ENVIRONMENTAL EVALUATION NOTIFICATION FORM

Grantee/Contractor Laboratory: Princeton University/Princeton Plasma Physics Laboratory (PPPL)
Project/Activity Title: ITER Port Plug Test Facility (PPTF)
NEPA Tracking No.:_____ Type of Funding ITER funding through ORNL
B&R Code:_____ Total Estimated Cost: $4M

DOE Cognizant Secretarial Officer (CSO): William F. Brinkman
Contractor Project Manager: --------- Signature: --------
Date: --------

Contractor NEPA Reviewer: Jerry D. Levine Signature: _____
Date: _____

I. **Description of Proposed Action:** The proposed action would install a Port Plug Test Facility (PPTF) at the PPPL D-Site TFTR Test Cell to support the ITER Experiment that is being constructed in France. The PPTF, which is being fabricated elsewhere and shipped to PPPL, is an experimental device that would approximate several ITER like conditions. These conditions, which would include high pressure and temperature, would be applied to test the integrity of several ITER port plugs that are being manufactured elsewhere. Following testing, these port plugs (which will provide primary ultra high vacuum seals for penetrations in the ITER tokamak that will be used for diagnostic equipment) would be shipped to the ITER site and installed on the ITER experimental device. Work at PPPL would include the installation and operation of the PPTF vacuum systems, heating systems, cooling systems, pressurization systems, test tanks, material handling systems and associated controls. Some existing equipment in the TFTR Test Cell (e.g., neutral beam boxes) may be moved to accommodate the PPTF equipment. Testing activities would be developed, and would likely include (but not necessarily be limited to) port plug pressure tests with water (to about 1,000 psi), port plug pressure drop measurements, thermal cycling, window and penetration leak tightness tests (using helium), and plug cooling circuit leak checks. The port plug vessels that would be supplied to PPPL for testing are being fabricated in accordance with ASME pressure vessel criteria. The port plugs would have pressure relief systems that, if activated during PPTF testing, would direct steam to a mitigation system that would exhaust to an area outside the Test Cell. Several figures depicting the port plugs and a conceptual layout of the PPTF in the Test Cell are provided in the attachments.

II. **Description of Affected Environment:** Work would take place at the PPPL D-Site, mostly in the TFTR Test Cell (see Figures). No environmentally sensitive resources would be affected.

III. **Potential Environmental Effects:** (Attach explanation for each "yes" response, and "no" responses if additional information is available and could be significant in the decision making process.)

A. Sensitive Resources: Will the proposed action result in changes and/or disturbances to any of the following resources?

		Yes/No
1.	Threatened/Endangered Species and/or Critical Habitats	1. No
2.	Other Protected Species (e.g. Burros, Migratory Birds)	2. No
3.	Wetlands	3. No
4.	Archaeological/Historic Resources	4. No
5.	Prime, Unique or Important Farmland	5. No
6.	Non-Attainment Areas	6. No
7.	Class I Air Quality Control Region	7. No
8.	Special Sources of Groundwater (e.g. Sole Source Aquifer)	8. No
9.	Navigable Air Space	9. No
10.	Coastal Zones	10. No
11.	Areas w/Special National Designation (e.g. National Forests, Parks, Trails)	11. No
12.	Floodplain	12. No

B. Regulated Substances/Activities: Will the proposed action involve any of the following regulated substances or activities?

		Yes/No
13.	Clearing or Excavation (indicate if greater than 5 acres)	13. No
14.	Dredge or Fill (under Clean Water Act section 404; indicate if greater than 10 acres)	14. No
15.	Noise (in excess of regulations)	15. No
16.	Asbestos Removal	16. No
17.	PCBs	17. No
18.	Import, Manufacture or Processing of Toxic Substances	18. No
19.	Chemical Storage/Use *Helium gas would be used for leak checking activities.*	19. Yes
20.	Pesticide Use	20. No
21.	Hazardous, Toxic, or Criteria Pollutant Air Emissions	21. No
22.	Liquid Effluent	22. No
23.	Underground Injection	23. No
24.	Hazardous Waste	24. No
25.	Underground Storage Tanks	25. No
26.	Radioactive (AEA) Mixed Waste	26. No
27.	Radioactive Waste	27. No
28.	Radiation Exposures	28. No

C. Other Relevant Disclosures. Will the proposed action involve the following?

		Yes/No
29.	A threatened violation of ES&H regulations/permit requirements *The requirements of 10CFR851 (as implemented under the DOE approved PPPL Worker Safety and Health Program) would be applied to work at PPPL under this proposed action.*	29. No
30.	Siting/Construction/Major Modification of Waste Recovery, or TSD Facilities	30. No
31.	Disturbance of Pre-existing Contamination	31. No
32.	New or Modified Federal/State Permits	32. No
33.	Public controversy	33. No
34.	Action/involvement of Another Federal Agency (e.g. license, funding, approval)	34. No
35.	Action of a State Agency in a State with NEPA-type law. (Does the State Environmental Quality Review Act Apply?)	35. No
36.	Public Utilities/Services	36. No
37.	Depletion of a Non-Renewable Resource	37. No

IV. **Section D Determination:** Is the project/activity appropriate for a determination under Subpart D of the DOE NEPA Regulations for compliance with NEPA?

Yes

DOE-PSO NEPA Compliance Officer Review:

Concurrence with Proposed Class of Action Recommended

CX EA EIS

Category: B3.6 Siting/construction/operation/decommissioning of facilities for bench-scale research, conventional laboratory operations, small-scale research and development and pilot projects.

For Categorical Exclusions (CXs):

A. The proposed action fits within a class of actions that is listed in Appendix A or B to Subpart D.

For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:

1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders;
2) Require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities;
3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or
4) Adversely affect environmentally sensitive resources.

B. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and

C. The proposal is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

V. **DOE Recommendation Approval:**

SC GLD: Michael M. McCann Signature: _____
Attorney-Advisor

Date: _____

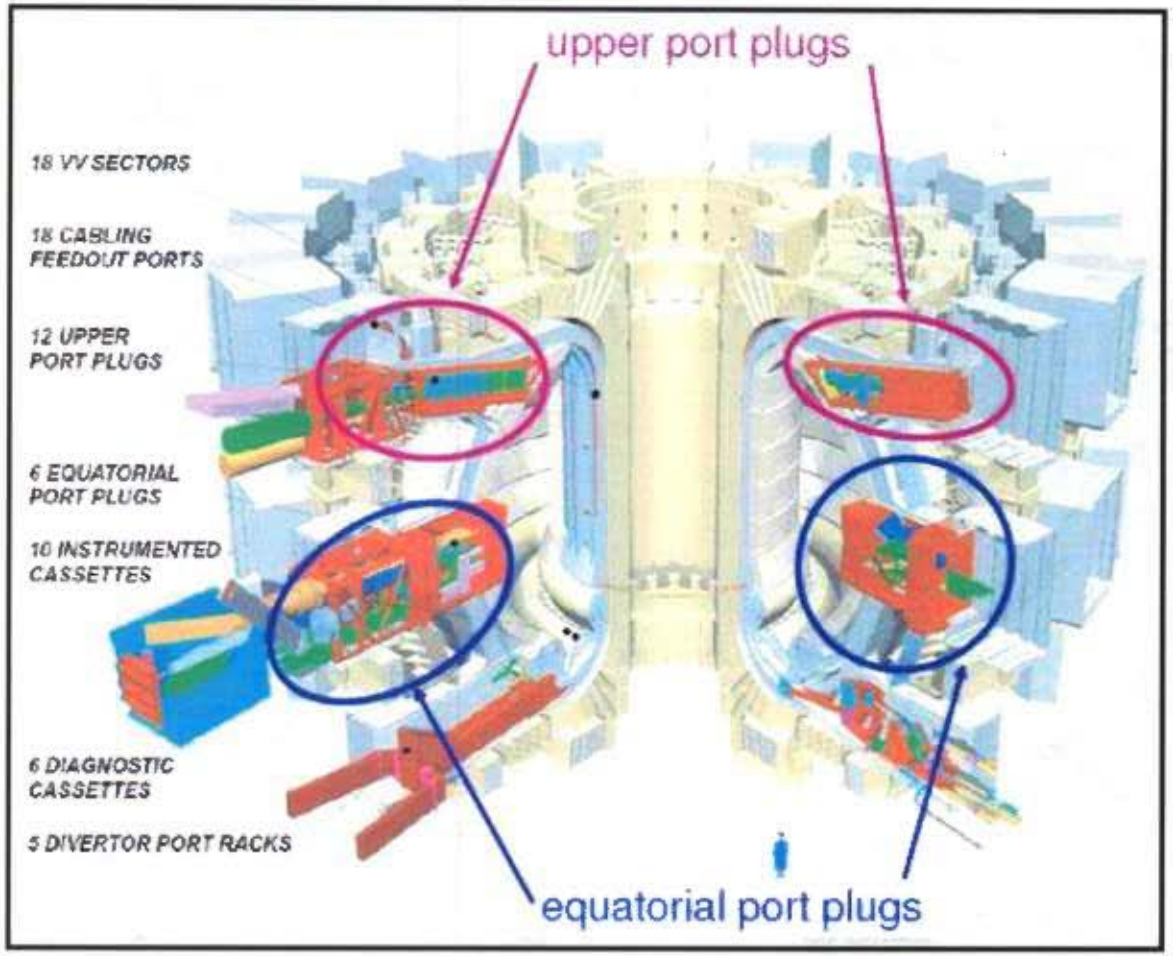
VI. NEPA Compliance Officer Subpart D CX Determination and Approval:

Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer, I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

PSO NCO: Peter Siebach Signature: Peter R Siebach

Date: 8/16/2012

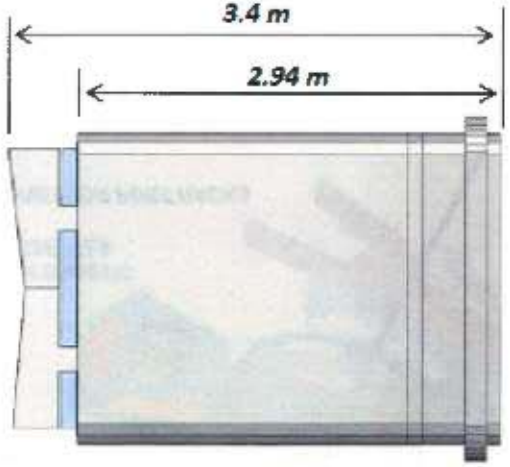
Diagnostic Ports and Port Plugs

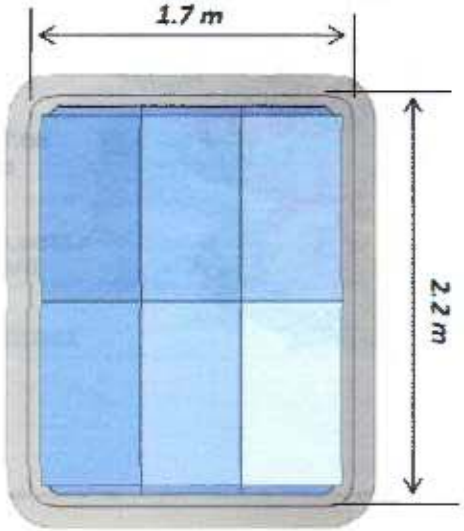


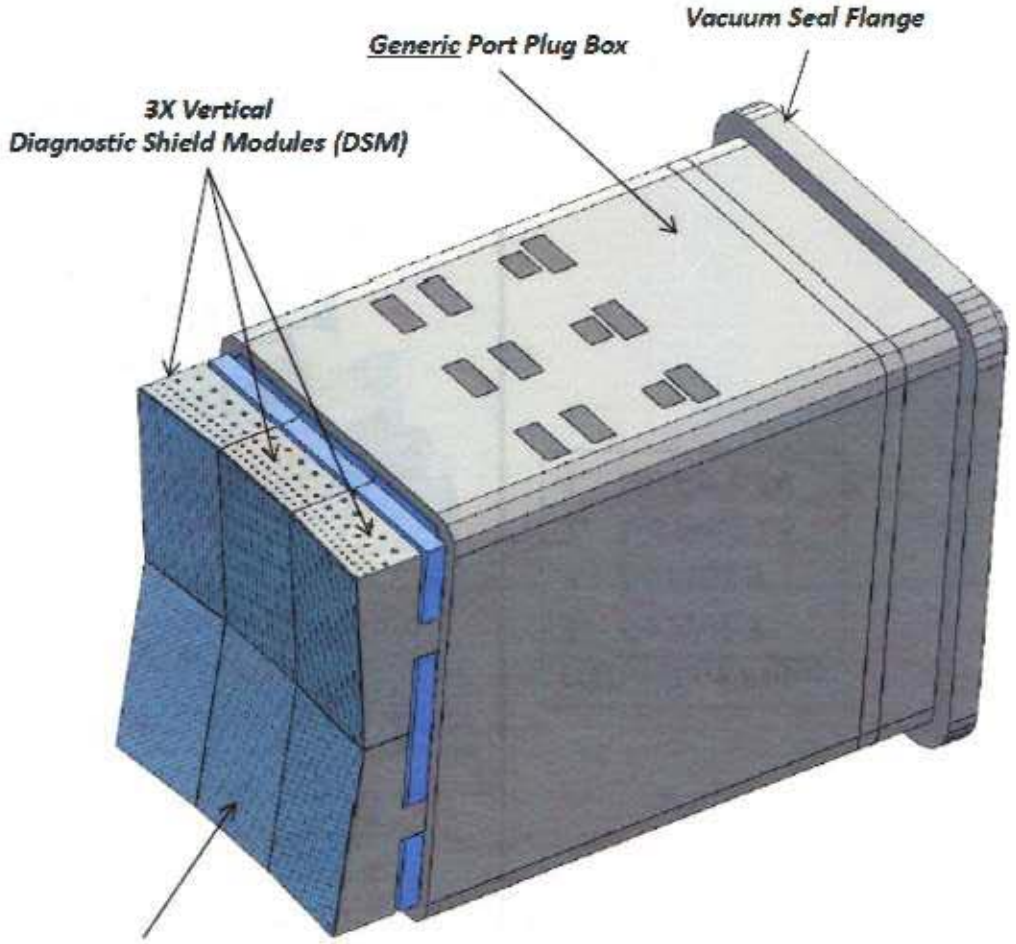
USDA Port Plugs

1. ***Eq Port 3***
2. ***Eq Port 9***
3. ***Up Port 11***
4. ***Up Port 14***

The Generic Diagnostic Equatorial Port Plug





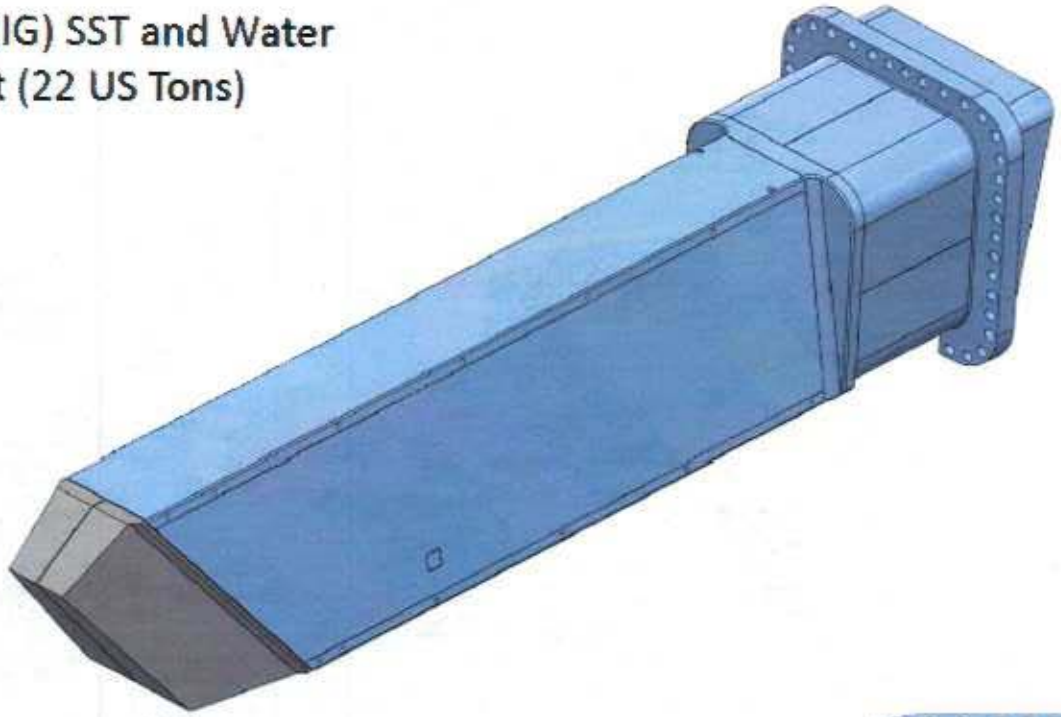


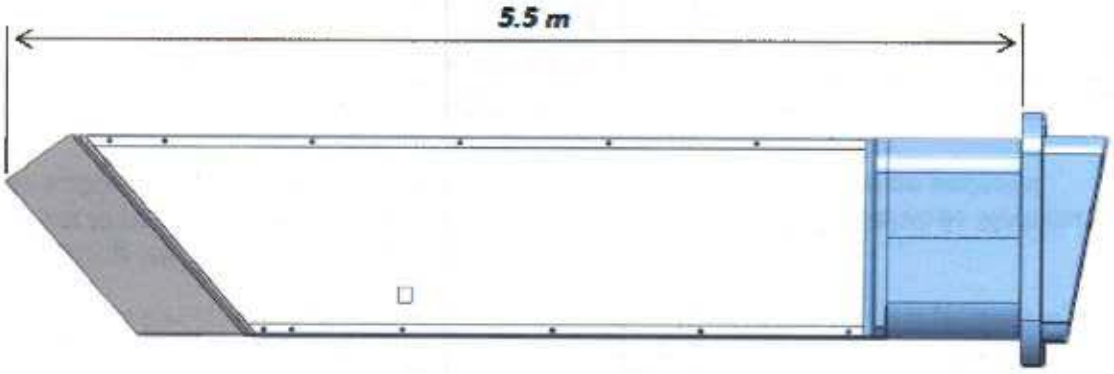
Materials: 316L-N(IG) SST and Water

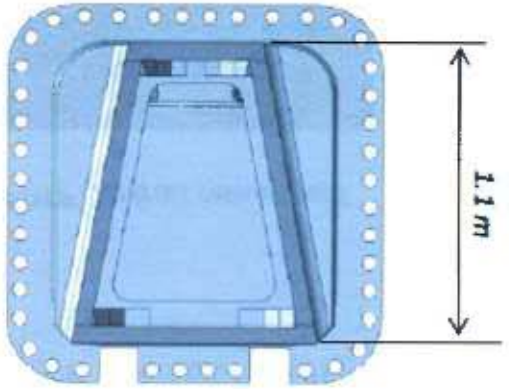
Dry Weight : 45 mt (~50 US Tons)

The Generic Diagnostic Upper Port Plug

Materials: 316L-N(IG) SST and Water
Dry Weight : 20 mt (22 US Tons)







ITER Port Plug Test Facility: "Testing Cell" Layout Proposal for TFTR Test Cell

→ Build PPTF safety barrier/wall/containment around raised pedestal