


<i>NCSX RFD</i> <i>Part I</i>	<b>Number:</b> NCSX-RFD-12-007	<b>RFD Description:</b> NCSX Vessel Port Pre-Assembly and Blank-Off for Vacuum Testing
<b>Initiator:</b> Doug McCorkle		<b>Organization:</b> Major Tool and Machine
<b>List of Impacted Documents:</b> ( <i>Specification, MIT/QA Plan, SOW, drawing, etc.</i> ) NCSX-CSPEC-121-02, SE-121-020 Detail C, SE120-103, SE121-014 (Detail Number 3), SE121-091, SE121-095, SE121-099, and SE121-102		
<b>Cost Impact:</b> ( <i>If none, so state</i> ) NONE		
<b>Schedule Impact:</b> ( <i>If none, so state</i> ) NONE		
<b>Quality Impact:</b> ( <i>If none, so state</i> ) NONE		
<b>State Requirement Deviation is Requested For:</b> ( <i>Specification, MIT/QA Plan, SOW, drawing, etc.</i> ) NCSX-CSPEC-121-02 4.2.1 allows combining vacuum test and thermal cycling		
<p><b>Full Description of the Deviation Requested:</b> (<i>Use continuation pages, e-mails, letter, sketches, etc. as needed and include amplifying information as appropriate to support deviation request.</i>)</p> <p>As defined in the MTM Process Outline, the method of pre-assembly and blank-off for vacuum testing will be performed slightly differently than depicted on the design drawings. The plan is to complete and assemble all components for a single thermo-cycle and vacuum test for each 120° period simultaneously. The Vessel and Spacer flanges (SE120-013 and SE121-014-Detail 3) will be machined to finish dimensions after the testing is completed.</p> <p>This will allow the parts to be temporarily welded together utilizing the excess machining stock on the flange faces (with a seal weld similar to the welds shown on SE121-020 Detail C). This eliminates the need for the following detail components: SE121-091, SE121-095, SE121-099, and SE121-102.</p> <p>The open ends of the Vessel and Spacer will be blanked for vacuum testing using temporary (300 series stainless steel) blank plates.</p>		
<b>Attachments:</b> NONE		
<b>Initiator Signature:</b> <u>Signed by Doug McCorkle (on record)</u> <b>Date:</b> <u>June 2, 2005</u>		

<i>NCSX RFD</i> <i>Part III</i>	<b>Number:</b> NCSX-RFD-12-007	<b>RFD Description:</b> NCSX Vessel Port Pre-Assembly and Blank-Off for Vacuum Testing
<b>RLM:</b> Brad Nelson		<b>Organization:</b> ORNL
<b>Impact on Interfaces with Other WBS Elements/Items:</b> <i>(If none, so state)</i> NONE		
<p><b>RLM Recommended Disposition:</b></p> <p><input checked="" type="checkbox"/> <b>Approve</b>   <input type="checkbox"/> <b>Do Not Approve</b> (If recommendation is to approve, ECP will be assigned)</p> <p><b>Additional remarks:</b></p> <p><b>Cognizant Engineer Comments:</b> Note that although this seems like a good solution for them, it does not permit them to omit the parts listed. The components are used for leak checking in-house and in the final assembly for leak checking the spacer weld.</p> <p>The parts referenced must be supplied to PPPL exactly as drawn. The leak check done by us must not affect (warp) the VV flange which will have been final machined when we get it. It, the seal lip, is used for this purpose and must be ground off and the remaining lip on the VV used as backup ring during final welding of the Spacer joint. MTM can make their own blank-off for leak check, but analysis indicated probable weld failure if stainless steel is used during evacuation and bakeout. Carbon steel more closely matches the CTE of Inconel.</p> <p><b>RLM Comments:</b></p> <ol style="list-style-type: none"> <li>(1) The change in the leak check process is approved.</li> <li>(2) Do not delete the parts listed as these will be needed for leak checking the field period assemblies and the final assembly welds at PPPL.</li> <li>(3) If changes are proposed to the <b>final</b> blank cover design (e.g., from Inconel to <b>Stainless Steel</b>), these changes need to be transmitted to PPPL for separate approval.</li> <li>(4) The specification, NCSX-CPEC-121-02, will not be revised at this time, but the list of all approved RFDs will be updated at the next revision.</li> </ol>		
<b>RLM Signature:</b> _____		
<b>Project Disposition: (Include ECP Number):</b> NONE		

<i>NCSX RFD</i>	<b>Number:</b>	<b>RFD Description:</b> NCSX Vessel port manufacture
<b>Initiator:</b> Doug McCorkle		<b>Organization:</b> Major Tool and Machine
<b>List of Impacted Documents:</b> NCSX-CSPEC-121-02		
<b>Cost Impact: (If none, so state)</b> NONE		
<b>Schedule Impact: (If none, so state)</b> NONE		
<b>Impact on Interfaces with Other WBS Elements/Items: (If none, so state)</b> None		
<p><b>Full Description of the Deviation Requested:</b> As defined in the MTM Process Outline, the method of pre-assembly and blank-off for vacuum testing will be performed slightly different that depicted on the design drawings. The plan is to complete and assemble all components for a single thermo-cycle and vacuum test of each 120 D Period simultaneously. The Vessel and Spacer flanges (SE120-013, and SE121-014-3) will be machined to finish dimensions after the testing is completed. This will allow the parts to be temporary welded together utilizing the excess machining stock on the flange faces (with a seal weld similar to the welds shown on SE121-020 detail C). This eliminates the need for the following detail components: SE121-091, SE121-095, SE121-099, SE121-102</p> <p>The open ends of the Vessel and Spacer will be blanked for vacuum testing using temporary (300 series stainless steel) blank plates.</p>		
<b>Attachments:</b> N/A		
<b>Initiator Signature:</b> 		<b>Date:</b> <u>02 JUN 2005</u>
(Doug McCorkle)		
<b>Project Disposition (Include ECP Number):</b>		

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