

# ***Zirconium Recycle Test Equipment for Hot Cell Operations***

**Fuel Cycle Research & Development**

***Prepared for  
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E. D. Collins, G. D. DeCul, B. B. Spencer,  
R. R. Brunson, E. C. Bradley***

***Oak Ridge National Laboratory***

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# Zirconium Recycle Test Equipment for Hot Cell Operations

## STATUS REPORT—EXPERIMENTAL EQUIPMENT PREPARATION FOR HOT CELL TESTING

The equipment components and assembly support work were modified for optimized, remote hot cell operations as illustrated in Figures 1 and 2 to complete this milestone. The modifications include installation of a charging door, Swagelok connector for the off-gas line between the reactor and condenser, and slide valve installation to permit attachment/replacement of the product salt collector bottle.

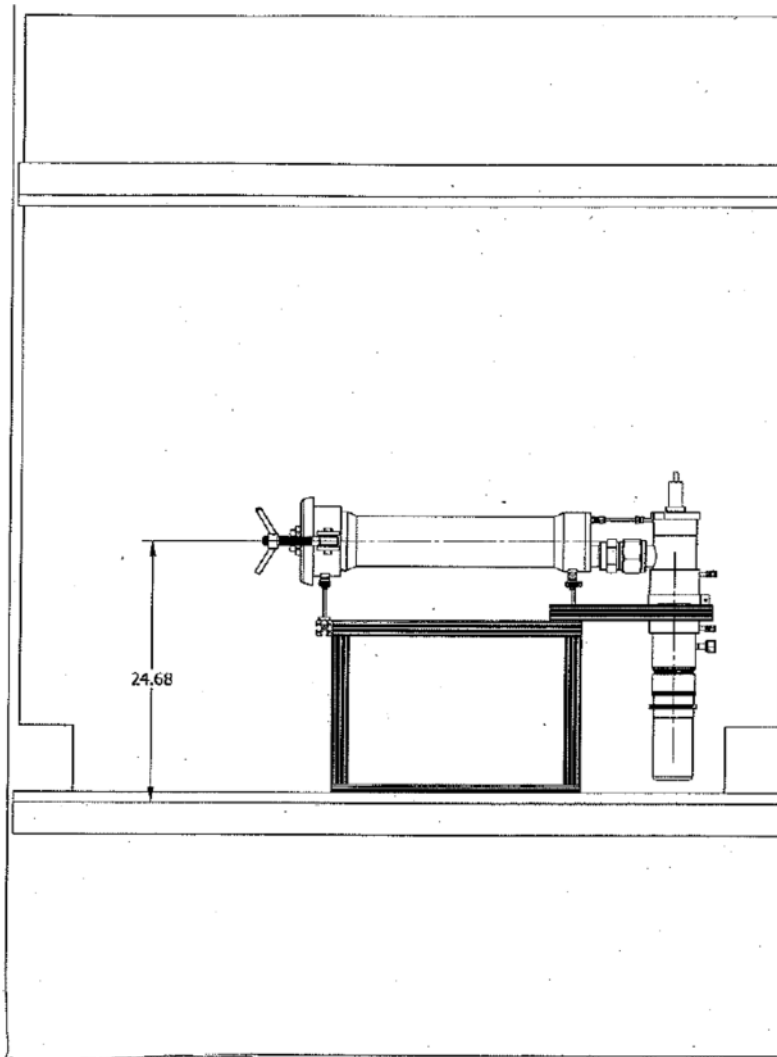
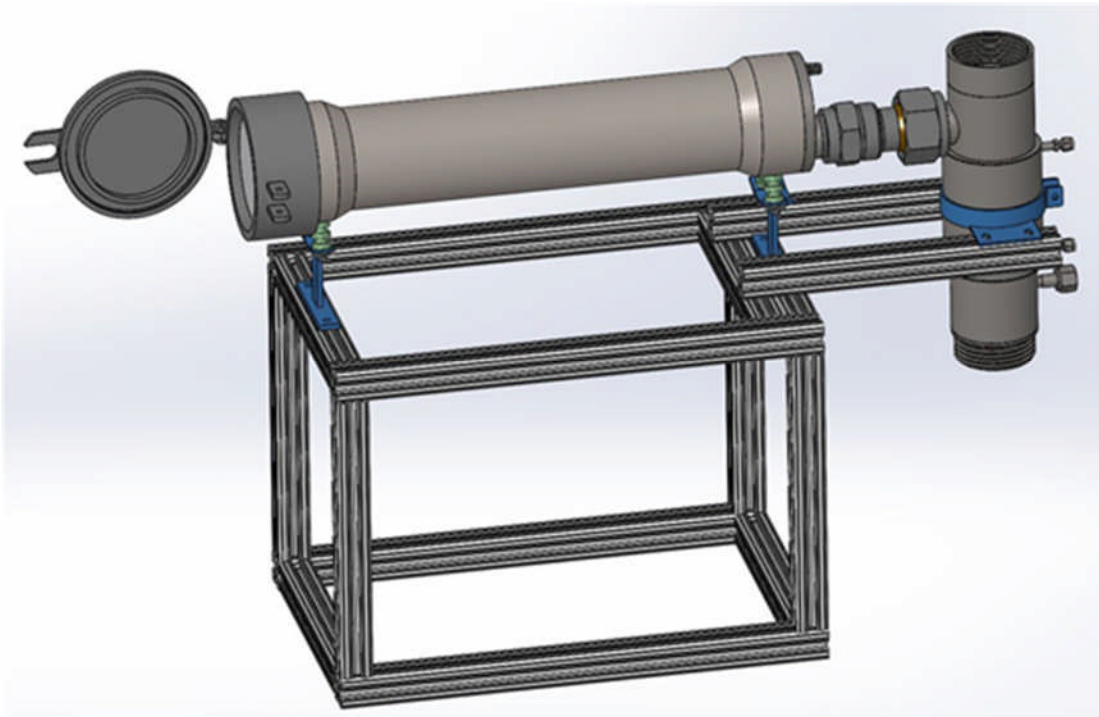


Fig. 1. Diagram of assembled test equipment.



**Fig. 2. Picture of assembled test equipment.**

The latter will enable collection of product fractions during each test operation for subsequent mass balance weighing and sampling. The reactor currently contains a removable tray for containment of the cladding tubes and residual ash for mass balance weighing/sampling capabilities.

The assembled equipment will be moved to the laboratory containment box for non-rad testing and determination of any further modifications that may be required. Various methods of heating/cooling will be tested to select the optimum method for use in hot cell operations.