# INTERFACE CONTROL DOCUMENT TITLE AND APPROVAL PAGE

**(Page 1)**

| | |
|---|---|
| **ICD Number:** ICD-12-142-0001 Vacuum Vessel a Modular Coil assembly clearances | **Primary Author**: P. Goranson |
| **Impacted WBS Elements:** WBS 121, WBS 14, WBS 123, WBS 122 | **Type of Interface:** Mechanical/Envelope Interface |

**Description of Interface:**
The Vacuum Vessel subassembly (VVSA) must be slipped inside the Modular Coil (MC) shell assembly prior to final assembly of the port extensions onto the VVSA. This ICD defines the clearance requirements to accomplish this task and defines the radial buildups allotted to other VVSAexternal components, i.e. the insulation and heating/ cooling distribution system.

**Record of Revisions**

| Revision Number | Description | Date |
|---|---|---|
| 0 | Initial Issue | February 10, 2005. |
| | | |

**Approvals**

| | |
|---|---|
| **WBS Manager:** ? Paul Goranson Signature Not Verified Digitally signed by Paul Goranson DN: cn=Paul Goranson, c=US Date: 2005.05.06 11:15:02 -04'00' | **WBS Manager:** |
| **Project Engineer:** | **Project Engineer:** |
| **Systems Engineering Support Manager:** | |

# ICD DETAIL SHEET

**(Page 2)**

**(Use Continuation Sheets as Necessary to Include the Following Applicable Information)**

**Scope of Interface:**
This interface impacts the design and fabrication of the VVSA, the VVSA insulation, the VVSA heating/cooling tubes, and the MC shell structure.

**Equipment and Responsibility List:**
Vacuum Vessel Systems (WBS 121): Goranson
Modular Coils (WBS 14): Williamson
Vacuum Vessel Insulation (WBS 122): Goranson
Vacuum Vessel Heating Cooling Distribution System (WBS 123): Goranson
Design Integration (WSBS19):A Brooks

**Related ICDs:**

**Notes and Abbreviations:**

**Interface Block Diagrams:**

**Installation Information:**
The VVSA surface is fitted with heating tubes and insulation wrap, after which the VVSA is slipped inside the MC shell. The VVSA and insulation wrap must clear the MC structure by minimum distances, as set forth in the referenced drawings,.to permit this installation task.
WBS 12 is responsible for design of the VVSA and coordination with WBS 14, WBS 122, WBS 19, and WBS 123 to assure proper clearance with the MC and definition of the radial buidup of the VVSA external components.

**Other Pertinent Information:**
Reference Documents
The memo below from the FDR documents the clearances of the VV and MC assembly:
http://ncsx.pppl.gov/NCSX_Engineering/File_Cabinet/Files2/Brooks/040512_AssemblyClearances/

The ProE Intralink model se185-000.asm incorporates the assembly path into the model of the assembly fixture which integrates the VV and MC assembly.