



Light Water Reactor Test Facilities – Integral and Separate Effects –

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Current Facilities

APEX Test Facility

- Compliant with 10CFR50 Appendix B
- $\frac{1}{4}$ length scale, $\frac{1}{2}$ time-scale



Hydro-Mechanical Fuel Test Facility

- Compliant with 2008/09A NQA-1
- BWR/PWR Bundle Flow Test Loop



Transient Reactor Test Loop

- Compliant with 2008/09A NQA-1
- PWR CHF Loop (Steady & Transient)





Ongoing or Previous Work

APEX Test Facility

- AP600 (Since 1992)
 - Design Certification Testing
 - Confirmatory Testing
- AP1000 (Since 2002)
 - Design Certification Testing
 - Confirmatory Testing
 - NRC Testing of Steam Generator
 - Testing to support China Construction of AP1000



Hydro-Mechanical Fuel Test Facility

- In-Pile Reactor Component Hydraulic Testing (2011-2015)
- FSI Validation Flow Testing (2015-2016)
- Fuel Qualification Flow Testing (2016-Present)



Transient Reactor Test Loop

- DoE Integrated Research Project Benchmark for the Transient Reactor Test Loop (2015-Present)





Future Planned Work

APEX Test Facility

- None



Hydro-Mechanical Fuel Test Facility

- Fuel Qualification Flow Testing (2016-Present)
- Demonstration Element Flow Testing



Transient Reactor Test Loop

- DoE NEUP CHF Transient Testing (ATF)





Access as User Facility

APEX Test Facility

- Desire expressed for use through NEAMS, OECD, IAEA
- Available now through NSUF



Hydro-Mechanical Fuel Test Facility

- Available after 2019 through NSUF



Transient Reactor Test Loop

- Available after 2019 through NSUF





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Thank You