

***Lessons Learned from
Licensing of Rensselaer
Reactor Critical Facility***

March 27, 2012

Sastry Sreepada

Director

***Walthousen Reactor Critical Facility
Rensselaer Polytechnic Institute***

Rensselaer Reactor Critical Facility

Characteristics:

- ***Power: 100 W,***
- ***Negligible burn-up.***
- ***Open reactor tank***
- ***SPERT F-1 Fuel Pins***



History of Renewals

	<i>Submitted</i>	<i>RAIs</i>	<i>Date Licensed</i>
<i>Original -HEU</i>			<i>July 20, 1965</i>
<i>Renewal HEU</i>			<i>June 19, 1969</i>
<i>Renewal IHEU</i>	<i>May 14, 1979</i>	<i>One</i>	<i>December 2, 1983</i>
<i>HEU/LEU</i>	<i>October 3, 1986</i>	<i>One</i>	<i>August 1987</i>
<i>Recent Renewal</i>	<i>November 19, 2002</i>	<i>Nine</i>	<i>June 27, 2011</i>

What Worked Well

- ***The initial submittals for the last 3 renewals/amendments were prepared under the same director***
- ***The submittals were prepared by experienced part time/adjuncts with active full time nuclear jobs in industry***
- ***Bulk of the submittal was based on previous license with material/methods updated***

What Worked Well

- ***Time from first Request for Additional Information to renewal is about 3 years.***
- ***Direct telephone contacts between the director, operations supervisor and the NRC project manager***

What Didn't work well

- ***Substantial turn over of people during the renewal process (5 directors, 5 operations supervisors, 5 Nuclear Safety Review board chairmen, 3 Radiation safety officers)***
- ***First Request for Additional Information was almost 6 years after the submittal.***

What Didn't work well

- ***Difficult to be on the same page with constant change in personnel***
- ***This situation could not be changed by face to face contact***

Where did we spend Most of the time

- ***In decreasing order major time was spent on***
 - 1. Technical Specifications***
 - 2. Safety Analysis***
 - 3. Other sections***
- ***Most revisions in Technical Specifications were related to terminology, clarifications and editorials.***

Lessons Learned

- ***It is necessary to have continuity of personnel throughout the process***
- ***Some documentation of discussions with the project manager, in the absence of face to face meetings when staff changes occur could have helped somewhat.***

Beneficial Outcomes

- ***The documents and methods have been updated and are in editable formats for any future changes.***
- ***The student design projects can rely on the new documentation***
- ***We should strive to increase the participation of full time faculty, due to the attrition in the past and present***