



# Procuring and Building 3 Full Scope Simulators at SNC

(Farley Perspective)

# Project Overview

- Construct a second full scope simulator for each SNC site
- Each site evaluated its facilities and determined if a possible suitable existing facility existed to house the new simulator. Farley and Vogtle had possible existing facilities.
- Corporate project manager who had been assigned the project reviewed those site options and determined that modification of existing facilities included too much risk for the project and that a new facility would be built for each simulator.
- One site had limited space for their existing programs and wanted the new building to include significant new classroom facilities. Another site wanted the new facility to include space to move the existing simulator.
- The corporate project manager believed he could select a single building design, saving money. This led to a fairly large building size being chosen.

# What was the driving force to do it?

- Simulators being used around the clock for much of the year, non-outage. This is routine business to the training staffs.
- In order to provide training time during normal work hours (to provide a better quality of life going forward), our CNO directed that an additional Simulator be built at each site in our Fleet (and do this by the end of 2016!!!). The first I heard of this was when the corporate project manager scheduled a meeting.

# What was the process for creating the RFP?

- The project is organized as corporate project, with a PM in charge of the overall project. Each site has a standard project organization set up. The detailed project schedule is being maintained by the corporate PM's staff.
- The SNC second simulator procurement was unique in that it was a Fleet initiative involving two PWRs and one BWR that are owned by different companies.

- SNC corporate project manager hired a Subject Matter Expert and challenged them to craft a Specification that maximized the FLEET commonality yet addressed the unique needs of each individual site. The body of the final version of the Spec contained all common requirements and there was a specific addendum for each site.
- The challenge in creating the Spec was to avoid repetition of problems found in the existing simulators and to create the opportunity for porting new solutions from the new simulators back to the existing simulators.

SPECIFICATION NO. Z2201  
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**SOUTHERN NUCLEAR**

General Technical Specification  
Second Reference Unit Simulators  
For  
**Vogtle 1, Hatch 2, and Farley 1**  
Hardware/Software Procurement



- Each site reviewed and approved the Simulator Specification
- SNC supply chain purchasing agent was involved in guiding the process to make sure all rules and regulations were followed.
- The SNC Supply Chain then attached the Specification and Data Packages which had been collected to a standard procurement RFP.
- Simulator vendors were selected to bid on the site Simulators per the approved Specification

# What was the process for evaluating bids?

- Venders visited the sites, walked the simulators down, took pictures, measurements, etc.
- Eventually, bids were submitted.



- The project team used a weighted evaluation that was developed and approved prior to the receipt of the bids. This evaluation was implemented on a spreadsheet, with criteria for 135 evaluation points.
- The same evaluation form was utilized at all three sites.
- The evaluation sheets were independently filled out by staff members at each site, by SNC corporate (in areas where they were qualified) and by the SME.



- Proposals from the vendors were commercially evaluated by Supply Chain Management
- Based on the combination of the technical and commercial evaluations, a Simulator vendor was selected. Interestingly, while the final vendor scores were different among the sites evaluating the bids, the independent ranking of the four vendors, as a result of the technical bid evaluation, was identical. In the end, when upper management questioned the vendor selection or the process there were no negative findings or observations.

- A Simulator contract was initiated for each site
- A nearly identical process was used for the building.

# What is the current status?

- Contracts have been awarded for simulator construction with design and procurement of parts progressing rapidly.
- The project completion order is Hatch, Farley, Vogtle.
- Farley's scheduled completion is first half of 2018.

What are some problems that you have encountered along the way?

- The one size fits all approach for the building was problematic. Initially, everyone was onboard. The Vogtle desire to move the existing simulator to the new building drove building's size. Hatch's desire for classroom space, but not to move the existing simulator, was served by that building size. Farley didn't really need the extra space but wasn't complaining about it.

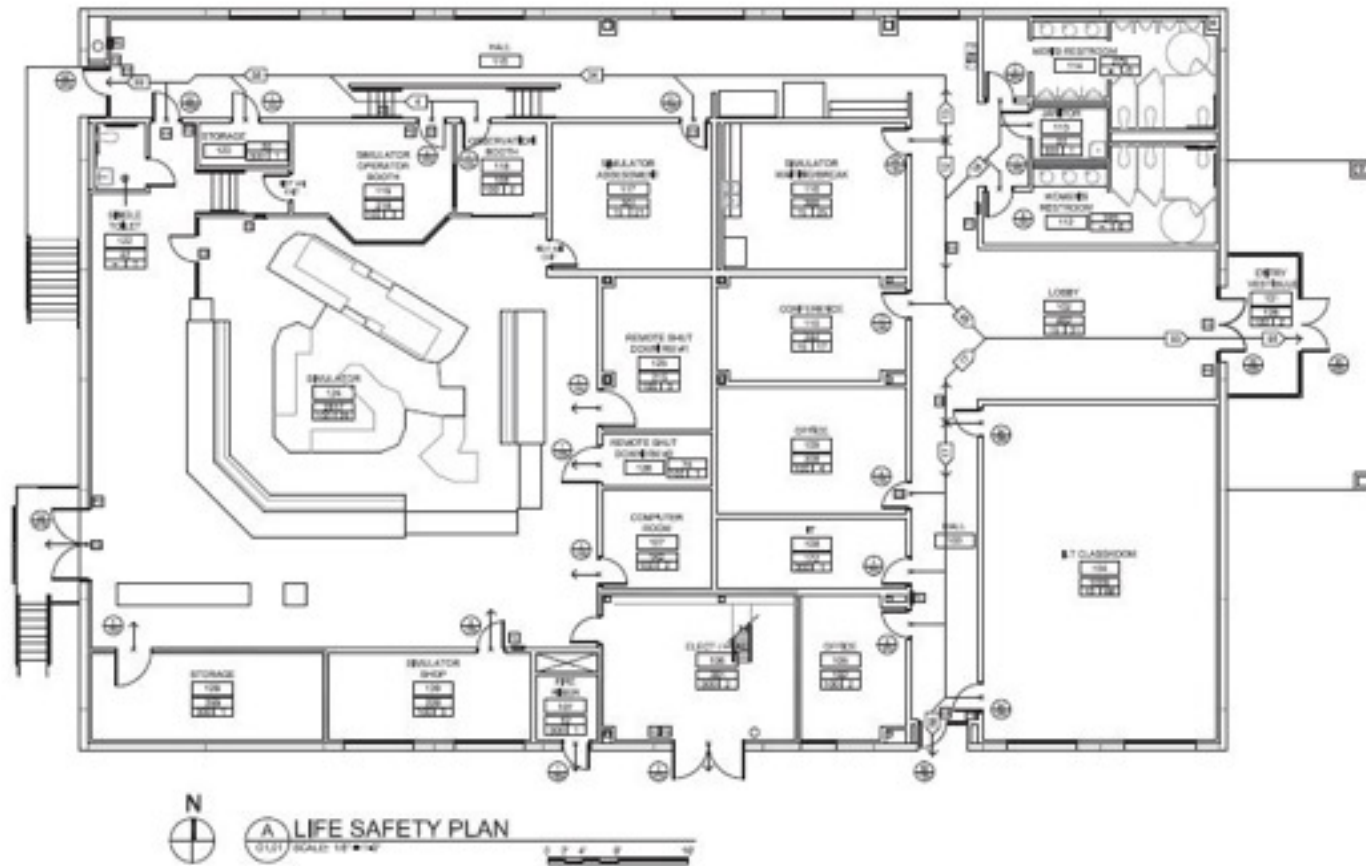
# Forging ahead with the large building size,

- A building was designed
- Bids were received for construction
- The building size began to be questioned. Vogtle (new management) no longer desired to move the existing simulator and had an empty building inside the protected area which they now intended to use as classroom and office space (not suitable for the simulator—but, the simulator could be built right next to it--so, they now needed only a minimally sized building to house the new simulator.)
- Hatch still desired all the space they could get.
- Farley was in the middle.

- It was decided to re-design the building.
- We wound up with three different size buildings.
- We had to restart the bid process, etc.



# Final Farley Building



## Some problems encountered (cont)

- Which to use as design basis: Plant or simulator. Obviously, you'd want to use the reference unit. But, it's very hard to get permission to take a measurement on the reference unit's main control board.

# Some problems encountered (cont)

- Sourcing of obsolete equipment. GSE has found: We knew that the sourcing of old parts would be difficult. What we did not know and have learned from this process is that it has been extremely difficult dealing with semi-obsolete parts. Many of these companies still maintain some ability to in theory build these old parts, but their ability to price and quote them has been extremely difficult.

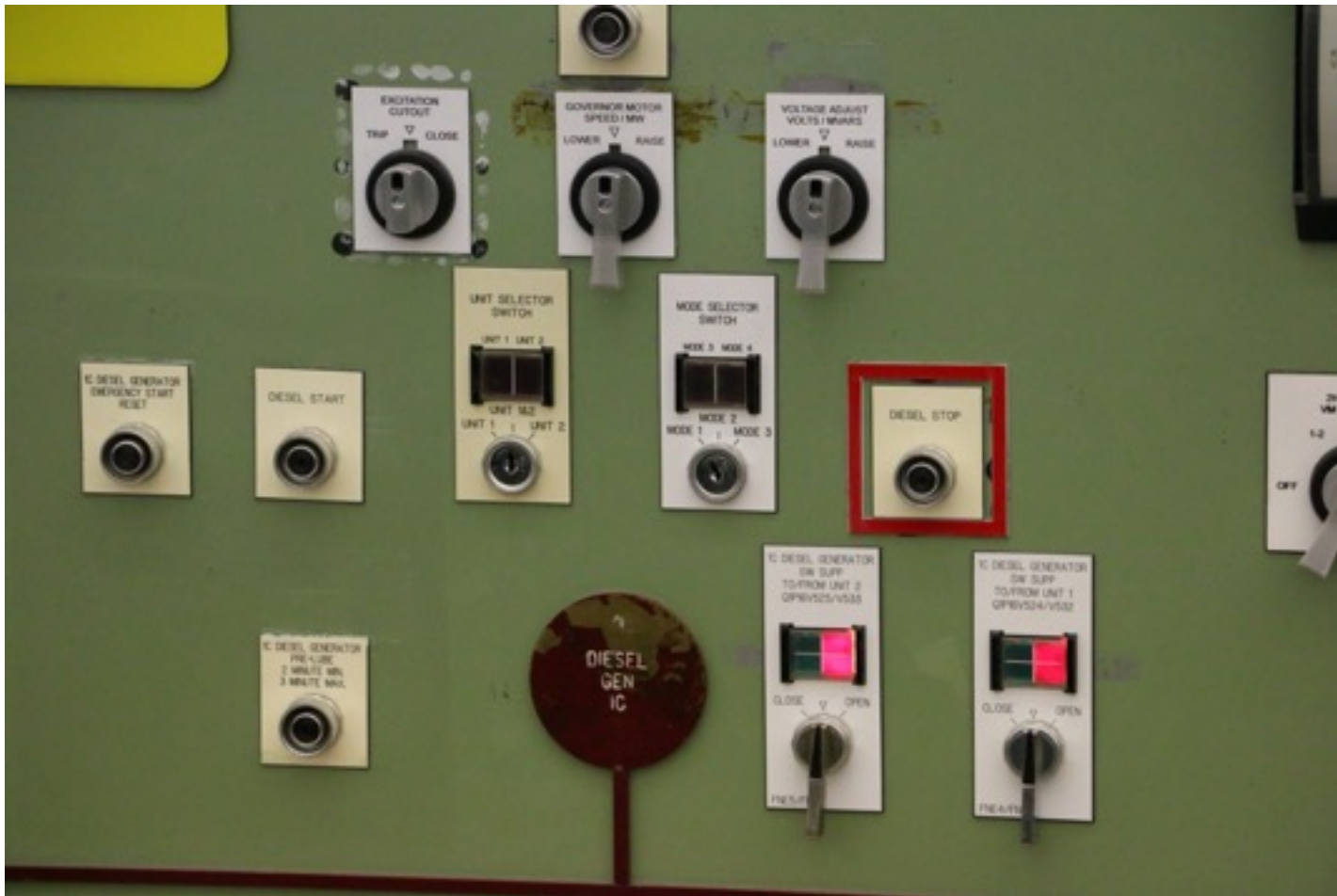
# Some problems encountered (cont)

- Changes in management

# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



Unique and hard to obtain equipment





# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# Unique and hard to obtain equipment



# How have you solved those issues?

- All three building designs are complete. Construction of the Farley building starts this month.
- Fabrication and substitution.
- Having professional corporate and site project structures with much communication has helped us greatly responding to changes and challenges.

# How do you plan to use the new simulator?

- One simulator will be used for ILT. The other for LOCT.
- There are no plans at the current time to augment the instructor staffs to take advantage of the increased simulator time that will be available.
- The project adds severe accident capability. \*
- Many tangible benefits have been presented in the past at this conference by sites with second simulators. We look forward to experiencing these.



# Questions?

