SOUTHERN NUCLEAR
SECOND SIMULATORS

POWERPLANTSIM 2018

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In late 2014, the Southern Nuclear CNO proclaimed that SNC needed second simulators, with new training buildings for their three nuclear plants, Hatch, Farley and Vogtle.

He observed that his operators and trainers needed the extra facilities since the original simulators were fully booked, being used nights and weekends for training. Additionally, planned training was continually delayed by such things as JITT, retraining/re-exam and maintenance.

Danny Bost
Executive Vice President &
Chief Nuclear Officer
TIME LINE FOR SNC SECOND SIMULATORS

January 2015 - At the SCS PowerPlantSim 2015 Representatives of Exitech Corporation met with the staffs of the three SNC plants to discuss the possibility of second simulators.

March 2015 – Exitech Corporation was contracted by SNC Corporate Office to prepare a specification for three new simulators.

April 2015 – The four North American Simulator Vendors were invited to each plant to observe the existing simulators and discuss the plans for second simulators.

July 2015 - RFP for three simulators issued by SNC Supply Chain.

August 2015 – Proposals received from four bidders.
September 2015 – All proposals were independently evaluated by SNC Corporate Projects, SNC Supply Chain, Plant Hatch Training, Plant Vogtle Training, Plant Farley Training and Exitech.

October 2015 – Questions sent for clarifications.

December 2015 – GSE Systems selected to be vendor.


March 2016 – Contract Awarded to GSE Systems. Three separate Purchase Orders issued with a three month delay between the start of each simulator
Project Challenge

The Challenge – This project must reduce certification risks and life-cycle simulator maintenance costs by applying a single simulator certification test program for each pair of simulators that satisfies each plant’s training needs and NRC certification for pairs of simulators delivered 45 years apart.
The 2\textsuperscript{nd} simulator project is following the successful Oconee 2\textsuperscript{nd}
Simulator project model that resulted in two nearly identical Unit
1 simulators being certified for use in Licensed Operator training
and examination while implementing a single certification test
program that covered both simulators

This second simulator project started with a bid Specification that assured
an ANSI/ANS 3.5 - 2009 certifiable simulator would be delivered by:
- Specifying an as close as possible replica of the existing certified
  simulator
- Specifying the specifics of the simulator testing and documentation to
  emulate the very tests utilized to certify the current simulator with
  respect to NRC and INPO guidelines
- Specify upgrades and features in a manner that correct current problems
  without creating a risk to certification
- Keeping track of all differences to avoid any possibility of negative
  training
Where are we now?
Where are we now?

HATCH – Hardware is assembled and operating at GSE’s FAT Facility in Sykesville, MD. Pre-FAT has been run and DR’s are being fixed. FAT is to begin in 2 to 3 weeks. Ready for Training is scheduled for June 2018.
Where are we now?

FARLEY – Hardware 95% complete this month. FAT scheduled for May 2018. RFT scheduled for September 2018.
Where are we now?

VOGTLLE – Hardware being built, Combined Acceptance Testing scheduled for August 2018. RFT scheduled for October 2018
Other project consideration:

The overall project includes three new buildings as well as the simulators.

More classroom space is provided.

New training supplied for simulator staff.

All simulator documentation updated.

All three sites will have a common platform.

All three simulators will receive a new containment model in support of the integration of the MAAP code addition.

The following slide shows the combined schedule overview for the Hatch project:
Summary of Key Milestones

Timeline For 2nd Operations Training Center At Hatch

- Jul '15 - Nov '15: Simulator Final Design
- Dec '15 - Feb '16: Simulator Purchase Order
- Feb '16 - Mar '18: OTC Building Design
- Nov '16 - Aug '16: OTC Building Utility Design
- Sep '16 - Oct '18: OTC Building Construction Contract
- Sep '15 - May '16: OTC Building Design
- Jul '16 - Oct '16: Furniture Specification
- Apr '17 - Jan '18: Furniture Purchase Order & Delivery
- Mar '18 - Sep '18: A/V & IT Equipment Specification
- Oct '17 - Nov '17: A/V & IT Equipment Installation
- 2015: CPRC Project Approval
- 2016: Begin Development Process For Simulator FAT
- 2017: Complete Simulator FAT
- 2018: Begin Development Process For Simulator SAT
- 2019: Complete Simulator SAT

Southern Nuclear
GSE Systems®
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Lessons Learned

High ranking project sponsor is beyond helpful.

Use a second simulator as an opportunity to fix legacy issues found in the current simulator.

Plan for the stresses that a full scope simulator project will have on the existing staff.

In a multiple simulator procurement be aware that there will be common issues that require participation from all sites.

The new simulator facility has as much risk of impacting the delivery schedule as does the simulator.

Design basis data is not an easy task...place the burden of data collection on the simulator vendor.
Questions?