

Maintenance and Building Conceptual Approach

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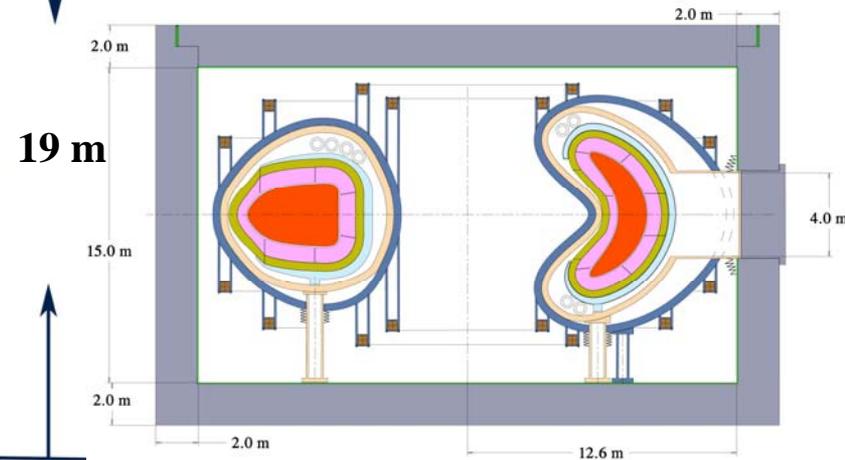
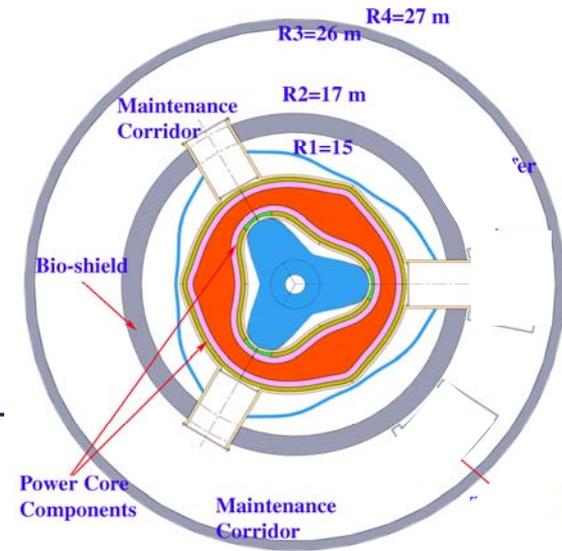
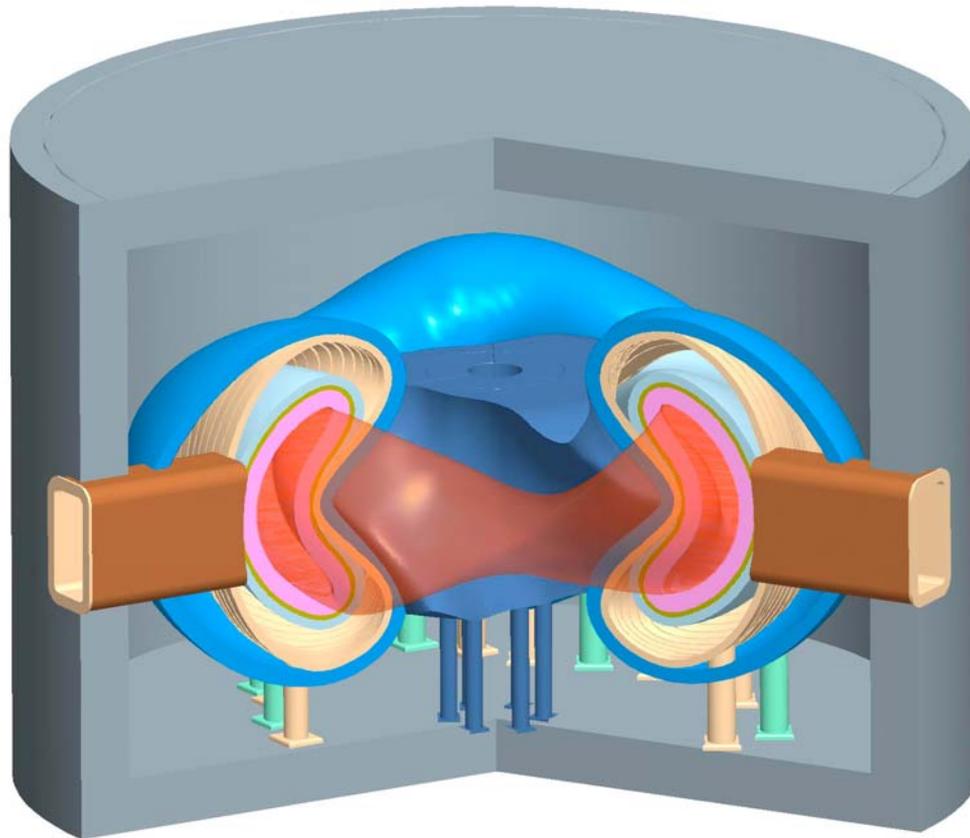
Coordinated Design Approach

The nominal maintenance approach has been selected and the power core design finalized.

Next, the building and maintenance approach has to be developed in concert.

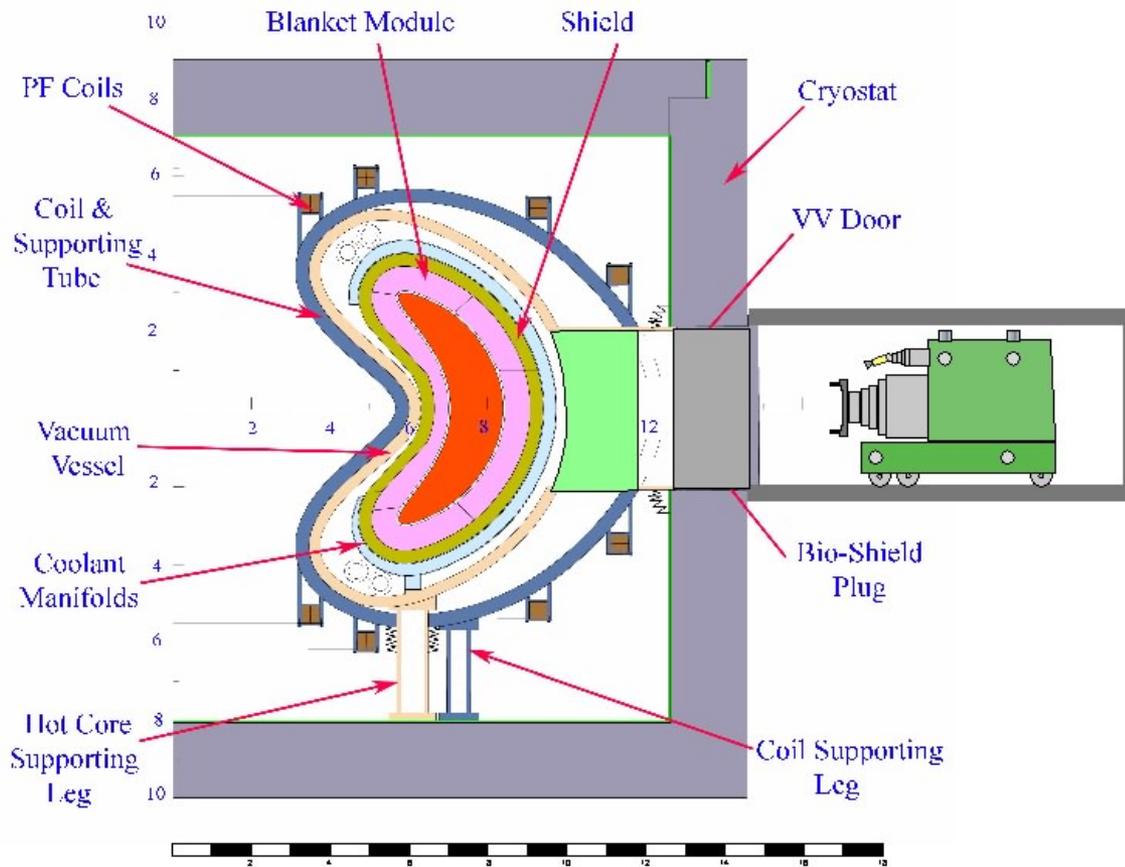
Power Core General Configuration

These graphics represent our current 3-field period, port maintenance approach



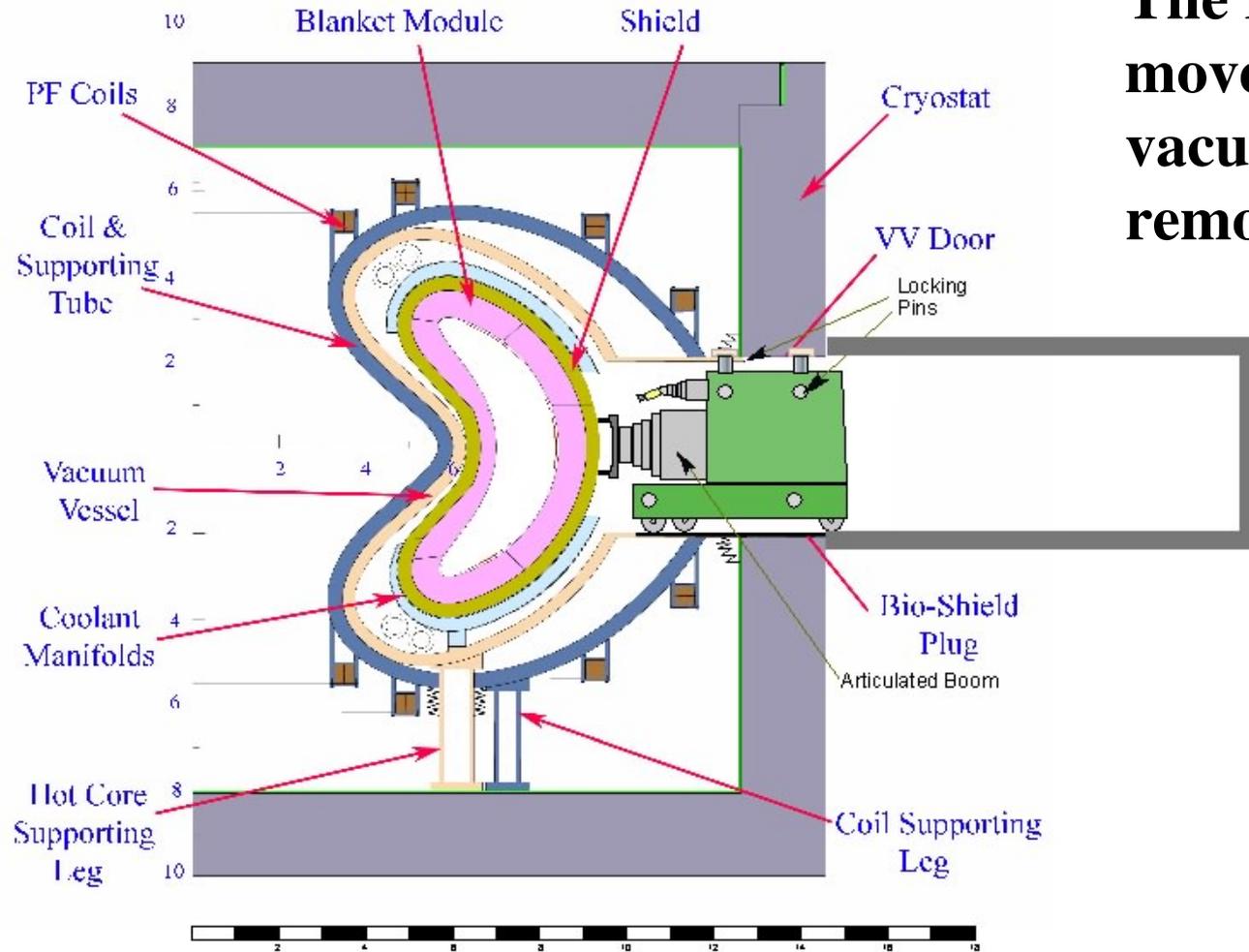
Sequence of Port Maintenance

Extractor is located inside the Transfer Chamber ready to remove and set aside the bioshield plug and then remove the auxiliary shielding inside the vacuum vessel port



8.00 m

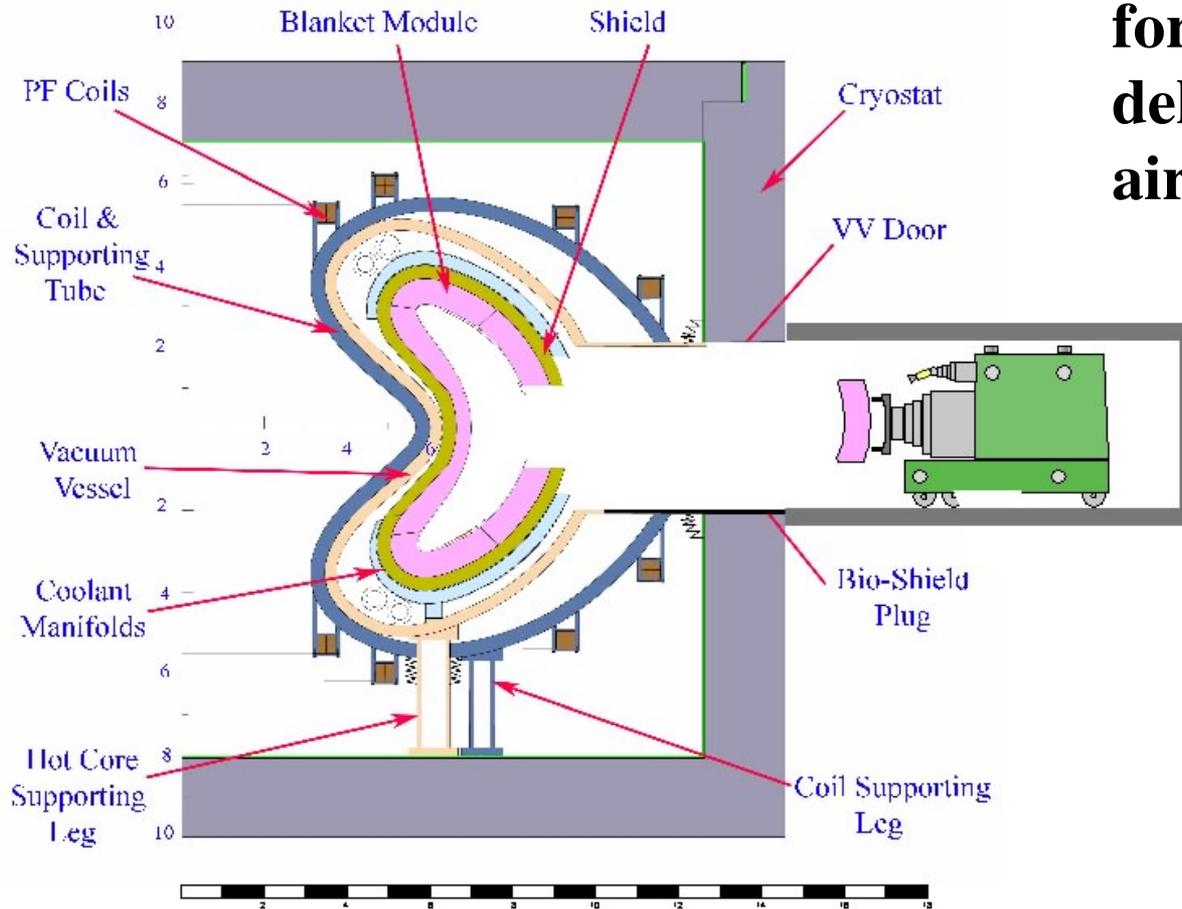
Sequence of Port Maintenance



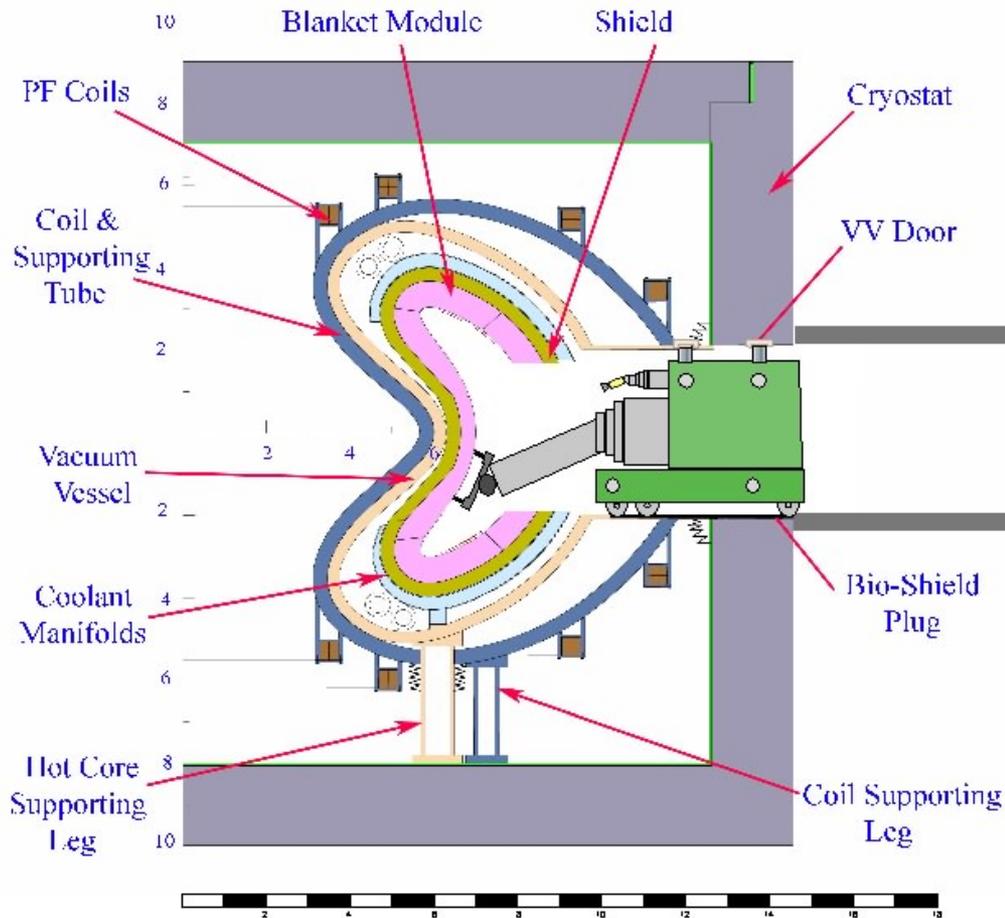
The Extractor now moves inside the vacuum port and removes the port shield

Sequence of Port Maintenance

The Extractor now access the port blanket for extraction and delivery to the transfer airlock



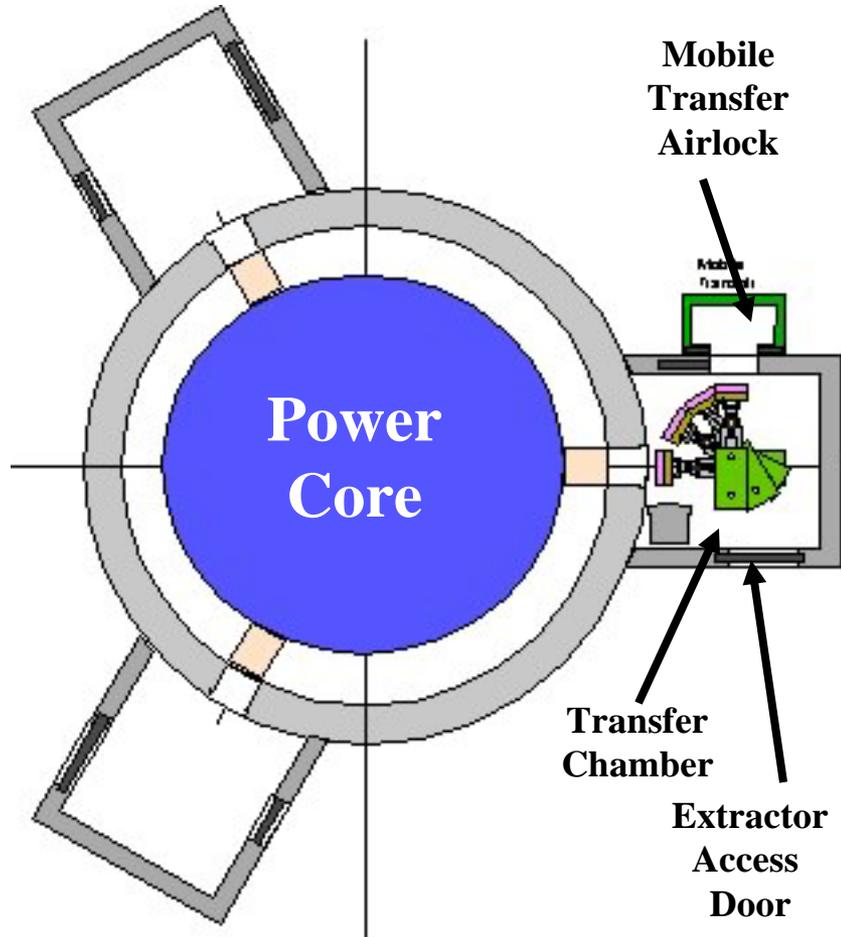
Sequence of Port Maintenance



The Extractor now access the inner blanket modules for extraction and delivery to the transfer airlock

Note that the opening created by the port blanket must be large than is currently shown to accommodate the large inner blanket modules.

Plan View of Maintenance Approach



- **Three Transfer Chambers are permanently located outside the ports.**
- **The Extractor equipment enters through an access door**
- **The Extractor removes the Bioshield Port Plug and sets aside**
- **The Extractor then moves inside and removed the port shield, retracts it, rotates and places it in the mobile airlock**
- **Mobile Airlock goes to Hot Cell**
- **The sequence is repeated until all blanket modules are removed**
- **This can happen all ports simultaneously**

Next Actions

- **This level of detail probably suffices to prove feasibility**
- **Additional detail will be added to increase the confidence in the selected maintenance scheme and building definition**
- **Some consideration should be added for construction approach with Reactor Building**
- **Added details for Hot Cell, steam generators and turbines could be provided, if required.**