

# VC Summer Unit 2/3 Update

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New Nuclear Deployment

SCANA/South Carolina Electric & Gas

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# VC Summer 2 & 3 – Construction Site 2014



Storage

Unit 2

HLD

Cooling Towers

MAB

Unit 3

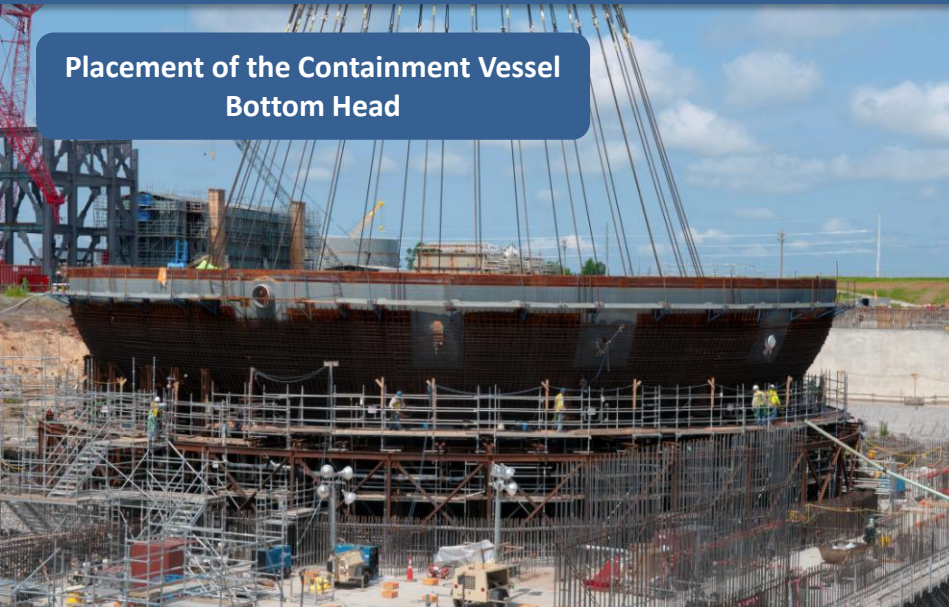
CV Assembly

Contractor  
Support  
Personnel



# Unit 2 Nuclear Island

Placement of the Containment Vessel Bottom Head



Placement of Module CA-20



Placement of Containment Vessel Ring 1

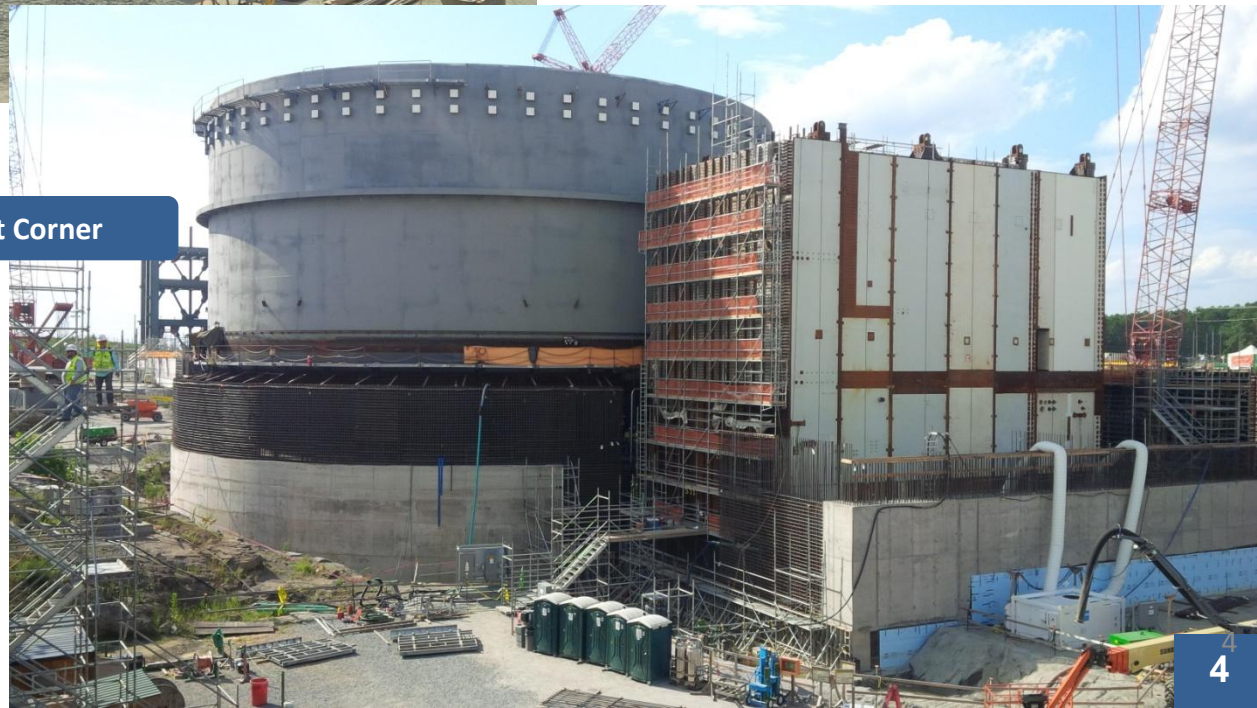




# Unit 2 Nuclear Island



Unit 2 NI/TB from Southeast Corner



Unit 2 NI from Southwest Corner

# Unit 2 Containment Vessel Lower Ring

- Four Courses
- A lower and an Upper Equipment Hatch
- A lower and an Upper Personnel Hatch
- An external Stiffener







# Containment Vessel

**Unit 2**

**Unit 3**

Top Head

Ring 3

Ring 2



Ring 1



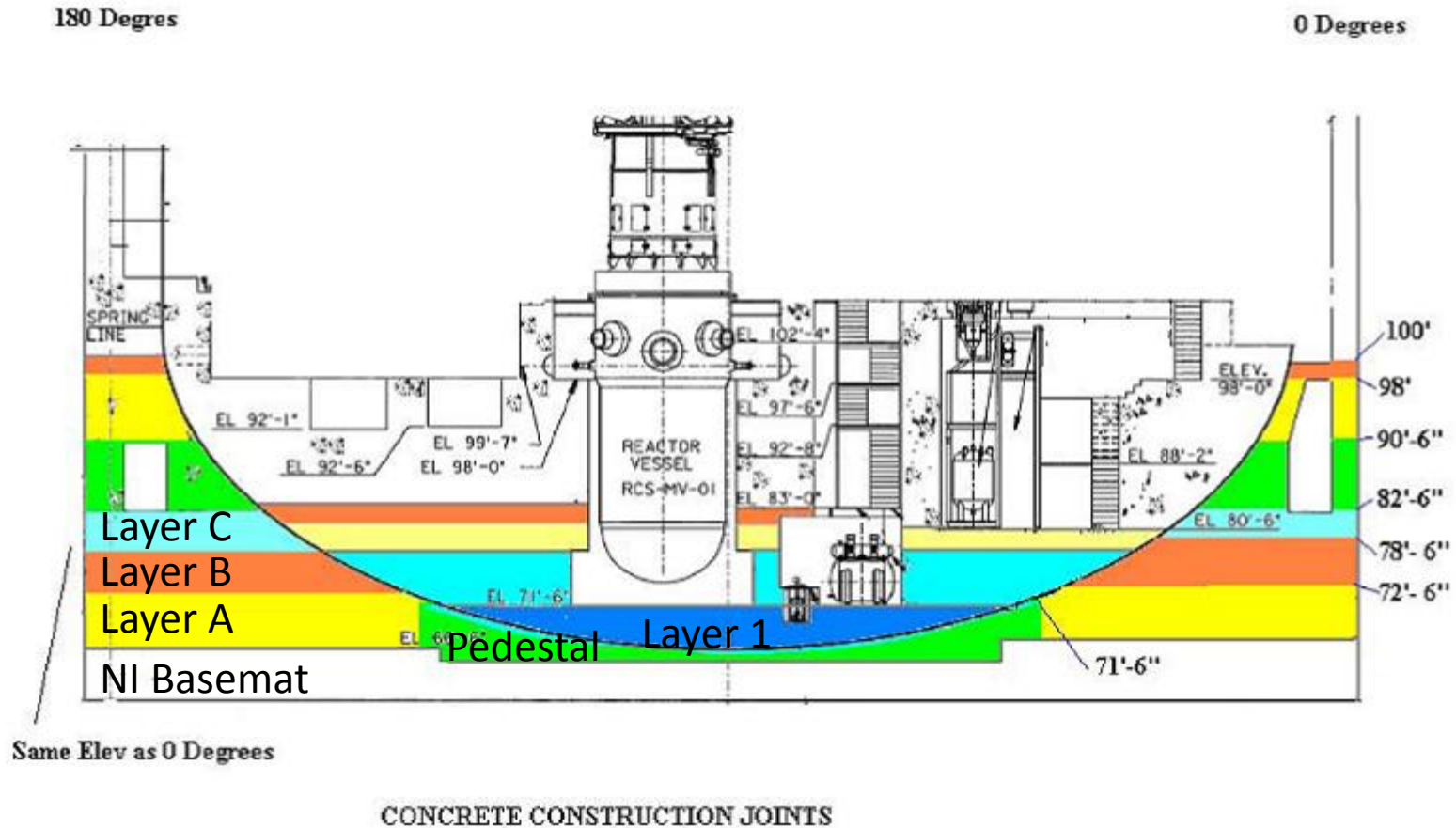
Bottom Head



Equipment  
Hatches (2)

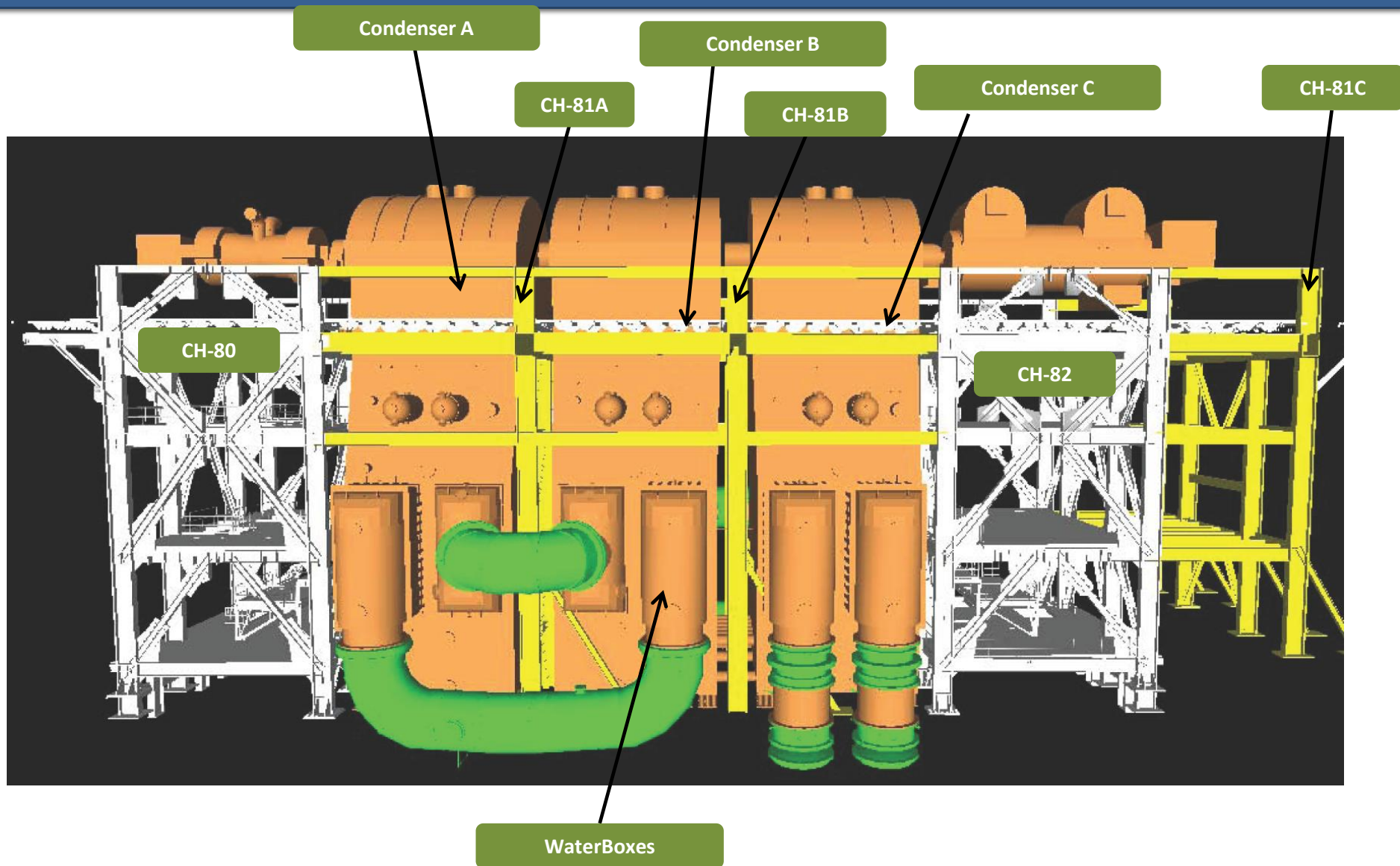
Personnel  
Airlocks (2)

# Containment Vessel Concrete Layers





# Turbine Building Layout



# U2 Turbine Building





# U2 Turbine Building Eastside





# U2 Turbine Building Northside





# Upcoming 2014 Construction Milestones

## Unit 2

### **Nuclear Island**

- Place Concrete in CA20
- Fabricate and Set CA05—*CVS / Access Tunnel / PXS-B Walls*
- Fabricate and Set CA01—*Steam Generator and Refueling Canal*
- Fabricate and Set CA02 —*IRWST / Pressurizer Wall*
- Fabricate and Set CA03 —*IRWST Southwest Walls*
- Set First-Floor Mechanical Modules
- Start Shield Building

### **Turbine Building**

- Complete Condenser component installation
- Complete foundation at Elevation 100'0"
- Start First-Bay foundation

# Unit 3 Nuclear Island





# Unit 3 Nuclear Island



Column line  
N wall

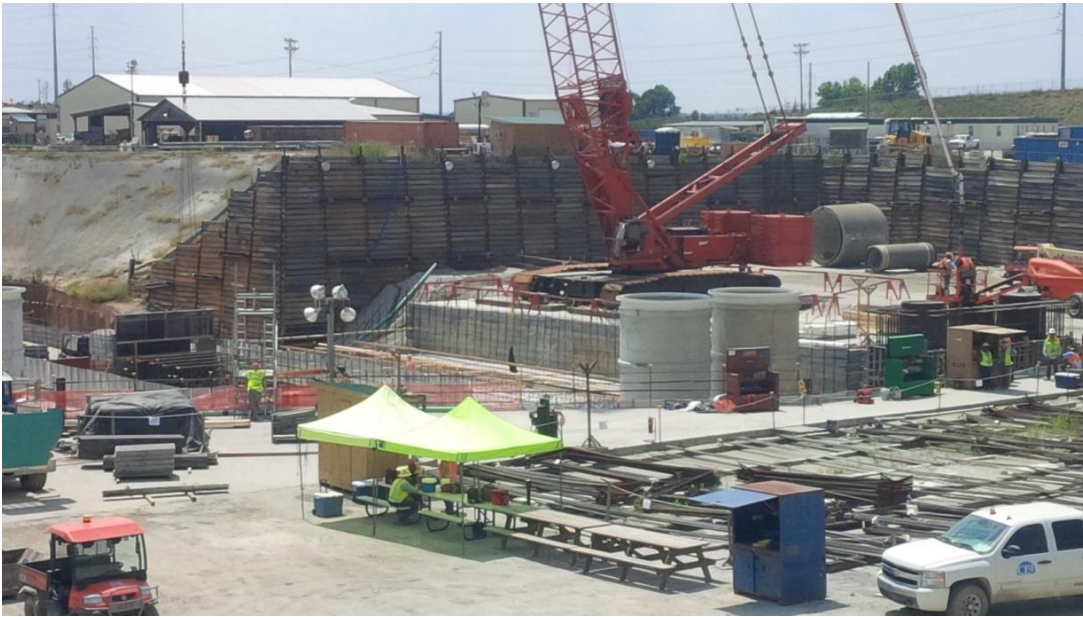
Column line  
1 wall

# Unit 3 Containment Vessel Bottom Head





# Unit 3 Turbine Building Area



Circ Water Pipes



Circ Water Risers

# Upcoming 2014 Construction Milestones

## Unit 3

### **Nuclear Island**

- Set Containment Vessel Bottom Head (CVBH)
- Grout CVBH
- Place first level of concrete in CVBH
- Fabricate and Set CA04—Reactor Vessel Cavity
- Place Auxiliary Building walls – A2 Elevation (66'6"-82'6")

### **Turbine Building**

- Complete Backfill
- Install 82'6" basement foundation and walls
- Fabricate and install Condenser components
- Install CH Structural Steel modules



# Units 2 & 3 Construction Milestones – Completed

- Unit 2 FNC, 3/11/13, 7000 cubic yards of concrete
- Unit 2 CR10 set, 4/3/13
- Unit 2 Containment Vessel Bottom Head placed, 5/22/13
- Unit 3 FNC, 11/4/13
- Unit 2 CV Ring 1
- Unit 3 CV Bottom Head
- Switchyard energized
- Cooling Tower 2A structure erected
- Unit 2 Turbine Building Basemat & Basement Walls placed
- Unit 2 Condensers set 12/30/13
- Unit 2 CH80 & CH82 steel set



Unit 3 Core Makeup Tanks



Units 2 & 3 Accumulator Tanks



Unit 2 Turbine Stator



Units 2 Turbine Waterbox



## Unit 2 Main Step Up Transformers - 230/26kV

- Assembly weight with oil - 529,800lbs each
- 3 in service, 1 spare
- 12,720 gallons each
- Stored Air Filled



# Lesson Learned

- Green NCV of 10 CFR Part 50, Appendix B, Criterion VII “for failure to assure purchased equipment met procurement and ITAAC requirements”
- Vendor provided the average wall thickness and average outer diameter, but did not provide/retain the data that supported the average
- The average values were used to obtain the “calculated volume” of the accumulator tanks
- Error required the tanks to be re-measured onsite
- ITAAC team is now more involved in the procurement process to ensure documentation will support ITAAC closure



# Questions