

PPPL ENGINEERING CHANGE NOTICE (ECN) ECN # 5121

COGNIZANT INDIVIDUAL: Paul Goranson

ECN TITLE: Port Attachment Weld Deviation Request

ASSOCIATED ECP: None

CC/WP/Job: 9450-1*-1203**

AREA OR PROJECT: NCSX

LIMITATION OF SCOPE - NOTE: A Work Planning Form is NOT required if the total change to be accomplished (ENG-032):

- Is not large or complex or does not represent a new installation into a usable space
- Does not have a significant ES&H impact
- Does not involve tritium or other radioactive contaminated or activated equipment
- Does not impact multiple projects, systems, or groups

OR does not change the scope or intent of the original design.

Responsible Line Manager CONCURRENCE: _____
(Signature indicates that no Work Planning form is required.)

If non-concurrence or associated with a work planning form, enter the WP Number:

DRAWING(S) AFFECTED NUMBER:	NEW Revision	TITLE
SE120-004 (Sheets 4 through 19)	See RLM Comment	Vacuum Vessel Period Inspection and Leak Check Assembly

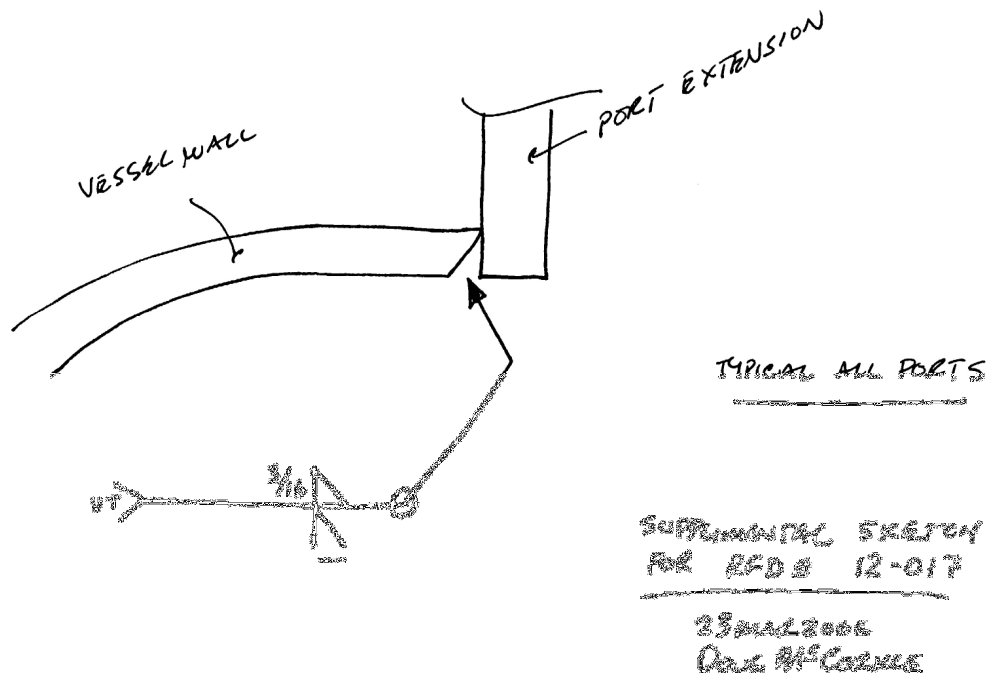
DESCRIPTION OF CHANGE: (State Drawing No., Zone/Group, or List Attachments)

MTM used a different method for welding the port extensions to the vessel for VVSA segments #1 and #2. NCR19464 approved this deviation for “use as is” for VVSA segments #1 and #2. The deviation request approved by RFD-12-017 authorized this different method for welding the port extensions for VVSA segment #3.

This method for attaching the port stubs uses a process by which the majority of the joint is filled in from the inside vessel surface, then we grind the outside (root side) until all irregularities are removed, and apply a fill pass and a cover pass (which creates the 3/16 fillet) on the exterior side (see attached sketch).

PPPL ENGINEERING CHANGE NOTICE (ECN) ECN # 5121

Sketch of MTM Weld Concept



Methods of Achieving this Alternate Welding Process

- Round ports - cutting the hole in the vessel to the o.d. size of the tube and welding full penetration from the vessel interior (ground flush) with a continuous fillet weld around the tube exterior.
- Ports 4, 12, NB - welded the exterior fillet as a continuous fillet opposed to the specified intermittent weld.
- Clevis bosses - added a 3/16 fillet to the exterior side of the joint.

PPPL ENGINEERING CHANGE NOTICE (ECN) ECN # 5121

REASON FOR CHANGE:

MTM alternate methods provide equal or better welds.

RFD-14-017 authorized this deviation for the VVSA segment #3.

ENGINEERING CHANGE PROPOSAL: N/A

DATE: 4/21/2006

COGNIZANT INDIVIDUAL MAKING THE CHANGE:

RESPONSIBLE LINE MANAGER:

RLM Comments: This ECN will NOT be immediately incorporated. Rather a stamp will be placed on this drawing as Rev 2-e to indicate that this ECN is outstanding.

Note: This will be the fifth ECN applicable to this drawing. The drawing must be revised to reflect this and the other ECNs within one (1) month.