Overview of Savannah River Site F-Tank Farm

Savannah River Nuclear Solutions, LLC

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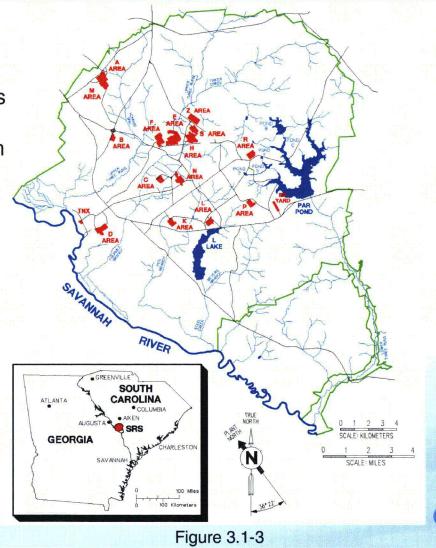
October 14, 2008

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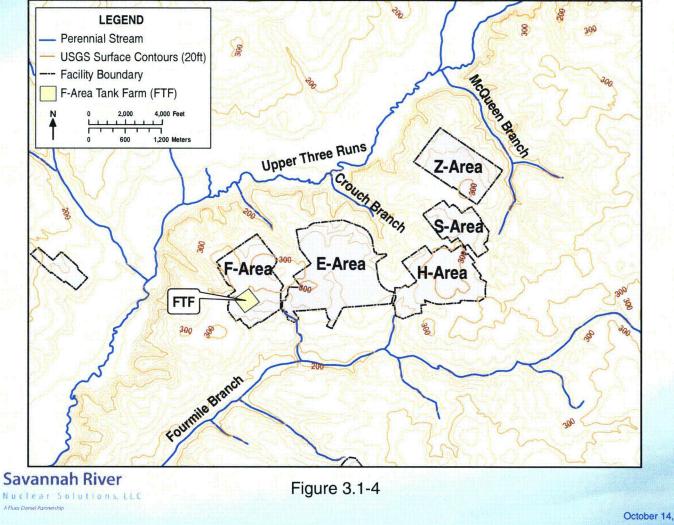
Savannah River Site encompasses 310 square miles (198,344 acres) in South Carolina on the Savannah River.

Savannah River

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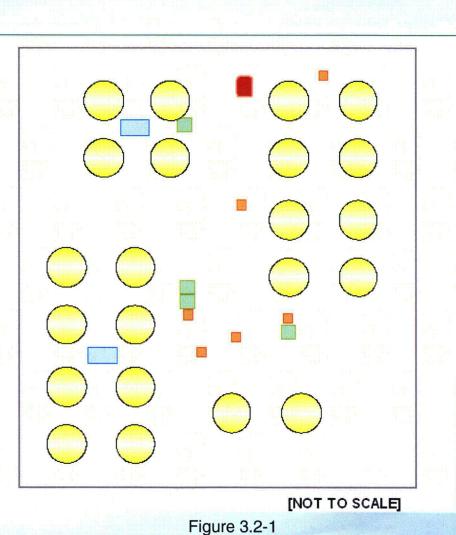






F-Tank Farm consists of:

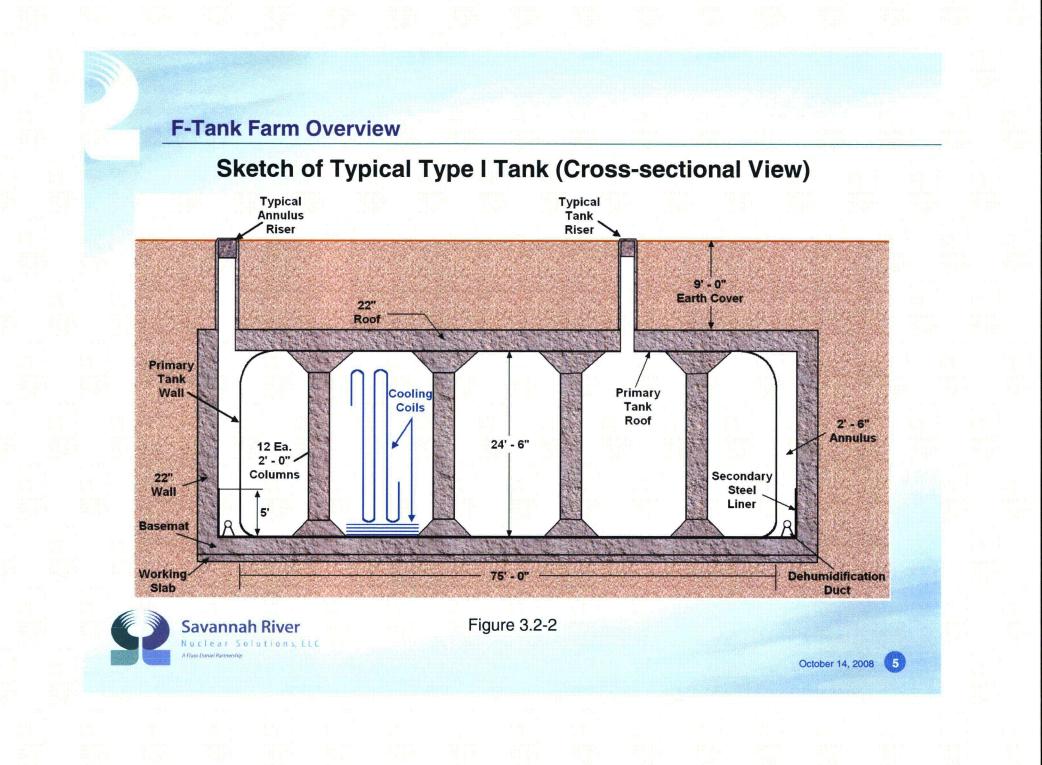
- 22 underground liquid waste storage tanks
- 2 Evaporator systems
- 6 Diversion boxes
- 3 Pump tanks
- 1 Catch tank
- 1 Concentrate Transfer Tank
- ~45,000 linear feet of transfer lines
- Plus numerous support equipment and facilities



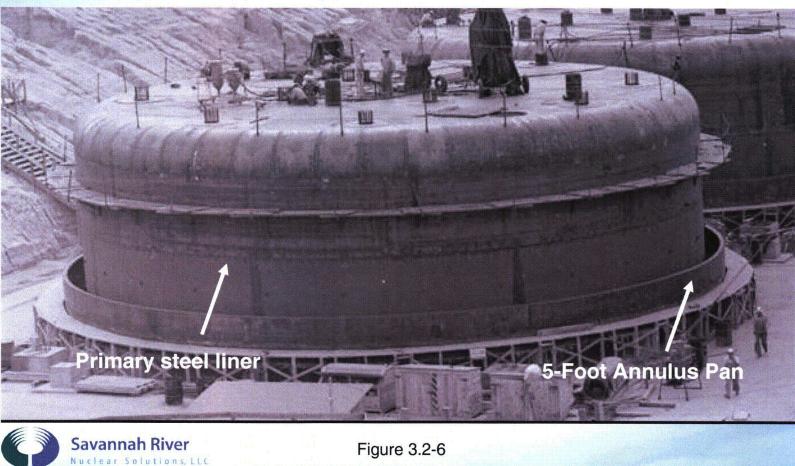
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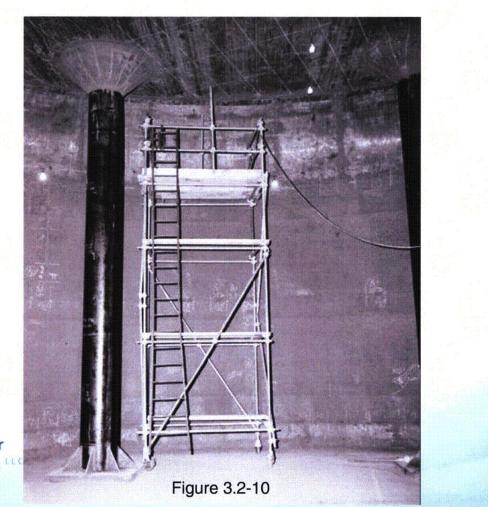




Typical Type I Tank Construction



Typical Type I Tank Support Column



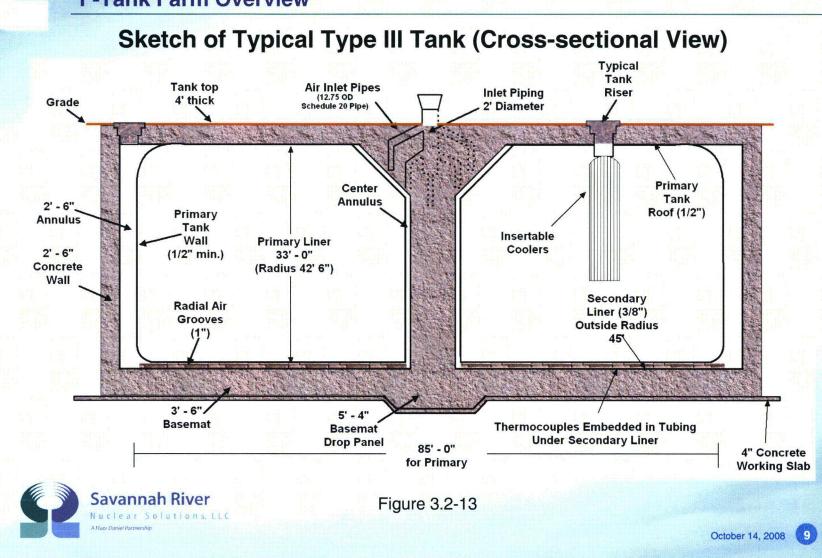


Typical Type I Tank Interior

Cooling coil piping is 2" diameter

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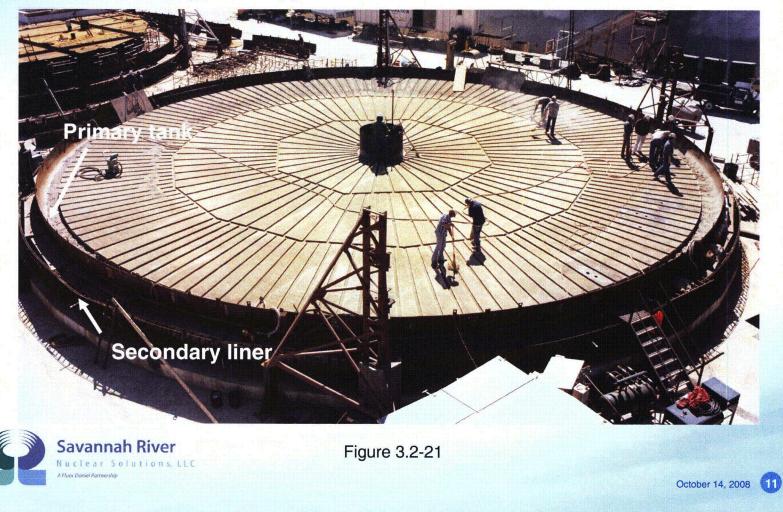




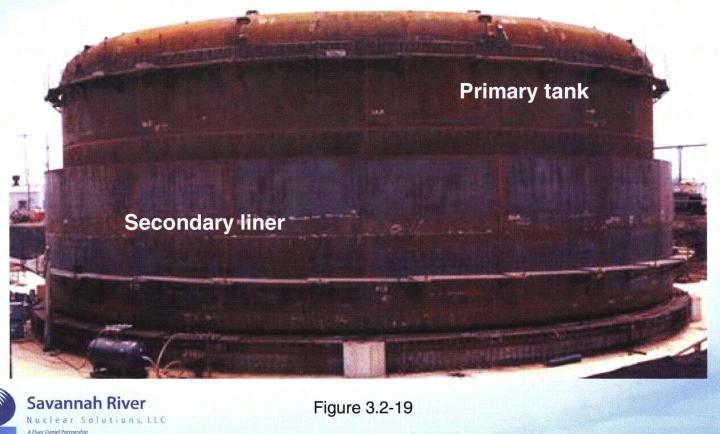
F-Tank Farm Overview Sketch of Typical Type IIIA Tank (Cross-sectional View) Tank Top Typical 5' at center Tank top Tank 47' - 6" Tank Top **Sloped Tank** 4' thick Air Inlet Pipes **Inlet Piping** Riser **Outside Radius of** Roof at edge Grade Schedule 20 Pipe) 2' Diameter Roof Slab Primary Center Carbon Tank Annulus Steel 2' - 6" Roof (1/2") Primary Annulus Cooling Tank Coils Wall **Primary Liner** (2") 33' - 0" 2' - 6" (1/2" min.) Concrete (Radius 42' 6") Wall Secondary **Radial Air** Liner (3/8") Grooves **Outside Radius** (1") 45 Underliner Sump 3' - 7" 6' - 4" Thermocouples Embedded in Concrete **Basemat** Basemat **Under Secondary Liner** 2" thick leak **Drop Panel** and under Working Slab 85' - 0" 4" Concrete detection slots cut for Primary Working Slab into base slab which drain to the [NOT TO SCALE] underliner sump Savannah River Figure 3.2-14 Nucl Solutions, LLC A Fluor Daniel Partnership October 14, 2008

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Typical Type III/IIIA Tank Construction



Typical Type III/IIIA Tank Construction

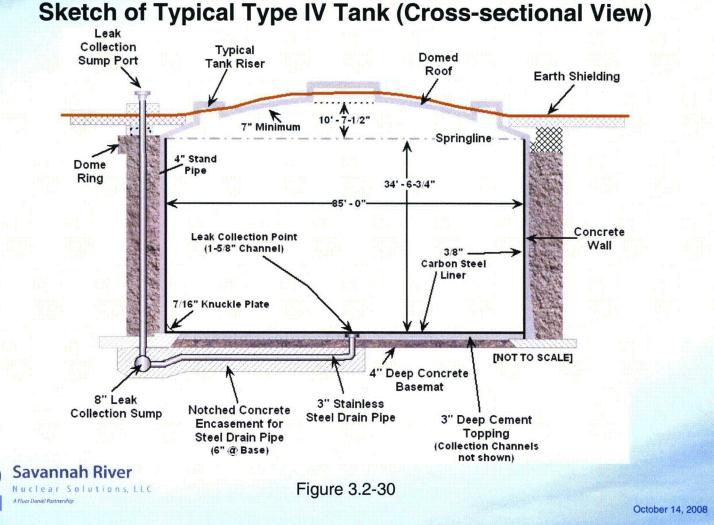


F-Tank Farm Overview Typical Type IIIA Tank Interior



Savannah River

Figure 3.2-29



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Sketch of Typical Type IV Tank (Cross-sectional View)

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Type IV Tank Construction

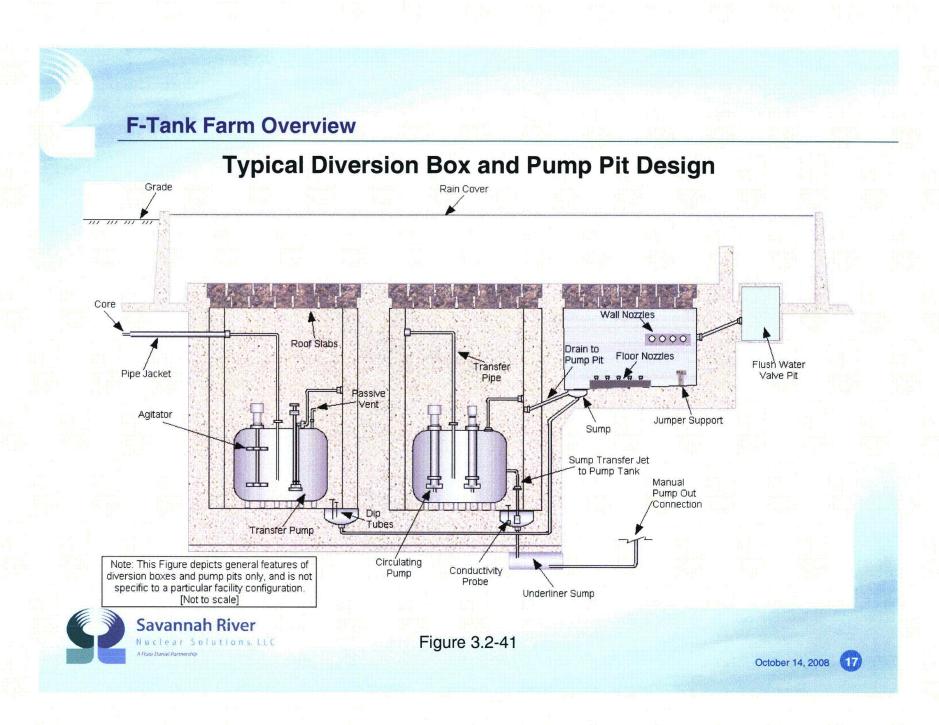


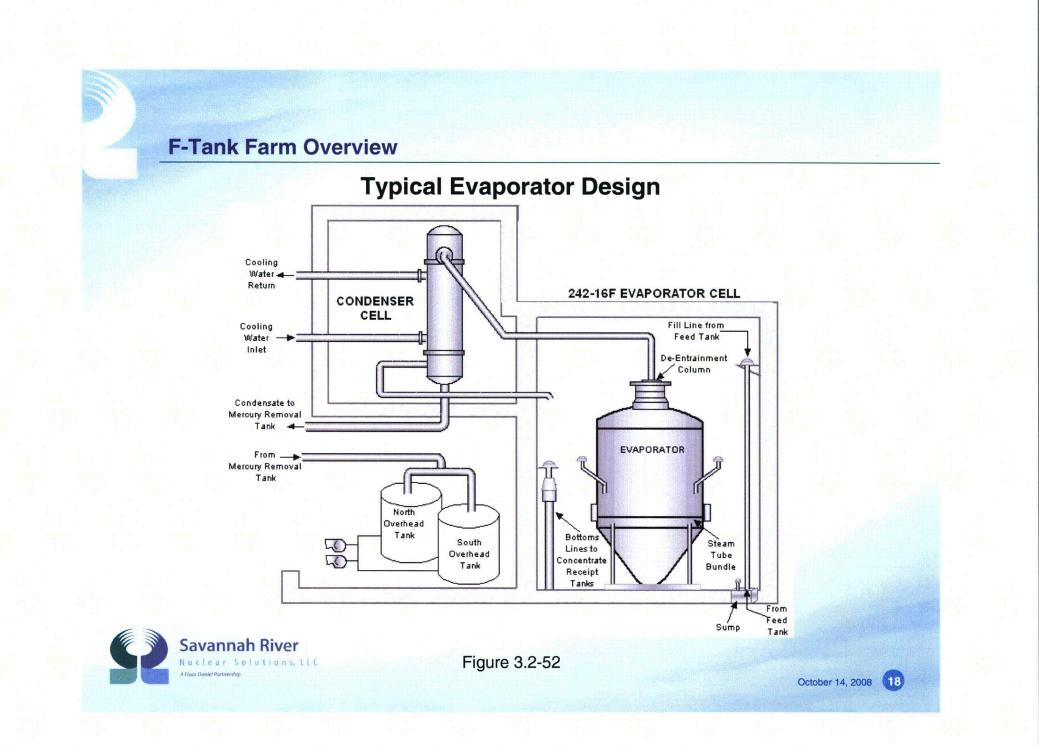
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Figure 3.2-32

Type IV Tank Construction







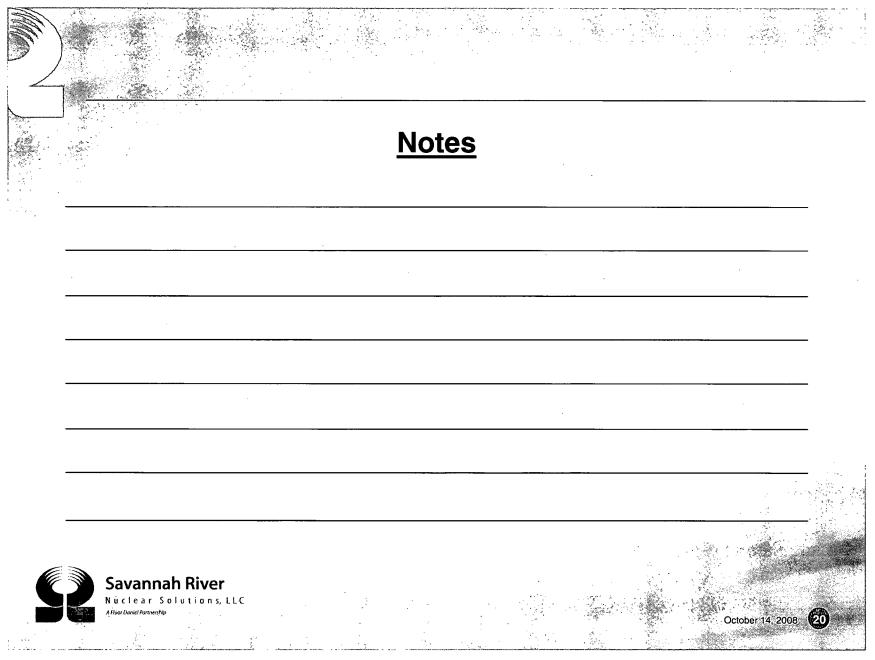
Stakeholder Input Scoping Meetings

- Provided forum for open technical discussions and interchange
- Eight meetings were held between February of 2007 and January of 2008 and minutes documented on DOE-HQ website:

http://www.em.doe.gov/Pages/3116Summaries.aspx

 Covered numerous topics including tank design, hydrogeology, closure cap design, exposure pathways and parameters, waste release, code integration, residual inventory, and integrated conceptual model





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