

**Completion date** May 2018

May 2019  
(Prelim)

Dec 2019

May 2020  
(Final exam)

SaltProc v1

Simple demonstration  
for once-through  
MSR reprocessing

Find equilibrium  
fuel composition  
for MSBR with  
ideal removals

Analysis of  
fission products  
removal effect

SaltProc v2 tool  
development

No removal/feed case  
verification against  
SERPENT 2

**Demonstration  
case phase**

**Base case phase**

Constant removal efficiency,  
unit cell case validation  
against ChemTriton  
(Betzler, 2016)

Constant removal efficiency,  
full-core TAP case validation  
against ChemTriton  
(Betzler, 2017)

**Extension phase**

Realistic reprocessing system  
demonstration  
(full-core MSBR and MSFR)

Realistic reprocessing system  
involving multiple processes  
informed by correlations  
(for full-core TAP model)

M.S. thesis

Ph.D. dissertation