURING INSERVICE INSPECTION~~OR NAMEPLATE

5.2.1 AUTHORIZATION

a) When the stamping on a pressure-retaining item becomes indistinct or the nameplate is lost, illegible, or detached, but traceability to the original pressure-retaining item is still possible, the Inspector shall ~~instruct~~ require ~~the owner or user to shall have~~ the nameplate or stamped data to be replaced. All re-stamping shall be done in accordance with the original code of construction, except as modified herein. ~~Requests for permission to re-stamped or replaced nameplates shall be made to the Jurisdiction in which the pressure-retaining item is installed. Application~~ Documentation must be made on the Replacement of Stamped Data Form, NB-136 (see 5.3.2). Proof of the original stamping and other such data, as is available shall be furnished ~~with the request~~ to the Inspector (not required for the reattachment of nameplates that are partially attached). ~~Permission from the Jurisdiction~~ Completion of an NB-136 is not required for the reattachment of nameplates that are partially attached. Notification of re-stamping or replacement nameplates shall be made to the Jurisdiction in which the pressure-retaining item is installed. When traceability cannot be established, the Jurisdiction shall be contacted.

b) When there is no Jurisdiction, the replacement of stamped data shall be authorized and ~~witnessed~~ verified by a National Board Commissioned Inspector and the completed Form NB-136 (see 5.3.2) shall be submitted to tThe National Board.

5.2.2 REPLACEMENT OF STAMPED DATA OR NAMEPLATE

a) The re-stamping or replacement of ~~data~~ a nameplate shall be ~~witnessed~~ verified and accepted by a National Board Commissioned Inspector. ~~and shall be identical to the original stamping.~~

b) The ~~R~~re-stamping or replacement of a code symbol stamp shall be performed only as permitted by the governing code of construction.

c) Replacement nameplates shall be clearly ~~marked~~ stamped "~~replacement~~REPLACEMENT".

5.2.3 REPORTING

Form NB-136 shall be filed with the Jurisdiction (if required) and ~~or~~ tThe National Board by the owner or user ~~together with~~ documenting a facsimile of the stamping or nameplate, as applied, and shall also bear the signature of the National Board Commissioned Inspector who ~~witnessed~~ verified the replacement.

PROPOSED NEW WORDING– NBIC Part 2, SECTION 5, 5.2 – 5.2.3

5.2 REPLACEMENT OF STAMPING OR NAMEPLATE

5.2.1 AUTHORIZATION

a) When the stamping on a pressure-retaining item becomes indistinct or the nameplate is lost, illegible, or detached, but traceability to the original pressure-retaining item is still possible, the Inspector shall require the nameplate or stamped data to be replaced. All re-stamping shall be done in accordance with the original code of construction, except as modified herein. Documentation must be made on the Replacement of Stamped Data Form, NB-136 (see 5.3.2). Proof of the original stamping and other such data, as is available shall be furnished to the Inspector (not required for the reattachment of nameplates that are partially attached). Completion of an NB-136 is not required for the reattachment of nameplates that are partially attached. Notification of re-stamping or replacement nameplates shall be made to the Jurisdiction in which the pressure-retaining item is installed. When traceability cannot be established, the Jurisdiction shall be contacted.

b) When there is no Jurisdiction, the replacement of stamped data shall be authorized and verified by a National Board Commissioned Inspector and the completed Form NB-136 (see 5.3.2) shall be submitted to The National Board.

5.2.2 REPLACEMENT OF STAMPED DATA OR NAMEPLATE

a) The re-stamping or replacement of a nameplate shall be verified and accepted by a National Board Commissioned Inspector.

b) The re-stamping or replacement of a code symbol stamp shall be performed only as permitted by the governing code of construction.

c) Replacement nameplates shall be clearly stamped "REPLACEMENT".

5.2.3 REPORTING

Form NB-136 shall be filed with the Jurisdiction (if required) and The National Board by the owner or user documenting a facsimile of the stamping or nameplate, as applied, and shall also bear the signature of the National Board Commissioned Inspector who verified the replacement.

NB-136 REPLACEMENT OF STAMPED DATA FORM

in accordance with provisions of the *National Board Inspection Code*

Submitted to:

(name ~~of jurisdiction~~)

(address)

(telephone no.)

Submitted by

(name of owner or certificate holder)

(address)

(telephone no.)

1. Manufactured by (name and address)
2. Manufactured for (name and address)
3. Location of Installation (address)
4. Date Installed
5. Previously installed at
6. Manufacturer's Data Report Attached ☐No ☐Yes
7. Item registered with National Board ☐No ☐Yes, NB Number
8. Item identification Year built
   Type Dimensions
   Mfg. Serial no. Jurisdiction no.
   MAWP psi Safety relief valve set at psi
9. Complete ~~the reverse side of~~ this report with a true facsimile of the legible portion of the nameplate or:
10. If nameplate is lost or illegible, traceability documentation shall be ~~attached~~ available to the Inspector identifying the stamping or nameplate to the object ~~to~~ and the Manufacturer's Data Report (if available) referenced on this form.

~~11. I request authorization to replace the stamped data and/or nameplate on the above described pressure retaining item in accordance with the rules of the *National Board Inspection Code* (NBIC).~~

~~Owner or User's nOrganization Name~~

~~Signature~~ ~~Date~~

~~Title~~

~~12. Authorization is granted to replace the stamped data or to replace the nameplate of the above described pressure retaining item.~~

~~Signature~~ ~~Date~~

~~(chief inspector or authorized representative)~~

~~Jurisdiction~~

Inspection

The following is a true facsimile of the legible portion of the item's existing nameplate, (if applicable). Please print. Where possible, also attach a rubbing of the nameplate.

The following is a true facsimile of the item's replacement nameplate

ADDED

I certify that to the best of my knowledge and belief, the statements in this report are correct, and that the replacement information, data, and identification numbers are correct and in accordance with provisions of the *National Board Inspection code*. ~~Attached is a facsimile or rubbing of the stamping or nameplate.~~

Name of Owner or User or Certificate Holder _____

Signature _____ Date _____
(Authorized representative)

Witnessed by _____ Employer _____
(Name of inspector)

Signature _____ Date _____ NB Commission _____
(Name of inspector)

NB-136 REPLACEMENT OF STAMPED DATA FORM

in accordance with provisions of the *National Board Inspection Code*

Submit to:

(name)

(address)

(telephone no.)

Submitted by

(name of owner or certificate holder)

(address)

(telephone no.)

1. Manufactured by _____ (name and address)
2. Manufactured for _____ (name and address)
3. Location of Installation _____ (address)
4. Date Installed _____
5. Previously installed at _____
6. Manufacturer's Data Report Attached ☐No ☐Yes
7. Item registered with National Board ☐No ☐Yes, NB Number _____
8. Item identification Year built _____

   Type _____ Dimensions _____

   Mfg. Serial no. _____ Jurisdiction no. _____

   MAWP _____ psi Safety relief valve set at _____ psi
9. Complete this report with a true facsimile of the legible portion of the nameplate or:
10. If nameplate is lost or illegible, traceability documentation shall be available to the Inspector identifying the stamping or nameplate to the object and the Manufacturer's Data Report (if available) referenced on this form.

The following is a true facsimile of the legible portion of the item's existing nameplate, (if applicable). Please print. Where possible, also attach a rubbing of the nameplate.

Inspection

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The following is a true facsimile of the item's replacement nameplate

I certify that to the best of my knowledge and belief, the statements in this report are correct, and that the replacement information, data, and identification numbers are correct and in accordance with provisions of the *National Board Inspection code*.

Name of Owner or User or Certificate Holder _____

Signature _____ Date _____
(Authorized representative)

Witnessed by _____ Employer _____
(Name of inspector)

Signature _____ Date _____ NB Commission _____
(Name of inspector)

CURRENT NB-136 FORM

NB-136 REPLACEMENT OF STAMPED DATA FORM

in accordance with provisions of the *National Board Inspection Code*

Submitted to

(name of jurisdiction)

(address)

(telephone no.)

Submitted by

(name of owner)

(address)

(telephone no.)

1. Manufactured by (name and address)
2. Manufactured for (name and address)
3. Location of Installation (address)
4. Date Installed
5. Previously installed at
6. Manufacturer's Data Report Attached ☐No ☐Yes
7. Item registered with National Board ☐No ☐Yes, NB Number
8. Item identification Year built

   Type Dimensions

   Mfg. Serial no. Jurisdiction no.

   MAWP psi Safety relief valve set at psi
9. Complete the reverse side of this report with a true facsimile of the legible portion of the nameplate.
10. If nameplate is lost or illegible, documentation shall be attached identifying the object to the Manufacturer's Data Report referenced on this form.

11. I request authorization to replace the stamped data and/or nameplate on the above described pressure-retaining item in accordance with the rules of the *National Board Inspection Code* (NBIC).

    Owner or User's name

    Signature Date

    Title

12. Authorization is granted to replace the stamped data or to replace the nameplate of the above described pressure-retaining item.

    Signature Date
    (chief inspector or authorized representative)

    Inspection Jurisdiction

CURRENT NB-136 FORM

The following is a true facsimile of the legible portion of the item's nameplate. Please print. Where possible, also attach a rubbing of the nameplate.

I certify that to the best of my knowledge and belief, the statements in this report are correct, and that the replacement information, data, and identification numbers are correct and in accordance with provisions of the *National Board Inspection code*. Attached is a facsimile or rubbing of the stamping or nameplate.

Name of Owner or User _____

Signature _____ Date _____
(Authorized representative)

Witnessed by _____ Employer _____
(Name of inspector)

Signature _____ Date _____ NB Commission _____
(Name of inspector)

Inspection

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