ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 1 of 231

STATE OF SOUTH CAROLINA	)	
	)	**BEFORE THE**
	)	**PUBLIC SERVICE COMMISSION**
Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina	)	**OF SOUTH CAROLINA**
	)	**COVER SHEET**
	)	
	)	**DOCKET**
	)	**NUMBER: 2016 - 223 - E**
	)	
	)	

(Please type or print)

Submitted by: Matthew W. Gissendanner
SC Bar Number: 76027
Address: SCANA Corp.
220 Operation Way MC C222
Cayce, SC 29033
Telephone: 803-217-5359
Fax: 803-217-7810
Other:
Email: matthew.gissendanner@scana.com

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

☐ **Emergency Relief demanded in petition** ☐ **Request for item to be placed on Commission's Agenda expeditiously**
☐ **Other:**

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
☒ Electric	☐ Affidavit	☐ Letter	☐ Request
☐ Electric/Gas	☐ Agreement	☐ Memorandum	☐ Request for Certification
☐ Electric/Telecommunications	☐ Answer	☐ Motion	☐ Request for Investigation
☐ Electric/Water	☐ Appellate Review	☐ Objection	☐ Resale Agreement
☐ Electric/Water/Telecom.	☐ Application	☐ Petition	☐ Resale Amendment
☐ Electric/Water/Sewer	☐ Brief	☐ Petition for Reconsideration	☐ Reservation Letter
☐ Gas	☐ Certificate	☐ Petition for Rulemaking	☐ Response
☐ Railroad	☐ Comments	☐ Petition for Rule to Show Cause	☐ Response to Discovery
☐ Sewer	☐ Complaint	☐ Petition to Intervene	☐ Return to Petition
☐ Telecommunications	☐ Consent Order	☐ Petition to Intervene Out of Time	☐ Stipulation
☐ Transportation	☐ Discovery	☒ Prefiled Testimony	☐ Subpoena
☐ Water	☐ Exhibit	☐ Promotion	
☐ Water/Sewer	☐ Expedited Consideration	☐ Proposed Order	
☐ Administrative Matter	☐ Interconnection Agreement	☐ Protest	
☐ Other:	☐ Interconnection Amendment	☐ Publisher's Affidavit	
	☐ Late-Filed Exhibit	☐ Report	

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 2 of 231

Matthew W. Gissendanner
Assistant General Counsel

matthew.gissendanner@scana.com

July 1, 2016

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

RE: Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina
Docket No. 2016-223-E

Dear Ms. Boyd:

Enclosed for filing on behalf of South Carolina Electric & Gas Company ("SCE&G" or "Company") in the above-captioned docket is the direct testimony and, where applicable, exhibits of Kevin B. Marsh, Stephen A. Byrne, Jimmy E. Addison, W. Keller Kissam, Kevin R. Kochems, and Joseph M. Lynch.

In addition to the filing of SCE&G's direct testimony, the Company hereby informs the Public Service Commission of South Carolina that SCE&G is withdrawing that portion of its petition in which it requested to increase the transmission cost category of its capital cost schedule in the amount of $4.3 million, the purpose of which was to install additional capacitors in the Unit 1 switchyard to ensure that it operates reliably. During the preparation of its direct testimony, SCE&G was informed that its plan to increase the number of capacitors in the Unit 1 switchyard will significantly decrease the amount of open space in the switchyard thereby causing its personnel to work in a confined space which will put them at-risk for inadvertent contact with equipment located in the switchyard. Simply put, this is a safety issue for those individuals who work in the switchyard. As a result of this development, SCE&G is in the process of evaluating other alternatives which could decrease the need to install more capacitors in the switchyard; however, the cost of these alternatives is not yet fully developed. Therefore, SCE&G is withdrawing its request to adjust its transmission capital costs forecast in the amount of $4.3 million. By way of its direct testimony, SCE&G has updated its capital cost schedule in this docket to reflect the removal of $4.3 million from the transmission cost category and the associated escalation and AFUDC.

By copy of this letter, we are also serving the other parties of record with a copy of the SCE&G's direct testimony and exhibits and attach a certificate of service to that effect.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 3 of 231

If you have any questions regarding these matters, please do not hesitate to contact us.

Very truly yours,

Matthew W. Gissendanner

MWG/kms
Enclosures

cc: Dawn Hipp
Jeffrey M. Nelson, Esquire
Shannon Bowyer Hudson, Esquire
M. Anthony James
Christopher R. Koon, Esquire
Michael N. Couick, Esquire
Frank R. Ellerbe III, Esquire
John H. Tiencken, Jr., Esquire
Paul J. Conway, Esquire
Scott Elliott, Esquire
Sandra Wright
Frank Knapp
(all via electronic mail and U.S. First Class Mail w/enclosures)

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 4 of 231

BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2016-223-E

IN RE:

Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina	)	**CERTIFICATE OF SERVICE**

This is the certify that I have caused to be served this day one (1) copy of South Carolina Electric & Gas Company's **Direct Testimony and Exhibits of Kevin B. Marsh, Stephen A. Byrne, Jimmy E. Addison, Kevin R. Kochems, W. Keller Kissam, and Joseph M. Lynch** to the persons named below at the addresses set forth via electronic mail and U.S. First-Class Mail:

Shannon Bowyer Hudson, Esquire
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC 29201
shudson@regstaff.sc.gov

Jeffrey M. Nelson, Esquire
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC 29201
jnelson@regstaff.sc.gov

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 5 of 231

M. Anthony James
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC 29201
majames@regstaff.sc.gov

Dawn Hipp
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC 29201
dhipp@regstaff.sc.gov

Christopher R. Koon, Esquire
The Electric Cooperatives of South Carolina, Inc.
808 Knox Abbott Drive
Cayce, SC 29033
chris.koon@ecsc.org

Frank R. Ellerbe III, Esquire
Robinson, McFadden & Moore, P.C.
Post Office Box 944
Columbia, SC 29202
fellerbe@robinsonlaw.com

John H. Tiencken Jr., Esquire
Tiencken Law Firm, LLC
234 Seven Farms Drive, Suite 114
Charleston, SC 29492
jtiencken@tienckenconway.com

Michael N. Couick, Esquire
The Electric Cooperatives of South Carolina, Inc.
808 Knox Abbott Drive
Cayce, SC 29033
mike.couick@ecsc.org

Paul J. Conway, Esquire
Tiencken Law Firm, LLC
234 Seven Farms Drive, Suite 114
Charleston, SC 29492
pconway@tienckenconway.com

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 6 of 231

Frank Knapp, Jr.
118 East Selwood Lane
Columbia, SC 29212
fknapp@knappagency.com

Scott Elliott, Esquire
Elliott & Elliott, P.A.
1508 Lady Street
Columbia, SC 29201
selliott@elliottlaw.us

Sandra Wright
313 N. Stonehedge Drive
Columbia, SC 29210
sandrabw22@yahoo.com

Karen M. Scruggs

Cayce, South Carolina

This 1st day of July 2016

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 7 of 231

[SCANA] - SCANA Corporation
Second Quarter 2016 Earnings Conference Call/Webcast
Thursday, July 28, 2016 3:00 PM Eastern

Officers
Susan Wright; Director Financial Planning & IR
Jimmy Addison; CFO
Steve Byrne; SCE&G; COO

Analysts
Julien Dumoulin-Smith, UBS
Jim von Riesemann; Mizuho Securities
Michael Weinstein; Credit Suisse
Travis Miller; Morningstar
Andrew Weisel; Macquarie
Dan Jenkins; State of Wisconsin Investment Board
Leslie Britch, JPMorgan
Michael Lapides, Goldman Sachs

Presentation

Operator: Good afternoon, ladies and gentlemen. Thank you for standing by. I will be your conference facilitator today. At this time, I would like to welcome everyone to the SCANA Corporation conference call. All lines have been placed on mute to prevent any background noise. After the speakers' remarks, there will be a question-and-answer period. (Operator Instructions)

As a reminder, this conference call is being recorded on Thursday, July 28, 2016. Anyone who does not consent to the taping may drop off the line.

At this time, I would like to turn the call over to Susan Wright, Director of Financial Planning and Investor Relations.

Susan Wright: Thank you, and welcome to our analyst call. As you know, earlier today we announced financial results for the second quarter of 2016.

Joining us on the call today are Jimmy Addison, SCANA's Chief Financial Officer, and Steve Byrne, Chief Operating Officer of SCE&G. During the call, Jimmy will provide an overview of our financial results and Steve will provide an update on our new nuclear project.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 8 of 231

After our comments, we will respond to your questions.

The slides and the earnings release referred to in this call are available at Scana.com.

Additionally, we post information related to our new nuclear project and other investor information directly to our website at Scana.com. On SCANA's homepage, there is a yellow box containing links to the nuclear development and other investor information sections of the website.

It is possible that some of the information that we post directly to our website may be deemed material information that has not otherwise become public.

You can sign up for e-mail alerts under the investor section of Scana.com to notify you when there is a new posting in the new nuclear development and/or other investor information sections of the website.

Finally, before I turn over the call to Jimmy, I would like to remind you that certain statements that may be made during today's call that are considered forward-looking statements and are subject to a number of risks and uncertainties as shown on slide 2.

The Company does not recognize an obligation to update any forward-looking statements.

Additionally, we may disclose certain non-GAAP measures during this presentation. The required Reg G information can be found in the investor section of our website under webcasts and presentations.

I now will turn the call over to Jimmy.

Jimmy Addison: Thanks, Susan, and thank you all for joining us today. I'll begin our earnings discussion on slide 3. Earnings in the second quarter of 2016 were $0.74 per share, compared to $0.69 per share in the same quarter of 2015.

Electric margins benefited from a Base Load Review Act rate increase and customer growth, but were partially offset by milder weather in the second quarter of 2016 when compared to the same quarter of last year, and slightly lower average use.

Results also improved due to increased gas margins at SCANA Energy and the positive impact of the depreciation study. As you will recall, this is the last quarter that a positive bottom line impact will be realized from this study on a comparative basis.

Additionally, increases in O&M and property taxes had a negative impact on earnings.

At the bottom of the slide, you will note that abnormal weather increased electric margins by $0.05 per share in the second quarter of 2016, and $0.06 per share in the second quarter of 2015, resulting in a negative $0.01 per share impact to earnings quarter-over-quarter.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 9 of 231

Please turn to slide 4. Earnings per share for the 6 months ended June 30, 2016, were $1.97 versus $3.49 in 2015. The decline in results is mainly attributable to the net of tax gains on the sale of CGT and SCI, and a negative year-over-year impact from weather.

Otherwise, higher electric margins, due primarily to a Base Load Review Act rate increase and customer growth, as well as the deprecation study impact, were offset by lower gas margins and expected increases in O&M and CapEx-related items, including interest and property taxes.

Electric margins through the first two quarters of 2016 were unaffected on a net basis by abnormal weather, which is down $0.11 when compared to the benefit from abnormal weather through June 30, 2015.

Now on slide 5, I'd like to briefly review results for our principal lines of business. South Carolina Electric & Gas Company's second quarter 2016 earnings were up $0.02 per share compared to the same period of 2015.

The increase in earnings is due to higher electric margins, principally as a result of the continued recovery of financing costs through the BLRA and customer growth, partially offset by milder weather during the second quarter of 2016 versus the same period of 2015 and lower average use. The impact of the previously mentioned depreciation study also contributed to earnings for the quarter.

These items were partially offset by an increase in operation and maintenance expenses as well as increases in expenses related to our capital program, including interest expense and property taxes. Year-to-date, SCE&G's earnings were down by $0.06 due primarily to milder weather than was experienced in 2015.

PSNC Energy's reported seasonal flat earnings in the second quarter of 2016, consistent with the same quarter of the prior year. For the 6-month period ended June 30, earnings were up $0.01 per share in 2016 over the comparative period of 2015.

SCANA Energy, which includes SCANA Energy Marketing and SCANA Energy Georgia, showed an increase in second quarter earnings of $0.02 per share, primarily due to higher margins during the second quarter of 2016, as compared to 2015.

Year-to-date earnings are $0.17 per share compared to $0.21 per share in the prior year and down primarily due to milder weather in the first quarter.

Additionally, I'm pleased to report that SCANA Energy has been granted a 1-year extension to serve as the regulated provider for the State of Georgia. This additional year will be added onto the current term and will end in August 2018. SCANA Energy has served as the regulated provider since the program's inception in 2002.

SCANA's corporate and other businesses reported a loss of $0.05 per share in the second quarter of 2016, compared to a loss of $0.06 per share in the comparative quarter.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 10 of 231

For the 6-month period, these businesses reported a loss of $0.05 per share in 2016 compared to earnings of $1.38 in 2015 primarily due to the net of tax gains on the sales of CGT and SCI of $1.41 per share, as well as the foregoing earnings contributed by CGT and SCI prior to the closing of the sales in the first quarter of 2015.

I would now like to touch on economic trends in our service territory on slide 6. The Carolina's environment continues to prosper and we are pleased by the continuous growth in our service territories as evidenced by announcements to invest approximately $1.5 billion with the expectation of creating approximately 3,300 jobs.

At the bottom of the slide, you can see the national unemployment rate, along with the rates for the three states where SCANA has a presence and the SCE&G Electric territory. South Carolina's unemployment rate is now at 5.4% and the rate in SCE&G's Electric territory is estimated at 4.4%. Attesting to our state's strong economic growth, almost 70,000 more South Carolinians are working today than a year ago.

Slide 7 presents customer growth and electric sales statistics. On the top half of the slide is the customer growth rate for each of our regulated businesses. SCE&G's electric business added customers at a year-over-year rate of 1.6%. Our regulated gas businesses in North and South Carolina added customers at a rate of 3% and 2.9%, respectively.

This is the first time PSNC's growth rate has hit 3% since the early stages of the 2008 recession. We continue to see strong customer growth in our businesses and in the region, which is a key fundamental.

The bottom table outlines our actual and weather-normalized kilowatt hour sales for the 12-months ended June 30, 2016. Overall, weather-normalized total retail sales are up 0.3% on a 12-month ended basis.

Now please turn to slide 8, which recaps our regulatory rate base and returns. The pie chart on the left presents the components of our regulated rate base of approximately $9.7 billion. As noted in the two shades of blue, approximately 85% of this rate base is related to the electric business.

In the block on the right, you will see SCE&G's base electric business in which we're allowed a 10.25% return on equity. The earned return for the 12-months ended June 30, 2016 in the base electric business continues to meet our stated goal of earning a return of 9% or higher to prevent the need for non-BLRA-related base rate increases during the peak nuclear construction years. We continue to be pleased with the execution of our strategy.

As a reminder, we're allowed a return on equity of 10.25% in our gas LDC in South Carolina. If the earned ROE of the gas business for the 12 months ending March 31st falls outside a range of 50 basis points above or below the allowed ROE, then we file to adjust rates under the Rate Stabilization Act. As of March 31, 2016, the 12-month earned return was below the band and we recently filed for an annual increase of approximately $4 million in mid-June.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 11 of 231

As you are also aware, during the first quarter of 2016, we filed an application with the North Carolina Utilities Commission requesting annual revenue increases of $41.6 million at PSNC Energy in response to the normal attrition in the earned returns in that business.

This rate increase is the result of PSNC's need to recover costs to operate and expand its pipeline system and to implement a pipeline integrity management rider. The rider would allow PSNC to track and receive ongoing recovery of capital expenses related to its distribution and transmission pipeline integrity management programs. A hearing with the North Carolina Utility Commission on this rate case is scheduled for August 30.

Slide 9 presents our CapEx forecast. This forecast reflects the Company's current estimate of new nuclear spending through 2018, and reflects the fixed-price option spending as represented in the petition testimony as filed on July 1.

As a reminder, these schedules reflect the existing payment plan and do not incorporate the construction payment milestone schedule, as it is still under negotiation. Therefore, it is unlikely that the timing of these expenditures will occur as presented.

At the bottom of the slide, we recap the estimated new nuclear CWIP from July 1 through June 30, to correspond to the periods on which the BLRA rate increases are historically calculated.

Slide 10 presents information regarding certain transitional payments being made in 2016 as it pertains to the construction payment milestone schedule and the settlement agreement. Once the construction payment milestone schedule is complete, we will update the CapEx schedule and the corresponding financing plan.

Now please turn to slide 11 to review our estimated financing plan through 2018. In June of this year, SCE&G issued $425 million of 30-year bonds at 4.1%, and reopened and issued $75 million of bonds as part of a previous 4.5% series due June 1, 2064.

Additionally, PSNC issued a 30-year private placement of $100 million at 4.13%. I would like to thank our banks and fixed-income investors for their support of our liquidity needs.

As a reminder, we have switched to open-market purchases instead of issuing new shares to fulfill our 401k and DRIP plans, at least until we have fully utilized the net cash proceeds from the sales of CGT and SCI. We do not anticipate the need for further equity issuances until 2017.

It is unlikely that these issuances will occur in the exact amounts or timing as presented, as they are subject to changes in our funding needs for planned project expenses. We continue to adjust the financing to match the related project CapEx on a 50/50 debt and equity basis.

Again, this financing plan does not represent the election of the fixed-price option and we will conform this plan, and the CapEx plan, once we reach agreement on the construction payment milestone schedule later this year.

On slide 12, we are reaffirming our 2016 GAAP-adjusted weather-normalized earnings guidance

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 12 of 231

is $3.90 per share to $4.10 per share, with an internal target of $4 per share.

However, I did want to take a moment and revise our operation and maintenance expense projection for the year. We previously issued O&M guidance for 2016 of approximately 2% higher than 2015. O&M has since outpaced that guidance rate, primarily due to increasing pension expense, which is offset with the pension rider and revenues and higher incentive compensation accruals as a result of the year-to-date stock performance.

Pension expense has increased due to the lower discount rate associated with falling interest rates, which is applied to the projected liability. Although this incremental pension expense has no net effect on bottom line earnings, we are updating our O&M guidance for 2016 to approximately 4% higher than 2015.

Our long-term GAAP-adjusted weather-normalized average annual growth guidance target remains unchanged as we plan to deliver 4% to 6% earnings growth over 3 to 5 years using a base of 2015's GAAP-adjusted weather-normalized EPS of $3.73 per share.

And I'll now turn the call over to Steve to provide an update on our nuclear project.

Steve Byrne: Thanks, Jimmy. I'd like to begin by addressing the status of our current regulatory proceedings. Slide 13 presents the relative schedule for two filings. The first is an update petition, which includes our selection of the fixed-price option; and the second is our annual request for revised rates.

At the beginning of July, we filed our direct testimony for our update petition and anticipate a hearing in October, with an order in late November. The Office of Regulatory Staff, or ORS, will be issuing their report sometime in the next month or so regarding our annual request for revised rates. And we also anticipate that concluding in late November.

Slide 14 presents the projected costs associated with our update petition. Please note that we have removed the additional transmission costs originally requested in the petition from our testimony filing, as we are evaluating other alternatives to installing additional capacitors in the unit 1 switchyard.

Moving on to some of the activities at the new nuclear construction site, slide 15 presents an aerial photo of what we call the Tabletop from June of this year. This photo gives you a view of the layout of the site and I've labeled both units 2 and 3 as well as many of the other areas of the construction site.

Slide 16 presents a schematic view of the five large structural modules that are located inside the containment vessel. As you will recall, we have previously placed module CA01, 04 and 05 for unit 2 and CA04 and 05 for unit 3. And more recently, we placed module CA03 for unit 2, which you'll see shortly.

Slide 17 shows an aerial view of the unit 2 nuclear island and containment from last week. Looking down into the containment vessel, you can see the first ring section, as well as modules

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 13 of 231

CA01, 03, 04 and 05. Outside the containment vessel, you can see auxiliary building module CA20, the shield building, which surrounds the containment vessel and the battery room.

Slide 18 shows a few pictures of the unit 2 CA02 module. CA02 is a wall section that forms part of the In-Containment Refueling Water Storage Tank. CA02 is structurally complete and should be installed this quarter.

Slide 19 shows a picture of the unit 2 CA03 module, which is the west wall of the In-Containment Refueling Water Storage Tank. This module was set in place last week.

Slide 20 shows the continued fabrication of subassemblies 1 and 2 for the unit 3 module CA20. This is an auxiliary building module that is located outside and adjacent to the containment vessel. As you may recall, this module consists of 4 subassemblies and subassemblies 3 and 4 were previously placed in an effort to move forward with the shield building erection, which is the next critical path item.

All required submodules for subassemblies 1 and 2 are onsite and they will be placed once fabrication is complete.

Slide 21 shows a picture of the fabrication of the unit 3 module CA01. This module houses the steam generators and the pressurizer and forms the refueling canal inside the containment vessel.

Currently, all 47 submodules are onsite and 21 of those submodules are upright and being welded together in the Module Assembly Building.

On slide number 22, you can see one of the two steam generators for unit 3 that arrived on the construction site in late April. It was transported from the port of Charleston on a specifically designed rail car. This steam generator weighs approximately 1.3 million pounds. It's about 20 feet in diameter and it's almost 82 feet long.

The other unit 3 steam generator -- and the last one for the project -- is scheduled to be delivered during the fourth quarter of this year.

Slide 23 shows you a picture of the Sanmen Plant in China. This past May, Westinghouse completed the coal hydrostatic testing at Sanmen unit 1. The successful completion of this test confirms that the reactor systems meet design pressures under operating and accident conditions. This is great news for the AP1000 design and Sanmen unit 1 is expected to load fuel by the end of the year. Another Chinese AP1000 unit, Haiyang unit 1, completed its coal hydro test in early July.

That concludes our prepared remarks. We'll now be glad to respond to any questions you might have.

Questions and Answers

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 14 of 231

Operator^ We will now begin the question-and-answer session. (Operator Instructions). Julien Dumoulin-Smith, UBS.

Julien Dumoulin-Smith: So I wanted to follow up a little bit on the timeline and schedule on the project and specifically on the milestones, if you could provide a little bit more of an update there; and ultimately, if and/or when you expect to do -- or hear back from Fluor as to more of an integrated schedule update for the overall project.

Steve Byrne: Yes, Julien, this is Steve. The guaranteed substantial completion dates remain at August of 2019 for unit 2 and August of 2020 for unit 3. We don't see anything to change those. Fluor's review of the schedule is really something that should conclude somewhere in the third quarter and they will be giving that to Westinghouse. And remember that on the project now, we're dealing just with Westinghouse; Fluor is a subcontractor to Westinghouse.

I don't expect anything necessarily to change from that review, save for perhaps the number of hours it might take and shifts that they would have to put on, that kind of thing. So the goal of that schedule review was to hold the dates constant and see what it would take to accomplish those dates. So I don't expect anything dramatic to come from that.

With respect to milestones, the CA03 lift and set for unit 2 was completed last week, as I think you saw in the photographs. We would intend to set the second half of auxiliary building module CA20 probably next week; if not, then the week after. So we're actually taking the end off the module assembly building as we speak in order to get that module out, so that'll be another large lift. That'll be for unit 3.

We've got a module called CA02, which should be the last of the big five modules to go in the unit 2 containment building. That should come later in August and then we've got condenser sections that we'll be setting for unit 3. That's the turbine building side. And one of our goals this year is to set and align the reactor vessel for unit 2 and we hope to do that sometime in September.

Julien Dumoulin-Smith: Got it, excellent. And just to be clear about this, basically what you're suggesting is you could very well see Fluor accelerate, improve their productivity, ramp up hiring in order to meet the existing targets, right? Is that the right way to think about it?

Steve Byrne: Yes, everything they're doing has meeting the existing targets in mind, and they are, as we speak, accelerating their hiring. They've done a pretty good job in about the last 3 to 4 months after a relatively slow start early in their tenure on the project, which was January-February. They certainly picked up the pace significantly now, but everything they're doing is to hold the dates constant.

Julien Dumoulin-Smith: And then just to quickly clarify on the milestone payments, where do you stand in that process and what's expectation for the outcome there?

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 15 of 231

Steve Byrne: Yes, with regard to the milestone payments, the milestones are not in dispute; the total payment is not in dispute. Since we're electing a fixed-price option, we know what the final price is going to be. Really, the only thing we're discussing with Westinghouse is the timing for those payments, and so we're still in discussions with them relative to those timings.

And we'd anticipate a positive result sometime in the next couple of weeks. I don't see anything to change that. Should we not come to a resolution, then we've got a mechanism in place now that we negotiated in our October amendment to the EPC contract and that's a Dispute Resolution Board, so that Dispute Resolution Board has been set. So it's a three-person board and if we can't agree on it, then we just take it to the Dispute Resolution Board and they can resolve it. And they have to have it resolved in 60 days.

Julien Dumoulin-Smith: And just very quickly lastly, in terms of the process itself for the fixed-price option, is it potential or would you expect a settlement with the parties?

Steve Byrne: With regard to our case before the Public Service Commission for the fixed-price option --

Julien Dumoulin-Smith: Yes.

Steve Byrne: -- I'd anticipate that once the final roster of interveners is compiled, that we will enter into settlement discussions with those interveners. And very similar to what we did the last time, which was in 2015, we did reach a settlement agreement with a number of the interveners, but we never reached a settlement agreement with all of the interveners. So there will be a hearing. We do anticipate that we'd have a settlement agreement with some of the interveners, but not all.

Julien Dumoulin-Smith: Great, thank you.

Operator: Jim von Riesemann, Mizuho.

Jim von Riesemann: Hey, a couple questions on the nuclear and then just some on financial. Could you comment a little bit on the CB&I Westinghouse litigation and whether there's any direct or indirect impact on either SCE&G or SCANA?

Steve Byrne: Yes, Jim, this is Steve. We're aware of the lawsuit; we were made aware of it the day that it was filed. We don't see any implications to SCE&G or SCANA and we can't comment on the merits of the case for either party.

Jim von Riesemann: That's fine. Okay. But no issue for you guys?

Steve Byrne: We don't see any issues.

Jim von Riesemann: Then secondly, can you talk about some of these Chamber of Commerce articles that are appearing in the Post and Courier about their desire to have the BLRA opened or re-opened, I should say?

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 16 of 231

Jimmy Addison: Yes, I'll be glad to comment on that briefly, Jim. First of all, that is not the State Chamber or the local Chamber; that is what's called the Small Business Chamber, and that is a person that has intervened in our prior proceedings, I believe, Steve, all the way back to our initial siting and approval of the plant to begin. So that's not a new party to these discussions.

Jim von Riesemann: Okay. Okay. Switching over to the financial discussion, can you remind us what the weather impact has been on SCANA for the trailing 12 months? I know it's $0.11 year-to-date. I guess that's relative to the prior period. So how do you get -- I guess the real question I have is how do you get to your internal $4 a share target, especially in light of some of the other disclosures to you made today?

Jimmy Addison: Let me clarify. So first of all, we're not providing GAAP-adjusted numbers anymore. It's pretty clear; you've probably seen that the SEC is discouraging any of that. So we're going to stay away from that. I don't think that was aimed at our industry, but we're going to steer clear.

Year-to-date for SCANA on the electric side of the business for 2016, there's no impact from weather, compared to our plan. Now there is impact compared to 2015's first half of the year because it was very cold in Q1 of 2015 and very warm in Q2 of 2015. But for 2016, the weather has been quote, "normal" on a net basis. It was mild in Q1, but it was warmer in Q2, so we're kind of on plan from a weather standpoint through midyear.

Now, I don't really pay a lot of attention to trailing 12 months when it straddles year-end like that because there's so much difference in our business with the BLRA increases that are near calendar year-end. In the past, it's been around the 1st of November, and now they'll be a little later than that, as well as our RSA increases when they occur in the LDC in South Carolina. So I pay less attention to the trailing 12 and try to just go off normal weather.

Jim von Riesemann: Okay. And tax rates, I know for the second quarter trended down from what you had indicated for the year. Is there anything we should think about tax rates over the second half of the year?

Jimmy Addison: No, there's nothing really to read into that at this point based on what you've seen. I actually asked that very question earlier this week myself and we're a little lower than we guided. We guided at 32% and I think we still projected it would -- based on where we are today, that would still be in the ballpark of 32%.

Jim von Riesemann: Okay, great. And then the last thing, just to be clear, when you announced your 4% to 6% earnings growth rate aspirations for the coming 3 to 5 years, those EPS growth aspirations were prior to your election of the fixed-price contract. So I guess the question is that would imply EPS could change if the PSC approves the fixed-price option contract, correct?

Jimmy Addison: Yes, I'm not saying that. We'll certainly relook at our earnings guidance if they approve it, but we'd refresh everything like we do every quarter when we look at it. So I can't suggest to you that it would change because of that, but we'll certainly relook at it. Of course, we

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 17 of 231

expect the impact of that, once we either agree or the Resolution Board gives us a payment scheduled, we expect that will be spread out over several years. So to say that it would necessarily change that rate, I couldn't get to that yet.

Jim von Riesemann: Okay. Thank you.

Operator: Michael Weinstein, Credit Suisse.

Michael Weinstein: I just wanted to confirm that the CapEx update for nuclear, does that include or exclude the fixed-price option cost at this time? It was increased but --

Jimmy Addison: Yes, it does include it; it does include the fixed-price option. What it doesn't include obviously, because we haven't reached agreement, is the payment schedule changes. And as Steve said earlier, that won't change what we pay; it just will obviously change the buckets of years when we pay it. So we'll have to adjust this once we reach that agreement.

Michael Weinstein: Okay. And with the final order not expected until November, does that mean that I guess the fixed price option becomes irrevocable on November 1, is that right?

Jimmy Addison: Unless it's not -- it's subject to approval by the Commission.

Michael Weinstein: Right. It's a regulatory out, but essentially after November -- you've already chosen it, right? So on November 1, it becomes set in stone unless there's a regulatory problem?

Jimmy Addison: Yes, that's right, and I can't imagine why we wouldn't want to elect it.

Michael Weinstein: Right. And what was the difference between the $55 million and the $11.5 million monthly payment? Remind me of that.

Jimmy Addison: Yes, so the $55 million is simply our 55% share of the $100 million we agreed to pay each month, and then the $11 million is just the installment payments associated with the EPC. That's the settlement of the $137 million gross for the settlement of all the outstanding dispute items.

Michael Weinstein: Oh, I see, I see. Okay. All right. Thank you.

Operator: Travis Miller, Morningstar.

Travis Miller: A question on this petition -- what's the chance that when you guys go there and regulators, interveners, start debating, that we could end up in a situation where there is a reopening of some other issue or regulators decide to take back something, right? You guys went through this a couple years ago on the ROE. Is that something that would be open for debate? Are there other places in the full contract, full BLRA, that would be open for debate?

Jimmy Addison: The ROE was set in the initial approval by the Commission at 11%. The only reason that came back into play the last time we were there is we agreed in settlement

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 18 of 231

discussions to put that on the table in order to reach the settlement we did. So that has to be -- that can only be changed if we choose to put that on the table.

Steve Byrne: That was done in that settlement proceeding in order to gain the settlement of those intervening parties. And outside of that, what the Public Service Commission is supposed to rule on is the petition that is before them, and not other things. So basically, those other things have already been decided. We're looking for a change and they're to rule on the change that we're asking for based upon obviously, the prudent standard.

Travis Miller: Sure, okay. Is it possible that ROE or some other issue could come up in the settlement, or you guys would do that kind of give-and-take?

Jimmy Addison: As Steve said earlier, we'll first have to wait and see who's interested in being in the discussions and then we'll see. Negotiations are always unique and we'll have to wait and see how it develops.

Travis Miller: Okay. And then on the gas customer side, you guys have been putting up some good growth numbers there on the customer side. How long -- what's the runway for this 3% gas customer growth?

Jimmy Addison: Do you mean on a projected basis?

Travis Miller: Projected, yes. You guys have been -- put up very impressive numbers here on the 3% gas customer growth.

Jimmy Addison: Yes, so --

Travis Miller: And I'm just wondering how long does that last? How many more customers are out there that you can get for that?

Jimmy Addison: Obviously, it's made up of a couple things; it's made up of the -- just the core housing growth. So the housing growth, you might look at it like this. The electric growth is 1.6%, so most of those -- not all -- but most of those are going to have gas if it's accessible because it's so much more affordable and it's a fuel of choice. People like it; I personally like it and I like it for a heater or a water heater or the clothes dryer, etc.

Then on top of that, you've got penetration of existing homes because of the price. It's so much more affordable with the price of shale gas today in the market for folks to use it for heating and water heating and things of that nature. So you've got kind of the double benefit of that, if you will.

So I think it's kind of interesting. I was looking at some stats earlier today about these economic projections for the Carolinas and for the first time in several years, the multiunit housing is projected over the next couple of years to drop as far as the number of units. And single-family housing is projected to increase. In South Carolina, single-family permits are projected over the

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 19 of 231

next couple of years to go up 20%, while multifamily is projected to go down 20%. And North Carolina is even more exaggerated, up 25% and down 35%.

Yes, I think what we're reaching is more of this kind of a relative saturation of these multiunit -- on a relative basis. I'm not saying there won't be more built, but compared to the single-family units, you're starting to see single families grow faster than the multifamily. And you're just going to see a lot more of those single-family units using natural gas, so I think that's going to be a big driver as well.

Travis Miller: And read into that the single-family is better for you guys from a customer growth standpoint, right?

Jimmy Addison: Absolutely, and not just for gas, but also for electricity. Your average single-family home is going to be larger than your average multifamily unit. And a lot of those customers that we've been adding the last several years have been -- while there's been nice growth in numbers, they've not been the size units that they were obviously in 2006 or 2007. And I don't see that returning as far as the size of those homes, but I do see more and more of the makeup being relative in single family.

Travis Miller: Great. Thanks so much. Appreciate it.

Operator: Andrew Weisel, Macquarie.

Andrew Weisel: The first question I wanted to ask was about the Dispute Resolution Board. If I understood correctly, you're still talking with Westinghouse and have not yet -- I don't know what the right word is -- filed with the DRB, is that right? And if so, at what point would you submit all the requests to the DRB to get that 60-day clock started?

Steve Byrne: Andrew, you're correct that we have not yet submitted anything to the DRB. I'd imagine that we'll probably submit something within the next couple of weeks. That's not to say that we couldn't submit, and then still come to an agreement, after we submit and then withdraw it. So we'll probably submit in the next couple of weeks, at least to start the clock. Then I wouldn't preclude the fact that we might not reach a settlement anyway with Westinghouse and then withdraw it.

Andrew Weisel: Is there a reason you didn't submit when you issued that 8K last month?

Steve Byrne: No, we're looking at timing around other things. The 8K was not necessarily a consideration.

Andrew Weisel: Okay. Then in terms of the sequence of events, we've got a couple things coming up. There's that we just talked about. There's the Fluor report to Westinghouse; there's the ORS report; and then there's the potential settlement ahead of hearings. Is there any specific order in which those have to happen? In other words, is it possible that ORS might not be able to or want to file their report until the Fluor report is in; or how should I think about that sequence?

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 20 of 231

Steve Byrne: The ORS report is separate from the update proceeding. The ORS report is relative to our annual rate filing, so remember, we've got two things going on with regard to new nuclear. There's the update petition, which gets the fixed-price option into the Public Service Commission for their approval.

And then we have an annual rate adjustment, which we've been filing every year since we started the construction. There's no hearing associated with that, but ORS does submit a report. So really, the two are separate and running on separate tracks, but just happened to conclude at about the same timeframe in November, probably late November. So don't think that the ORS report is relative to the update petition.

Jimmy Addison: I'd say the things that are fairly firm, we have a hearing date starting October 5 and we have a date that ORS is to submit their testimony in the update proceeding of September 1. We've of course already submitted ours, and the Commission has a practice generally of preferring to see settlements filed a week or more before a proceeding begins, just so they have time to kind of digest the settlement document.

That's not always doable, just based upon the parties and negotiations and things that happen on the steps, that kind of thing. But that is the goal is to have it in a few -- sometime so they've got time to digest it before it starts.

Andrew Weisel: Okay. And to clarify, if you file with the DRB in a few weeks, call it mid-August, if they take the full 2 months, that takes us to mid-October. That is after the October 5 hearing is scheduled for the petition, but those are separate things, right? In other words, the DRB potential intervention wouldn't have anything to do with the schedule or decision around the updated petition; is that fair?

Steve Byrne: Yes, they're not necessarily tied to each other. Now we may file, I'd say, within the next couple of weeks; we could file next week. So they could actually get synced up, but I wouldn't read too much into that.

Jimmy Addison: And what we're asking the Commission to prove is the prudence of these costs, not necessarily the buckets of when they'll be paid.

Andrew Weisel: Got it. Okay. Thank you very much.

Operator: Dan Jenkins, State of Wisconsin Investment Board.

Dan Jenkins: I just had a question on slide 7 where you show the weather-adjusted change. I noticed compared to this same slide last quarter, it appears to be down by about a percent for most of the customer classes and overall. So I guess I was wondering if you could give any color on what -- are you seeing a slowdown? It looks like the customer growth still looks pretty strong. I was just curious about the kilowatt sales growth.

Jimmy Addison: No, I would not -- I personally don't read that into it at this point. Obviously, the base numbers are lower, but that is a 12-month moving average, so you're dropping off a

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 21 of 231

quarter from 2015, picking up another quarter here. We don't like to get into the individual quarters themselves because that introduces more volatility. But the pipeline, as you saw from the slide before that, the pipeline is still full.

And economic announcements just this week, the Mercedes plant announced that -- a previous announcement from a while back that they're breaking ground on the plant now, and they're adding 1,300 workers with another several hundred expected to be in part suppliers down in our Charleston territory. So there's a lot going on out there now. I don't really read anything into that as far as a trend.

Dan Jenkins: Okay. And then I just had a question. I know you mentioned on the nuclear update that the shield building is still one of the critical path items. I was wondering if you could give a little color in terms of where you're at in terms of the panels onsite and what's still being fabricated or constructed up at Newport News and so forth in terms of that item.

Steve Byrne: Dan, this is Steve. The shield building panels -- Newport News continues to do a good job both with timely deliveries and with quality. We've probably got about 2/3 of the panels onsite for unit 2, maybe a third onsite for unit 3 and those are going in very well. We've had good success with the fit-up of the panels so far and so what we're doing now is we're actually welding those panels together in pairs. And we actually lift them in pairs and put them in.

So these are 40-foot curved panels, so when we weld them together, we get 80-foot curved panels. So it's one less lift you have to do to get two panels in and we're pouring concrete in the panels. We're through four courses and we need to get a couple of other things done around that now. So we're not waiting on the panels, so that work is going very well.

Newport News is also getting the contract for the air inlet and tension ring portion of the shield building, so from our perspective, that's good news. So the shield building is going well enough that I believe it is now off critical path for the trailing unit, unit 3. It's still critical path for the first unit, unit 2, but the trailing unit, it's now off critical path, so that's good news.

Dan Jenkins: So when do you expect for unit 2 that would be completed where you would have all the panels onsite? Is that this year still?

Steve Byrne: Dan, I'm not sure when we have them all onsite. I'd imagine that would be this year, at least the panels up to the air inlet and tension ring. I'd say that there's 167 of those panels and I'd imagine we'd probably get all of those onsite this year. I don't think we're scheduled to complete the shield building until sometime in 2018. So even if they're not onsite this year, that's not necessarily a hold-up.

So what they've done is they've prioritized the panels, so we're getting in the ones that we need earlier than later. So even if some of those units are not coming to us, it doesn't mean necessarily any delay.

Dan Jenkins: Okay. Thank you.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 22 of 231

Operator: (Operator Instructions). Leslie Britch, JPMorgan.

Leslie Britch: I'm sorry to ask this question because I'm sure you've already answered it. But as I compare the CapEx slide from the first quarter to the one from the second quarter, the new nuclear expenses are up $400 million. And so I just want to make sure I really understand what is and is not included in your new nuclear CapEx today.

Jimmy Addison: Yes, sure, Leslie. So the short answer is the slide you're currently looking at in this presentation includes everything we know, includes all the fixed-price option, etc. The only thing that we anticipate changing on that in the future is adjusting the nuclear -- the years that the spend occurs in once we reach some type of agreement on this payment schedule.

The one from Q1 included the settlement portion, the $137 million, that we had reached settlement on, but since we had not elected the option by that point, we didn't have the entire $800 plus-million included for the fixed-price option, the $505 for the fixed price plus the other items.

Leslie Britch: Okay. So the remainder, the $852 million minus $137 million, minus the $418 million -- sorry -- the other $300 million for the fixed-price option would be in 2019,2020?

Jimmy Addison: That's right.

Leslie Britch: The rest of the fixed-price option cost increase would be in the latter 2 years?

Jimmy Addison: That's right.

Leslie Britch: Okay. Got you. Thank you.

Operator: Michael Lapides, Goldman Sachs.

Michael Lapides: I'm just trying to think about some of the changes on the nuclear, the midyear CWIP balances. And if I go back to your EEI slide deck, that balance was expected to be for 2016, about $1.1 billion. And now you expect it to be about $665 million, so 48%, 50% reduction. That impacts -- I'm going to make sure I understand that correctly -- that impacts the rate increase that will go into effect in November of 2016?

Jimmy Addison: That's right.

Michael Lapides: And therefore, the bulk of the impact is really felt in the revenue seen at SCE&G in 2017?

Jimmy Addison: That's correct.

Michael Lapides: So you're expected -- if I just do like-for-like or one-for-one, CapEx and revenue, your expected nuclear revenue increase 2016 to 2017 is roughly $45 million, $50

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 23 of 231

million lower, or 45%, 50% lower that it would've been 6 or 9 months ago because of a change in the construction schedule?

Jimmy Addison: That's correct, but I'd encourage you to look at the whole picture, so the financing associated with that will be less too.

Michael Lapides: Yes, right. You wouldn't issue nearly as much debt. You've reduced the equity balance as well. Understood.

Jimmy Addison: Exactly, exactly.

Michael Lapides: Okay. Just trying to make sure; I'm trying to think about -- this begins to look like much more of the real big uplift and revenue doesn't really happen until 2018 and that assumes that the construction schedule doesn't push out any further based on whatever Fluor fines or others find?

Jimmy Addison: Yes, Michael, I'd agree with that, the caveat being the fixed-price payment schedule will have some impact on the buckets. It's obviously not going to change the increase this November; that's already -- that die is cast, if you will, but it will have some impact on the other years.

Michael Lapides: Got it. Okay. I have a gas question for you guys. You all talk a lot about gas customer demand growth. Can you talk about weather-normalized gas unit growth that you're seeing? I know you've got some decoupling on the gas side, but I just want to kind of think about what you're actually seeing on the overall demand growth side. I know customer growth has been great.

Jimmy Addison: Yes, Michael, I really am not prepared to give you anything on that and the reason is that it really doesn't impact us much. We've got the decoupler, pure decoupler in North Carolina, so it's an absolute non-issue there on a real-time basis. And in South Carolina gas business, you've got the Rate Stabilization Act that captures any of that on -- the most you'd have is a 1-year lag.

So it's really not a big impact for us, so we don't model it in and spend a lot of time on it. I'm sure we could -- I could get that answer, but I just don't have it with me today.

Michael Lapides: Okay. I appreciate that, guys. I may want to follow up with you. Just trying to think about kind of the bigger, broader picture of midstream needs into the lower Carolinas, given really the uptick in gas usage you may be seeing --

Jimmy Addison: Right.

Michael Lapides: -- and whether that creates another investment opportunity for you down the road.

Jimmy Addison: I understand, or someone else.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 24 of 231

Michael Lapides: Understood, understood, cool. All right, guys, thank you. I appreciate it.

Operator: Ladies and gentlemen, this will conclude our question-and-answer session. I would like to turn the conference back over to Jimmy Addison for any closing remarks.

Jimmy Addison: Well, thank you. We've had a successful first half of 2016 and we look forward to concluding the regulatory proceedings before both the South Carolina and the North Carolina Pubic Service Commissions in the balance of the year.

We continue to focus on our new nuclear construction and on operating all of our businesses in safe and reliable manner. And we thank you all for joining us today and for your interest in SCANA.

Operator: The conference has now concluded. Thank you for attending today's presentation. You may now disconnect.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 25 of 231

Media Contact:
Rhonda O'Banion
800-562-9308
rhonda.obanion@scana.com

Analyst Contacts:
Bryant Potter
803-217-6916
addison.potter@scana.com

Susan Wright
803-217-4436
susan.wright@scana.com

SCE&G Achieves History-Making Milestone With Placement of V.C. Summer Unit 2 Reactor Vessel

CAYCE, S.C., Aug. 31, 2016—On Aug. 30, 2016, South Carolina Electric & Gas Company (SCE&G), principal subsidiary of SCANA Corporation (NYSE:SCG), along with Santee Cooper, the co-owner, placed the reactor vessel in the containment building of V.C. Summer Unit 2. This is the first reactor vessel to be set at a new nuclear plant in the U.S. in more than 30 years.

The cylindrical-shaped reactor vessel will house fuel that powers the reactor along with other related components. The robust, protective steel structure is approximately 35 feet tall and weighs approximately 305 tons. Because of its significant weight, the reactor vessel was transported from the Port of Charleston to the construction site on a specialty rail car, which is designed to carry heavy loads. One of the largest cranes in the world, a heavy lift derrick with a 560-foot front boom, lifted the reactor vessel and placed it in its permanent location.

"Successful placement of the Unit 2 reactor vessel is a very significant milestone on our path to completing the construction of the two new nuclear units," said Kevin Marsh, SCANA chairman and CEO. "This accomplishment is representative of the collaboration among many people who are working hard every day to provide a clean and reliable energy future for South Carolina."

Lonnie Carter, president and CEO of state-owned utility Santee Cooper, said, "The Westinghouse-Fluor team has hit several important milestones this summer, and I congratulate them for the good progress they are achieving. When these units come online, the customers of Santee Cooper and SCE&G will enjoy clean, non-emitting and reliable electricity for decades to come."

To see pictures and video of this nuclear construction milestone and more, visit https://www.scana.com/investors/nuclear-development

SCE&G and co-owner Santee Cooper are building two 1,117-megawatt Westinghouse AP1000 reactors in Fairfield County, S.C. Westinghouse is the contractor, and Fluor is the construction manager. Approximately 3,800 Westinghouse personnel and subcontractor workers are on site daily. When the two units start generating electricity, SCE&G anticipates more than 60 percent of its generation will be non-emitting.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 26 of 231

PROFILE

SCE&G is a regulated public utility engaged in the generation, transmission, distribution and sale of electricity to approximately 706,000 customers in South Carolina. The company also provides natural gas service to approximately 352,000 customers throughout the state. More information about SCE&G is available at www.sceg.com.

SCANA Corporation, headquartered in Cayce, S.C., is an energy-based holding company principally engaged, through subsidiaries, in electric and natural gas utility operations and other energy-related businesses. Information about SCANA and its businesses is available at www.scana.com.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 27 of 231

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA
COLUMBIA, SOUTH CAROLINA

HEARING #16-11554 OCTOBER 4, 2016 10:30 A.M.

DOCKET NO. 2016-223-E:
SOUTH CAROLINA ELECTRIC & GAS COMPANY – *Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina*

TRANSCRIPT OF TESTIMONY AND PROCEEDINGS VOLUME 1 OF 4

HEARING BEFORE: Swain E. WHITFIELD, CHAIRMAN; Comer H. 'Randy' RANDALL, VICE CHAIRMAN; and COMMISSIONERS John E. 'Butch' HOWARD, Elliott F. ELAM, Jr., Elizabeth B. 'Lib' FLEMING, Nikiya M. 'Nikki' HALL, and G. O'Neal HAMILTON

ADVISOR TO COMMISSION: F. David Butler, Esq.
Senior Counsel

STAFF: Joseph Melchers, General Counsel; James Spearman, Ph.D., Executive Assistant to Commissioners; David W. Stark, III, Esq., Legal Staff; Philip Riley, Doug Pratt, Lynn Ballentine, and Tom Ellison, Advisory Staff; Jo Elizabeth M. Wheat, CVR-CM/M-GNSC, Court Reporter; and William O. Richardson, Deborah Easterling, Hope Adams, Calvin Woods, and Randy Erskine, Hearing Room Assistants

APPEARANCES:

K. CHAD BURGESS, ESQUIRE, MATTHEW W. GISSENDANNER, ESQUIRE, MITCHELL WILLOUGHBY, ESQUIRE, and BELTON T. ZEIGLER, ESQUIRE, representing SOUTH CAROLINA ELECTRIC & GAS COMPANY, PETITIONER

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 28 of 231

APPEARANCES (Cont'g):

SCOTT ELLIOTT, ESQUIRE; representing SOUTH CAROLINA ENERGY USERS COMMITTEE, INTERVENOR

ROBERT GUILD, ESQUIRE, representing SIERRA CLUB, INTERVENOR

FRANK R. ELLERBE, III, ESQUIRE, and ***JOHN H. TIENCKEN, JR., ESQUIRE,*** representing CENTRAL ELECTRIC POWER COOPERATIVE and THE ELECTRIC COOPERATIVES OF SOUTH CAROLINA, INTERVENORS

J. BLANDING HOLMAN, IV, ESQUIRE, and ***GUDRUN THOMPSON, ESQUIRE,*** representing SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, INTERVENOR

FRANK KNAPP, JR., appearing *pro se*, INTERVENOR

SANDRA WRIGHT, appearing *pro se*, INTERVENOR

JEFFREY M. NELSON, ESQUIRE, and SHANNON BOWYER HUDSON, ESQUIRE, representing the SOUTH CAROLINA OFFICE OF REGULATORY STAFF

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 29 of 231

I N D E X

PAGE

OPENING MATTERS 5-22
Ms. Hudson 10
Hearing Exhibit 1
[Settlement Agreement and Settlement Exhibits 1 ~ 2] 12
Mr. Holman 12, 34
Hearing Exhibit 4 marked/received in evidence
[Letter regarding *pro hac vice* admission of Ms. Thompson] 35
Mr. Guild 14

1. TESTIMONY OF PUBLIC WITNESS RONALD P. WILDER, Ph.D. 23
Hearing Exhibit 2 marked/received in evidence
[Written comments submitted in conjunction with testimony] 23
Cross Examination by Ms. Wright 26
Cross Examination by Mr. Guild 27
Witness excused 29

2. TESTIMONY OF PUBLIC WITNESS TERESA ARNOLD 29
Hearing Exhibit 3 marked/received in evidence
[Written comments submitted in conjunction with testimony] 33
Witness excused 34

TESTIMONY OF KEVIN B. MARSH
Direct Examination by Mr. Burgess 35
Summary of prefiled direct testimony 37
Prefiled direct testimony 43-81
Summary of prefiled settlement testimony 83
Prefiled settlement testimony {w/corr'n} 87-95
Cross Examination by Ms. Wright 96
Cross Examination by Ms. Thompson 123
Hearing Exhibit 5 [Marsh CX Exhibits 1 ~ 2]
Marked for identification 125
Received in evidence 130
Cross Examination by Mr. Guild 132

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 30 of 231

PAGE

Examination by Commissioner Hamilton..... 185
Examination by Commissioner Hall..... 187
Examination by Commissioner Fleming..... 191
Examination by Vice Chairman Randall..... 200
Examination by Commissioner Elam..... 201
Examination by Chairman Whitfield..... 208
Witness excused..... 215

TESTIMONY OF W. KELLER KISSAM

Direct Examination by Mr. Zeigler..... 217
Hearing Exhibit 6 marked/received in evidence
[Prefiled Exhibit WKK-1]..... 218
Summary of prefiled direct testimony..... 219
Prefiled direct testimony..... 234-250
Summary of prefiled rebuttal testimony..... 252
Prefiled rebuttal testimony..... 261-270
Cross Examination by Ms. Wright..... 271
Examination by Commissioner Fleming..... 287
Examination by Chairman Whitfield..... 289
Witness excused..... 291

TESTIMONY OF ALICE NAPOLEON

Direct Examination by Mr. Holman..... 292
Hearing Exhibit 7 marked/received in evidence
[Prefiled Direct Exhibits 1 ~ 2]..... 293
Summary of prefiled testimony..... 294
Prefiled direct testimony..... 300-329
Prefiled surrebuttal testimony..... 331-337
Cross Examination by Ms. Wright..... 338
Witness excused..... 342

CLOSING MATTERS..... 342

REPORTER'S CERTIFICATE..... 344

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 31 of 231

FLUOR®

Fluor Enterprises, Inc.
100 Fluor Daniel Drive
Greenville, SC 29607
USA

281-263-3059 office
713-417-2688 mobile
John.Dempsey@fluor.com

John A. Dempsey, Jr.
SVP / Fluor Project Director
Vogtle Plant

October 21, 2016

Response Required: Yes ☐ No ☒

FLV-WEC-2016-00054

William E. (Robbi) Robinson
ETC Estimate Manager
WECTEC Global Project Services
3735 Glen Lake Drive
Charlotte, NC 28208

Mr. John Crenshaw
Vice President/Project Director
Vogtle Project, Building 120
7828 River Road
Waynesboro, GA 30830

Reference: Estimate to Complete (ETC)

Dear Mr. Robinson/Mr. Crenshaw;

Fluor has completed the management reviews of Fluor's portion of the ETC effort and provides the attached for WEC review and comment. The key documents attached are:

- Basis of Estimate
- ETC Cost Summary for VC Summer
- ETC Cost Summary for Plant Vogtle
- Direct Craft Man-hour Summary – VC Summer
- Direct Craft Man-hour Summary – Plant Vogtle
- Field Non Manual Summary – VC Summer
- Field Non Manual Summary – Plant Vogtle
- Overall resource curve for Fluor Direct Craft and Fluor Field Non Manual Staff – VC Summer
- Overall resource curve for Fluor Direct Craft and Fluor Field Non Manual Staff – Plant Vogtle

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 32 of 231

In preparing the ETC estimate Fluor has been transparent in providing preliminary information to WEC, and we appreciate the direct communications between the estimating teams. This has been valuable in expediting the preparation of the ETC estimate.

As a result of these estimate alignment efforts and better alignment regarding implementation of the some of the project performance improvement ideas at each site, Fluor has been able to take a more aggressive view of the estimated unit rates, resulting in approximately 1.3 MM man hour reduction at each site.

Additionally, Fluor believes that if WEC and Fluor continue to work together in a one team approach to implement the entire list of improvement ideas, over time we should see an even further improvement in direct craft man-hours beyond the current estimate. Based on this we have developed a targeted reduction of direct craft man-hours on the basis that all identified improvements are implemented. Notable Key Improvements Ideas which must be implemented to realize this further reduction are as follows:

- Total List of FAA's to be further evaluated for execution and the previously completed FAA recommendations to be fully implemented
- PIP rev 3 fully implemented (WEC and Fluor items)
- Fluor to manage our scope of work to an Approved Budget. Examples for managing to a budget being: Staffing (PAF's), craft hiring, purchasing, subcontracts, indirects, computers, printer/copiers, project vehicles, equipment, etc.
- Revise pre-approval requirement on overtime to allow for nimble response to critical path or milestone needs without risk of contractual conflicts.
- Clean Engineering Design Drawings and Requisite Materials to be at site on time to support construction schedule. This requires full bulk take offs and purchase requisition of the balance of bulk materials to be completed by WEC home office engineering post haste to support site receiving, inspecting, and bagging/tagging/staging process to align with improved work packages to meet the schedule and work front needs.
- Fluor computer network at site. Wifi network across site to support both Fluor and WEC network tools and computers including FNM staff. Streamlined and functional tablets required for field supervision, QC, and field engineering.

It is important to note that a significant number of the improvement ideas from the Site Improvement Plans are assumed in our Basis of Estimate and required to meet the current estimated man hours, however we believe there is an opportunity to see a compounding improvement when the items above are also implemented. As the improvements are not instantaneous, Fluor is targeting 0.75% per month compounding improvement that if successful would lead to approximately 15% cumulative improvement in later months. Overall this is expected to reduce the estimates for each site approximately as follows:

- VC Summer – 2.2 million direct craft hours, and $230million.
- Plant Vogtle – 2.2 million direct craft hours, and $230 million.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 33 of 231

Per your request the detailed commodity account files will be uploaded to WEC's Sharepoint site.

We look forward to meeting with WEC to discuss and clarify any questions that arise during the review process and to jointly further evaluate additional mitigation strategies to lower the ETC results.

Best Regards,

John A. Dempsey Jr.
Fluor Sr. VP – Project Director

CC: Darrell Waters (Fluor)
Jeff Hawkins (Fluor)
David Weiner (Fluor)

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 34 of 231

WESTINGHOUSE ELECTRIC COMPANY (WEC)

Plant Vogtle Units 3 & 4
Waynesboro, Georgia
Project #: V3GT

V.C. Summer Units 2 & 3
Jenkinsville, S.C
Project #: S3MM

Basis of "Estimate to Complete"

REVISIONS			APPROVALS			
REV	DATE	DESCRIPTION	BY	ETL	EDM	PM
A	10/21/16	Issue for WEC Review	WAS/ RAB	SK	RAB	

(ETL: Estimating Team Leader; EDM: Estimating Department Manager; PM: Project Manager)

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 35 of 231

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 3
- 1.1 Introduction 3
- 1.2 Background 3
- 1.3 Overview - Basis of Estimate 4
- 1.4 Key Project Milestones and Schedule Dates 4
- 1.5 Completed Work 7
- 1.6 Overview of Physical Scope of Supply 8
- 1.7 Basis Documentation 9

2.0 DIRECT FIELD COSTS 10
- 2.1 Construction Execution Strategy 10
- 2.2 Labor Rate Basis 11
- 2.3 Productivity Analysis 12
- 2.4 Quantity Basis 13
- 2.5 Pricing Basis for Direct Material Costs 15
- 2.6 Prime Accounts 15
- 2.7 Premium Time 33
- 2.8 Handling of Punchlist Items 33

3.0 INDIRECT COST 33
- 3.1 Construction Indirect 33
- 3.2 Construction Management 33
- 3.3 Temporary Construction Facilities and Services 34
- 3.4 Construction Equipment, Small Tools & Consumables, and Heavy Haul 37
- 3.5 Scaffolding 38
- 3.6 Fire Watch 38
- 3.7 Insurances 38
- 3.8 Demobilization Plan for Fluor Facilities and Services 39

4.0 PRE-COMMISSIONING (Prior to Fuel Load) 39
- 4.1 VC Summer and Plant Vogtle Sites 39

5.0 COMMISSIONING AND START-UP SUPPORT (Post Fuel Load) 41

6.0 ESCALATION 41

7.0 SALES TAX 41

8.0 WARRANTY 41

9.0 CONTINGENCY 42

10.0 FEE 42

11.0 EXCLUSIONS 42

ESTIMATE DISCLAIMER 44

ATTACHMENTS 44

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 36 of 231

1.0 EXECUTIVE SUMMARY

1.1 Introduction

The purpose of this Basis of Estimate (BOE) is to describe the development of the Capital cost estimate for the Fluor scope of work at V.C. Summer and Plant Vogtle Nuclear Power Stations. In general, this BOE describes the scope of work, source of quantities (total and actual to date), estimating methodology, and project execution assumptions.

This BOE is the foundation for the Fluor provided 'Estimate to Complete' (ETC) deliverables and serves as:

1. the source for information required by WEC to integrate into the overall project ETC
2. an important reference document for WEC to assess and develop their risk register and for establishing their overall project cost contingencies
3. the most probable outlook of the Fluor costs for the Construction of the two nuclear projects
4. a source for identified gaps or potential missing scope and quantities for WEC's overall project ETC or in WEC's cost contingency analysis

The allowances identified in this ETC are only associated with the methodology used to develop the ETC. Contingency for scope and quantity changes and other WEC responsible issues are excluded from this ETC.

This ETC estimate is not to be interpreted as an agreement, target price, or firm/fixed price on behalf of Fluor. FEI's contractual arrangement with WEC is Cost Reimbursable with a fixed fee.

1.2 Background

In October 2015, WEC and Fluor entered into a MOU that outlined Fluor Enterprises taking over the construction at Plant Vogtle Units #3 and #4 and V.C. Summer Units #2 and #3 from the previous contractor. A target date of January 1, 2016 was set as the transition date. This date is referred to as "Day One". During the transition planning phase in late 2015, it was agreed that Fluor Enterprises would develop an ETC for both projects, and a validated EPC Schedule for each project that would constitute a re-baseline of the construction scope of the project. Subsequently WEC instructed that the ETC would be based on the June/June target completion schedules, which is now the basis for the ETC.

The Agreement stated that Fluor would provide certain construction services, procurement services for bulk commodities, and would provide Construction Management services.

The ETC was agreed to be based on "to go" quantities and that these quantities would be provided to Fluor Corp by WEC. Purchased "to-date" quantities and associated Purchase Orders were never provided to Fluor and so Fluor has excluded the purchase of all Direct Field Materials in the ETC. This also resulted in Fluor not being able to assess or take into account items that were purchased and can no longer be used. An Estimate schedule was developed that outlined deliverables and their required dates. The go forward date for the ETC was established as April 1, 2016. Therefore all costs incurred prior to April 1, 2016 are excluded from this ETC Estimate.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 37 of 231

1.3 Overview - Basis of Estimate

This BOE describes the key components of the estimate, including quantity development, labor costs, indirect costs, productivity adjustments, wage rates, taxes, escalation and contingency. Also included is a list of all allowances, assumptions, qualifications and exclusions that were made in development of the ETC. This BOE also identifies the documents that were used or referenced.

And Estimate Plan was prepared for this ETC estimate, but was never approved. The Estimate Plan included a schedule showing all quantity information was to be provided to Fluor by 27 May 2016. A review of the quantities and "to go" quantities was to be performed and approved by both WEC and Fluor on 15 July 2016. This did not occur due to the quality of the data provided to Fluor. RFI's and additional data was provided to Fluor in order for the estimate to be developed.

The Estimate Plan also included a GOSP (Governance, Oversight, Support & Perform) Matrix which identified who was going to perform and support various estimating activities. Some items in this GOSP Matrix were to be performed by Fluor, but subsequently were not done per direction given by WEC. The major estimating effort not performed by Fluor was the material pricing of bulk commodities, development of S/C pricing and development of escalation. These and other items are identified later in this BOE and in the Exclusions list.

WEC provided six (6) major working documents and supporting documentation to Fluor that form the basis of this estimate "to go" forecast. These files contain the material and equipment scope and quantities for the VC Summer and the Plant Vogtle AP-1000 Nuclear Power plants.

- MEL Standard plant Quantity file containing material Equipment list
- Module construction list for Vogtle
- Module construction list for VC Summer
- Master bulk material quantities
- Site specific bulk quantities – Vogtle
- Site specific bulk quantities – VC Summer
- Cut/Add list – Vogtle & Summer – Provided after frozen quantities

This estimate is organized by Fluor's standard cost categories and used Imperial units of measure. Fluor's standard cost categories and source of pricing are as follows:

- Direct Field Costs containing:
  - Unit and total DFL hours — Estimated by Fluor
  - Unit and total DF material cost — Excluded, to be added by WEC
  - Unit and total subcontracted cost — S/C Log provided by WEC
  - Unit and total permanent equipment cost — Excluded, to be added by WEC

1.4 Key Project Milestones and Schedule Dates

The ETC is based on the project milestones and schedule dates shown in the following two tables. Note that the estimate is based upon this schedule and not a 'validated' EPC Schedule as originally envisioned.

The Fluor Direct craft resource loading curves developed as part of the ETC effort were developed based on a Level 1 view of the project and not a detailed schedule analysis. Fluor assumed that roughly 97 percent of its Direct work was required by the start date of the Hot Functional Testing (HFT) milestone, and the remaining 3 percent would extend out an additional 5 months.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 38 of 231

Table #1 – Key Milestones and Schedule Dates VC Summer

Key Milestones	VCS Unit 2 April 1, 2016 Revised Target Schedule Dates	VCS Unit 3 April 1, 2016 Revised Target Schedule Dates
Licensing		
Contract Award	7/01/2014	NA
Construction		
First Nuclear Concrete	3/9/2013	11/4/2013
CA20 Nuclear Ready to set	5/5/2014	1/20/2016
Set CA01	7/20/2015	8/10/2016
Set Reactor Vessel	9/30/2016	9/30/2017
Set CV Top Head	6/01/2017	6/1/2018
Start Cold Hydro	3/19/2018	3/19/2019
Startup		
Initial Energization	6/01/2017	6/01/2018
Start Hot Functional Testing	6/20/2018	6/20/2019
Fuel On Site	8/01/2018	8/01/2019
Fuel Load	12/31/2018	12/31/2019
COD	6/30/2019	6/30/2020

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 39 of 231

Table #2 – Key Milestones and Schedule Dates Plant Vogtle

Key Milestones	Vogtle Unit 3 April 1, 2016 Revised Target Schedule Dates	Vogtle Unit 4 April 1, 2016 Revised Target Schedule Dates
Licensing		
Contract Award	7/01/2014	NA
Construction		
First Nuclear Concrete	3/15/2013	
CA20 Nuclear Ready to set	3/15/2014	7/30/2016
Set CA01	8/10/2015	9/30/2016
Set Reactor Vessel	9/30/2016	9/30/2017
Set CV Top Head	6/01/2017	6/01/2018
Start Cold Hydro	3/19/2018	3/19/2019
Startup		
Initial Energization	5/01/2017	5/01/2018
Start Hot Functional Testing	6/30/2018	6/30/2019
Fuel On Site	9/01/2018	9/01/2019
Fuel Load	12/31/2018	12/31/2019
COD	6/30/2019	6/30/2020

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 40 of 231

1.5 Completed Work

The following scope of work, identified in the Fluor Agreement as Exhibit A (Division of Responsibility) of the Fluor Agreement, as being the responsibility of the Constructor are deemed to be complete and therefore accepted by WEC and is now under their Care, Custody and Control. Therefore the following items are not included in this cost estimate:

- Permanent site access road (Roads item 1, page 45 of 111 in DOR)
- Heavy haul road and crane lift pathways (Roads item 3, page 45 of 111 in DOR)
- Railroad rerouting and extension to support construction within the limits of the site boundary (Railroad item 1, page 45 of 111 in DOR)
- Permanent railway and facilities and Associated security provisions (on-site) (Railroad item 2, page 45 of 111 in DOR)
- Evaluate and upgrade Owners owned rail spur to main line if required. Upgrade to higher capacity is by Contractor. Restore/maintain capacity is by Contractor. (Railroad item 4, page 45 of 111 in DOR)
- Supply Raw Water via minimum 12” diameter pipe at the site boundary (Water Systems item 1, page 45 of 111 in DOR)
- Ring Water hold-up tank (Water Systems item 2, page 45 of 111 in DOR)
- Ring Main for Fire Suppression water on site installed during site preparation. This becomes the permanent Fire Ring Main (Water Systems item 3, page 45 of 111 in DOR
- Ring Main for Raw water distribution on site – installed during site preparation. The distribution system for Raw Water Ring Main is a permanent installation, with the exception of localized areas. (Water Systems item 4, page 45 of 111 in DOR)
- Raw Water pre-treatment / pre-treatment plant (if needed) (Water Systems item 5, page 45 of 111 in DOR)
- Relocation, extension and distribution on site of W&W supplied existing potable water meeting DCD requirements. This is performed during site preparation and becomes the permanent system (Water Systems item 6, page 45 of 111 in DOR)
- Temporary protection or rerouting of fire header during excavation (Water Systems item 9, page 45 of 111 in DOR)
- Site permits (Site Development item 1, page 45 of 111 in DOR)
- Environment Impact Assessment (Site Development item 2, page 45 of 111 in DOR)
- Soil investigation and boring plan as input for final layout plan (Site Development item 3, page 45 of 111)
- Demolition of existing foundation & structures (Site Development item 4, page 46 of 111 in DOR)
- Installation of construction site Emergency Notification equipment (Site Development item 5, page 46 of 111 in DOR)
- Deforestation (Site Development item 6, page 46 of 111 in DOR)
- Relocation and extension of existing gas lines (Site Development item 8, page 46 of 111 in DOR)
- Relocation, extension and distribution on site of owner supplied existing sewage services (Site Development item 9, page 46 of 111 in DOR)

Copyright © 2012, Fluor Corporation. All Rights Reserved

- Site grading, clearing, plating, grubbing, removal of spoil offsite (Site Development item 10, page 46 of 111 in DOR)
- Slope and shore protection and rip rap within the limits of the site. Assume no more required after April 1, 2016. (Site Development item 11, page 46 of 111 in DOR)
- Construction waste water retention and disposal – Initial Development and Implementation. Fluor is responsible for maintenance and removal. (Site Development item 14, page 46 of 111 in DOR
- Evaluation of haul routes and site entrance ways (Site Development item 18, page 46 of 111 in DOR)
- Security boundary development (Site Development item 19, page 46 of 111 in DOR)
- Construction site fencing – Initial Development and Implementation. Fluor is responsible for maintenance and removal. (Site Development item 20, page 46 of 111 in DOR)
- General (Site Development item 21, page 46 of 111 in DOR)
- Erosion, Sedimentation and Control Plan – Initial Development and Implementation. Fluor is responsible for monitoring and maintenance. (Site Development item 27, page 46 of 111 in DOR)
- Demolition after initial site preparation in the 2010 timeframe (Site Development item 31, page 46 of 111 in DOR)
- Piling and Caissons if required (Site Development item 32, page 47 of 111 in DOR)
- Supply and Installation of all Construction Support. Maintenance and demobilization of the Construction Support items are part of the Fluor scope (Construction Support items 1 thru 18, page 48 of 111)

1.6 Overview of Physical Scope of Supply

The ETC estimates for the AP1000 plants are based on WEC's "Standard Plant" definition and detailed design quantity information provided to Fluor. The major Structures/ Areas are the Shield/ Containment and Auxiliary buildings making up the Nuclear Island (NI); the Turbine Island (TI) made up of the Turbine Building and Annex Building; and Balance of Plant (BOP) made up of Standard Plant Yard and other Site Specific Scope.

- o Containment / Shield Building (NI)
- o Auxiliary Building (NI)
- o Passive Containment Cooling Ancillary Water Storage Tank (NI)
- o Radwaste Building (NI)
- o Turbine Building (TI)
- o Transformer Area (TI)
- o Turbine Building lay down Area (TI)
- o Annex Building (TI)
- o Standard Plant Yard (BOP)
- o Site Specific (BOP)

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 41 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 42 of 231

The ETC estimate used the following Scope Division of Responsibility (DOR):

Description	WEC Responsibility	Fluor Responsibility
Direct & Indirect Craft Labor	Hire and Manage per latest DOR	Hire and Manage per latest DOR; Fluor to price for ETC
Non-Manual Staff Labor	Hire and Manage WEC Required Resources	Hire and Manage; Fluor to price for ETC
Direct Material	Provide MTO to Fluor ; WEC to price for ETC	Procure & Manage as Agent for WEC
Direct Subcontract (L&M)	Provide MTO to Fluor; WEC to price for ETC	Procure & Manage as Agent for WEC
Indirect and Other Costs	Procure and Manage per latest DOR	Procure and Manage per latest DOR; Fluor to price for ETC

The ETC estimate is based upon the following:

	VC Summer	Plant Vogtle
Direct Labor Costs	ETC per Quantities from WEC	ETC per Quantities from WEC
Direct Material Costs	Excluded, ETC to be added by WEC	Excluded, ETC to be added by WEC
Direct Subcontract Costs	Total from WEC's S/C Log plus Fluor Supply Chain Comments, WEC to revise costs to ETC	Total from WEC's S/C Log plus Fluor Supply Chain Comments, WEC to revise costs to ETC
Indirect Manual Costs	ETC per Fluor's Estimating Methodology	ETC per Fluor's Estimating Methodology
Indirect Non-Manual Costs	ETC per Fluor's Staffing Plan	ETC per Fluor's Staffing Plan
Indirect Material Costs	ETC per Fluor's Estimating Methodology	ETC per Fluor's Estimating Methodology
Indirect Subcontract Costs	ETC per Fluor's Estimating Methodology with input from Site Contract Administrator	ETC per Fluor's Estimating Methodology with input from Site Contract Administrator
Other Costs	ETC per Fluor's Estimating Methodology	ETC per Fluor's Estimating Methodology

All "to go" equipment and bulk commodity materials provided in the above listed files as MTO's were developed by WEC and supplied to Fluor for estimating to evaluate the required direct and indirect installation hours. Fluor takes no responsibility for accuracy of scope or quantity base provided by WEC since they were not validated by Fluor.

Cash flow constraints, considerations or restrictions by the Owner and/or WEC were not considered during the considered during the estimating process.

Plant is designed and built to US Codes and Standards, and per the DCD and other NRC requirements

1.7 Basis Documentation

The estimate is based on the following key documentation provided by WEC throughout the Fluor proposal development phase:

Attachment 5 includes the pricing guidelines for Construction Equipment less than 60 tons.

Copyright © 2012, Fluor Corporation. All Rights Reserved

Attachments 6a includes a listing of incorporated "Cut/Add" Changes to the Estimate that were received on October 7, 2016.

WEC presented Equipment and Material files and a file for Modules for the VC Summer project and, the same files for Vogtle. These are described later in the BOE.

2.0 DIRECT FIELD COSTS

2.1 Construction Execution Strategy

2.1.1 Execution Plan

The attached DOR defines the project sub-contracting plan

Fluor will provide construction management, bulk commodity procurement, project controls, field engineering, health safety and environmental (HSE) management, quality control, subcontractor management, and material management services to construct two Westinghouse AP1000 nuclear power units.

Construction of the power block and BOP structures will be self-performed.

Fluor has assumed all permanent plant materials will be available as needed to progress construction effort with no delays or impacts.

2.1.2 Direct Hire Craft labor vs. Sub Contract

The estimate files provided by WEC identify the items that are contracted and which items need to be quantified by Fluor for direct hire installation hours.

The Subcontract Costs were not developed based upon quantities, but were derived jointly by WEC and Fluor from the Subcontract Logs provided by WEC. WEC informed Fluor that Performance and Payment Bonds were included in the S/C value shown in the Subcontract Logs provided to Fluor.

2.1.3 Construction Approach

The AP 1000 has been designed to support a modularized and over the top construction approach. Currently there are structural and mechanical modules identified for each site and site assembly of these modules will be by Fluor. The largest module is expected to weigh 1500 ton. Westinghouse is responsible for the fabrication and shipment of these modules to the site. Fluor is responsible to lift, set, install, connect, and finish out these modules.

2.1.4 Overtime/2nd Shift:

VC Summer includes a $1.00 per hour differential rate adjustment for night shift, plus associated benefits and burdens.

Vogtle includes a $0.25 per hour differential rate adjustment for night shift plus half hour paid lunch time, plus associated benefits and burdens. The craft working a

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 43 of 231

night shift will be paid for 10 hours while only working 9.5 hours. The lunch period is a paid time period.

2.1.5 Work Week

VC Summer's work week is a rolling 3 week shift of 2 weeks at 60 hours per week and 1 week at 50 hours per week. The 60 hours per week is based upon 6 days at 10 hours per day. The 50 hours per week is based upon 5 days at 10 hours per day. The plan is that 40 percent of the ETC hours will be performed on the second shift. Both shifts are working the same work week schedule. This equates to an average work week plan of 56.7 hours per week.

Vogtle's work week is a steady work shift of 60 hours per week. The 60 hours per week is based upon 5 days at 12 hours per day. The plan is that 40 percent of the ETC hours will be performed on the second shift. Both shifts are working the same work week schedule.

2.2 Labor Rate Basis

2.2.1 Vogtle

The craft work at Plant Vogtle will be executed as a Union closed shop. The craft labor rates are based on the current site Project Labor Agreements (except for sheet metal) which is based on-site labor report, date 08-14-16. See Attachment 1c for labor rates, comments and PLA expiration dates.

The craft labor rates shown in Attachment 1c are base wage rates, not composite rates. Composite rates are based upon craft mix and crew mix history and assumptions. A crew mix comprises of a general foreman, foreman, journeyman and apprentices. The site Construction Group assisted in the development of the craft mix and crew mix. See Attachment 4b for information on craft mixes and crew mixes which resulted in the composite average craft labor rates reflected in the estimate.

The compensation adder for craft working a night shift is $ 0.25/hour. This is shown in Attachment 1c. The impact of the planned overtime and night shift work is captured in Attachment 3b. The premium costs for overtime and night shift work is not included in the craft rates, but is added separately within the Direct and Indirect estimates.

Craft Workers Compensation Insurance is paid under the Owner's OCIP program. Workers compensation is therefore excluded from the estimate. . Fluor has included 1.8% for CGL in the ETC since Fluor's corporate guidelines is based upon a recovery of CGL from all projects, regardless of OCIP program. The 1.8% is discounted from the standard rate for a non-OCIP program.

Fluor craft Overhead rate of $1.00 per craft hour (per contract agreement) is included in the estimate as a separate line.

2.2.2 V.C. Summer

The craft work at Plant VC Summer will be executed as an open shop project. The labor rates are based upon the current site labor agreement and have not been escalated. The craft labor Benefit rate is a carryover of the CB&I Craft Wage Schedule, dated 11/24/14. See Attachment 1a for labor rates and comments. Labor

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 44 of 231

compensation and burdened rates are as of 08/22/16.

An ALMA was prepared for the project. The recommendation from the ALMA is shown in Attachment 1a. Attachment 1b is an excerpt from the ALMA.

The craft labor rates shown in Attachment 1a are base wage rates, not composite rates. Composite rates are based upon craft mix and crew mix assumptions. A crew mix comprises of a general foreman, foreman, journeyman and helpers. The site Construction Group assisted in the development of the craft mix and crew mix and has agreed to the resulting averages used in this estimate. See Attachment 4a for information on craft mixes and crew mixes which resulted in the average craft labor composite rates reflected in the estimate.

Per Diem is included in the Indirect estimate. Reference Attachments 1a and 2 for the per diem rates in the estimate and its basis. The current site average for craft receiving per diem is 69.6%. However, the average ETC rate used is 76.8% of all craft due to the planned increase of travelers to meet the higher project staffing requirements. Per Diem is not included in the craft labor rate, but added separately within the Indirect Estimate.

The compensation adder for craft working a night shift is $1.00/hour. This is shown in Attachment 1a. The impact of the planned overtime and night shift work is captured in Attachment 3a. The premium costs for overtime and night shift is not included in the craft labor rates, but is added as a separate line entry within the Direct and Indirect estimates.

Craft Workers Compensation Insurance is paid under the Owner's OCIP program. Workman compensation is therefore excluded from the estimate. Fluor has included 1.8% for CGL in the ETC since Fluor's corporate guidelines is based upon a recovery of CGL from all projects, regardless of OCIP program. The 1.8% is discounted from the standard rate for a non-OCIP program.

Fluor craft Overhead rate of $1.00 per craft hour (per contract agreement) is included in the estimate as a separate line item.

2.3 Productivity Analysis

A site specific project productivity analysis was performed for Vogtle and VC Summer and is incorporated in the estimate. See Attachment 7 for details of this analysis. The results were reviewed and agreed upon by the Construction teams at Vogtle and VC Summer.

Craft Performance Factors (PFs) were established by Accounts, Areas, and Units. Performance Factors are based on current and previous project experience and information on local unions. The analysis focused on the following attributes that drive craft productivity.

1. Craft Availability – Unemployment and Demand
2. Craft Skill Level & Experience
3. Work Space per Person / Congestion
4. Work Week and Hours
5. 40% Night Shift Work
6. Site Conditions / Logistics
7. Work Heights
8. Climate / Temperature / Precipitation

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 45 of 231

9. Other Site Specific Performance Conditions

The key results of the Performance Factors are provided below:

Table for Vogtle and VC Summer – PF Results

	Nuclear Island		Turbine Island		BOP
Vogtle Site	Unit A	Unit B	Unit A	Unit B	1.45
ETC Analysis	1.95	1.70	1.89	1.64	
VC Summer Site	Unit A	Unit B	Unit A	Unit B	
ETC Analysis	1.90	1.65	1.83	1.59	1.45

2.4 Quantity Basis

Design quantities for both Standard Plant Design and Site Specific design were provided to Fluor by WEC. Installed quantities were also provided to Fluor by WEC. Fluor used these two sets of values to calculate "to be installed" quantities. Labor effort hours were applied **only** to the items coded "to be installed".

The HVAC estimate was provided by WEC based on Subcontract pricing and information received from the subcontractor.

2.4.1 MTO Documents

This table lists the documents/files provided to Fluor by WEC and their use in developing the estimate.

Document/ File Name	MTO Quantity Use	Provided by
FROZEN-Quantity Report-ETC Bulk Quantities R3.xls – Posted to Fluor 08/24/2016	Standard Plant total bulk Qtys and installed Qtys both sites	WEC
FROZEN-Quantity Report-ETC Bulk Quantities R5.xls – Posted to Fluor 10/10/2016	To be used for subcontractor scope identification only	WEC
FROZEN-Quantity Report SITE Vogtle-ETC Bulk R3.xlsx – Posted to Fluor 08/29/2016	Plant Vogtle total bulk Qtys and installed Qtys	WEC
FROZEN-Quantity Report SITE Vogtle-ETC Bulk R4.xlsx – Posted to Fluor 10/03/2016	To be used for subcontractor scope identification only	WEC

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 46 of 231

FROZEN-Quantity Report SITE VCS-ETC Bulk Quantities R4.xlsx – Posted to Fluor 08/22/2016	VC Summer total bulk Qtys and installed Qtys	WEC
FROZEN-Quantity Report SITE VCS-ETC Bulk Quantities R5.xlsx – Posted to Fluor 10/07/2016	To be used for subcontractor scope identification only	WEC
FROZEN_MEL Components R2.xls – Posted to Fluor 08/29/2016	Includes non-equipment items such as door, bath fixtures, valves, duct accessories, instruments, Archt. finishes	WEC
FROZEN_MEL Components R3.xls – Posted to Fluor 10/01/2016 (Includes Site Specific Mels)	To be used for subcontractor scope identification only	WEC
VCSummer Site Specific MEL.xlsx – Posted to Fluor 06/20/2016	Site specific equipment	WEC
Vogtle Site Specific MEL.xlsx – Posted to Fluor 06/20/2016	Site specific equipment	WEC
Additional_Cranes_RevA_09_JUNE_2016.xlsx	Bridge Cranes, Monorails/ Hoists, Vertical lift equip.	WEC/ Moorside
Electric_Components_RevA23_MAY_2016.xlsx	Electrical Equipment	WEC/ Moorside
Electric_Cubicles_RevA_23_MAY_2016.xlsx	Electrical Equipment	WEC/ Moorside
Fuel_Handling_Components_RevB.xlsx	Fuel Handling equipment including cranes, hoists, tools	Wec/ Moorside
HeatExchangers_RevA.xlsx	Heat Exchangers, Cooling Towers, Condensers	WEC/ Moorside
HVAC_RevA_16_May_2016.xlsx	Ductwork, Dampers, & HVAC Equip. Surface area for duct insulation.	WEC/ Moorside
Large_Primary_Equipment_RevB.xlsx	Tanks & Vessels; Cooling Pumps; Containment Vessel	WEC/ Moorside
LoopPiping_RevA.xlsx	Primary Coolant Loop Piping	WEC/ Moorside
Pumps_RevA.xlsx	Pump equipment detail	WEC/ Moorside
RV_and_Components_RevB.xlsx	Reactor Vessel; Internals; & Components	WEC/ Moorside
Tanks_RevC.xlsx	Shop Fab Tanks; PXS Gutter	WEC/ Moorside
TurbineLineParts_RevA_23_MAY_2016.xlsx	Steam Turbine and Condensers	WEC/ Moorside
Valves_Rev B_13_May_2016.xlsx	Valves; Manual and Actuated	WEC/ Moorside

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 47 of 231

Vessels_RevB.xlsx	Vessels; Shop Fab	WEC/ Moorside
Additional_Items_RevA_31_MAY_2016.xlsx	HVAC Equip. Misc. Hoists; Monorails; Cranes; Pumps; Tanks	WEC/ Moorside
2016 ETC Estimate CUT + ADD Sheet R2 – Posted to Fluor 10/07/2016	Late changes to quantities reports identified after frozen document date	WEC

2.4.2 Allowances

No "uplift" allowances for additional quantities, cut/waste, Owner caused rework, over pour, overbuy is included in the estimate. The only allowances included in the estimate are for Direct Field Labor (DFL) hours when the scope item was unclear or poorly defined and an allowance of hours was established for the ETC estimate. These allowances are identified in the ETC with a unit of measure of "LOT" or "LS". Additionally all subcontract values are considered an allowance as quantity information was not available in a timely manner to develop a "bottoms up" estimate for the Subcontracts.

2.5 Pricing Basis for Direct Material Costs

Direct Material costs are being estimated by WEC procurement in the form of unit rates based on the MEL estimate file and the site specific data files transmitted to Fluor. WEC will be responsible for adding these material costs to Fluor's estimate.

2.6 Prime Accounts

The Prime Accounts include the following items within Fluor's standard Direct Field Costs categories:

- 00 Site Preparation, Roads, Excavation and Piling
- 10 Concrete
- 20 Steel
- 30 Buildings
- 31 HVAC
- 40 Mechanical Equipment
- 41 Modules
- 50 Piping
- 60 Electrical
- 61 Auxiliary Systems
- 70 Instrumentation and Controls
- 80 Paint
- 81 Insulation

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 48 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 49 of 231

The Prime accounts described above were estimated based on a combination of Fluor Standard work effort hours, VCS and Vogtle historical information, quantity data supplied by WEC, engineering and design data supplied by WEC. Additional details regarding these prime accounts, such as quantity, pricing, and general assumptions are provided in the following sections.

2.6.1 Site Preparation, Roads, Excavation and Piling

Balance of Plant (BOP) and Site Specific civil and site work quantities were supplied by Westinghouse and used to develop estimated construction costs.

The following line item(s) have been excluded due to a general lack of scope definition

- Fill Material Processing - 2 LS
- Site Dewatering - 12 LS
- Demolition for Removal - 3 LS
- Directional Boring/Tunneling - 1 LF
- Paving, Concrete - 1 SF

<u>ASSUMPTIONS</u>

1. Erosion Control – 4,028 AC – Allowance of 38.07 Mhrs/Unit
2. Guard Post & Bollards – 803 Ea – Allowance of 3.15 Mhrs/Unit
3. Lift Station – 2 Ea – 1,277 Mhrs/Unit
4. Grade Protection – 964,054 Sf – Allowance .07 Mhrs/Unit
5. Load, Haul and Dump (excess) – 151,665 Cy – Allowance .11 Mhrs/Unit

2.6.2 Concrete

The estimated man-hours per ton of reinforcing steel has been based on shop fabricated steel, it does not include any field fabrication.

It is assumed the man-hours for the operation of the concrete Batch Plant and delivery of ready mix is included within the indirect portion of the estimate, therefore excluded from this account.

The estimate assumes the concrete ready mix quantities provided by Westinghouse are the “Net Quantity” installed; no adjustments have been included for over-pour, testing, etc.

Craft man-hours applied to the provided Grout quantities (Epoxy and Cementitious) has been based on an average of Grouting has been included based on an average rate for applications at Structural Column bases and equipment bases to an average thickness of 2”.

2.6.3 Steel

Structural Steel and Miscellaneous Metals quantities were provided by Westinghouse as described in section 2.4.

Copyright © 2012, Fluor Corporation. All Rights Reserved

Per the direction of Westinghouse, supplemental steel quantities have been included in the "Structural Steel (Light)<18ppf" and "Steel (medium), 18-<80ppf" categories. Due the large differences in unit man-hours per ton, the proportional mix was requested from Westinghouse however no response was received. For this ETC, the following table summarizes the composite unit rate mix used in the estimate and will be the basis of change.

	VC Summer		Vogtle	
Basis of Supplemental Steel vs Light	Total Tonnage	Estimated Percent Supplemental	Total Tonnage	Estimated Percent Supplemental
Shield Building	1,765	35%	1,765	35%
Annex Building	1,539	20%	1,318	20%
Auxiliary Building	524	25%	590	25%
Turbine Building	3,181	0%	3,258	0%
Diesel Generator	262	0%	262	0%
Radwaste Building	402	0%	402	0%
Standard Plant Yard	136	0%	171	0%

The Steel craft man-hours estimate assumes all finished shop applied coating will have the appropriate "black out" at all field connection areas, no additional man-hours have been included for removing paint, galvanizing, etc.

The Steel craft man-hours estimate assumes all steel will be shop fabricated off-site, no on-site fabrication has been included

2.6.4 Buildings

Building Standard Plant and BOP Standard Plant building quantities were supplied by Westinghouse and used to develop estimated construction costs.

All quantities were provided to Fluor by WEC as described section 2.4.

The following line item(s) have been excluded due to a general lack of scope definition

- Containment Vessel - 1 EA
- Build-Out, Finishes - 1 LS
- Building Structure/Finishes - 806 SF
- Plumbing - 3 LS
- Pre-Fabricated Buildings - 30,335 EASF
- Finishes - 1 SF

<u>ASSUMPTIONS</u>

1. Overhead Coiling Doors and Operators
   Doors, rolling service, steel, motor operated, fire, class A, 20 gauge, 14' x 14' high, including hardware. Finish Painting is not included.
2. Standard Metal Doors, Frames and Hardware
   1-3/4" x 3'-0" x 7'-0" Hollow Metal Doors, impregnated honeycomb core, fabricated from 18 Gauge Skin, 14 Gauge Channels and baked-on epoxy primer. Pressed Steel Frame is Knockdown (KD) with 4-3/4" or 5-3/4" throat, fabricated of 16 Gauge Steel, Bonderized and Prime Coated. Hardware includes a Standard Duty Cylinder Type Lockset;

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 50 of 231

Hinges, Prime Painted, Full Mortise, Ball Bearing; Concealed Automatic Flush Bolts on Inactive Leaf; 1/2" x 4" Aluminum Threshold. Panic Exit Devices are included for Exit Doors. Finish Painting is not included. (Single Leaf: 67% of total door count and Double Leaf: 33% of total door count)

3. Wire Mesh Doors, Partitions, and Frames
   Woven wire partitions, for tool or stock room enclosures, channel frame, painted wall panels, 1-1/2" diamond mesh, 10 gauge. wire, 4' w x 10' h and sliding doors, full height, 6' w x 10' h, Finish Painting is not included. (Single Leaf: 100% of total door count)
4. Special Security Doors
   Steel door, flush UL 752 Level 8, both 14 gauge, 1-3/4", 4'-0" x 7'-0", with ballistic core and welded frame, Finish Painting is not included. (Single Leaf: 100% of total door count)
5. Water Tight Doors
   Hinged Watertight Door, 3'-0" x 7'-0", with Mechanical Seal (D3C) Finish Painting is not included. (Single Leaf: 100% of total door count) by Presray Corporation, Wassaic, NY or equal
6. Building Insulation
   Roof deck insulation, fiberglass, 2-7/16" thick, R10
7. HVAC Systems Security Barriers
   Maximum Security Perforated Face Grille (MSPG) by Price Industries Inc., Suwanee, GA or equal
8. Emergency Eyewash/Safety Showers
   Industrial safety fixture, shower, single head, drench, ball valve, pull, freestanding, walk-thru decontamination with eye-face wash
9. Windows
   Windows, aluminum, commercial grade, stock units, sliding, insulating glass, 9'-0" x 5'-0" opening, incl. frame and glazing
10. Dishwashers
    Dishwasher, commercial kitchen equipment, automatic, 190 to 230 racks per hour
11. Ice Makers
    Ice flakers, commercial kitchen equipment, 1,000 lbs per day
12. Oversized Specialty Security / Shield Doors
    Steel door, flush UL 752 Level 8, both 14 gauge, 1-3/4", 5'-0" x 8'-0", with ballistic core and welded frame, Finish Painting is not included. (Single Leaf: 100% of total door count)
13. RCDT Shield Doors
    Steel door, flush UL 752 Level 8, both 14 gauge, 1-3/4", 4'-0" x 7'-0", with ballistic core and welded frame, Finish Painting is not included. (Single Leaf: 100% of total door count)
14. Hatches
    Aluminum or Galvanized Steel Hatches, Low Profile or Sloped Cover, average 32 SF each, Insulated, with Curb, Spring Loaded Hinge Cover and Weather Gasket.
15. Raised Flooring Systems
    2’ x 2’ metal or metal with wood core panels with High Pressure Laminate surface (HPL). One electrical/equipment panel with box and one vent panel for each 100 Square Feet of floor area. Height is assumed to be 8" to 18" above the existing subfloor. The panels are supported on free standing pedestals or on pedestals with grid system.
16. Bullet Resistant Enclosures

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 51 of 231

Guard house, prefab concrete, level IV, 8' x 8', with bullet resistant doors, windows, exterior roof, lights, wiring & insulation

17. Security Enclosures
    Guard house, prefab concrete, level IV, 8' x 8', with bullet resistant doors, windows, exterior roof, lights, wiring & insulation
18. Wall Gun Ports
    Sliding Bullet Resistant Gun Port (SSGP) by Armortex, Schertz, TX or equal
19. Defensive Fighting Positions
    Prefabricated Bullet Resistant Armored Fighting Positions (AFP's) by PROTECH Armor Systems, Pittsfield, MA or equal
20. Portable Defensive Fighting Positions
    Defensive Fighting Position (DFP) by Perimeter Security Products, Churubusco, IN or equal
21. Security Active Barriers
    Ground Retractable Vehicle Barrier (GRAB-400) by Futurenet Security Solutions, Franklin, TN or equal
22. Plant Security Delay Barriers
    Turnstiles, high security, galvanized, electric, 5'-5" diameter x 7' high
23. Louvers
    Louver, aluminum, extruded, with screen, mill finish, average 50 SF each, dual combination, with motor for electric or pneumatic operation, intake or exhaust
24. Relief Panels
    Steel siding, factory sandwich panel, 2" insulation, galvanized, average 25 SF each, polyvinylidene exterior finish, 22 gauge, incl. fasteners
25. Containment Vessel Seals
    Allowance Included for Estimated Craft Labor Man Hours
26. Showers
    Shower, stall, polypropylene, with molded stone floor, 32" x 32", includes drain, built-in shower head, arm, by-pass, integral stops, handles, mixing valve control and door/curtain.
27. Fireproofing on Structural Steel
    Fireproofing, Monokote, Sprayed on Structural Steel, 2" thick
28. Waterproofing Sealants and Membranes
    Membrane waterproofing, on walls, glass fiber fabric, 3 ply, mopped
29. Masonry Walls and Structures
    Concrete block, exterior, tooled joints both sides, normal weight, 2000 psi, 12" x 8" x 16", includes mortar, grout and horizontal joint reinforcing every other course, excludes scaffolding and vertical reinforcing. Finish Painting is not included.
30. Roofing, Insulation and Flashing
    Built-up roofing systems, coal tar pitch with gravel, slag surfacing, coated glass fiber base sheet and 2 plies of glass fiber felt, (type IV), mopped, on nailable decks
31. Metal Siding
    Steel siding, factory sandwich panel, 2" insulation, galvanized, polyvinylidene exterior finish, 22 gauge, incl. fasteners.

2.6.5 HVAC

All HVAC System scope except for subcontracted HVAC insulation is by WEC. The list of HVAC scope to be estimated by WEC includes:

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 52 of 231

1. Equipment (ACU's, AHU's, Coils, Dampers, EFU's, Exhausters, Fans, Filter Units, Heaters, Humidifiers, Louvers, Plenums and Tanks)
2. Duct, Duct Supports
3. Expansion Joints
4. Filters

2.6.6 Mechanical Equipment

Standard Plant

Erection hours for equipment are based on sizes and weights provided by Westinghouse. Estimating has alerted and discussed this with Westinghouse.

The Nuclear Steam Supply System (NSSS) erection and Steam Turbine Generator erection hours are based upon a recent Darlington nuclear estimate with comparison to Toshiba installation guidance and adjusted per equipment list provided by Westinghouse.

The equipment scope is based on the Westinghouse mark-up of the UK estimate file. There is a possible scope gap for equipment that was not in the original UK estimate file. Westinghouse needs to investigate and provide the necessary estimate cost associated if there are missing items.

Site Specific

The erection hours for the balance of plant and site specific equipment are based on equipment sizes, compared to previous estimates utilizing equipment with similar sizes and weights.

Allowance for installation of shims is included in the estimate.

2.6.7 Modules

A list of modules is referenced in Attachment 8.

The hours included in the estimate file have been reviewed by the relevant and responsible VCS construction managers and this estimate includes their comments. Both site estimating teams from Vogtle and VC Summer performed a module by module estimate review and submitted a combined module estimate in summary format with specific comments on all modules.

Westinghouse did not provide the field weld quantities for the modules. Therefore site estimators at both Vogtle and VC Summer developed weld quantities from the detailed design drawings. The length of weld is what Vogtle estimators concentrated on for their labor hour estimates. VC Summer estimators developed weld volume which includes length and size, type of weld and position of the weld to deposit. The following is mostly VC Summer specific.

The direct craft hours shown on the estimate includes the site location factor multiplier. There are separate categories for the site to:

1. connect the sub module assemblies into modules,
2. move, lift and set the assembled modules into the final location, and

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 53 of 231

3. to structurally connect the modules to the plant.

For all modules the effort to move, lift and set in final position is based on weight categories.

The installation estimates for the various types of mechanical modules KB, KU, KQ, R and Q are based on a review of the drawings showing the connection details. Both welding and bolting requirements were quantified. For welding requirements the weld volume was calculated based on the weld symbol. The estimate of in place welding hours includes consideration for the position of the weld; flat, vertical, horizontal or overhead. Field drilling of holes and bolt witness torque time is considered.

This estimate was originally based on no site assembly or repair to resolve QA deficiencies for any mechanical modules to be included in this estimate. The starting instruction received by estimating was to consider all off site fabricated mechanical modules as “perfect”. During construction management review of the mechanical modules estimate a comment was received to include site fabrication / rework of specific to a detailed list of mechanical modules subsequently forwarded to estimating.

The structural modules shown in this estimate are based on the extrapolation of hours per ton for module assembly and final fit up install from a few very detailed estimates created for specific modules or plant components. The detailed MTO in all cases develops pounds of weld metal to deposit and the labor hours do account for weld position and the differences in metallurgy. Most of the assembly estimates for the CA floor modules are backed up with a detailed weld MTO and estimate.

A detailed estimate and basis of estimate for the IRWST tank was created and it includes for the in place welding bolting and or assembly of components and modules CA01, CA02, CA03, CA55,CA56, and CA57. It was discovered that the IRWST tank floor is Duplex stainless steel and is fully welded together from loose shipped parts and all welded seams require a leak chase. This IRWST tank floor and internal components are included in this estimate as dark blue highlighted items. No concrete is included for the IRWST but the leak chase embedded carbon steel, heavy Duplex embedded plates and stainless steel parts are included. The hours per module ton to install the IRWST was back calculated from the IRWST module parts to forecast “to-go” hours for the modules not based on detailed estimates.

A detailed estimate and basis of estimate was created for Module 31. Module 31 is almost 41 tons and the detailed estimate is based on the design drawings which define the installation sequence that is caused by the physical space around the reactor vessel. The result is that the majority of the pieces of the module must be stick built in place welded assembly. The install in-place hours per ton back calculated for module 31 is 768.6 hrs/ton (including scaffolding, paint and concrete).

A detailed estimate and basis of estimate was created for Module CA20 specific to units 2 and 3. The CA20 estimate(s) account for the remaining module wall and floor work and leak chased Duplex stainless steel loose floor installation. Not included in this module estimate is the concrete and reinforcing steel needed to be cast on the module floors or underneath the leak chased duplex stainless steel floors.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 54 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 55 of 231

The module CA01 has internal Duplex walls in the refueling pool area that will require a Duplex floor with embeds and leak chased seam welds for the refueling pool. Since the refueling pool floor is also to be created by shipped loose parts, the same labor back calculated from the IRWST tank floor of 19 hrs/sf (with productivity) is applied to the CA01 refueling pool floor. This is included for both unit 2 and unit 3. For unit 3 the B plate welding is included at 17,000 hours.

This estimate includes CB20 as a site assembled by direct craft item. The 150,000 estimated hours to assemble one tank is based on receiving off site fabricated sub modules and welding the sub modules together. This tank is constructed from Duplex and includes welded on carbon steel external structural members. All Duplex seam welds have a leak chase external to the wetted side of the tank interior.

Equipment Piping and Commodity Modules

The estimates encompassing family of modules KB, KQ, KU and R modules were derived from the latest drawing revisions obtained from Documentum. However, it must be noted that a large number of the drawings used were undergoing E&DCR revisions at the time the estimate was constructed.

Estimates prepared for these modules covered the following construction areas;

1. Assembly Hrs.
2. Setting Hrs.
3. Field Fit-up/Tie In Hrs.

As a review comment and provided list of specific mechanical equipment modules will be fabricated or repaired on site. This separate scope list was labor estimated and this is included in this estimate as field fabrication items. The estimated labor hours for the site fabrication or repair fabrication are based on the Highbridge and associates developed estimate for all the non-safety related mechanical modules.

Other than just stated list the fabrication of modules is excluded from this estimate and is subcontracted off site by others. Electrical-controls, piping connections are also excluded and are covered by the technical disciplines respectively, using piping plans, P&IDs, Cable Schedules AKA the Bulk MTOs.

2.6.8 Piping

Standard Plant (VC Summer)

The Piping Estimate is based on an MTO provided by WECTEC via files "Quantity Report – ETC Bulk Quantities R3" and file "MEL Components R2" :

- The piping estimate is based on shop fabricated piping for all above ground piping.
- MTO provided by WECTEC included the Standard plant quantities with total pipe lengths only. The MTO excluded fittings. Piping composite installation hours were developed using Fluor in-house fitting frequency by specification designation from similar projects by area.

Copyright © 2012, Fluor Corporation. All Rights Reserved

- Piping specifications by size per system and isometric drawing are included in the estimate.
- Pipe insulation is included in the insulation account.
- The Pipe Heat Tracing is included in the Electrical account.
- Painting and sandblasting for Carbon Steel pipe is included in the painting account.
- Pipe Supports, Specialty, Hydro-Testing and Flushing are a part of piping account 50.203 “Pipe – Eng. Supports, Specialty, Testing, Other”.
- NDE is excluded from the piping account and included in the indirect estimate.
- The MTO for Pipe supports / hangers did not include and sizes or weights. Therefore an allowance is included of 80Mhrs / support.
- Hydro-Testing and flushing is included in estimated hours.
- All valves and inline devices with no size in Standard Plant priced and labored as 5” average pipe size,
- Quick connectors .75”,all drains 4”,
- Labeling Pipe 1 every 30 ft.12 unit hours is included in estimate.
- Valve tags are included @ .24 unit hours each.
- Labeling Pipe has been included - 1 label per 30 feet @ .12 unit hours.
- Allowed 25 unit hours for pipe seal and penetrations.
- Allowed 20 unit hours for pipe supports with no size.

Site Specific

The Piping Estimate is based on an MTO provided by WECTEC via files “Quantity Report SITE VCS-ETC Bulk Quantities R4” and MEL Components R2:

- The piping estimate is based on shop fabricated piping for all above ground piping.
- MTO provided by WECTEC included the Standard plant quantities with total pipe lengths only. The MTO excluded fittings. Piping composite installation hours were developed using Fluor in-house fitting frequency by specification designation from similar projects by area.
- Piping specifications by size per system and isometric drawing are included in the estimate.
- Pipe insulation is included in the insulation account.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 56 of 231

- The Pipe Heat Tracing is included in the Electrical account.
- Painting and sandblasting for Carbon Steel pipe is included in the painting account.
- Pipe Supports, Specialty, Hydro-Testing and Flushing are a part of piping account 50.203 “Pipe – Eng. Supports, Specialty, Testing, Other”.
- NDE is excluded from the piping account and included in the indirect estimate.
- The MTO for Pipe supports / hangers did not include and sizes or weights. Therefore an allowance is included of 80Mhrs / support.
- Hydro-Testing and flushing is included in estimated hours.
- All valves and inline devices with no size in Standard Plant priced and labored as 5” average pipe size,
- Quick connectors .75”,all drains 4”,
- Labeling Pipe 1 every 30 ft.12 unit hours is included in estimate.
- Valve tags are included @ .24 unit hours each.
- Labeling Pipe has been included - 1 label per 30 feet @ .12 unit hours.
- Allowed 25 unit hours for pipe seal and penetrations.
- Allowed 20 unit hours for pipe supports with no size.
- Excavation and backfill included in underground piping material and labor.
- Assumed Hose stations @ 1.5”.
- Underground pipe with no pipe class description, assumed to be HDPE.

Standard Plant (Vogtle)

The Piping Estimate is based on an MTO provided by WECTEC via files “Quantity Report – ETC Bulk Quantities R3” and file “MEL Components R2” :

- The piping estimate is based on shop fabricated piping for all above ground piping.
- MTO provided by WECTEC included the Standard plant quantities with total pipe lengths only. The MTO excluded fittings. Piping composite installation hours were developed using Fluor in-house fitting frequency by specification designation from similar projects by area.
- Piping specifications by size per system and isometric drawing are included in the estimate.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 57 of 231

- Pipe insulation is included in the insulation account.
- The Pipe Heat Tracing is included in the Electrical account.
- Painting and sandblasting for Carbon Steel pipe is included in the painting account.
- Pipe Supports, Specialty, Hydro-Testing and Flushing are a part of piping account 50.203 “Pipe – Eng. Supports, Specialty, Testing, Other”.
- NDE is excluded from the piping account and included in the indirect estimate.
- The MTO for Pipe supports / hangers did not include and sizes or weights. Therefore an allowance is included of 80Mhrs / support.
- Hydro-Testing and flushing is included in estimated hours.
- All valves and inline devices with no size in Standard Plant priced and labored as 5” average pipe size,
- Quick connectors .75”,all drains 4”,
- Labeling Pipe 1 every 30 ft.12 unit hours is included in estimate.
- Valve tags are included @ .24 unit hours each.
- Labeling Pipe has been included - 1 label per 30 feet @ .12 unit hours.
- Allowed 25 unit hours for pipe seal and penetrations.
- Allowed 20 unit hours for pipe supports with no size.

Site Specific (Vogtle)

The Piping Estimate is based on an MTO provided by WECTEC via files “Quantity Report SITE Vogtle-ETC Bulk R3” and MEL Components R2:

- The piping estimate is based on shop fabricated piping for all above ground piping.
- MTO provided by WECTEC included the Standard plant quantities with total pipe lengths only. The MTO excluded fittings. Piping composite installation hours were developed using Fluor in-house fitting frequency by specification designation from similar projects by area.
- Piping specifications by size per system and isometric drawing are included in the estimate.
- Pipe insulation is included in the insulation account.
- The Pipe Heat Tracing is included in the Electrical account.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 58 of 231

- Painting and sandblasting for Carbon Steel pipe is included in the painting account.
- Pipe Supports, Specialty, Hydro-Testing and Flushing are a part of piping account 50.203 “Pipe – Eng. Supports, Specialty, Testing, Other”.
- NDE is excluded from the piping account and included in the indirect estimate.
- The MTO for Pipe supports / hangers did not include and sizes or weights. Therefore an allowance is included of 80Mhrs / support.
- Hydro-Testing and flushing is included in estimated hours.
- All valves and inline devices with no size in Standard Plant priced and labored as 5” average pipe size,
- Quick connectors .75”,all drains 4”,
- Labeling Pipe 1 every 30 ft.12 unit hours is included in estimate.
- Valve tags are included @ .24 unit hours each.
- Labeling Pipe has been included - 1 label per 30 feet @ .12 unit hours.
- Allowed 25 unit hours for pipe seal and penetrations.
- Allowed 20 unit hours for pipe supports with no size.
- Excavation and backfill included in underground piping material and labor.
- Assumed Hose stations @ 1.5”.
- Underground pipe with no pipe class description, assumed to be HDPE.

2.6.9 Electrical

<u>Standard Plant</u>

General

Electrical Equipment Basis of Quantities are based on MEL Components R2

Bulk Material Basis of Quantities are based on Quantity Report – ETC Bulk Quantities R3

- Cable and Terminations
  - Low Voltage Power Cable quantities are based on Quantity Report – ETC Bulk Quantities R3 (Cable-Scheduled)
  - Lighting Cables quantities are based on Quantity Report – ETC Bulk Quantities R3 (Cable-Unscheduled)

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 59 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 60 of 231

- o Unit Instrument & Control Cables quantities are based on Quantity Report – ETC R3 (Cable-Schedule)
- o Fiber Optic Cable quantities are based on Quantity Report – ETC Bulk Quantities R3 (Cable-Scheduled)
- o Fire Detection and Communication Cable quantities are based on Quantity Report – ETC Bulk Quantities R3 (Cable-Unscheduled)
- o Cable/Wire (scheduled and unscheduled) Termination quantities are based on Quantity Report – ETC Bulk Quantities R3 (Terminations), the man-hours included are for 1/C of 1 end of the cable.

- Labor for Underground Raceway quantities (conduit straight sections) are based on Quantity Report – ETC Bulk Quantities R3. Underground conduit fittings were not identified and therefore Fluor added 90 degree bends, connectors, and spacers as required to arrive at an overall composite rate.
- Labor for Aboveground Raceway quantities (conduit straight sections) are based on Quantity Report – ETC Bulk Quantities R3. Aboveground conduit fittings were not identified and therefore Fluor added 90 degree bends, and conduit connections as required to arrive at an overall composite rate. Labor for Aboveground Raceway quantities (cable tray straight sections) are based on Quantity Report – ETC Bulk Quantities R3. Aboveground cable tray fittings, splice plates, and hold down clips have been added as required to arrive at a composite rate.
- Labor for Aboveground Raceway Engineered Support quantities (conduit and cable tray) are based on Quantity Report – ETC Bulk Quantities R3. They were identified as Conduit and CT Supports.
- Labor for Aboveground Raceway Non-Engineered Support quantities (conduit and cable tray) are based on Quantity Report – ETC Bulk Quantities R3. They were identified, and are included in the aboveground conduit and cable tray composites.
- Labor for light fixture quantities is based on Quantity Report – ETC Bulk Quantities R3. Light fixture supports have been added by Fluor.
- Labor for Underground Grounding Wire quantities are based on Quantity Report – ETC Bulk Quantities R3. Grounding rods, cadwelds, and test wells have been added as required to arrive at a composite rate.
- Labor for Aboveground Grounding Wire quantities are based on Quantity Report – ETC Bulk Quantities R3. Grounding connections, cadwelds, and test wells have been added as required to arrive at a composite rate.
- Lightning Protection Wire quantities are based on Quantity Report – ETC Bulk Quantities R3, lightning protection air terminals, surge protectors, and connections have been added as a composite by Fluor.
- Heat Tracing Cable quantities are based on Quantity Report – ETC Bulk Quantities R3, thermostats, connection kits, support material, and caution labeling have been added as a composite by Fluor.
- Cathodic Protection, all quantities have be deleted from Quantity Report – ETC Bulk Quantities R3.
- For specific Electrical Contracts, see Attachment Attachments 10b and 10c.

<u>Site Specific</u>

Electrical Equipment Basis of Quantities is based on MEL Components R2 (VC Components on Data Sheets and Vogtle Components on Data Sheets)

Copyright © 2012, Fluor Corporation. All Rights Reserved

Bulk Material Basis of Quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3

- Cable and Terminations
  - Low Voltage Power Cable quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3
  - Lighting Cables quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3
  - Unit Instrument & Control Cables quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3
  - Fiber Optic Cable quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3
  - Cable/Wire (scheduled and unscheduled) Termination quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3), the man-hours included are for 1/C of 1 end of the cable.
- Aboveground Raceway quantities (conduit straight sections) are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3. Aboveground conduit fittings, 90 degree bends, and conduit connections have been added as a composite by Fluor. Used 90% <3", 7% 3-4", and 3% 5-6".
- Underground Raceway quantities (conduit straight sections) are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3. Underground conduit 90 degree bends, connectors, and spacers have been added as a composite by Fluor. Used 41.4% 4" PCV and 58.6% 4" RGS.
- Conduit – Non-Metallic (503,064LF) on Quantity Report Site VCS-ETC Bulk Quantities R4, man-hours based on 98% <=4" U/G PVC and 2% >4" U/G PVC.
- Lighting quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3. Light fixture supports have been added by Fluor.
- Grounding quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3, grounding rods, cadwelds, etc. have been added as a composite by Fluor.
- Lightning Protection quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3, lightning protection air terminals, surge protectors, and connections have been added as a composite by Fluor.
- Heat Tracing Cable quantities are based on Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3, thermostats, connection kits, support material, and caution labeling have been added as a composite by Fluor.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 61 of 231

- Cathodic Protection, all quantities have been deleted from Quantity Report Site VCS-ETC Bulk Quantities R4 and Quantity Report Site Vogtle-ETC Bulk Quantities R3,
- Miscellaneous and Support
- For specific Electrical Contracts, see Attachments 10b and 10c.

2.6.10 Auxiliary Systems

Fluor Auxiliary Systems are a grouping of the Emergency Preparedness System (EFS) and Plant Security System (SES). All procurement is by Owner or Westinghouse. Westinghouse has awarded this work to multiple subcontractors. It is assumed that the MTO files have identified the scope that is either Fluor's or Subcontractor's responsibility to install.

For the EFS, Fluor will be responsible for all cabling, conduit/raceway, end devices and racks. The estimate assumes all of these quantities were supplied in the MTO files given to Fluor. For the SES, Fluor will be responsible for installing everything that has not been awarded to the SES contractor. The estimate assumes all of these quantities were supplied in the MTO files given to Fluor.

Fluor is aware of one ductbank that will be installed within the Unit 1's Controlled Area for communication/security lines. The estimate has been adjusted for access and productivity issues associated with working inside an operating plant's "controlled" area.

Fluor is aware that the Site Specific Communications design is not complete and cannot be estimated at this time.

Fluor is aware that a new owner controlled area will be established west of unit 3 that will impact construction completion of Unit 4. Impacts have not been evaluated at this time.

The following is a listing of subsystems or scope that is considered to be Auxiliary Systems.

Emergency Preparedness System:
- Internet Protocol Plant Paging & Notification System (IPPA)
- Digital Enhanced Cordless Telephone System (DECT)
- Land Mobile Radio System (LMRS)
- Emergency Private Branch Exchange (EPBX)
- Sound Powered Phone (SPP)
- SES intercom System (SESIC)

NON EP Communications
- Closed Circuit Television (TVS)
- Business Network System (BIZ)
- Satellite Phone Communication System (Conduits only)

Plant Security System:
- Protected Area Entry Access Control Equipment/Facilities
- Vital Area Access Control Equipment/Facilities
- BRE's, Gun Ports, and other Security Enclosures (AS 20)

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 62 of 231

- Intrusion Detection and assessment system (IDS)
- Delay barriers and features (AS21)
- Security Computers and Consoles (JC03)

2.6.11 Instrumentation and Controls

Standard Plant

- Instrument types and quantities are based on MEL Components R2. Man-hours include installation, calibration, and loop check.
- Control Panels and Console quantities are based on MEL Components R2.
- Electronic Cabinet quantities are based on MEL Components R2.
- Local Panel quantities are based on MEL Components R2.
- Instrument Mounting Plate quantities are based on MEL Components R2, man-hours is based on the installation of pre-fabricated plates.
- Computer quantities are based on MEL Components R2.
- Instrument Racks and Support quantities are based on MEL Components R2, installation is based on pre-fabricated Racks and Supports.
- Packaged Instrument System quantities are based on MEL Components R2.
- Aux & Remote Relay Panels quantities are based on MEL Components R2.
- Instrument Specialty quantities are based on MEL Components R2.
- Instrument Valve Manifold quantities are based on MEL Components R2.
- Instrument Tubing and Pipe quantities are based on MEL Components R2, tubing fittings, connections, and supports have been added as a composite by Fluor.
- No allowance has been included for installation of vendor supplied instruments since no count was provided.

Site Specific

For systems delineated as Raw Water, Circulating Water, and Cooling Towers in the DOR, instrument quantities were derived primarily from similar projects for equivalent or similar systems.

- The following equipment is considered a vendor package provided with all necessary instrumentation and installation material. No instruments or required bulk material are included in the Instrumentation quantities:

  - MR01- Self Contained Breathing Apparatus
  - MS01- Water-Cooled Chillers
  - MS02- Air-Cooled Chillers
  - MS03- Decontamination Equipment
  - MS07- Diesel Oil Transfer Packages
  - MS10-Air Handling Units
  - MS11- Air Filtration Units

  - MS12- General Area Room Coolers
  - MS14- Containment Recirculation Fan Cooling Units
  - MS17- Potable Water Chlorinator
  - MS23- VES Air Tank Package
  - MS31-Raw Water System Package

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 63 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 64 of 231

- MS32-Fire Pump Packages
- MS34-Sanitary Waste Treatment Plant
- MS44-Diesel Fuel Offloading Packages
- MS50-PGS Plant Gas Packages
- MS51-PGS Nitrogen Package
- MS52-PGS Hydrogen Package
- MS53-PGS Carbon Dioxide Package
- MS54-Argon Gas Package
- MS55-Sanitary Lift Stations
- MS59-Safety Related Air Filtration Unit
- MS90-Post 72 Hour Temporary Power Supply Units
- MS93-Self-Contained Breathing Apparatus Refill Station

Equipment Basis of Quantity

- ILRT Temporary Instrumentation Package JS30 will be a contracted service supplying temporary testing equipment and services.
- No quantities were included in the estimate for tubing and fittings.
- Temperature elements and indicators are to be quantified as assemblies and are assumed to include an associated thermowell. Thermowells are not listed as a separate instrument.
- Thermocouples and RTDs are assumed to be direct wired to the control system. Temperature transmitters are not provided.
- Instruments installed on or integral to broader components (e.g. – bearing vibration elements, bearing thermocouples, motor winding RTDs, valve position sensors, etc.) are typically furnished by the equipment supplier and not included in the listed quantities.
- Process and Area Radiation Monitors are by Westinghouse and are not included in the provided instrument quantities.
- Radiation Monitors JS21, 22, 23, 24, and JS25 specified by Westinghouse and procured by Fluor are not included in the provided instrument quantities. Westinghouse is responsible for estimating.
- Seismic Monitoring equipment JS01 is by Westinghouse and is not included in the provided Instrument Quantities.
- Meteorological and Environmental Monitoring System JS09 is by Westinghouse and is not included in the provided Instrument Quantities.
- All Control System hardware (e.g. - DCIS, Condition Monitoring, Asset Management, etc.) is by Westinghouse and is not included in the provided Instrument Quantities. All I/O is assumed to be hardwired.
- No scope or quantities are included for a Plant Data Network such as an IT network, Local Area Network (LAN), Wide Area Network (WAN), or any other corporate data infrastructure.

Bulk Material Basis of Quantity

- Bulk material for instrument stands, tubing, and tubing support tray is not included in the provided quantities and should be estimated based on the included instrument quantities.

2.6.12 Painting & Coatings

Copyright © 2012, Fluor Corporation. All Rights Reserved

The WEC provided quantities included "Paint, Architectural", “Painting, Structural Steel", “Specialty Coatings" (at VC Summer only) and "Paint, Other" (at Vogtle only). Any piping painting or coating, if required, is included in the piping section of this document. All other paint and/or coatings will be excluded from the ETC and will be addressed via change process.

1. "Paint, Architectural"
   Assumed to be two coats, smooth finish, spray applied latex product or equal. A mix of 90% has been assumed to be field work and 10% to be trim work (non-productive applications). No surface preparation has been included for Paint, Architectural. (for reference only - RS Means has a standard unit rate of .005. The current estimate has included a standard unit of .028 (when adjusted for PF average .045 Mhrs/SFCA).

2. "Paint, Structural Steel" is included as a Subcontract package.

3. "Specialty Coatings" is included as a Subcontract package.

4. "Paint, Other" is included as a subcontract package.

2.6.13 Insulation

All HVAC insulation was identified as subcontract, no quantities were provided by WEC for this scope. Fluor has included the subcontract amount as listed on the register.

Pipe Insulation has been included as a Subcontract package.

Equipment Insulation has been included as a Subcontract package.

Metal Reflective Insulation - Is identified as a Westinghouse subcontractor package. It has been assumed to be included in the allowance established for Insulation in the Subcontract Log.

Note that any support for WEC’s insulation contractor(s) is not included in Fluor’s ETC. This would include such items as

- Unload Shipment at site and Place in Storage
- Preparation of level and Well-drained assembly area for staging functions
- Planning of site facilities, including storage, lay down yard, temporary preparation area, machine /maintenance workshops, offices, etc.
- Safety Training
- Supply of electrical power, compressed air, water, toilers, dumpster, waste management
- Construction area free of concrete slabs and footings that would prohibit free and open travel by Supplier's construction equipment.
- Placement of RV and RV Supports
- Supply of crane(s) of sufficient capacity and reach over the Containment Wall to unload MRI into Containment
- Dust protection cover for MRI
- Scaffolding for MRI worker
- Sufficient area to store/laydown MRI from BOM.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 65 of 231

2.7 Premium Time

Premium time for VC Summer is 36.0% (54.4 hrs / 40.0 hrs). From a cost view, all overtime worked, even on Sundays and holidays, is at a 50% rate over the straight time rate. For all overtime hours and the second shift rate differential, the total premium wages paid out is 14.60% over the straight time rate. Reference Attachment 3a.

Premium time for Vogtle is 42.5% (57.6 hrs / 40.0 hrs). From a cost view, all overtime worked, except on Sundays and holidays, is at a 50% rate over the straight time rate. For Sundays and holidays, double time is paid. For this estimate, it has been assumed that no work going forward will be worked on Sundays or holidays. For all overtime hours and the second shift rate differential, the total premium wages paid out is 14.58% over the straight time rate. Reference Attachment 3b.

2.8 Handling of Punchlist Items

Cost of performing punchlist work is typically included with Cost Contingency. Therefore the Fluor ETC estimate has excluded this cost and considers it to be included with WEC's cost contingency analysis.

3.0 INDIRECT COST

The estimate for indirect cost is based on information generated through site visits and site meetings conducted by the indirect estimator and site staff.

The estimates are prepared using Fluor standard Templates per each of the indirect cost elements of this estimate.in house cost data for similar projects using benchmarking for all of the related indirect cost as stated on the project summary sheet.

3.1 Construction Indirect

The indirect estimate is based upon Vogtle's and VC Summer's history in 2016 and Fluor Construction's nuclear experience for each category of Indirect costs, plus an evaluation of the burn rate through June 2016 to adjust the ETC estimate.

This estimate will include costs for the following (but not limited to):

- Construction Management field staff
- Temporary Construction Facilities and Construction Services
- Scaffolding
- Fire Watch
- Construction Equipment and Small Tools/Consumables
- Insurance

3.2 Construction Management

The VC Summer and Vogtle Field Non-Manual Staff Estimates were developed considering the following:

- The Fluor Scope of Work (SOW) and Division of Responsibility (DOR) in accordance with the executed Prime Contract documents.
- The WEC Project Schedule to complete the two Units in June of 2019 & 2020, respectively.
- The estimate for Field Staff hours assumes a commencement date of April 02, 2016

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 66 of 231

- The estimate is based upon actual contractual compensation rates for personnel, including burdens and assignment provision costs as applicable.
- For yet to be determined (TBD) positions, average position grades were determined by each functional group and associated average base rates were used and uplifted by the contractual compensation rates, including burdens and assignment provisions.
- The estimate excludes hours and costs for WEC/WECTEC seconded personnel.
- The estimate of Field Staff hours is based upon a Direct Hire Craft resource loading, including the night shift support. The estimate of Field Non-Manual staff hours supports the Direct Hire Craft working week.
- Full access to WEC computers/systems on day 1 of Staff arrival on site (currently seeing significant delays. WEC to provide timely support for those systems.
- Full Fluor network at site (Hardware and installation provided by WEC).
- Full site WiFi (for WEC network)
- No rework related to Engineering & Design Change Requests (EDCR's), Nonconformance and Dispositions (N&D's), etc.
- No additional work is deferred to the field then is specifically identified in the estimate of the direct scope.
- No staff is included for support of Field Fabrication of Pipe Spools or Rebar.
- Subcontracts – No claims or litigation actions are assumed to need Fluor support.
- Subcontracts – Revise LOA (approval process) to improve award and change management process.
- Procurement – Allow Fluor to streamline the Permanent Plant Purchase Requisition process.
- This estimate includes support for the craft that will be seconded to WEC for component testing and pre-operational assistance.

3.3 Temporary Construction Facilities and Services

Temporary Construction Facilities and Services include the following items:

- Temporary Construction Buildings & Facilities
- Weather Protection
- Maintenance and Operation of Construction Buildings & Facilities (includes utilities)
- General Construction Services (warehousing, material transportation, etc.)
- Field Office Supplies and Expenses
- Construction Equipment, Small Tools, Consumables, Weld Rod and Gases
- Cranes over 60 Tons
- Heavy Haul and Special Rigging
- Equipment Fueling, Oil Services, Maintenance
- Insurances

3.3.1 Construction Indirect

3.3.1.1 91-00 Temporary Construction Buildings & Facilities:

The estimate for this account covers the cost of rental for the existing buildings that are on a rental contract. For future buildings and facilities, they were identified by Fluor's Construction Group and added as part of the Functional Area Assessment (FAA). In addition the following facilities were added.

1. Rebar fab shop (VC Summer)
2. Pipe fab shop within the MAB (VC Summer)
3. Building 302 (Future office complex) - VC Summer

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 67 of 231

4. FAA 12a &b – Site Reorganization (Vogtle)
    a. Relo buildings 207 and 171
    b. Refurbish buildings ASB 303 & 307
    c. Relocate Annex building
    d. New carpenter shop and form work assembly yard
    e. Demo "shanty" row west of U4
5. Containment vessel rotational dome cover (material pricing based on recent purchase price) – VC Summer and Vogtle
6. Additional pads for "placing booms"(Vogtle)
7. Rental of off-site indoctrination office (Vogtle)

Pricing for existing rental buildings came from the rental agreements. Pricing for new buildings were obtained from in-house pricing.

The estimate includes maintenance of construction buildings and facilities. The estimate is based upon a staffing plan and a material spend rate plan.

3.3.1.2 91–30 Weather Protection:

The estimate includes shelters, tarps and removable weather enclosures for protecting materials and personnel. A crew has been included to build and maintain weather protection for cold/hot weather installations plus any specific protective care (e.g. controlled environment areas) during the open top construction.

- Miscellaneous Wind Breaks (material pricing based on burn rate)

3.3.1.3 91–40 Construction Utilities:

This estimate includes maintenance, relocation, and repair of onsite utilities for electrical distribution, sewer, water (including temporary fire protection piping) and communication systems.

This estimate includes an allowance for rerouting of previously installed underground utilities due to interferences with permanent plant underground systems.

3.3.1.4 91-50 Utility Bills:

All costs for electricity and other utilities are provided by WEC at Vogtle and VC Summer. This includes utilities for onsite and offsite facilities and warehouses. Exception being the water and power utility bills for the VC Summer Metro Office.

Heating fuel costs are included in Vogtle and VC Summer estimates.

The estimate includes costs for heating oil at Vogtle and VC Summer.

3.3.1.5 91-60 Temporary Roads, Parking and Fences

The estimate includes temporary fencing installation, fencing maintenance and removal, site erosion control, maintenance of gravel lay down areas and dust control with water trucks. Estimate also includes maintenance of the site access rail spurs. An allowance is included for snow/ice removal.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 68 of 231

A general description of Construction Services included in this Estimate follows.

3.3.1.6 92-00 Construction Services:

Construction Services costs are either "Time-Driven" or "Craft-hour" driven. The estimate is based on site burn rates as a guide for establishing the forecast "to go" cost.

3.3.1.7 92-11 Job Clean up and Janitorial:

This category consists of the following activities:

- General cleanup (FTE craft plan over time),
- Final clean up (developed a plan)
- Building janitorial service site labor (FTE craft plan over time)
- Dumpster Service for construction and non-construction waste (Fluor's contract administrator provided forecast)
- Toilet Trailers and Port-a-jons are both services by a contractor (Fluor's contract administrator provided forecast)

3.3.1.8 92-12 Site Services:

Site Services includes the following time driven construction services:

- Material handling and delivering to intermediate work areas
- Warehouse work force
- Warehouse supplies, pallets, dunnage, tarps
- Tool room attendants and rod room attendants
- Bussing is required at both sites. Bus operator costs are based upon a staffing plan. The costs for the busses are in the Construction Equipment rate.
- Crews to handle and distribute water and ice. A subcontractor is on both sites to supply additional ice.
- Surveyors site craft crew including instruments (VC Summer only; Vogtle is using non-manual staff)
- Site security is managed by WEC. VC Summer has included purchase of Security supplies and the ETC is based upon current expenditure rate
- Equipment preservation, including preventive maintenance supplies (labor and material plans were developed)
- Upgrades to the existing Time & Attendance system at Vogtle
- Site mockup (For Vogtle, this cost is in the Directs; For Summer, SCANA requests the mock-ups, labor and material costs are based upon an expected spend plan)
- Work stoppage due to wind, lightning, and heat stress
- Show up pay (0.5% on total craft hours at both sites)

3.3.1.9 92-14 HSE Costs:

HSE costs included are as follows. Costs are calculated as a percentage of construction hours:

- Safety Training/Orientation included for Summer and Vogtle
- Drug Testing (WEC pays for the test; Labor is included for random tests at both sites)

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 69 of 231

- Safety awards and ceremonies included for Summer and Vogtle
- Specific skilled training for heavy equipment, fire safety, etc is included at both Vogtle and Summer
- Safety meetings at Summer and Vogtle is included
- Union/steward meetings are included at Vogtle
- First Aid supplies
- Allowance of craft hours for Employee Review Board is included for Summer

3.3.1.10 92-15 Personnel Testing:

This category consists of the following costs associated with Personnel Testing and are based on a factor of direct craft hours:

- Physicals for crane operators (based on projected operator count plus turnover rate)
- Welder testing

3.3.1.11 92-17 Miscellaneous Professional Services:

It has been assumed that costs for the NRC is by others. This category consists of the following costs for Professional Services to be subcontracted:

- Quality test equipment (M&TE) and calibration equipment (Summer & Vogtle)
- Soil and Concrete testing (Summer & Vogtle)
- NDE testing and inspection (Summer & Vogtle)
- Post weld heat treatment (Summer & Vogtle)
- Authorized Nuclear/ASME Inspector (Summer & Vogtle)
- Battery testing (Vogtle)
- Geotechnical services (Vogtle)
- Remote cleaning & flushing (Summer)

3.3.1.12 92-19 Environmental Control

This section of the estimate includes General Vacuum service for spill cleanups and dewatering which is performed by a subcontractor.

3.3.1.13 92-20 Field office Supplies

This section of the estimate includes for Field office supplies, mobile phones, copiers, plotters, office furniture, advertising and miscellaneous expenses. The ETC is based upon the non-manual hours at the current burn rate.

3.4 Construction Equipment, Small Tools & Consumables, and Heavy Haul

Construction Equipment - The construction equipment account, equipment less than 60 tons, is being managed by WEC. WEC has told Fluor that an all-in rate of $7.28 per Direct craft hour is to be used for the ETC at both the Vogtle and VC Summer sites. Of this $7.28, $2.28 has been assigned to Fluor to include in Fluor's ETC for fuel, oil and gas. WEC is to include the remaining $5.00 per hour rate in their ETC. The applicable sales tax for fuel oil and gas is assumed to be included in the $2.28 per hour rate.

In addition, shown in Attachment 5 are the "Ground Rules" WEC sent to Fluor for pricing Construction Equipment less than 60 tons.

For Vogtle, the concrete pump trucks and transporters are provided by subcontractors and are included in the Subcontract Log. For VC Summer, concrete pump trucks and

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 70 of 231

transporters were identified, along with a plan, and were priced based upon existing rental rates.

Small Tools & Consumables - For Summer, small tools and consumables is based on a monthly burn rate that was converted to a rate per Direct hour. That rate is $1.95/DFL hour. For Vogtle, AMECO is providing this material up to a tool value of $1,000. A rate of $1.44 per DFL hour is included and includes an allowance for loss tools. For tools between $1,000 and $3,000, Penn Tools (a Subcontractor) is providing this class of tools and includes the most current ETC from Contracts. For tools above $3,000, it is included in WEC's rate of $5.00 per Direct hour.

For welding gases and supplies, the rate is $0.44 per Direct craft hour at VC Summer. For Vogtle, the rate is $0.66 per Direct craft hour. These rates are based upon actual burn rates. WEC supplies the welding rods at both Vogtle and VC Summer.

Heavy Haul and Large Cranes – Vogtle is using a Heavy Haul Contractor and therefore the ETC is based upon the Subcontract Log.

At VC Summer, rental costs for a single transporter has been estimated per a rental rate and planned time duration. Other heavy haul equipment at VC Summer is being provided by a subcontractor and therefore the ETC is based upon the Subcontract Log.

The total cost included in the ETC for large cranes, greater than 60T, includes mobilization, demobilization and fuel. For 2nd shift work, assume 50% of equipment from the day shift is being used at night. This night shift rule excludes the 3,000T crane which is not being used at night. The ETC does not include costs related to rebuilding of this equipment. For the HLD, the demobilization costs are included in the Demobilization allowance provided by WEC.

3.5 Scaffolding

The labor scaffolding estimate for V.C. Summer and Vogtle includes a 'scaffolding craft' to 'direct craft' ratio of 15.0%.

WEC has purchased the basic scaffolding material. The miscellaneous scaffolding material cost for items not being provided by WEC, but needed to support the scaffolding operation, is based on a rate of $1.85 per hour for Vogtle and $1.15 per Direct hour for Summer.

3.6 Fire Watch

The estimate includes dedicated labor to perform required fire watches. Based upon past burn rates at Vogtle and VC Summer, different ETC unit rates were established for Fire Watch. The rate used at VC Summer is 1.37% per Direct craft hour and the rate used at Vogtle is 1.42% per Direct craft hour.

3.7 Insurances

Per the Agreement with WEC, the ETC has included insurance costs associated with Employment Practices Liability Insurance and Contractor's Pollution Liability Insurance. Pricing was obtained from Fluor's Risk and Management Department.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 71 of 231

3.8 Demobilization Plan for Fluor Facilities and Services

The estimate assumes the following regarding demobilization of the temporary infrastructure, services and labor once Mechanical Completion is achieved:

- Demobilization from site will follow the plan and scope established by WEC and as shown in Attachment 9a (VC Summer) and Attachment 9b (Vogtle). Any change in this scope will be considered basis for a Change Order.
- WEC has established an allowance of $9.3mm for Demobilization effort at VC Summer and $9.0mm for Demobilization effort at Vogtle. This has been used in the ETC.
- An assumption in these allowances is that Field Non-Manual staff costs are covered elsewhere in the ETC and therefore will not be charged to this WBS. All demobilization effort is assumed to be complete prior to First Fuel Load.

4.0 PRE-COMMISSIONING (Prior to Fuel Load)

O&M Training is by Others with no support from Fluor. Construction Testing is performed by Fluor and is included in the Direct accounts. Component and Pre-Operational Testing is performed by WEC with support from Fluor as described below. Fluor's support role during Pre-Commissioning will be based upon a time phased staffing plan.

4.1 VC Summer and Plant Vogtle Sites

Per the DOR, the Fluor construction organization will provide needed craft support to Westinghouse to perform Component Testing/Flushing, Pre-op and Start-up activities. The separation/distinction between Construction Testing (Provided by Fluor) and Component Testing (Lead by WEC with craft provided by Fluor) is defined as:

- Construction Testing – Consists of cable and switchgear meggars, point to point wire checks, and piping/vessel hydrostatic tests.
- Component Testing /Flushing – Consists of mechanical and electrical check out, system flushing, instrument loop checkout and calibrations, initial energization, uncoupled/coupled motor/driven device runs, valve setup and testing, and initial system and subsystem operation. The jurisdictional control of the equipment/systems formally changes hands from Fluor to WEC at the start of component testing.

The required craft level of effort is based upon Westinghouse's requested staffing plan and hours. Fluor increased the field non-manual component to allow for additional administrative support of the craft during this phase of the work. The staffing plan was priced based upon Fluor's current benefit and burden package rates. The table below summarizes the requested craft and staff positions;

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 72 of 231

	Unit	Fluor Classification	Man-Months	FTE Hours/ Week	Total Hours
WESTINGHOUSE REQUESTED SECONDED CRAFT					
Electricians Crew	A	Craft	382	55	90,973
Piping Crew	A	Craft	123	55	29,292
Millwrights	A	Craft	13.1	55	3,120
Carpenters Crew	A	Craft	74	55	17,623
Painter/Insulation	A	Craft	30	55	7,145
Laborers	A	Craft	44	55	10,479
Electricians Crew	B	Craft	371	55	88,354
Piping Crew	B	Craft	118	55	28,102
Millwrights	B	Craft	13	55	3,120
Carpenters Crew	B	Craft	68	55	16,194
Painter/Insulation	B	Craft	30	55	7,145
Laborers	B	Craft	44	55	10,479
I&C Crew	A&B	Craft	424	55	100,479
Subtotal:		**Craft**			**413,000**
WESTINGHOUSE REQUESTED SECONDED STAFF					
Field Engineering	A&B	Staff	70	55	16,671
Planners	A&B	Staff	56	55	13,336
Craft Supervision	A&B	Staff	155	55	36,794
Subtotal:		**Staff**			**66,801**
FLUOR ESTIMATED FNM FOR SECONDED STAFF MANAGEMENT & SUPPORT					
Field Recommend Support	A&B	Staff	83	60	21,563
Subtotal:		**Staff**			**21,563**

The craft labor rates and crew make-ups have been included as submitted on 08/31/2016 and subsequently approved by WEC.

The associated indirect costs that follow *craft* hours have been included /excluded based on the below;

- Temporary Facilities and fabrication shops are available and maintained by others; no additional costs have been included.
- Craft man-hours for scaffolding erection and disassembly have been assumed to be included in the requested man-hours; no additional costs have been included.
- Craft man-hours for Safety / Hole watch, fire watch, confined space watch have been assumed to be included in the requested man-hours; no additional costs have been included.
- Craft man-hours for material handling / warehousing have been assumed to be included in the requested man-hours; no additional costs have been included.
- Craft man-hours for equipment operation have been assumed to be included in the requested man-hours; no additional costs have been included.
- Craft man-hours for craft orientation, training, testing, certifications, physicals, chemical screening, security screening, etc have been assumed to be included in the requested man-hours; no additional costs have been included.
- The estimate excludes construction equipment. It is assumed all support construction equipment, including Scaffolding material, and associated operating costs necessary to perform the work will be provided and paid for by Westinghouse
- The estimate assumes all work will be performed on a single day shift with no allowance for casual overtime. Off-shift premiums and incentives have been excluded. Craft labor above

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 73 of 231

55 hours per week, or on multiple shifts, will be reimbursed per the agreed upon Rate Schedule(s).

The associated indirect costs that follow *Staff* hours have been included /excluded based on the below;

- Office supplies / materials, Telephone, communications and network capabilities for staffing have been assumed to be provided by Westinghouse; no additional costs have been included.
- The estimate excludes any additional casual overtime (Hours beyond the requested 55 hour workweek).
- The estimate assumes 25% of requested staff will be non-exempt employees and therefore eligible for time and half (1.5x) for all hours beyond standard work week of forty hours.
- The estimate assumes 60% of staff will be on Per Diem, the monthly Per Diem amount included is $3,055/mo plus $345/mo for home trips. This is consistent with the Indirect Estimate.
- The estimate assumes the requested hours for staffing includes hours related to travel time to and from home of record per assignment policy.

Quality and Testing staffing, per the Westinghouse requested staffing plan, has been excluded.

5.0 COMMISSIONING AND START-UP SUPPORT (Post Fuel Load)

The commissioning and startup approach for the project is the responsibility of Westinghouse. Westinghouse has not requested Fluor to include any costs or to provide support for this effort. Therefore this is excluded from Fluor's ETC.

6.0 ESCALATION

Escalation is excluded per verbal direction from WEC.

7.0 SALES TAX

V.C. Summer is tax exempt for all materials purchased on this project.

For Vogtle, permanent plant material is tax exempt. For non-permanent plant material and indirect consumables, these materials are taxed at 7%. The cost for Sales Tax on Indirect Materials and Consumables is reflected in the Indirect Field Cost section of the ETC. Note that since WEC is responsible for pricing all Direct materials, any non-permanent materials included in WEC's estimate will incur Sales Tax which WEC must capture in their ETC estimate.

8.0 WARRANTY

Both projects have a 24 month warranty requirement after Substantial Completion (COD) is achieved. Per the Agreement with WEC, all warranty work will be reimbursable, exclusive of Fee.

For this estimate, since Fluor will have demobilized from the sites for most of this warranty period, it is expected that WEC would use other resources to perform the warranty work. Therefore this is excluded from Fluor's ETC.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 74 of 231

9.0 CONTINGENCY

Cost, Schedule and Event Contingency are excluded. It is the responsibility of WEC to develop the overall Contingency for these two projects. Fluor will assist as required in defining high/low ranges of this estimate for WEC's use.

10.0 FEE

The Agreement between WEC and Fluor established a Fixed Fee for these projects of $300 million. This is made up of:

1. $100mm for VC Summer
2. $100mm for Vogtle
3. $100mm for attaining Set Milestones at VC Summer

This fee is paid to Fluor by an invoicing process for all Fluor labor costs. A fee rate of 4.0% is applied to all burdened labor costs (per Exhibit J to the Agreement) and paid by WEC until $100mm is paid for each project. G&A is also being reimbursed at various rates, as established in Exhibit J of the Agreement, and is shown in the ETC.

A total Fee of $100mm is shown in the ETC for Vogtle and $200mm for VC Summer.11.0

11.0 EXCLUSIONS

- No sustained Capital Costs prior to April 01, 2016
- Constructive acceleration measures to recover schedule to achieve Mechanical Completion in June 2018 for the first unit and June 2019 for the second unit
- Impact of "out of sequence" work driven by WEC direction to achieve Payment Milestones
- Additional impact to craft hours due to Owner and/or WEC caused delays, interruptions, rework, backcharges, or untimely adjustments to craft compensation is considered to be included in WEC's contingency analysis
- Schedule float and associated time-driven costs
- Permanent Plant Material Costs and Associated Sales Tax (this includes Freight, Import Duties, Taxes and Heavy Haul costs associated with Permanent Plant Material) to be included in WEC's ETC estimate
- Non Permanent Plant Material or Consumables Costs, Direct Field Cost Items, and associated sales tax, if any, is assumed to be included in WEC's ETC estimate
- Any upgrades or repairs to off-site roads
- Installation of DCS and Simulator
- Material Take-off Allowances
- Engineering & Design Change Requests (E&DCR's)
- Non-Conformance and Dispositions (N&D's) except for construction defects
- Direct Field Costs for the following items since they were not identified in the MTO's:
  1. Installation, calibration and testing of vendor supplied instruments
- Installation of Weapons and Mobile Communications Gear (per DOR by Owner)
- Installation of BIS electronics

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 75 of 231

- Installation of Plant Furniture, Furnishings & Equipment, except for those specified.
- Except for one ductbank, no other work has been identified as being outside of the project's battery limits. Any scope of work going to the existing plant facilities will terminate at the project's battery limits.
- Site radiation detectors
- Site seismic monitoring system
- All Vendor Rep Assistance
- Engineering Services and HO Support Services
- Tie-ins to Existing Facilities or Refurbishment of Existing Facilities
- Usage costs for electricity, water and sewage
- Premium cost for Builders Risk Insurance and payment of a deductible per occurrence
- Any impact associated with the NRC's final review and closure of all ITAAC requirements.
- Switchyard(s), including interconnects to the utility grid
- In/out allowance of $500 per craft worker is not part of the compensation package for the VC Summer project and is therefore excluded
- Subsistence allowance has been excluded for the union craft at the Vogtle site
- Site craft tents (still under evaluation)
- Upgrades to IT Infrastructure and providing computers/tablets to Field personnel
- All construction and pre-construction utility bills
- Site Security clearances and background checks
- Escalation
- All Permits and Licenses are by WEC
- Purchase of Land
- Interest on investment and financial charges
- Costs related to identifying and/ or removal of any hazardous materials encountered.
- Costs associated with environmental impact statements
- Underground obstructions
- Labor unrest (Strikes)
- Force Majeure (**Uncontrollable Circumstances such as excessive snow, rain, HSE stand downs, etc. that has impacted the schedule)**
- 1st Fills of Chemicals and Fuels (Material only)
- Commissioning and Startup costs (post Fuel Load)
- Owners operational costs and Operational Readiness (includes Fuel Load)
- Management and performance of warranty work
- Additional transfer of module work from the MAB to the field is excluded other then what is specifically identified in the module list Attachment 8.

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 76 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 77 of 231

ESTIMATE DISCLAIMER

"This report was prepared for WEC by Fluor Enterprises, Inc. ("Fluor") and other independent consultants and is based in part on information not within the control of either Fluor or the consultants. Neither Fluor nor the consultants have made an analysis, verified, or rendered an independent judgment of the validity of the information provided by others. While it is believed that the information contained herein will be reliable under the conditions and subject to the limitations set forth herein, neither Fluor nor the consultants guarantee the accuracy thereof. Use of this report or any information contained therein shall constitute a release and agreement to defend and indemnify Fluor and such consultants from and against any liability (including but not limited to liability for special, indirect or consequential damages) in connection with such use. Such release from and indemnification against liability shall apply in contract, tort (including "negligence" of Fluor or those consultants, whether active, passive, joint or concurrent), strict liability, or other theory of legal liability; provided , however, such release, limitation and indemnity provisions shall be effective to, and only to, the maximum extent, scope or amount allowable by law."

Notwithstanding the above, neither this report, nor any information contained therein or otherwise supplied by Fluor in connection with the Study and the Services shall be released or used in connection with any proxy statement, proxy soliciting materials, prospectus, financial offering, Securities Registration Statement or similar document without the express written consent of Fluor, except as may be required by law.

ATTACHMENTS

Attachment 1a – Basis of Labor Rates (VC Summer)

Attachment 1b – Extract of HR's ALMA (Area Labor Market Analysis) for VC Summer

Attachment 1c – Basis of Labor Rates (Vogtle)

Attachment 2 – Craft Per Diem Calculation (VC Summer)

Attachment 3a – Craft OT & Night Shift Premium Calculation (VC Summer)

Attachment 3b – Craft OT & Night Shift Premium Calculation (Vogtle)

Attachment 4a – Crew Mix / Craft Mix (VC Summer)

Attachment 4b – Crew Mix / Craft Mix (Vogtle)

Attachment 5 – Construction Equipment Pricing Ground Rules (for Vogtle and VC Summer)

Attachment 6 - List of Pending Late "Cut/Add" Changes from WEC for the Estimate

Attachment 7 – Productivity P.F. Presentation (VC Summer & Vogtle)

Attachment 8 – Module List – Combined both sites

Attachment 9a – Demobilization Allowance (VC Summer)

Attachment 9b – Demobilization Allowance (Vogtle)

Attachment 10a – Subcontracts DOR

Attachment 10b– VC Summer Contracts Log

Attachment 10c – Vogtle Contracts Log

Copyright © 2012, Fluor Corporation. All Rights Reserved

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 78 of 231

SCANA
VC Summer Nuclear Sta. U2 & U3
Jenkinsville, SC

Attachment 1a

Basis of Labor Estimate

Description	VC Summer HR Recommendation		VC Summer 2016 Execution Plan	
Journeyman Base Rate:	Helper (D3 rate)	$20.70	Helper (mixed grades; use 80% of Jymn)	$22.80
(without incentive adders)	Boilermaker	$28.50	Boilermaker	$28.50
	Carpenter	$28.50	Carpenter	$28.50
	Cement Mason	$28.50	Cement Mason	$28.50
	Electrician	$28.50	Electrician	$28.50
	Insulator	$26.50	Insulator	$26.50
	Ironworker	$28.50	Ironworker	$28.50
	Laborer (Helper 3D)	$16.00	Laborer	$16.00
	Millwright	$28.50	Millwright	$28.50
	Operator (Heavy: 300 to 399 Tn)	$32.30	Operator (Heavy)	$32.30
	Painter	$26.50	Painter	$26.50
	Pipefitter	$28.50	Pipefitter	$28.50
(2 or more processes)	Welder (Combo + Stainless)	$32.00	Welder (Combo + Stainless)	$32.00
	Sheet Metal	$28.50	Sheet Metal	$28.50
	Operator - Truck Driver (Lt)	$22.50	Operator - Truck Driver (Lt)	$22.50
	Operator - Truck Driver (Hvy)	$29.50	Operator - Truck Driver (Hvy)	$29.50
($2 over Certified Plus Rate)	Foreman	$31.50	Foreman	$31.50
($4 over Certified Plus Rate)	General Foreman	$33.50	General Foreman	$33.50
Per Diem / Subsistence	$70 per day for 5 days worked plus 2 (100% of craft = $ 98/day) (provided to Helper 3D and above, except to Laborer))		$70 per day for 5 days worked plus 2 days incentive for 77% of craft or $ 75.13/day (provided to Helper 3D and above, except to Laborer)	
NCCER	Written Assessment is Training Certifcation; Performance Verification (PV) is Certified Plus		$1.00 /hour for Training Cert. for 23% of craft & $1.00 /hour for Certified Plus for 10% of craft	
Average Work Week :			Rolling 3 weeks - ave. 52.1 hrs/wk 2 wks @ 5x12's and 1 wk @ 5x10's less 8% for absenteeism	
Shift Differentials:	$1.00 /hr; meals unpaid - Night Shift		$1.00 /hr; meals unpaid - Night Shift	
Benefits	Standard Rate (Applied on all Foreman & Below Wages)	10.00%	15.59% on all S.T. wages (maintain CBI craft benefit policy)	
Benefits	Standard Rate (Applied on all GF Wages)	39.00%	39.0% on 40 hrs of wages	
Burdens - FICA	Standard Rate (Applied on Wages < $118,500)	6.20%	6.20% on all wages	
Burdens - Medicare	Standard Rate (Applied on Wages < $200,000)	1.45%	1.45% on all wages	
Burdens - FUI	Standard Rate (Applied on Wages < $7,000)	0.80%	0.60% on all wages	
Burdens - SUI	Standard Rate (Applied on Wages < $14,000)	2.63%	1.39% on all wages	
Burdens - CGL	Standard Rate (applied on all hours at S.T. rate)	2.80%	Have proposed 1.80% on all wages WEC wants 0%	
Worker's Compensation:	OCIP Program; Excluded		OCIP Program; Excluded	
Total Benefits & Burdens			Applied to all S.T. Wages; Varies for Prem. Portion of OT Pay (Excl. General Foreman; Incl. CGL)	27.03%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 79 of 231

FLUOR®

SECTION 0 – INTRODUCTION

Fluor Project Management has requested a craft compensation review and wage recommendation in support of the VC Summer project in Jenkinsville, SC. The project is scheduled to transition current workforce in the first quarter of 2016. This document will provide a brief summary of today's craft labor market, compare wage rates in the region, and highlight projects expected to compete for craft workers.

This report reflects the latest craft labor market conditions available to Fluor at this time, including market indicators, area specific and regional wage summaries and trends.

Key market indicators from the U.S. Bureau of Labor Statistics, Alpha Resources, and other compensation related sources are:

- The national unemployment rate is 5.0%, down from 5.7% in January 2015.
- The South Carolina statewide unemployment rate is 5.6%, down from 6.6% in January 2015.
- US Construction unemployment rate is 6.2%, down from 9.8% in January 2015.

(October 2015 Statistics)

The U.S. Census Bureau's Construction Put-In-Place figures suggest overall construction is growing at a rate of 13.7% (July 15/July 14). Strength in non-residential and residential construction leads the way, up 18.2% and 15.6% respectfully. This suggests that labor pressure is being applied on all three sides of the construction market –residential, commercial and industrial according to Industrial Info Resources.

Anirban Basu, Chief Economist for the Associated Builders and Contractors, made the following comments regarding the expanding economy and skilled labor shortages:

> *"Construction was one of the few bright spots in today's report as residential and nonresidential construction remain two of the nation's five leading growth segments. The industry's unemployment rate is down 1.5 percentage points from September 2014 and is essentially at its lowest point in eight years. There are 125,000 fewer unemployed construction workers than there were one year ago, and construction employment is up by 205,000 positions on a year-over-year basis, one of the best performances of any industry in both absolute and percentage terms. The construction unemployment rate continues to head lower, falling by 0.6 percentage points in September to 5.5 percent. According to Alpha Resources, "**The monthly and year over-year growth in employment are both consistent with the notion that construction wage growth will continue to accelerate.**" – October 2015*

BOE - Attachment 1b

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 80 of 231

FLUOR®

Regional and State Wage Summary

The following Alpha Resources data (3rd Qtr 2015) summarizes industrial construction open shop base wages in the Mid-Atlantic region as well as the State of South Carolina. The *Available Rate Range* documents the lowest wage rate and the highest wage rate reported by contractor participants for each craft discipline. The *Average Rates* document the average of the low end of the range as well as the average of the high end of the range – the spread created by the *Average Low Rate* and the *Average High Rate* is interpreted as the "competitive range" for skilled workers within each craft discipline. NCCER or craft skills certification is the most common qualifier for the high end of the wage range.

Mid-Atlantic Regional Open Shop Construction Base Wage Summary

Craft Type	Civil		Mechanical		Welder		Electrical		Hvy Equip	
Low/High	*Low*	*High*	*Low*	*High*	*Low*	*High*	*Low*	*High*	*Low*	*High*
Construction Available Ranges	18.00	32.00	18.00	32.00	21.50	37.00	21.00	35.00	18.00	35.00
Construction Average Rates	23.82	26.63	24.87	27.65	27.26	30.14	25.62	27.98	26.38	29.84
Avg Per Diem/Utilization: $74.03 (83%)										

South Carolina Open Shop Construction Base Wage Summary

Craft Type	Civil		Mechanical		Welder		Electrical		Hvy Equip	
Low/High	*Low*	*High*	*Low*	*High*	*Low*	*High*	*Low*	*High*	*Low*	*High*
Construction Available Ranges	21.00	29.50	22.00	30.00	25.00	35.00	24.00	30.00	24.00	34.50
Construction Average Rates	24.00	26.63	25.04	27.63	28.25	30.25	26.18	27.64	27.70	29.48
Avg Per Diem/Utilzation: $79.17 (86%)										

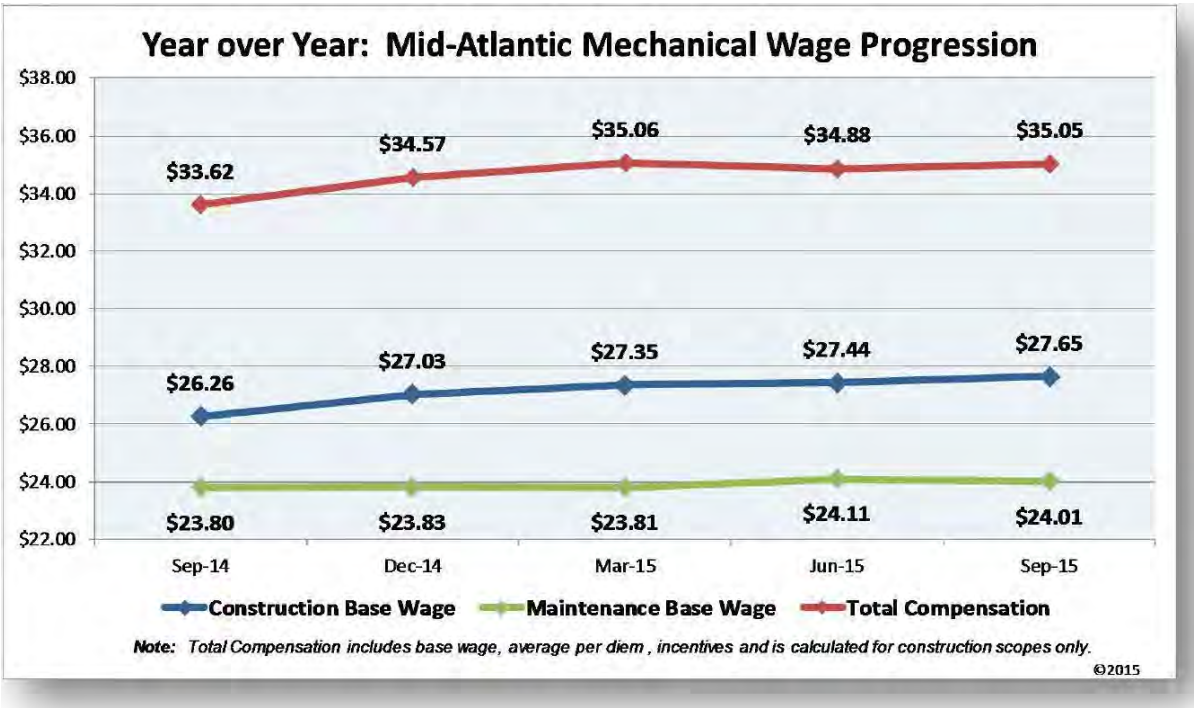
Important - Using Alpha Resources Craft Compensation Data Effectively
Although the average base wage ranges and per diem values remain important benchmarks to measure escalation in the market as a whole, report users should pay close attention to the "grey area" between the "average high rate" and the "highest rate reported" in the regional wage summaries. This "grey area" is an important indicator of wage competitiveness moving forward in an escalating market and robust build cycle. This same "grey area" should be closely considered in risk evaluation for wage determinations on future work. A detailed list of project data points used to compile this summary is located in *Exhibit #1.*

BOE - Attachment 1b

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 81 of 231

Mid-Atlantic Regional Wage Progression

The following graphs trend wage progression of mechanical crafts in the Mid-Atlantic region as documented by multiple point-in-time labor studies. The blue line trends documented base mechanical rates and the red line trends *Total Compensation Rates* which include average per diem and hourly incentive values found in the region during the reporting period.



Since last quarter, average mechanical construction base wages have increased 0.8% while *Total Compensation* (which includes average mechanical base wage, hourly incentives and per diem) has increased 0.5% in the Mid-Atlantic market.

Year over year, mechanical base wages for construction activities have increased 5.3% to a current average value of $27.65 per hour. During the same period, *Total Compensation* has increased 4.3% to a current average value of $35.05 per hour.

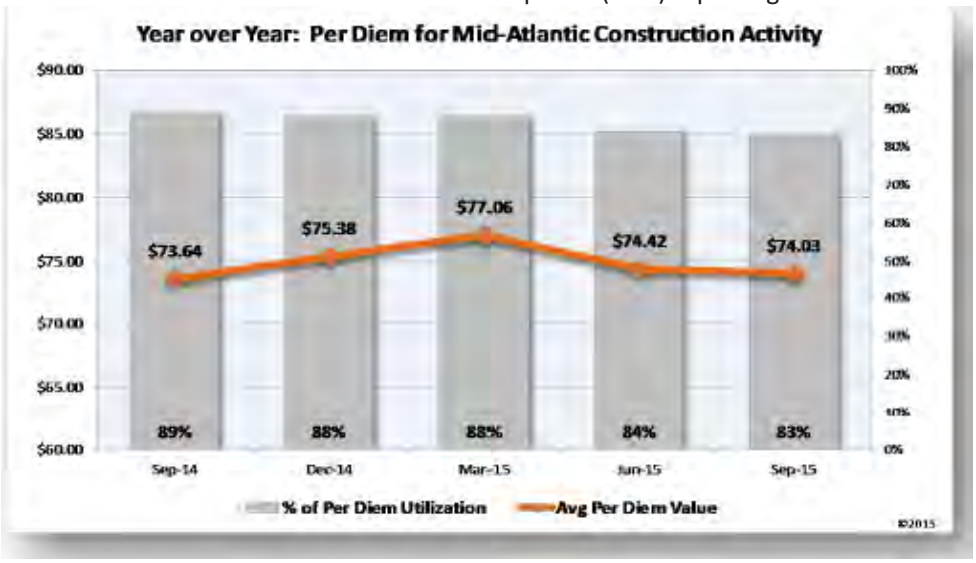
Currently, 83% of construction activity identified utilizes per diem as a compensation component averaging $74.03 per day. Further, 9 data points (18%) report using per diem as an attendance incentive by paying 7 days per week (or one extra day) if the employee works all scheduled hours for the week.

The use of hourly incentives based on company service, safety, attendance, completion, etc., was limited to 6 construction data points averaging $1.25 per hour. In addition, 7 construction data points (12%) report the use of travel pay.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 82 of 231

Mid-Atlantic Per Diem Utilization and Average Value

Per diem continues to be heavily utilized in the Mid-Atlantic market with 83% of construction scopes reporting per diem with an average value of $74.03 per day. Year over year, per diem availability has decreased 6% while the average value has increased 0.5%. The use of per diem as an attendance incentive by paying per diem 7 days per week (or one extra day) if the employee works all scheduled hours for the week has decreased with 9 data points (18%) reporting this incentive.



Major Projects Expected to Compete for Regional Manpower Resources

The oil and gas shale boom continues throughout the United States where the shale business supports over 600,000 jobs. The major regions attracting craft resources include are the Gulf Coast States. The Eagle Ford shale in Central Texas accounts for over 120,000 jobs with early signs of decrease activity.

In an effort to determine market competitive wage strategies, we observed several major construction projects proposed in the region that could impact craft labor compensation and availability of skilled industrial construction workers. The projects are in various stages of development.

Projects – Mid-Atlantic	Location	Estimated Craft Peak	Mobilization	Completion
Mercedes Truck	Charleston, SC	1,000	2016	2019
Volvo	Charleston, SC	500	2016	2018
Southern LNG	Elba Island, GA	1,250	2015	2017
Dominion Cove Point LNG	Lusby, MD	4,000	2014	2018
Dominion Power	Greensville Co., VA	1,000	2015	2017
Cypress Creek Power	Dendron, VA	1,200	2013	2018

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 83 of 231

SECTION 2 – WAGE RECOMMENDATION STRATEGY

Due to the complexity of transitioning the current workforce from company to company and the unknown recruiting, retention, attendance and performance metrics for the project, Craft Compensation recommends a phased wage strategy:

Phase I: Retain the current compensation package during the transition period.

Phase II: At the end of the transition period, review project metrics to confirm existing compensation package or present new compensation recommendation. The new compensation plan will be issued within 60 days post transition.

This strategy should make the transition less confusing for craft employees as well as site management.

Project metrics will be tracked to identify potential trends that could indicate a non-competitive compensation package include but are not limited to: high employment rejection, new hire no-show rate, an employee turnover rate higher than 10% and an absenteeism rate that exceeds 5%. The project performance factor and completion schedule are also factors indicating a potential compensation impact.

It is recommended that a craft compensation review committee (owner, project team and/or Craft Services) be instituted to monitor the package on an on-going basis.

The following "current" craft wage package and details/incentive chart will be used during the transition period.

Note: Also see *exhibit #2* which compares the current job title list with Fluor titles. The document also shows gaps and outstanding questions that will need to be answered prior to mobilization.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 84 of 231

FLUOR®

Craft Compensation Review
VC Summer
9/27/2016

Current Job Title	A Entry Level	B Helper 1	C Helper 2	D Helper 3	E Helper 4	F Helper 5	Jrny	Jrny PV	Fmn	GF
Boilermaker	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Carpenter	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Cement Finisher	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Custodian	$11.50	$12.80	$14.60	$16.00					$22.50	
Equipment Mechanic	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Equipment Mechanic - Oiler	$13.30	$14.80	$17.70	$20.70	$23.60					
Facilities Worker	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Field Assistant	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60		$29.50		
Field Machinist	$14.20	$15.75	$18.90	$22.05	$25.20	$28.35	$30.50	$31.50	$33.50	$35.50
General Supervisor										$35.50 $37.50 $40.00
Heat Stress Technician	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Instrument Fitter	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Instrument Tech							$29.50 $31.50 $33.50			
Insulator	$12.40	$13.80	$16.50	$19.30	$22.00	$24.80	$26.50	$27.50	$29.50	$31.50
Ironworker	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Laborer	$11.50	$12.80	$14.60	$16.00					$27.50	$29.50
Millwright	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Operator Heavy - 80 to 299 Ton							$31.30		$33.30	$35.30
Operator Heavy - 300 to 399 Ton							$32.30		$34.30	$36.30
Operator Heavy - 400 to 599 Ton							$33.30		$34.30	$36.30
Operator Heavy - 600 Ton +							$34.30		$34.30	$36.30
Operator Heavy - Batch Plant (Goldhofer Hauler)							$30.30		$32.30	$34.30
Operator Heavy - Specialty Equipment (Concrete Pump Truck)							$29.50 $31.50 $33.50		$34.30	$36.30
Operator Heavy - Specialty Equipment (Hvy Lift Derrick)							$38.30		$34.30	$36.30
Operator Light - Truck Driver, Bus Driver							$22.50			
Operator Medium							$29.50		$31.50	$33.50
Painter	$12.40	$13.80	$16.50	$19.30	$22.00	$24.80	$26.50	$27.50	$29.50	$31.50
Pipefitter	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Rigger	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Rodbuster	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Runner	$9.70	$10.80	$12.90	$15.10	$17.20	$19.40				
Scaffold Carpenter	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Survey - Rod-Chain Person	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60				
Surveyor - Instrument Person							$29.50 $30.50 $31.50			
Surveyor - Party Chief							$31.50 $33.50 $35.50			
Warehouseman	$13.30	$14.80	$17.70	$20.70	$23.60	$26.60	$28.50	$29.50	$31.50	$33.50
Welder - Combination Process					$24.00	$27.00		$30.00	$32.00	$34.00
Welder - Combo + Machine					$28.00	$31.60		$35.00	$37.00	$39.00
Welder - Combo + Stainless					$25.60	$28.80		$32.00	$34.00	$36.00
Welder - Single Process					$23.60	$36.55		$29.50	$31.50	$33.50

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 85 of 231

FLUOR®

VC Summer Project Compensation Package Details and Incentives	
Lead Person	Paid $1.00 above respective craft journeyman level
General Supervisor	Functions as lead General Foreman
Per Diem	Craft maximum daily per diem is $70.00
	$70.00 per day for Helper Level 3 (D). Paid in accordance with project per diem guidelines.
	Laborer & Custodian not eligible for per diem
	Eligibility includes permanent residency of more than 50 miles from project
	Daily per diem eligibility includes requirement to work a minimum of 10 hours of work day or current set schedule
	Paid 7 days when employee works scheduled work week. If regular schedule is not worked, per diem is paid for days worked.
Shift Differential	$1.00 per hour for night shift.
Light Equipment Operator	Compactor, farm tractor, street sweeper, water truck, other trucks, skidsteer, bobcat, small forklift, hoist, mini-excavator, vans, buses, single axle tr, trencher
Medium Equipment Operator	Grader, scraper, dozer, trackhoe, backhoe, front end loader, tandem dump truck, yard dog/semi tractor trailer, tandem axle truck, boom truck, articulated dump truck, mixers, upender lift vehicle, fule truck, large forklift - rough terrain, cranes to 59 tons.
Welder - Single Process - Unlimited	One Process - GMAW, GTAW, FCAW, SMAW - Unlimited metal thickness.
Welder - Combination	Two or more processes - GMAW, GTAW, GMAWP, FCAW, SMAW
Welder - Combination + Stainless	Two or more processes - GMAW, GTAW, GMAWP, FCAW, SMAW plus GTAW-SS
Welder - Combination + Stainless + Machine	Must have AWS D1.1, SMAW GTAW, GMAW, FCAW, AWS D1.6 GTAW, GMAW, FCAW, ASME GTAW-Carbon, GTAW-SS, SMAW, FCAW+Orbital and robotic.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 86 of 231

FLUOR®

Craft Compensation Review
VC Summer
9/27/2016

EXHIBIT #1

Client Name or Industry Type	Hrs	Peak	PD Amt	Civil Jry Min-Max	Mech Jry Min-Max	Welder Min-Max	Elect Min-Max	Hvy Equip Min-Max	Incentives
AM/NS Calvert, AL	5x10s	10		25.00-25.00	25.00-25.00	26.00-27.00	25.00-25.00	25.00-25.00	
BP Wando, SC	5x10s	48	$80		25.00-25.00	25.00-25.00	24.00-24.00		
Brunswick Freeman, VA		600	$75	25.50-27.50	27.50-29.50	27.50-29.50	26.50-28.50	28.50-30.50	$1.00 Night Shift
Catawba York, SC	4x10s		$85	21.00-26.00	22.00-30.00	29.00-33.00	28.00-30.00	26.00-30.00	Mileage In/Out
Chemical McIntosh, AL	5x10s	60		18.00-18.00	22.50-22.50	24.00-26.00	22.50-22.50	22.50-22.50	
Client 2 Decatur, AL	6x10s	25			18.00-23.25	25.00-28.00			
Client 4 Decatur, AL	5x10s	36			24.00-25.00	25.00-26.00			
Colgate Greenwood, SC	5x10s	150	$75	28.50-28.50	28.50-28.50	29.00-29.00	28.50-28.50	31.00-31.00	
Colgate Hodges, SC	5x10s	200	$75		28.50-28.50	29.00-29.00		31.00-31.00	
Dominion Front Royal, VA	5x10s		$65				28.00-28.00		
Duke Lee Belton, SC			$65	24.00-25.00	24.00-25.00	25.00-28.00	24.00-25.00	24.00-25.00	
First Quality Anderson, SC				24.00-24.00	25.00-25.00	27.00-27.00	25.00-25.00	27.00-27.00	
FP&L Ft. Lauderdale, FL	5x10s	250	$80	25.00-27.00	25.00-27.00	29.00-31.00	25.00-27.00	24.00-30.00	NCCER
FP&L Ft. Myers, Fl	5x10s	150	$80	25.00-27.00	25.00-27.00	29.00-31.00	25.00-27.00	24.00-30.00	NCCER
FP&L Ft. Lauderdale, FL	5x9s	600	$65	26.00-29.00	26.00-29.00	30.00-34.00	26.00-29.00	34.00-35.00	
Georgia Pacific Big Island, VA	5x10s	130	$70	26.00-27.00	26.00-27.00	27.00-28.00	26.00-27.00	27.00-29.00	
Hexcel Decatur, AL	4x10s	150	$60	23.00-24.00	23.00-24.00	24.50-27.00	23.00-24.00	23.00-24.00	Spot Bonus - Up to $2,000
Hines Energy Bartow, FL	4x10s +8	70	$65	25.00-32.00	25.00-32.00	25.00-32.00	25.00-32.00	25.00-32.00	PD 7 days $1.25 Service
KU/LGE Ghent, KY	5x10s	550	$70	25.00-27.00	25.00-27.00	25.00-27.00	25.00-27.00	28.00-30.00	NCCER
KU/LGE Harrodsburg, KY	4x10s +8	194	$65	24.00-32.00	24.00-32.00	24.00-32.00	24.00-32.00	24.00-32.00	PD 7 days $1.25 Service
KU/LGE Louisville, KY	5x9s	800	$65	25.00-25.00	27.00-27.00	28.00-28.00	27.00-27.00	28.00-30.00	
KU/LGE Bedford, KY	6x10s		$100		27.00-29.00	29.00-30.00			PD 7 days $1.25 Service
KU/LGE Bedford, KY	4x10s +8	255	$65	24.00-32.00	24.00-32.00	24.00-32.00	24.00-32.00	24.00-32.00	PD 7 days $1.25 Service
Manufacturing Charleston, TN	5x10s	1600	$80	23.00-25.00	26.00-28.00	30.00-30.00	26.00-28.00	29.00-31.00	NCCER
Manufacturing Jackson, TN	5x10s	375	$75	21.50-22.50	23.50-24.50	24.00-25.00	23.50-24.50		
Marathon Catlettsburg, KY	4x10s						24.00-29.00		
McGuire Huntersville, NC	4x10s		$85	21.00-26.00	22.00-30.00	25.00-33.00	28.00-30.00	26.00-30.00	Mileage In/Out
Medimmune Frederick, MD	5x10s	40	$80				26.00-29.00		
Mosaic Ft. Meade, FL	5x10s	30	$75		27.00-27.00				Safety Incentive

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 87 of 231

FLUOR®

Craft Compensation Review
VC Summer
9/27/2016

Client Name or Industry Type	Hrs	Peak	PD Amt	Civil Jry Min-Max	Mech Jry Min-Max	Welder Min-Max	Elect Min-Max	Hvy Equip Min-Max	Incentives
Multiple Sites - FL			$80		24.00-26.00	29.00-29.00		25.00-28.00	PD $75 - $85
Multiple Sites - FL	5x10s	48		20.00-20.50	23.00-26.00	25.00-25.00	25.00-25.00	25.00-30.00	
Multiple Sites - NC	5x10s	20			23.00-23.00		32.00-32.00	30.50-30.50	
Multiple Sites - TN	6x10s	130	$70	28.00-28.00	26.00-30.00		32.00-35.00	28.00-28.00	
Multiple Sites - VA	5x10s	75	$60	21.00-24.00			21.00-24.00	24.00-27.00	
New Wales Mulberry, FL	5x10s		$45	21.00-21.00	24.00-24.00	25.00-25.00			
Oconee Seneca, SC	4x10s	160	$85	24.00-28.00	24.00-27.00	30.00-30.00	24.00-28.00	27.00-27.00	NCCER
Oconee Seneca, SC	4x10s		$85	21.00-26.00	22.00-30.00	29.00-33.00	28.00-30.00	26.00-30.00	Mileage In/Out
Power Rising Sun, MD	5x10s	600	$70	28.00-29.00	28.00-29.00	32.00-32.00	28.00-29.00	29.00-31.00	NCCER
Pulp & Paper Escambia, AL	4x10s +8	650	$60	25.00-32.00	25.00-32.00	25.00-32.00	25.00-32.00	25.00-32.00	PD 7 days $1.25 Service
Quiver Bowling Green, KY		200	$85	30.00-31.00	31.00-32.00	35.00-37.00	31.00-32.00	31.00-32.00	$250 In/Out $1.00 Shift Diff
Robinson Hartsville, SC	4x10s	300	$85	21.00-26.00	22.00-30.00	29.00-33.00	28.00-30.00	26.00-30.00	Mileage In/Out
Santee Cooper Cross, SC	5x10s	6					25.00-27.00		
SCE&G Various SC	5x10s	125	$85		26.00-27.00	32.00-35.00			NCCER $250 In/Out
Shearon Harris New Hill, NC	4x10s	300	$85	21.00-26.00	22.00-30.00	29.00-33.00	28.00-30.00	26.00-30.00	Mileage In/Out
Solar Ft. Mitchell, AL	4x10s +8	175	$50	21.50-29.50	21.50-29.50	21.50-29.50	21.50-29.50	21.50-29.50	PD 7 days $1.25 Service
Solar Kingsbay, GA	4x10s +8	175	$50	21.50-29.50	21.50-29.50	21.50-29.50	21.50-29.50	21.50-29.50	PD 7 days $1.25 Service
Stabilis/On Quest Miami, FL	5x10s	80	$80	23.00-27.00	23.00-28.00	31.00-31.00		23.00-30.00	
Steel Mill Saraland, AL	5x10s	15		18.00-20.00	22.50-25.00	25.00-26.00	22.50-22.50	24.00-30.00	
Stonewall Leesburg, VA	4x10s +8	650	$70	23.00-25.00	25.00-27.00	27.00-34.00	25.00-27.00	32.00-35.00	NCCER PD 7 days
TECO Mulberry, FL	5x10s	450	$70	26.00-27.00	26.00-27.00	27.00-30.00	26.00-27.00	27.00-29.00	
US Nitrogen Greeneville, TN	6x10s	250	$100	28.00-30.00	30.00-32.00	33.00-35.00		30.00-32.00	
VA Hospital Charleston, SC	6x10s	6	$80		25.00-26.00	25.00-26.00			
Valero Memphis, TN	5x10s	20	$92		29.00-29.00	30.00-34.00		26.00-31.50	PD $75 - $110
Valero Memphis, TN	4x10s	25	$60				23.00-28.00		NCCER
Valero Memphis, TN	5x10s	60	$60				24.00-24.00		
VC Summer Jenkinsville, SC	5x10s	4050	$70	28.50-29.50	28.50-29.50	30.00-35.00	28.50-29.50	31.30-34.30	NCCER Cert + PD 7 days
Wacker Charleston, TN	5x10s +8	120	$70		26.00-27.00			18.00-30.00	
Wacker Charleston, TN	6x10s	170	$100		25.00-25.00	25.00-35.00			
Wholesome Harleyville, SC	4x10s	5	$80				25.00-27.00		
Range - Lowest Rate - Highest Rate				18.00-32.00	18.00-32.00	21.50-37.00	21.00-35.00	18.00-35.00	
Range - Avg Low Rate - Avg High Rate				23.82-26.63	24.87-27.65	27.26-30.14	25.62-27.98	26.38-29.84	
Avg Per Diem				$74.03					

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 88 of 231

FLUOR®

Craft Compensation Review
VC Summer
9/27/2016

EXHIBIT #2

Incumbent Job Title	Fluor Job Title	Notes
Boilermaker	Boilermaker	
Carpenter	Carpenter	
Cement Finisher	Concrete Finisher	
Custodian	Utility Custodian	
Equipment Mechanic	Equipment Mechanic	
Equipment Mechanic - Oiler	See Note	Add New Title?
Facilities Worker	See Note	Need Job Description & Add New Title?
Field Assistant	See Note	Would this be Hourly Non-Manual Field Clerk?
Field Machinist	See Note	Add New Title?
General Supervisor	Sr. General Foreman	Need clarification on how 3 different rates are managed.
Heat Stress Technician	Post Weld Heat Treatment Tech	
Instrument Fitter	Instrument Fitter	
Instrument Tech	Instrument Technician	
Insulator	Insulator	
Ironworker	Ironworker Structural	
Laborer	Utility Worker	
Millwright	Millwright	
Operator Heavy - 80 to 299 Ton	See Note	Add New Title?
Operator Heavy - 300 to 399 Ton	See Note	Add New Title?
Operator Heavy - 400 to 599 Ton	See Note	Add New Title?
Operator Heavy - 600 Ton +	See Note	Add New Title?
Operator Heavy - Batch Plant (Goldhofer)	See Note	Add New Title?
Operator Heavy - (Concrete Pump Truck)	Truck Driver Concrete (See Note)	Is the pay range based on 51, 63, 70 meter qualifications.
Operator Heavy - (Hvy Lift Derrick)	See Note	Add New Title?
Operator Light - Truck Driver, Bus Driver	Truck Driver Light	Need clarification on equipment list - Single Axle TR?
Operator Medium	Equipment Operator Crane - Medium	
Painter	Painter	
Pipefitter	Pipefitter	
Rigger	Ironworker Rigger	
Rodbuster	Ironworker Reinforcing	
Runner	See Note	Hourly Non-Manual Town Runner? If not, Add New Title?
Scaffold Carpenter	Carpenter Scaffold	
Survey - Rod-Chain Person	Survey Crew	Need clarification on 3 Journeyman Pay Rates?
Surveyor - Instrument Person	Survey Crew-Instrument	
Surveyor - Party Chief	See Note	Add New Title? Need clarification on 3 Journeyman rates?
Warehouseman	Support - Warehouse Worker	
Welder - Combination Process	Welder - Combination	Clarify E-Helper 4 vs Journeyman on all welder titles?
Welder - Combo + Machine	See Note	Is this Orbital Machine or Flux Core? Add Title post feedback.
Welder - Combo + Stainless	See Note	Create New Title?
Welder - Single Process	Ironworker Welder (See Note)	Is this Structural Welder? Add Title based on feedback
Note 1: Need clarification on Time in Position from entry level to Journeyman. Fluor uses 42 months for Journeyman with 6 month intervals between helper levels.		
Note 2: Need complete Per Diem guideline details.		
Note 3: Do Foreman, General Foreman, and General Supervisor have pay incentives for NCCER certification?		

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 89 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 90 of 231

International Association of
Heat & Frost Insulators & Asbestos Workers Local 96

VINCE P. DRESCHER, JR.
Business Manager

105 Sharon Court
Pooler, Georgia 31322
Office: (912)748-6282
Fax: (912)748-5408
Cell: (912)663-0749
Email:awl96@insulators.org

Wage Rates
Effective 5 -16-16

- ✓ **Mechanic $25.92 Per Hour**
- ✓ **Health & Welfare $5.55 Per Hour**
- ✓ **Retire Health & welfare $.35 Per Hour**
- ✓ **Local 96 Pension $6.30 Per Hour**
- ✓ **Local 96 Apprenticeship (JATC) $.25 Per Hour**
- ✓ **Labor Management $.05 per hour**
- ✓ **Florence Bernard Scholarship and Disaster Relief $.01 per hour**
- ✓ **National Apprenticeship Training Fund $.05 Per Hour**
- ✓ **Employer shall apply 6.5% of gross per hour worked to the dues check off**
- ✓ **Employer shall deduct $.10 per hour to apply to the National organizing fund and $.01 for per hour for National PAC**
- ✓ **Employer shall Pay $.04 per hour for Tissue Bank**
- N/A **Travel pay 2.00 per hour for projects over 75 miles from union hall**
- N/A **Night shift 15%**

- ✓ **Foremen $2.00 Per Hour above base wage rates**
- ✓ **General Foremen $3.00 Per Hour above base wage rates**

1st Year Apprentice 60% of Mechanic Rate no Health & Welfare Or Retiree Health & Welfare with other benefits as outlined.
2nd Year 70% of mechanic hourly wage rates with full benefits.
3rd Year 75 % of mechanic hourly wage rates with full benefits.
4th Year 85 % of mechanic hourly wage rates with full benefits.

Pre Apprentice 10.00 per hour Local 96 Apprentice (JATC) $.25,
National apprentice $.05, 6.5% of gross per Dues check off

* NOT COUNTING COVER SHEET. IF YOU DO NOT RECEIVE ALL PAGES, PLEASE TELEPHONE US IMMEDIATELY AT.

BL 33

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 91 of 231

Article (A)

. WAGE RATES AND FRINGE BENEFITS CONTRIBUTIONS:

Employees covered by this agreement shall be paid on hours worked, as indicated in Article A, and such wage rates and fringe benefits contributions shall become effective the first full payroll on or after the date shown.

Bricklayers, Pointer, Cleaners, Cement Masons, Plaster, Tile Setter, Caulkers and Welders

FRINGE BENEFITS EFFECTIVE: 5-1-2016 TO 4-30-2017

Journeyman Rates	
Base Wage Rate:	$25.81
IHF	$ 6.00
IPF/PPA	$ 0.54
IPF	$ 1.50
Apprentice Training	$ 0.20
TOTAL WAGE PACKAGE	**$34.05**

Apprentice Base Wage Schedule	
1st 6 Months 50%	$12.91
2nd 6 Months 55%	$14.20
3rd 6 Months 60%	$15.49
4th 6 Months 70%	$18.07
5th 6 Months 80%	$20.65
6th 6 Months 90%	$23.23

Check-off Dues (4% of Total Wage Package)
IU Check-off Dues: $0.34
Local Check-Off Dues: $1.02

Foreman shall be paid Two dollars ($2.00) per hour above the journeyman rate.
General Foreman shall be paid Three dollars ($3.00) per hour above the journeyman rate.
*Refractory work pays an additional ($2.00) per hour above the journeyman rate.
Shift work for all refractory will be the same as agreed to in the National Refractory Agreement. Per Diem or travel will be negotiated on a per job basis with special consideration given depending on jobsite locations.

Apprentice rates to be determined by the Joint Apprenticeship Committee. It is the responsibility of the Foreman to see the apprentice receive the proper training.

ARTICLE XVIII
PROJECT AGREEMENTS

Before any project agreement can be entered into between the Union and a non-signatory contractor, the union must first get approval from the brick contractor committee of two. This committee will be selected by the Brick contractors and the committee's only function is for this Article XVIII. Project agreements only in regards to this contract.

Local 8 Southeast Officer: _____

Contractor: _____

Date: _____

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 92 of 231

Article (A)

1. WAGE RATES AND FRINGE BENEFITS CONTRIBUTIONS:

Employees covered by this agreement shall be paid on hours worked, as indicated in Article A, and such wage rates and fringe benefits contributions shall become effective the first full payroll on or after the date shown.

Bricklayers, Pointer, Cleaners, Cement Masons, Plaster, Tile Setter, Caulkers and Welders

FRINGE BENEFITS EFFECTIVE: 5-1-2016 TO 4-30-2017

Journeyman Rates	
Base Wage Rate:	$25.81
IHE	$ 6.00
IPF/PPA	$ 0.54
IPF	$ 1.50
Apprentice Training	$ 0.20
TOTAL WAGE PACKAGE	$34.02

Apprentice Base Wage Schedule	
1st 6 Months 50%	$12.91
2nd 6 Months 55%	$14.20
3rd 6 Months 60%	$15.49
4th 6 Months 70%	$18.04 *
5th 6 Months 80%	$20.65
6th 6 Months 90%	$23.23

Check-off Dues (4% of Total Wage Package)
IU Check-off Dues: $0.34
Local Check-Off Dues: $1.02

Foreman shall be paid Two dollars ($2.00) per hour above the journeyman rate.
General Foreman shall be paid Three dollars ($3.00) per hour above the journeyman rate.
*Refractory work pays an additional ($2.00) per hour above the journeyman rate.
Shift work for all refractory will be the same as agreed to in the National Refractory Agreement. Per Diem or travel will be negotiated on a per job basis with special consideration given depending on jobsite locations.

Apprentice rates to be determined by the Joint Apprenticeship Committee. It is the responsibility of the Foreman to see the apprentice receive the proper training.

ARTICLE XVIII
PROJECT AGREEMENTS

Before any project agreement can be entered into between the Union and a non-signatory contractor, the union must first get approval from the brick contractor committee of two. This committee will be selected by the Brick contractors and the committee's only function is for this Article XVIII. Project agreements only in regards to this contract.

Local 8 Southeast Officer: [signature]

Contractor: Victoria Magar [signature] Liberty Integrated Solutions LLC

Date: April 29, 2016

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 93 of 231

SOUTHEASTERN STATES ARTICLES OF AGREEMENT WAGE PACKAGE FOR BOILERMAKER
Lodges 26, 37, 69, 108, 110, 263, 433, 454, 455 and 456
EFFECTIVE THE FIRST FULL PAY PERIOD AFTER JANUARY 1, 2016 THROUGH December31, 2016
THE FOLLOWING CLASSIFICATIONS HAVE BEEN AGREED TO BY THE PARTIES

CLASSIFICATION	WAGE	PENSION	H&W	ANNUITY	APPR.	MOST	VAC	TOTAL
General Foreman	$35.27	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$56.49
Foreman	$33.27	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$54.49
Assistant Foreman	$32.02	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$53.24
Boilermaker CPW - TIG	$31.27	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$52.49
Boilermaker CW - MIG	$30.02	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$51.24
Boilermaker Mechanic	$27.97	$11.96	$7.07	$1.25	$0.60	$0.34	$0.00	$49.19

APPRENTICE RATES		WAGE	PENSION	H&W	ANNUITY	APPR.	MOST	VAC	TOTAL
Period 6	95%	$26.57	$11.36	$7.07	$1.19	$0.60	$0.34	$0.00	$47.13
Period 5	90%	$25.17	$10.77	$7.07	$1.13	$0.60	$0.34	$0.00	$45.08
Period 4	85%	$23.77	$10.16	$7.07	$1.06	$0.60	$0.34	$0.00	$43.00
Period 3	80%	$22.38	$9.57	$7.07	$1.00	$0.60	$0.34	$0.00	$40.96
Period 2	75%	$20.98	$8.97	$7.07	$0.94	$0.60	$0.34	$0.00	$38.90
Period 1	70%	$19.58	$8.37	$7.07	$0.88	$0.60	$0.34	$0.00	$36.84
Period Probation (0-2,000)	65%	$18.18	$0.60	$7.07	$0.81	$0.60	$0.34	$0.00	$27.60

SUBJOURNEYMAN RATES		WAGE	PENSION	H&W	ANNUITY	APPR.	MOST	VAC	TOTAL
Over 4,000	80%	$22.38	$0.60	$6.72	$0.10	$0.60	$0.34	$0.00	$30.74
1,000 - 2,000 Probationary	60%	$16.78	$0.60	$6.72	$0.10	$0.60	$0.34	$0.00	$25.14
0-1,000 Probationary	60%	$16.78	$0.60	$0.00	$0.10	$0.60	$0.34	$0.00	$18.42

Pension, Health & Welfare, and Annuity are paid on an "hours paid" basis

NOTE: Article 18.1.1(a) It is agreed that on all work erected in St. Lucie, Martin, Palm Beach, Broward, Dade, and Glade Counties (to and including Key West), Florida, and there only, all employees shall receive one dollar (**$1.00**) per hour above the rates provided in Article 18.1(a).

TRAVEL: **$.32** per mile where a job is located outside the 40-mile zone from the City Hall in the city of the local union having jurisdiction, to and from the job at the beginning and conclusion of employment.

SUBSISTENCE: Over **60** miles - **$40.00** per day from the employee's primary residence to the jobsite.

OVERTIME: Weekdays and Saturdays - Time and One-half
Sundays and Holidays - Double Time

SHIFT WORK: 1st Shift - 8 hours worked for 8 hours paid
2nd Shift - 7 1/2 hours worked for 8 hours paid
3rd Shift - 7 hours worked for 8 hours paid

***** Must demonstrate at least 1000 hours as a Subjourneyman B to advance to a Subjourneyman A and receive the Health and Welfare Contributions *****

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 94 of 231

Effective 7/4/16

Operative Plasterers' & Cement Masons
Plant Vogtle
Southeast region

AFL/CIO

4100 Martin Luther King Jr. Drive, SW
Atlanta, Georgia 30336
Phone (404) 696-9500 Fax (404) 696-3388
opcmialocal148@bellsouth.net

Wages & Benefits Appropriations Effective 7/1/16

Journeyman: ***$ 24.80 per/hr.***

Foreman rate: $ 2.00 above journeyman rate

Apprentice Rates and Percentages:

First 6 months	70%
Second 6 months	75%
Third 6 months	80%
Forth 6 months	85%
Fifth 6 months	90%
Sixth 6 months	95%
Upon Graduation	100% Journeyman Rate

Fringe Benefits

Health & Welfare	$ 4.70
Pension	$ 2.00
Admin. Dues	$ 1.67

N/C

Fund Appropriations:

Apprentice Fund	$ 0.50

N/C

Journeyman Total Package: ***$ 32.00***

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 95 of 231

APPENDIX "A"

CLASSIFICATIONS AND RATES OF PAY

FOR CARPENTERS

PLANT VOGTLE, PLANT HATCH AND PLANT FARLEY

SEPTEMBER 1, 2015 THROUGH AUGUST 31, 2016

	Wage	Apprenticeship	Pension	H & W
Carpenters: Journeyman	$26.20	$.90	$5.70	$4.10

SEPTEMBER 1, 2016 THROUGH AUGUST 31, 2017

$1.03 Increase to total package

SEPTEMBER 1, 2017 THROUGH AUGUST 31, 2018

$1.06 Increase to total package

Foreman will receive 15% above the Journeyman rate.

General Foreman will receive 20% above the Journeyman rate.

BOE - Attachment 1c

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 96 of 231

THE FOLLOWING PERCENTAGES SHALL APPLY TO APPRENTICE WAGE SCALE:

1ST STEP	844 HRS.	60%
2ND STEP	844 HRS.	65%
3RD STEP	844 HRS.	70%
4TH STEP	844 HRS.	75%
5TH STEP	844 HRS.	80%
6TH STEP	844 HRS.	85%
7TH STEP	844 HRS.	90%
8TH STEP	844 HRS.	95%

BOE - Attachment 1c

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 97 of 231

IBEW LOCAL UNION 1579
WAGE SCHEDULE
PLANT VOGTLE
Units 3 & 4

MANUAL CRAFT WAGE
CLASSIFICATION - ELECTRICIANS

JANUARY 1, 2016 – SEPTEMBER 30, 2016

CLASSIFICATION	BASE WAGE RATE
Journeyman	26.98
Foreman (15% above Journeyman)	31.03
General Foreman (20% above Journeyman)	32.38
Cable Splicer ($.25 above Journeyman)	27.23
Foreman (15% above Journeyman/Cable Splicer)	31.31
General Foreman (20% above Journeyman/Cable Splicer)	32.68

APPRENTICES (DOL-BAT Registered and Certified)
Percent of Journeyman Base Rate

1st 6 months	1st Period	47%	(No Local Pension)	12.68
2nd 6 months	2nd Period	50%	(No Local Pension)	13.49
2nd year	3rd Period	55%		14.84
3rd year	4th Period	60%		16.19
4th year	5th Period	70%		18.89
5th year	6th Period	80%		21.58

FRINGES

Health & Welfare	$5.91 per hour worked, contribution
Pension	$4.34 per hour worked, contribution
Pension Deficit Reduction Assessment	$1.13 per hour worked, contribution
NEBF	3% of gross monthly payroll contribution
Apprenticeship & Training	1.28% gross monthly payroll contribution
Dues	Deduction from pay (4% or 1%) with signed authorization
NECA – Augusta Chapter	1% of gross earnings (NECA members only) N/A

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 98 of 231

International Brotherhood of Electrical Workers
LOCAL UNION 1579
1250 REYNOLDS STREET
AUGUSTA, GEORGIA 30901
Phone: (706) 722-6357 • Fax: (706) 724-9792

October 30, 2015

To All IBEW 1579 Contractors-Plant Vogtle
Units 3 and 4

RE: Wage Reduction Explanation
for January 1-September 30, 2016

This year, the Journeyman Wireman rate for Plant Vogtle Units 3 & 4 increased .80 cents and went into effect October 1, 2015.
Unfortunately, **effective January 1, 2016**, our health & welfare rates will increase .22 cents per hour and will have to be deducted from the $27.20 hourly wage rate lowering the hourly rate to **$26.98**. Please see attached (revised) wage schedule for Inside Working Agreement for January 1, 2016 thru September 30, 2016.

If you need any additional explanation, please do not hesitate to call.

Thanks,

George W. (Will) Salters
Business Manager & Financial Secretary

GWS/jbs

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 99 of 231

Effective 7/4/16

IRONWORKERS LOCAL UNION 709

Affiliated With AFL-CIO
131 Westside Blvd.
Pooler, Ga. 31322
Phone: 912-748-5118
Fax: 912-748-4367
WILLIAM H. MCMILLAN
BUSINESS REPRESENTATIVE

Contracts five (5) million and above, and work at nuclear facility will increase as follows:
RATES EFFECTIVE 7/1/16 – 6/30/2017

JOURNEYMAN	$27.09
FOREMAN 15%	$31.16
GENERAL FOREMAN 20%	$32.51
WELDERS	$29.09

APPRENTICES

1ST YEAR-60%	$16.26
2ND YEAR-70%	$18.97
1ST & 2ND YR – HEALTH & WELFARE ONLY	
3RD YEAR-85%	$23.03
4TH YEAR-95%	$25.74
3RD & 4TH YR – ALL BENEFITS	

BENEFITS

HEALTH & WELFARE	$5.00
PENSION	$2.75) 5.00
FUNDING SURCHARGE	$2.25)
APPRENTICE	.50
DISTRICT COUNCIL	.02
PAC	.04
IMPACT	.20
ANNUITY	$1.00
CONTRACTORS ADMIN/TRAINING FUND	.03) N/A

WORKING ASSESSMENT
CONTRACTORS ARE TO DEDUCT 4% OF GROSS PAY WITH A 40 HOUR STRAIGHT TIME CAP PER WEEK FOR EACH MAN AND TRANSMIT TO:
IRONWORKERS LOCAL UNION 709
131 WESTSIDE BLVD.
POOLER, GA 31322

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 100 of 231

Effective 7/4/16

IRONWORKERS LOCAL UNION 709

Affiliated With AFL-CIO
131 Westside Blvd.
Pooler, GA 31322
Phone: 912-748-5118
Fax: 912-748-4367
WILLIAM H. MCMILLAN
BUSINESS REPRESENTATIVE

June 15, 2016

RE: Rate Increase

Dear Contractor:

As of July 1, 2016, there will be a rate increase of $1.20 per hour. We will be adding $0.50 cents to the Pension Surcharge and $0.70 cents to the wages.

JIW Wages - $27.09 per hour
Pension Surcharge - $2.25 per hour

Also, a Wage sheet is enclosed to further verify amounts.

Please see that these rates are implemented in a timely manner. Thank you for all your help with this change. I am

Respectfully,

W. H. McMillan

William H. McMillan
FS-T-BM

WHM:cs

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 101 of 231

International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers
Reinforcing Ironworkers Local Union No. 846
6260 Woodside Executive Court • Aiken, South Carolina 29803
Phone: (803) 644-2187 • Toll Free: (866) 336-9163 • Fax: (803) 644-2192
www.iw846.org • www.iwrdtt.org • www.ironworkers.org

PLANT VOGTLE RATES

Rates Effective 9/1/2015 – 8/31/2016

JOURNEYMAN	$33.69
FOREMAN (15%)	$38.74
GENERAL FOREMAN (20%)	$40.43

APPRENTICES

1st - 3rd Year

1st six months - 625 hours	70 % of the Journeymen's rate	$23.58
2nd six months - 625 hours	75 % of the Journeymen's rate	$25.27
3rd six months - 625 hours	80 % of the Journeymen's rate	$26.95
4th six months - 625 hours	85 % of the Journeymen's rate	$28.64
5th six months - 625 hours	90 % of the Journeymen's rate	$30.32
6th six months - 625 hours	95 % of the Journeymen's rate	$32.01

Fringes/Benefits (Journeyman & Apprentice)

Profit Sharing	$0.50^
Health and Welfare	$0.85
Apprentice/Training	$1.50
IMPACT	$0.28
Bonus Fund*	$0.80*
Total	**$3.93**

***Bonus Fund - To Be Deducted Out Of Employees Check.**

TOTAL JOURNEYMAN PACKAGE $37.62

^ You may elect to defer additional amounts from your wages into the Profit Sharing Plan on a pre-tax basis. You may defer anywhere from $0.50 to $7.00 per hour, in increments of $0.50. To defer your wages, you must complete a written authorization form.

Welding Rates and Fringes

Classification	Wage	Profit Sharing	H&W	Apprentice/Training	IMPACT	Bonus Fund*
Welder*	$39.36	$0.50^	$0.85	$1.50	$0.28	$0.80*

**Rates will defer for Ironworkers Reinforcing CPW-TIG and CW-MIG which are listed out in the Side Letter of Welder Rates effective 9/1/2014 as per the RDC and 846/847 CBA. Bonus Fund - To Be Deducted Out Of Employees Check.*

TOTAL WELDER PACKAGE $43.29

WORKING ASSESSMENTS

CONTRACTORS ARE TO DEDUCT 4.5% PER WEEK OF GROSS WAGES FOR **EACH** MAN AND TRANSMIT TO:
REGIONAL DISTRICT COUNCIL TRUST FUNDS
P.O. BOX 4148; PORTLAND, OR 97208

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 102 of 231

International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers
Reinforcing Ironworkers Local Union No. 846

6260 Woodside Executive Court • Aiken, South Carolina 29803
Phone: (803) 644-2187 • Toll Free: (866) 336-9163 • Fax: (803) 644-2192
www.iw846.org • www.iwrdtt.org • www.ironworkers.org

MEMORANDUM

August 28, 2015

RE: Wage Increase at Plant Vogtle

To whom it may concern:

Effective September 1, 2015, there will be a rate increase of sixty-five cents ($0.65) to our wage package. The wage increase will be effective the first full pay period in September 2015 and should be applied as follows:

- $0.65 added to the Wages

We have also changed our Annuity/Retirement contribution from $6.47 to $0.50. The balance of $5.97 is now added to the Journeyman wage. The change in contribution rate is done in connection with the conversion of the Retirement Plan from a Money Purchase plan into a Profit Sharing plan. The new Profit Sharing plan allows for employees to defer their wages on a pretax basis as an employee contribution to their Retirement Plan. This means that the employees can have additional money deducted from their wage on their check and added to their Retirement Plan. To do this, employees will need to fill out and sign the Wage Deduction Form for Voluntary Contributions that is attached to this letter.

In summary, attached please find:

- Revised rate sheet for Plant Vogtle in effect from 9/1/2015 to 8/31/2016
- Wage Deduction Form for Voluntary Contributions

Should you have any questions please feel free to contact us.

Sincerely,

Jose J. Mendoza, FST/BM
Reinforcing Local Union 846

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 103 of 231

APPENDIX "A" WAGES

FOR THE HEAVY AND HIGHWAY CONSTRUCTION AGREEMENT FOR THE SOUTHEAST LABORERS' DISTRICT COUNCIL on behalf of Laborers' Local Union 515 of GEORGIA AND SOUTH CAROLINA

GEOGRAPHICAL

GEORIA AND SOUTH CAROLINA

WAGE RATES

GROUP 1 Zone 1	1-13-16 $13.58	1-1-17 +$0.45(to be allocated)	1-1- 17 +$0.45(to be allocated)

Flagman, (Traffic Control)
Traffic Control Maintenance, (To include but not limited to erection and maintenance of barricades, signs and relief of flag person)

JMA

GROUP II Zone 1	~~1-13-16~~ 1/18/16 $16.02	1-1-17 +$0.45(to be allocated)	1-1- 18 +$0.45(to be allocated)

General Construction Laborer

UPGRADE CLASSIFICATIONS
Laborers working in these classifications will receive a $0.30 per hour upgrade JMC 16.32

Air and Hydraulic Track Drill
Asphalt Raker
Asphalt Roller, walking
Caisson Worker, free air
Cement Finisher Tender
Chain Saw Operator and Faller
Concrete Saw, walking
Concrete Crewman (To include stripping of forms, hand operating jacks on slip form construction, application of concrete curing compounds, pumpcrete machine, signaling, handling the nozzle of squeezecrete or similar machine, 6 inches and smaller)
Concrete Stack (To include Laborers working on free standing concrete stacks for smoke or fume control above 40 feet high)
Confined Space Attendant
Concrete Signalman
Crusher Feeder
Demolition (To include clean-up, burning rubbish, loading, wrecking & salvage of all material)
Demolition Torch
Driller Helper (when required to move & position machine)
Drills with dual Masts
Dumpman

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 104 of 231

Fence Erector
Form Setter, paving
Grade Checker Using Level
Grout Machine Header Tender
Guard Rail (To include guard rails, guide and reference posts, sign posts, and right-of-way markers)
Gunite (To include the operation of the machine or nozzle)
High Scaler
Jackhammer Operator
Laser Beam Operator (To include grade checkers and elevation control)
Miner, Class "A" (To include bull gang, Concrete Crewman, Dumpman and Pumpcrete Crewman, including distributing pipe, assembly & dismantle and nipper)
Miner, Class "B" (To include Brakeman, Finisher, Vibrator and Form Setter)
Miner, Class "C" (To include Miner, Nozzleman for concrete, Laser Beam Operator and Rigger)
Miner, Class "D" (To include Raise and Shaft Miner, Laser Beam Operator on raises and shafts)
Monitor Operator, air track or similar mounting
Mortar Mixer
Nipper
Nozzleman (To include squeeze and flo-crete nozzle)
Nozzleman, water, air or steam
Nozzleman (To include Jet Blasting Nozzleman, over 1200 lbs., jet blast machine power-propelled, sandblast nozzle
Pavement Breaker, all
Plasma Arc/Demolition Torch
Pipelayer, corrugated metal culvert
Pipelayer, multi-plate
Pipeliner, (To include Working Topman, Caulker, Collarman, Jointer, Mortarman, Rigger, Jacker, Shorer, Valve or Meter Installer and Tamper
Pipewrapper
Pot Tender
Powderman Helper
Power Buggy Operator
Power Tool Operator, gas, electric, pneumatic
Railroad Equipment, power driven, including dual mobile power spiker or puller
Remediation Worker (HazMat, Rad, Asbestos, Lead)
Rodder & Spreader
Riprap Man
Sandblast Tailhosman
Scaffold Erector, wood or steel
Stake Jumper
Tamper (To include the operation of Barco, Essex & similar tampers)
Tailhosman (water nozzle)
Track Laborer (RR)
Trencher
Truck Loader
Tugger Operator
Vibrators, all
Wagon Drills
Water Pipe Liner
Well-point Man
Wheelbarrow, power driver

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 105 of 231

JMB

GROUP III	~~1-13-16~~ 1/18/16 $17.37	1-1-17 +$0.45(to be allocated)	1-1- 18 +$0.45(to be allocated)

Concrete Specialist

Construction Specialist (To include all work requiring special skills not addressed in the previously listed classifications and mutually agreed to between the Union and the Employer)

FOREMAN & TRAFFIC CONTROL SUPERVISOR: will receive $1.00 per hour above the Laborers scale.

GENERAL FOREMAN AND CAISSON HOLE MAN: will receive $1.50 per hour above the Laborers scale.

The Union shall have the right to adjust the total wage and fringe benefit package as conditions dictate but the total package shall not exceed the total wage and fringe benefit package as negotiated.

APPRENTICESHIP HOURS AND RATES

STEP/HOURS

I	0-1000	80% of journeyman rate and 100% of fringe package, excluding pension*
I	1001-2000	85% of journeyman rate and 100% of fringe package, excluding pension*
III	2001-3000	90% of journeyman rate and 100% of fringe package, excluding pension*
IV	3000-4000	95% of journeyman rate and 100% of fringe package, excluding pension*

The pension contribution for an apprentice will be $0.20 per hour. When an apprentice reaches Journey Worker status, they will immediately receive the Journey Worker fringe package.

"NOTE" At no time will apprenticeship rates exceed journeyman rates for the same classification.

FRINGE BENEFIT CONTRIBUTIONS

	1-13-16	1-1-17	1-1- 18
Health & Welfare	$3.50	$ TBD	$ TBD
Pension	$1.60	$ TBD	$ TBD
Training	$0.30	$ TBD	$ TBD
Regional LECET	$0.10	$ TBD	$ TBD

TBD – To Be Determined

Rate increases shall become effective on the first full pay period of the month in which they become effective.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 106 of 231

LABORERS' INTERNATIONAL UNION OF NORTH AMERICA
LOCAL UNION 515
GEORGIA and SOUTH CAROLINA

MEMORANDUM

To: All Local 515 Members
From: Pedro Franco, Business Manager
Date: November 2, 2015
Subject: Changes to the Dues Structure

On December 9, 2011, a "Dues Convention" was held to establish the dues structure for our District Council. The "Dues Convention" was held in accordance with Article VIII, Section 2, of the Uniform District Council Constitution. During this meeting, a motion was properly made, seconded, and carried to establish the following dues structures for Local 515.

Effective January 1, 2016 the dues will be a follows:

Dues will be $35.00 per month and 4% working dues.

Retiree dues will be $8.00 per month.

1004 Edgewood Ave, NE • Atlanta, Georgia 30307 • Phone: (404) 522-5872 • Fax: (404) 522-3818
"Proud Heritage, Strong Foundation, Unified Future"
BOE - Attachment 1c

SSMRC MILLWRIGHT LOCAL UNI' ` 1263 RATE SHEET (FOR 09 01 2015)

COVERING GEORGIA, NOR.. CAROLINA SOUTH CAROLINA

PHONE: 770-795-1263 FAX: 770-795-0163

	NEW RATES
	GA-NC-SC+Farley
DESCRIPTION	NUCLEAR JOBS
EFFECTIVE DATE	09/01/15
MWJ WAGE RATE	$28.50/HR
MWF WAGE RATE	JNYMN +15%
MWGF WAGE RATE	JNYMN +20%
NIGHT SHIFT PREMIUM	JNYMN+1.667%
APPRENTICE WAGE RATES	
PRE-APPR 90 % 1ST PD	NONE
1ST PD APPR (60 %)	$17.10/HR
2ND PD APPR (65 %)	$18.53/HR
3RD PD APPR (70 %)	$19.95/HR
4TH PD APPR (75 %)	$21.38/HR
5TH PD APPR (80 %)	$22.80/HR
6TH PD APPR (85 %)	$24.23/HR
7TH PD APPR (90 %)	$25.65/HR
8TH PD APPR (95 %)	$27.08/HR
BENEFITS	
HEALTH & WELFARE	$4.10/HR
JNYMN PENSION	$7.80/HR
1ST & 2ND YR APPR PENSION	$7.80/HR
3RD & 4TH YR APPR PENSION	$7.80/HR
APPR/TRAINING	$ .95/HR
UBC MW FUND	NONE
TOOLS/SAFETY	NONE
NEXT CONTRACT MODIFICATION	8/31/2016
CONTRACT FINAL (Y/N)	Y
WORKING ASSESSMENT	4%
CONTRACT EXPIRATION DATE	8/31/2018

09/01/2015 THROUGH 08/31/2016

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 108 of 231

Effective 7/1/16

INTERNATIONAL UNION OF OPERATING ENGINEERS

127 Westside Blvd.
Pooler, GA 31322

Office: 912-330-9928
Fax: 912-330-9963

LOCAL UNION NO. 474
AFFILIATED WITH AFL-CIO

MEMORANDUM OF AGREEMENT

THIS AGREEMENT IS DULY MADE AND ENTERED INTO THIS 1ST DAY OF JULY, 2015 BY AND BETWEEN THE INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL 474 (HEREINAFTER THE "UNION) AND THE SOUTH GEORGIA MECHANICAL & ERECTORS ASSOCIATION, INC., FORMERLY KNOWN AS THE SAVANNAH AREA STEEL ERECTORS ASSOCIATION, (HEREINAFTER THE "ASSOCIATION" OR "EMPLOYER").

ALL OF THE TERMS AND CONDITIONS OF THE COLLECTIVE BARGAINING AGREEMENT BETWEEN THE "UNION" AND THE "ASSOCIATION" FOR THE PERIOD JULY 1, 2016 THROUGH JUNE 30, 2018 SHALL CONTINUE IN FULL FORCE AND EFFECT WITH THE FOLLOWING CHANGES:

1. ARTICLE 10--WAGES
On all jobs and work performed by Employers subject to this Agreement, the Employers agree to pay the following wage rates and fringe benefit contributions for all employees within the bargaining unit and within the groups stated hereunder and described in this Article.

WAGES--JOURNEYMEN

	JULY 1,2016 TO JUNE 30, 2016	JULY 1, 2016 TO JUNE 30, 2017	JULY 1, 2017 TO JUNE 30, 2018
GROUP 1	$25.85	$26.35	$26.85
GROUP 1A	$26.85	$27.35	$27.85
GROUP 1B	$27.85	$28.35	$28.85
GROUP 1C	$28.85	$29.35	$29.85
GROUP 1D	$29.85	$30.35	$30.85
GROUP 2	$24.02	$24.52	$25.02
GROUP 3	$21.68	$22.18	$22.68
GROUP 4	$19.51	$20.01	$20.51

FRINGE BENEFIT RATES

	7-1-2015 TO 6-30-2016	7-1-2016 TO 6-30-2017	7-1-2017 TO 6-30-2018
HEALTH & WELFARE	$5.75	$5.75	$5.75
LOCAL 474 PENSION	$2.50	$3.00	$3.50
CENTRAL PENSION	$3.95	$3.95	$3.95
APPRENTICESHIP	$.60	$.60	$.60
AAT	$.03	$.03	$.03
TOTAL FRINGES	$12.83	$13.33	$13.83

Do not pay (see attached email)

Contractors shall have the right to call for employees with valid commercial driver's license (CDL) and current Certified Crane Operator (CCO) training.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 109 of 231

GROUP 1A
ALL HYDRAULIC AND CONVENTIONAL CRANES RATED 120 TONS AND LARGER AND OPERATORS WITH UNESCORTED ACCESS IN NUCLEAR POWER PLANTS WHERE NRC CLEARANCE IS REQUIRED

GROUP 1B
ALL HYDRAULIC AND CONVENTIONAL CRANES RATED 250 TONS AND LARGER

GROUP 1C
ALL HYDRAULIC AND CONVENTIONAL CRANES RATED 500 TONS AND LARGER

GROUP 1D
ALL HYDRAULIC AND CONVENTIONAL CRANES RATED 800 TONS AND LARGER

APPRENTICE RATES	PAY RATE AND FRINGE BENEFIT CONTRIBUTIONS
FIRST YEAR	70% OF GROUP 1 RATE PLUS HEALTH & WELFARE
SECOND YEAR	80% OF GROUP 1 RATE WITH FULL FRINGE BENEFITS
THIRD YEAR	90% OF GROUP 1 RATE WITH FULL FRINGE BENEFITS

	(2015-2016)	(2016-2017)	(2017-2018)
FIRST YEAR	$18.10	$18.46	$18.80
SECOND YEAR	$20.68	$21.08	$21.48
THIRD YEAR	$23.27	$23.72	$24.17

DELETE PAC FUND FROM FRINGE BENEFIT PACKAGE. BOTH PARTIES AGREED TO ADD PAC FUND TO TOTAL NEGOTIATED WAGE WHICH IS REFLECTED IN THE FIRST YEAR OF THE WAGE RATES. BOTH PARTIES AGREED THAT THE UNION WILL SEND OUT CHECK OFF FORMS FOR THIS VOLUNTARY DEDUCTION TO BE TAKEN FROM MEMBERS WAGE.

ENGINEERS WHOSE "FULL TIME JOB" IS TO OPERATE A GREASE OR FUEL TRUCK SHALL RECEIVE $1.00 ABOVE THE GROUP 1 RATE.

CERTIFIED MECHANICS PERFORMING ANNUAL CRANE INSPECTIONS SHALL DRAW THE SAME RATE AS THE CRANE OPERATOR IF THAT RATE IS HIGHER THAN HIS OR HER OWN.

ANY FORKLIFT OPERATED ON JOBSITES USING A HOOK ATTACHMENT SHALL DRAW GROUP 1 RATE.

MASTER MECHANIC/GERNERAL FOREMAN AHALL RECEIVE $3.50 PER HOUR ABOVE GROUP 1 AND A WORKING FOREMAN SHALL RECEIVE $2.50 ABOVE GROUP 1 ALONG WITH CURRENT CBA LANGUAGE.

ARTICULATING (OFF ROAD) DUMP TRUCKS IS RECOGNIZED AS A GROUP 1 OPERATING ENGINEER DESIGNATION AS WELL AS ALL REMOTE CONTROL OPERATED EQUIPMENT.

2. ARTICLE 2-REPRESENTATION
KEEP THE CURRENT LANGUAGE. ADD THESE PARAGRAPHS:

IT IS MUTALLY AGREED AND UNDERSTOOD AND ACKNOWLEDGED THE SOUTH GEORGIA MECHANICAL AND ERECTORS ASSOCIATION HEREINAFTER REFERRED TO AS THE ASSOCIATION, IS THE DULY AUTHORIZED AND RECOGNIZED BARGAINING REPRESENTATIVE OF EMPLOYERS OF OPERATING ENGINEERS IN THE GEOGRAPHICAL AREA COVERED BY THIS AGREEMENT.

THIS AGREEMENT IS NEGOTIATED BY THE ASSOCIATION AS A NEGOTIATING AGENT ONLY. THE LIABILITY OF THE SOUTH GEORGIA MECHANICAL & ERECTORS ASSOCIATION SHALL BE AS A BARGAINING AGENT ONLY, ACTING WITHOUT LIABILITY FOR THE ACTS OF THEIR INDIVIDUAL MEMBERS OR OF OTHER PARTIES SIGNATORY TO THIS AGREEMENT.

CONTRACTOR FIRMS MAY BECOME PARTY TO THIS AGREEMENT BY DIRECT APPLICATION TO, AND APPROVAL BY, THE UNION. THE UNION SHALL NOTIFY THE ASSOCIATION AND THE BENEFITS ADMINISTRATOR OF THE NAMES OF CONTRACTOR FIRMS THAT BECOME PARTIES TO THIS AGREEMENT.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 110 of 231

ANY CONTRACTOR SIGNATORY TO THIS AGREEMENT, OR OTHERWISE BOUND BY THIS AGREEMENT, ACKNOWLEDGES THAT IT MAY GIVE BOTH THE UNION AND THE ASSOCIATION WRITTEN NOTICE NOT LESS THAN 60 DAYS PRIOR TO THE TERMINATION DATE OF THE AGREEMENT, OR PRIOR TO THE TERMINATION OF SUBSEQUENT RENEWAL, MODIFICATION, OR EXTENSION HEREOF, OF SAID CONTRACTORS INTENTION TO NO LONGER BE BOUND BY THE ASSOCIATION AS ITS COLLECTIVE BARAINING REPRESENTATIVE, AND FAILING TO GIVE SAID NOTICE, IT AGREES TO BE BOUND BY EACH SUBSEQUENT RENEWAL, MODIFICATION, OR EXTENSION OF THIS AGREEMENT. IF NO NOTICE IS GIVEN AS AFORESAID, ALL SUBSEQUENT AGREEMENTS NEGOTIATED BETWEEN THE ASSOCIATION AND THE UNION SHALL BE DEEMED TO HAVE BEEN NEGOTIATED ON BEHALF OF THE CONTRACTOR AND SHALL BE EXECUTED BY THE CONTRACTOR UPON REQUEST OF THE UNION. CHANGES TO THIS AGREEMENT MAY BE MADE AT ANY TIME BY MUTUAL CONSENT BETWEEN THE UNION AND ASSOCIATION.

THE SOUTH GEORGIA MECHANICAL & ERECTORS ASSOCIATION WILL APPOINT ALL MANAGEMENT TRUSTEES AND COMMITTEE MEMBERS REGARDING THIS AGREEMENT.

3. ARTICLE 11 HOURS OF WORK

THE THIRTY (30) MINUTE LUNCH PERIOD SHALL BE TAKEN BETWEEN 11:00 AND 2:00. IF WORK PROHIBITS LUNCH FROM BEING TAKEN DURING THIS INTERVAL, THE OPERATOR SHALL BE PAID THROUGH LUNCH. (WTL). THIS SHALL APPLY TO THE EIGHT (8) OR TEN (10) HOUR SCHEDULES.

4. ARTICLE 22 AGREEMENT ADMINISTRATION/TRAINING (AAT)

HEADING IN CBA IS REPLACED BY THIS HEADING. ARTICLE 22 HEADING WILL NO LONGER BE LOCAL 474 PAC FUND. ALL CURRENT LANGUAGE IS REPLACED BY THE FOLLOWING PARAGRAGHS:

THE AGREEMENT ADMINISTRATION/TRAINING (AAT) SHALL BE APPLIED TO MANAGEMENT'S COST OF LABOR RELATIONS, COLLECTIVE BARGAINING, INDUSTRY RELATIONS, PUBLIC RELATIONS, AND ALL MATTERS AND PROBLEMS INCIDENTAL THERETO, COST OF MAINTAINING FACILITES, APPOINTING OF TRUSTEES TO BENEFIT FUNDS, PROMOTION OF TRAINING AND SAFETY PROGRAMS, AND OTHER INDUSTRY COSTS.

SPECIFICALLY EXCLUDED FROM THE PURPOSE OF THE AGREEMENT ADMINISTRATION/TRAINING IS THE USE OF ANY OF THE FUND FOR LOBBYING IN SUPPORT OF ANTI-LABOR AND/OR SUBSIDIZE CONTRACTORS BY THE PAYMENT OF MONIES TO THEM FROM THE FUND IN CONNECTION WITH LEGAL, WORK STOPPAGES OR STRIKES AGAINST SUCH CONTRACTORS.

IT IS HEREBY MUTUALLY AGREED THAT THE SOUTH GEORGIA MECHANICAL & ERECTORS ASSOCIATION, INC. SHALL HAVE FULL CONTROL OF AND DISBURSE ALL MONIES OF THE AGREEMENT ADMINISTRATION/TRAINING.

IT IS ALSO HEREBY MUTUALLY AGREED UPON THAT THE ASSOCIATION WOULD HAVE THE SOLE RESPONSIBILITY FOR COLLECTION OF DELINQUENT FUNDS WHICH MAY ARISE UNDER THIS ARTICLE AND THAT NEITHER THE UNION OR THE FUND ADMINISTRATORS WOULD HAVE ANY RESPONSIBILITY. ARTICLE 22 IS NOT SUBJECT TO THE GRIEVANCE AND ARBITRATION PROVISIONS.

5. TERM OF AGREEMENT

JULY 1, 2015 TO JUNE 30, 2018 (THREE YEAR AGREEMENT). ALL NAMES AND DATES THROUGHOUT THE AGREEMENT HAVE BEEN CHANGED TO REFLECT THE NEW AGREEMENT.

THE EFFECTIVE DATE OF THE AGREEMENT SHALL BE JULY 1, 2015 AND THE AGREEMENT SHALL REMAIN IN FULL FORCE AND EFFECT UNTIL JUNE 30, 2018.

INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL 474

BY: _____
ALLEN BRASWELL
BUSINESS MANAGER
CO-CHAIRMAN

SOUTH GEORGIA MECHANICAL & ERECTORS ASSOCIATION, INC.

BY: _____
JAMES L. BOYKIN
ASSOCIATION PRESIDENT
CO-CHAIRMAN

PLANT VOGTLE WAGE RATES
PIPEFITTERS LOCAL 150

WAGE RATES AND FRINGES EFFECTIVE 10-05-15

	Effective date	Base Rate	H&W	Local Pen.	Nat. Pen.	Appr.	Int. Train.	Annuity	Total Fringe	TOTAL PACKAGE
Journeyman	10/05/15 to 9/30/16	$ 28.97	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 43.08
Working Foreman	15%	$ 33.32	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 47.43
Foreman	15%	$ 33.32	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 47.43
General Foreman	20%	$ 34.76	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 48.87
Superintendent	25%	$ 36.21	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 50.32
Apprentice - YEAR 1	50%	$ 14.49	$ 5.55	$ -	$ -	$ 0.60	$ 0.10	$ 0.75	$ 7.00	$ 21.49
Apprentice - YEAR 2	60%	$ 17.38	$ 5.55	$ 3.44	$ -	$ 0.60	$ 0.10	$ 0.75	$ 10.44	$ 27.82
Apprentice - YEAR 3	65%	$ 18.83	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 32.94
Apprentice - YEAR 4	70%	$ 20.28	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 34.39
Apprentice - YEAR 5	80%	$ 23.18	$ 5.55	$ 6.87	$ 0.24	$ 0.60	$ 0.10	$ 0.75	$ 14.11	$ 37.29

BOE - Attachment 1c

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 111 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 112 of 231

Lutz, Ronald

m: Diana Brazell <dj150@bellsouth.net>
sent: Wednesday, October 07, 2015 9:10 AM
To: djoiner@wisgrp.com; Phyllis Epting; Lutz, Ronald; Lori Davis; Lori Davis; chloe.vernon@dayzim.com; j.turner@tritool.com; ncollins@camurren.com; becky.meehan@airco-inc.com; theresa.mazzarella@ge.com; lisa.hine@bhienergy.com; tosmith@southernco.com; Tammy Twiggs; John Huchko; mary.gabriel@airco-inc.com; Penny Lanham; Beverly Papalski; ESPEY Leslie; rlanaconstr@aol.com; lizmcshane@comcast.net; Metcalf, Keith Britton
Subject: New Plant Vogtle wage rates
Attachments: WAGE RATES PLANT VOGTLE eff 10-5-15.pdf

PLEASE FORWARD TO PAYROLL:

Please see attached the **NEW** Plant Vogtle wage rates effective 10/5/15 for Local Union 150. Please adjust the wages to reflect this change.
If I can be of further assistance please call (706) 724-8846.

Charles I. Hardigree
Business Manager
Financial Secretary/Treasurer
Local Union 150
(706) 724-8846
x (706) 722-6302

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 113 of 231

SOUTHERN NUCLEAR
WAGE AND FRINGE BENEFIT ADDENDUM
PLANT FARLEY, PLANT HATCH, PLANT VOGTLE
2015-2018

	~~8/1/2015~~	8/1/2016	8/1/2017
Industrial-Journeyman	~~$24.70~~	$25.45	+$1.00

Distribution of annual increases in wages and fringes will be determined by Union with notice to employer by July 1, annually.

E-Journeyperson Rate is based on 90% of Journeyperson Minimum Base Rate.

MASTER PAINTER TRAINING PROGRAM: Journeypersons, who successfully complete Module I through Module 3 of the Master Painter Training Program or SSPC CAS, will receive a $1.00 per hour training incentive.

General Foreman shall be paid $2.00 per hour above the base wage rate. **Foreman** shall be paid $0.75 above the base wage rate up to five men and $1.25 above the base wage rate for over five men.

Fringe Benefit Contributions

	8/1/15		8/1/2016		8/1/2017
Journeyman IUPAT Pension Fund *	~~$4.10~~		$4.30		TBD
Southern Painter's Welfare Fund	~~$4.43~~		$4.58		TBD
FTI of DC 77	~~$0.70~~	$0.75		$0.75	
National FTI	~~$0.10~~	$0.10		$0.10	
LMCI	~~$0.10~~	$0.10		$0.10	
IUPAT Annuity	~~$0.25~~	$0.25		$0.25	

ension contribution rates for Apprentice's are as follows; other benefits are the same as above:

nsion First Year Apprentice	$0.14
Pension Second Year Apprentice	$0.21
Pension Third Year Apprentice	$0.34

Apprentice Wage Rates

Apprentice rates are based on a percentage of Journeyperson Base Wage Rate.

First Year	Second Year	Third Year
1st 6 Mos. 60%	3rd 6 Mos. 70%	5th 6 Mos. 80%
2nd 6 Mos. 65%	4th 6 Mos. 75%	6th 6 Mos. 90%

EMPLOYEE DEDUCTIONS:
Employer shall withhold five percent (5%) of total gross wages in ADMINISTRATIVE DUES CHECK OFF **and $0.05 for each hour worked for** POLITICAL ACTION TOGETHER **on each employee with signed authorization.**

The above Wage and Benefit package has been reviewed and approved and will be considered effective as of August 1, 2016.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 114 of 231

POWERHOUSE

Effective 7/1/16

Schedule 3

Journeyman Wage Rate and Fringe Package for the Southeast (Savannah) and South Central (Augusta) Georgia - Areas
(see addendum 2A for counties that make up Southeast/South Central Georgia)

3. Journeyman Wage Schedule: Southeast/South Central Georgia - Savannah & Augusta

A. Building Trades (Industrial/Shop & Field)

Effective	8/1/2015	7/1/2016	7/1/2017	7/1/2018
Base Rate	29.75	30.11	30.46	31.22
Health & Welfare	5.55	5.55	5.55	5.55
National Pension	5.19	5.55	5.94	5.94
N.S.S.P. - 401 (k)	Voluntary ***	Voluntary ***	Voluntary ***	Voluntary ***
J.A.T.C.	0.65	0.65	0.65	0.65
I.T.I. & N.E.M.I.C.	0.15	0.15	0.15	0.15
Industry Fund	0.30	0.30	0.30	0.30
S.M.W.D.P.	0.0	0	0	0
Vacation Fund	0.50 **	0.50 **	0.50 **	0.50 **
Dues Check-Off	1.52 **	1.57 **	1.61 **	1.64 **
S.A.S.M.I.	1.21 *	1.24 *	1.26 *	1.28 *
S.M.O.H.I.	0.02	0.02	0.02	0.02
S.M.W.L.A.S.F	0.01	0.01	0.01	0.01
Total Package	42.83	43.58	44.34	45.12

* S.A.S.M.I. = Total of Base Rate + Health & Welfare + Local Pension + National Pension x 3%
** Amounts included in Base Rate deducted after taxes.
***Amount to be deducted from Base Rate before taxes per individual Employee's request
Mileage Current I.R.S. Rate per mile (See Article VII, Section 1a)
Parking $10.50 (See Article VII, Section 2b)

Schedule 3 Apprentice Wage:

Effective		8/1/2015	7/1/2016	7/1/2017	7/1/2018
1st Year	45%	13.39	13.55	13.71	14.05
2nd Year	55%	16.36	16.56	16.75	17.17
3rd Year	65%	19.34	19.57	19.80	20.29
4th Year	75%	22.31	22.58	22.85	23.42
5th Year	85%	25.29	25.59	25.89	26.54

The fringe package for all of the above apprentice categories is identical to the Journeyman Fringe Package except for the following: Dues Check-off will be based on the Dues Check-off Schedule in Schedule 4. Also, First and Second Year Apprentices will have Vacation deductions of $0.25 cents per hour. Third, Fourth & Fifth Year Apprentices will have Vacation deductions of $0.50 cents per hour.

National Pension contributions for apprentices will be paid on a graduated scale percentage equal to the apprentice pay period.

Schedule 3 Helper Wage:

Effective	8/1/2015	7/1/2016	7/1/2017	7/1/2018
40%	11.90	12.04	12.18	12.49

Starting Pay Effective 8/1/2015 - 40% of Building Trades Journeyman Wage. Dues Check-off will be based on the Dues Check-off Schedule Below. Employer shall pay the journeyman hourly rate of Health and Welfare. National Pension contributions shall be paid on a graduated scale percentage equal to the helper's wages. Accrued SMWDP will be paid per Article VI Section 2. No other fringes will be paid.

BOE - Attachment 1c

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 115 of 231

POWERHOUSE

Schedule 4

*Note: Assessment Check-off subject to change upon notice from Local Union.

Journeyman, Helper, & Apprentice Dues Check-off Schedule

Effective	8/1/2015	7/1/2016	7/1/2017	7/1/2018
Journeyman	1.52	1.57	1.61	1.64
1st Year	0.79	0.83	0.85	0.87
2nd Year	0.92	0.96	0.99	1.01
3rd Year	1.05	1.10	1.13	1.15
4th Year	1.19	1.23	1.27	1.29
5th Year	1.32	1.37	1.40	1.43
Helper	0.72	0.76	0.78	0.80

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 116 of 231

POWERHOUSE

In witness whereof, the parties hereto affix their signatures and seal this 9th day of October, 2015.

Georgia SMACNA Inc.
Contractor Name of Association

By: _____
Representative Signature

Sheet Metal Workers'
Local Union No. 85

By: _____
Representative Signature

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 117 of 231

SOUTHERN REGION AGREEMENT – WAGES

	1/1/13	1/1/14	1/1/15	1/1/16
Group I	$27.09	$27.63	$28.48	$29.20 JM
Group II	$24.11	$24.60	$25.36	$25.99 JMA
Group III	$22.87	$23.33	$24.05	$24.64 JMB
H&W	$5.67	$6.35	$6.52	*$6.85
Pension	$3.30	$3.40	$3.50	$3.60

When new equipment not covered by the above classifications is to be used for transportation of men and/or materials, a new classification and rate shall be negotiated between the parties hereto and put into effect before the equipment involved is put into service.

Steward(s) will receive **Group I** pay after written confirmation of appointment from the Local Union.

**The Health and Welfare rate is an estimate and may change but will not exceed $8.40*

PLANT VOGTLE ONLY: *A General Foreman will receive an additional $3.00; a Foreman will receive an additional $2.00.*

Updated 1/6/16

BOE - Attachment 1c

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 118 of 231

APPENDIX A
Wage Rates and Classifications

The work coming under the jurisdiction of the Union and covered by the terms of this contract includes driving of all necessary equipment used for transportation of men, equipment and materials, as indicated in the following classifications:

Group 1	Group 3
Articulating End Dumps	All Terrain Vehicle (ATV)
Low Boy	Ambulance
Rollagon or Similar Type Equipment	Bus
Stringing Truck	Crew Cab
Truck Mechanic	Dump Truck (2 Axle)
	Dump Truck (3 Axle)
Group 2	Flat Bed Truck (2 Axle)
	Flat Bed Truck (3 Axle)
A-Frame	Gators
Boom Truck (Transport/Haul)	Grease Truck
Challenger (Transport/Haul)	Hot Pass Truck (3 Axle)
Fork Lift	Jeep
Fuel Truck	Pick-Up
Gin Pole	Single Axle Float (3 Axle)
Rubber-Tire Tractor	Skid Truck (2 Axle)
Tandem Float (4 & 5 Axle)	Skid Truck (3 Axle)
Track Truck/All-Track Dumper Equipment	Station Wagon
Vacuum Truck	Stringer Bead & Hot Pass (2 Axle)
Winch Truck	Suburban
	Swamp Buggy/Marsh Buggy, or Similar Type Equipment
	Team Driver
	Tool Clerk
	Warehouseman – Parts Chaser
	Water Truck (2 Axle)
	Water Truck (3 Axle)

BOE - Attachment 1c

Attachment 2

Craft Per Diem Calculation

Description	Actual Average Rate (April thru August 2016) Base Rate		Notes	Average Forecast Rate for ETC (April thru EOJ) Base Rate		Notes
Top Helper (3D) & Above	$ 70.00	per day		$ 70.00	per day	
Below Top Helper (2C and below)	$ -	per day		$ -	per day	
Top Helper & Above	$ 350.00	per wk	Standard PD rate	$ 350.00	per wk	Standard PD rate
Incentive; +2 for 5 days worked	$ 140.00	2 add'l dys		$ 140.00	2 add'l dys	
Top Helper & Above	$ 490.00	per wk	Incentive PD rate	$ 490.00	per wk	Incentive PD rate
Total % Receiving Per Diem	69.6%		actual rate - April thru Aug 2016	76.8%		Forecast Rate
% Craft Receiving PD Incentive	100.0%	69.6%	receiving $490/wk	100.0%	76.8%	receiving $490/wk
% Craft Not Receiving PD Incentive	0.0%	0.0%	receiving $280/wk or less	0.0%	0.0%	receiving $280/wk or less
	100%	69.6%		100%	76.8%	
Craft Receiving Full Rate of PD		$ 341.04	receiving maximum of $490/wk		$ 376.08	receiving maximum of $490/wk
Craft Receiving Lower Rate of PD		$ -	assume receiving $280/wk		$ -	assume receiving $280/wk
Craft Receiving No Per Diem		$ -			$ -	
Average $'s Received per week		$ 341.04			$ 376.08	
Rolling 3 week - work week	120	hrs	wk 1 & 2 - 5 x 12's	120	hrs	wk 1 & 2 - 5 x 12's
	50	hrs		50	hrs	
Less 8% for Absenteeism	-13.6	hrs	wk 3 - 5 x 10's	-13.6	hrs	wk 3 - 5 x 10's
Plan for 3 weeks	156.4	hrs		156.4	hrs	
Ave work week	52.1	hrs		52.1	hrs	
For 56.7 hrs/wk, ave. PD =		$ 6.54	per hour		$ 7.21	per hour
Actual Craft Per Diem Paid		$ 16,473,239	April thru August 2016			
Total Actual Craft Hours Expended		2,517,577	April thru August 2016			
Average Per Diem Rate	$ 6.54	per hr				

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 119 of 231

Project: V.C. Summer
Subject: O.T. Premium

Date: 10/8/2016
By: Fluor

Overtime Premium Calculation

Hrs:	Rolling 60 hr/wk (wk 1) + 60 hr/wk (wk 2) + 50 hr/wk (wk 3)			56.67	Avg/hrs/3 Week Period
	6 x 10 (wk 1), 6 x10 (wk 2), 5 x 10 (wk 3)				
Assumption	1.5 after 40, No Double time				
	Available Hours per Year Per Worker	56.67Avg Hrs/Wk	x	52.Wks/Yr	2,946.67
	Discount for Absenteeism & Holidays		Assume	-10%	(294.67)
	Casual O.T. (Beyond the Avg. Standard Work Week)			6%	176.80
	Assumed Yearly Hours Per Craft Worker				2,828.80
	Assumed Monthly Hours Per Craft Worker			/12=	235.73
				use==>	236 hrs/moon.
					54.4 hr/wk

		Avg. Hr Rate	Avg. Wkly Base Salary	
Base Week	40.0	$26.83	$1,073	
Overtime	14.4	$40.24	$580	
Total	54.4	$30.38	$1,653	
		Avg. Hr Rate (All Hours)		
	54.4	$26.83	$1,460	Base Salary Included on Direct Line Items
		Net	$193.18	
		Premium==>	13.24%	Percent to Add for O.T Premium

Second Shift Premium Calculation

Hrs:	Average Weekly Paid Work Hours (From Above)	54.40	Avgas/hrs/3 Week Period
Assumption	Percent of Work Assumed to Occur on Second Shift	40.0%	
Assumption	Casual Overtime	0.0%	(Included with above 54.40 Carry down)
	Total Second Shift Preminum	40.0%	
	Average Hourly Rate from Above (Includes Overtime)	$30.38	
	Preminum for Second Shift (40 hrs x $1.00 + 14.4 hrs x $1.50)/54.4	$1.13	
	Total Second Shift Hourly Rate	$31.51	
	Net Preminum==>	$1.04	
	Percent Preminum==>	3.41%	
	Percent Preminum at Percent overtime==>	1.37%	
	Total Percent Preminum for overall Project	14.60%	Percent to Add for 2nd Shift & O.T Premium

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 120 of 231

Project: Vogtle
Subject: O.T. Premium

Date: 10/8/2016
By: Fluor

Overtime Premium Calculation

Hrs:	Rolling 60 hr/wk (wk 1) + 60 hr/wk (wk 2) + 60 hr/wk (wk 3) + 60 hr/wk (Wl			60.00	Avg/hrs/4 Week Period
	5 x 12 (wk 1), 5 x12 (wk 2), 5 x 12 (wk 3), 5 x 12 (wk 4)				
Assumption	1.5 after 40, Double time on Sunday & Holidays (ASSUME NO SUNDAY OR HOLIDAY)				
	Available Hours per Year Per Worker	60.Avg Hrs/Wk	x	52.Wks/Yr	3,120.00
	Discount for Absenteeism & Holidays		Assume	-10%	(312.00)
	Casual O.T. (Beyond the Avg. Standard Work Week)			6%	187.20
	Assumed Yearly Hours Per Craft Worker				2,995.20
	Assumed Monthly Hours Per Craft Worker			/12=	249.60
				use==>	250 hrs/moon.
					57.6 hr/wk

		Avg. Hr Rate	Avg. Wkly Base Salary	
Base Week	40.0	$30.46	$1,219	
Overtime	17.6	$45.70	$804	
Total	57.6	$35.12	$2,023	
		Avg. Hr Rate (All Hours)		
	57.6	$30.46	$1,755	Base Salary Included on Direct Line Items
		Net	$268.09	
		Premium==>	15.28%	Percent to Add for O.T Premium

Second Shift Premium Calculation

Hrs:	Average Weekly Paid Work Hours (From Above)	57.60	Avgas/hrs/3 Week Period
Assumption	Percent of Work Assumed to Occur on Second Shift	40.0%	
Assumption	Casual Overtime	0.0%	(Included with above 54.40 Carry down)
	Total Second Shift Preminum	40.0%	
	Average Hourly Rate from Above (Includes Overtime)	$35.12	
	Preminum for Second Shift (40 hrs x $.25 + 14.7 hrs x $.3750)/54.7	$0.28	
	Total Second Shift Hourly Rate	$35.40	
	Net Preminum==>	$1.01	
	Percent Preminum==>	2.87%	
	Percent Preminum at Percent overtime==>	1.15%	
	Total Percent Preminum for overall Project	16.43%	Percent to Add for 2nd Shift & O.T Premium

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 121 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 122 of 231

CREW MIX REPORT - VC SUMMER

PRIME 00 - CIVIL & SITE WORK

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		4.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		0.00%
LABORERS		69.00%
OE'S		22.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		5.00%
PRIME 00 TOTAL		100.00%

PRIME 10 - CONCRETE

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		50.00%
MASONS		17.00%
ELECTRICANS		0.00%
IRON WORKERS		25.00%
LABORERS		5.00%
MILLWRIGHTS		0.00%
OE'S		3.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 10 TOTAL		100.00%

PRIME 20 - STRUCTURAL STEEL

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		1.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		90.00%
LABORERS		1.00%
MILLWRIGHTS		0.00%
OE'S		6.00%
PIPEFITTERS		2.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 20 TOTAL		100.00%

PRIME 30 - BUILDINGS

	CREW MIX	% MAKE UP
BRICKLAYERS		0.00%
BOILERMAKERS		0.00%
CARPENTERS		27.00%
MASONS		13.00%
ELECTRICANS		0.00%
IRON WORKERS		26.00%
LABORERS		15.00%
OE'S		4.00%
PAINTERS		0.00%
PIPEFITTERS		6.00%
SHEETMETAL		8.00%
TEAMSTER		1.00%
PRIME 30 TOTAL		100.00%

PRIME 30.101 - HVAC

	CREW MIX	% MAKE UP
BRICKLAYERS		0.00%
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		2.00%
OE'S		7.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
SHEETMETAL		80.00%
TEAMSTER		3.00%
PRIME 30 TOTAL		100.00%

PRIME 40 - OTHER EQUIPMENT (B O P)

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		1.00%
MASONS		0.00%
ELECTRICANS		2.00%
IRON WORKERS		35.00%
LABORERS		2.00%
MILLWRIGHTS		50.00%
OE'S		5.00%
PAINTERS		0.00%
PIPEFITTERS		5.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 40 TOTAL		100.00%

PRIME 40 - SHEET METAL

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		2.00%
MILLWRIGHTS		0.00%
OE'S		7.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		3.00%
SHEETMETAL		80.00%
PRIME 40 TOTAL		100.00%

PRIME 50 - PIPING

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASON		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		1.00%
MILLWRIGHTS		1.00%
OE'S		5.00%
PIPEFITTERS		60.00%
PIPE WELDER		25.00%
TEAMSTER		0.00%
PRIME 50 TOTAL		100.00%

PRIME 60 - ELECTRICAL

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		96.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 60 TOTAL		100.00%

PRIME 70 - INSTRUMENTS

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		0.00%
ELECTRICANS		5.00%
IRON WORKERS		0.00%
LABORERS		2.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PIPEFITTERS		91.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 70 TOTAL		100.00%

CRAFT MIX REPORT - VC SUMMER

BOILERMAKER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	3.0
WELDER	4.0
HELPER	2.0
S/T	10.3
% OF TIME	
TOTAL	

MILLWRIGHT

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	5.0
HELPER	2.0
WELDER	1.0
S/T	9.3
% OF TIME	
TOTAL	

CARPENTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	2.0
WELDER	0.0
S/T	11.3
% OF TIME	
TOTAL	

OPERATOR

	NO. REQD
MECHANIC	1.0
OPERATOR - HVY	5.0
OPERATOR - MED	4.0
OPERATOR - LGT	2.0
GEN. FOREMAN	0.0
S/T	12.0
% OF TIME	
TOTAL	

BRICKLAYER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

PAINTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	7.0
HELPER	2.0
S/T	10.3
% OF TIME	
TOTAL	

CEMENT MASON

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	2.0
S/T	9.3
% OF TIME	
TOTAL	

PIPEFITTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	3.0
WELDER	4.0
HELPER	3.0
S/T	11.3
% OF TIME	
TOTAL	

ELECTRICAN

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	5.0
HELPER	2.0
WELDER	3.0
S/T	11.3
% OF TIME	
TOTAL	

TEAMSTER

	NO. REQD
GEN. FOREMAN	0.0
TRUCK DRV - Heavy	6.0
TRUCK DRV - Light	3.0
WAREHOUSE FOREMAN	0.0
S/T	9.0
% OF TIME	
TOTAL	

BOE - Attachment 4a

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 123 of 231

CREW MIX REPORT - VC SUMMER

PRIME 40 - GAS TURBINE GENERATORS

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		20.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		60.00%
OE'S		3.00%
PAINTERS		0.00%
PIPEFITTERS		12.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%

PRIME 40 - STEAM TURBINE GENERATOR

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		20.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		60.00%
OE'S		3.00%
PAINTERS		0.00%
PIPEFITTERS		12.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%

PRIME 40 - HRSG's

	CREW MIX	% MAKE UP
BOILERMAKERS		70.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		1.00%
LABORERS		0.00%
MILLWRIGHTS		0.00%
OE'S		9.00%
PAINTERS		0.00%
PIPEFITTERS		17.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%

PRIME 41 - MODULES

	CREW MIX	% MAKE UP
BOILERMAKERS		70.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		1.00%
LABORERS		0.00%
MILLWRIGHTS		0.00%
OE'S		9.00%
PAINTERS		0.00%
PIPEFITTERS		17.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%

PRIME 80 - PAINTING

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		4.00%
INSULATORS		0.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		4.00%
MILLWRIGHTS		0.00%
OE'S		3.00%
PAINTERS		88.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		0.00%
TEAMSTER		1.00%
PRIME 80 TOTAL		100.00%

PRIME 80 - INSULATION

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		5.00%
INSULATORS		85.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		3.00%
MILLWRIGHTS		0.00%
OE'S		1.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		4.00%
TEAMSTER		2.00%
PRIME 80 TOTAL		100.00%

PRIME 80 - SCAFFOLDING

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		90.00%
INSULATORS		0.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		6.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		0.00%
TEAMSTER		2.00%
PRIME 80 TOTAL		100.00%

PRIME 90 - INDIRECTS

	CREW MIX	% MAKE UP
BOILERMAKERS		0.00%
CARPENTERS		16.00%
MASONS		2.00%
ELECTRICANS		8.00%
IRON WORKERS		4.00%
LABORERS		25.00%
MILLWRIGHTS		5.00%
OE'S		10.00%
PAINTERS		10.00%
PIPEFITTERS		5.00%
PIPE WELDER		0.00%
TEAMSTER		15.00%
PRIME 90 TOTAL		100.00%

CRAFT MIX REPORT - VC SUMMER

INSULATOR

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

SHEET METAL

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
WELDER	0.0
S/T	10.3
% OF TIME	
TOTAL	

IRONWORKER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	3.0
HELPER	2.0
WELDER	4.0
S/T	10.3
% OF TIME	
TOTAL	

IRONWORKER - REBAR

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	2.0
WELDER	0.0
S/T	9.3
% OF TIME	
TOTAL	

LABORER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	4.0
HELPER	4.0
S/T	9.3
% OF TIME	
TOTAL	

BOE - Attachment 4a

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 124 of 231

CREW MIX REPORT - VOGTLE

	CREW MIX	% MAKE UP
PRIME 00 - CIVIL & SITE WORK		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		0.00%
LABORERS		70.00%
OE'S		25.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		5.00%
PRIME 00 TOTAL		100.00%
PRIME 10 - CONCRETE		
BOILERMAKERS		0.00%
CARPENTERS		45.00%
MASONS		17.00%
ELECTRICANS		0.00%
IRON WORKERS		25.00%
LABORERS		5.00%
MILLWRIGHTS		0.00%
OE'S		5.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		3.00%
PRIME 10 TOTAL		100.00%
PRIME 20 - STRUCTURAL STEEL		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		86.00%
LABORERS		1.00%
MILLWRIGHTS		0.00%
OE'S		10.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		3.00%
PRIME 20 TOTAL		100.00%
PRIME 30 - BUILDINGS		
BRICKLAYERS		0.00%
BOILERMAKERS		0.00%
CARPENTERS		22.00%
MASONS		10.00%
ELECTRICANS		10.00%
IRON WORKERS		20.00%
LABORERS		12.00%
OE'S		5.00%
PAINTERS		5.00%
PIPEFITTERS		5.00%
SHEETMETAL		8.00%
TEAMSTER		3.00%
PRIME 30 TOTAL		100.00%
PRIME 30.101 - HVAC		
BRICKLAYERS		0.00%
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		2.00%
OE'S		7.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
SHEETMETAL		80.00%
TEAMSTER		3.00%
PRIME 30 TOTAL		100.00%

	CREW MIX	% MAKE UP
PRIME 40 - OTHER EQUIPMENT (B O P)		
BOILERMAKERS		0.00%
CARPENTERS		1.00%
MASONS		0.00%
ELECTRICANS		2.00%
IRON WORKERS		35.00%
LABORERS		2.00%
MILLWRIGHTS		50.00%
OE'S		5.00%
PAINTERS		0.00%
PIPEFITTERS		5.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 40 TOTAL		100.00%
PRIME 40 - SHEET METAL		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		2.00%
MILLWRIGHTS		0.00%
OE'S		7.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		3.00%
SHEETMETAL		80.00%
PRIME 40 TOTAL		100.00%
PRIME 50 - PIPING		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASON		0.00%
ELECTRICANS		0.00%
IRON WORKERS		8.00%
LABORERS		1.00%
MILLWRIGHTS		1.00%
OE'S		5.00%
PIPEFITTERS		60.00%
PIPE WELDER		25.00%
TEAMSTER		0.00%
PRIME 50 TOTAL		100.00%
PRIME 60 - ELECTRICAL		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
MASONS		0.00%
ELECTRICANS		96.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 60 TOTAL		100.00%
PRIME 70 - INSTRUMENTS		
BOILERMAKERS		0.00%
CARPENTERS		0.00%
ELECTRICANS		5.00%
IRON WORKERS		0.00%
LABORERS		2.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PIPEFITTERS		91.00%
PIPE WELDER		0.00%
TEAMSTER		0.00%
PRIME 70 TOTAL		100.00%

CRAFT MIX REPORT - VOGTLE

BOILERMAKER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	4.0
WELDER	4.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

CARPENTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	2.0
WELDER	1.0
S/T	10.3
% OF TIME	
TOTAL	

BRICKLAYER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

CEMENT MASON

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

ELECTRICAN

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	2.0
WELDER	1.0
S/T	10.3
% OF TIME	
TOTAL	

INSULATOR

MILLWRIGHT

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	2.0
WELDER	0.0
S/T	9.3
% OF TIME	
TOTAL	

OPERATOR

	NO. REQD
MECHANIC	1.0
OPERATOR - HVY	5.0
OPERATOR - MED	4.0
OPERATOR - LGT	2.0
S/T	12.0
% OF TIME	
TOTAL	

PAINTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	7.0
HELPER	2.0
S/T	10.3
% OF TIME	
TOTAL	

PIPEFITTER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	3.0
WELDER	3.0
HELPER	2.0
S/T	9.3
% OF TIME	
TOTAL	

TEAMSTER

	NO. REQD
GEN. FOREMAN	0.0
TRUCK DRV - Heavy	6.0
TRUCK DRV - Light	3.0
WAREHOUSE FOREMAN	0.0
S/T	9.0
% OF TIME	
TOTAL	

BOE - Attachment 4b

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 125 of 231

CREW MIX REPORT - VOGTLE

	CREW MIX	% MAKE UP
PRIME 40 - GAS TURBINE GENERATORS		
BOILERMAKERS		0.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		20.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		60.00%
OE'S		3.00%
PAINTERS		0.00%
PIPEFITTERS		12.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%
PRIME 40 - STEAM TURBINE GENERATOR		
BOILERMAKERS		0.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		20.00%
IRON WORKERS		1.00%
LABORERS		1.00%
MILLWRIGHTS		60.00%
OE'S		3.00%
PAINTERS		0.00%
PIPEFITTERS		12.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%
PRIME 40 - HRSG's		
BOILERMAKERS		70.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		1.00%
LABORERS		0.00%
MILLWRIGHTS		0.00%
OE'S		9.00%
PAINTERS		0.00%
PIPEFITTERS		17.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%
PRIME 41 - MODULES		
BOILERMAKERS		70.00%
CARPENTERS		2.00%
MASONS		0.00%
ELECTRICANS		0.00%
IRON WORKERS		1.00%
LABORERS		0.00%
MILLWRIGHTS		0.00%
OE'S		9.00%
PAINTERS		0.00%
PIPEFITTERS		17.00%
PIPE WELDER		0.00%
TEAMSTER		1.00%
PRIME 40 TOTAL		100.00%

	CREW MIX	% MAKE UP
PRIME 80 - PAINTING		
BOILERMAKERS		0.00%
CARPENTERS		4.00%
INSULATORS		0.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		4.00%
MILLWRIGHTS		0.00%
OE'S		3.00%
PAINTERS		88.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		0.00%
TEAMSTER		1.00%
PRIME 80 TOTAL		100.00%
PRIME 80 - INSULATION		
BOILERMAKERS		0.00%
CARPENTERS		5.00%
INSULATORS		85.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		3.00%
MILLWRIGHTS		0.00%
OE'S		1.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		4.00%
TEAMSTER		2.00%
PRIME 80 TOTAL		100.00%
PRIME 80 - SCAFFOLDING		
BOILERMAKERS		0.00%
CARPENTERS		90.00%
INSULATORS		0.00%
MASONS		0.00%
IRON WORKERS		0.00%
LABORERS		6.00%
MILLWRIGHTS		0.00%
OE'S		2.00%
PAINTERS		0.00%
PIPEFITTERS		0.00%
PIPE WELDER		0.00%
SHEETMETAL		0.00%
TEAMSTER		2.00%
PRIME 80 TOTAL		100.00%
PRIME 90 - INDIRECTS		
BOILERMAKERS		0.00%
CARPENTERS		16.00%
MASONS		2.00%
ELECTRICANS		8.00%
IRON WORKERS		4.00%
LABORERS		25.00%
MILLWRIGHTS		5.00%
OE'S		10.00%
PAINTERS		10.00%
PIPEFITTERS		5.00%
PIPE WELDER		0.00%
TEAMSTER		15.00%
PRIME 90 TOTAL		100.00%

CRAFT MIX REPORT - VOGTLE

BOILERMAKER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
S/T	10.3
% OF TIME	
TOTAL	

IRONWORKER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	1.0
WELDER	2.0
S/T	10.3
% OF TIME	
TOTAL	

IRONWORKER - REBAR

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	6.0
HELPER	1.0
WELDER	2.0
S/T	10.3
% OF TIME	
TOTAL	

LABORER

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	4.0
HELPER	4.0
S/T	9.3
% OF TIME	
TOTAL	

MILLWRIGHT

	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0

MILLWRIGHT

	NO.
SHEET METAL	
	NO. REQD
GEN. FOREMAN	0.3
FOREMAN	1.0
JOURNEYMAN	8.0
HELPER	1.0
WELDER	0.0
S/T	10.3
% OF TIME	
TOTAL	

BOE - Attachment 4b

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 126 of 231

Indirect Cost
Equipment Pricing
Ground Rules

1. All equipment under 60 tons will be included in a $7 per hour rate applied against craft man-hours.
2. Equipment is based on both direct and indirect calculated craft man-hours after productivity adjustments are made. For construction equipment, Fluor normally bases it on direct craft hours. Consequently their rate is probably high
3. Equipment rates do not include trailers, conex boxes, storage sheds, office/craft trailers, porta-johns, shops, shacks, tents, we included separate line items in the indirects for any future building rental cost. Porta-john are covered in our Distr. Cost 84131
4. Crane mats are not considered equipment. Crane mats are covered in our Dist cost 84132
5. Heating fuel to be calculated separately. Heating fuel is covered in our Distr. Cost 84134 Also,we have several line intems the estimate covering heating fuel covering additional weather protection in the upcoming years.
6. Radios and project communications equipment to be priced separately. Communication radios, blackberries, cell phones are covered in the Distr. Cost 84122
7. Dumpsters are not in the equipment pricing. Dumpsters are covered under Subcontract 1620 (Waste Mngt) trash hauling/disposal
8. Small tools and consumables are not considered equipment. Small tools are covered under Subcontract 1637 (Ameco), Distr cost 84251 (small tools) & distr. Cost 84252 (Consumables)
9. Large equipment above 60 tons is calculated using the Project Execution Plan and schedule. This should include the rental rate, mobilization and demobilization dates, fuel, oil, grease and parts. We have developed a

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 127 of 231

crane plan and costed for cranes over 60 Tons, transporters (Subcontract 1808 (Mammoet) & pump trucks (Subcontract 1801-Action) & Subcontract 1802 – Ashmore). Also we have included Subcontracts 1631 (Augusta Ind), 1804 (Thompson) & 1805 (Envirovac)

~~10.~~9. Operators and oilers to be calculated separately. Operators are included under Indirect craft support for cost coded 84291

Under 60 Ton

Fluor to calculate the equipment cost and provide to WECTEC. The $7.00 per hour shall be broken down to $5 per hour (WECTEC) for rentals/ownership and $2 per hour for Fluor cost.

Over 60 Ton

Fluor to calculate the equipment cost and provide to WECTEC. The rental/ownership rates shall be calculated on the equipment plan and in the WECTEC indirect estimate. Fuel, oil, grease and spare parts will be carried in the Fluor costs. All craft labor is in Fluor cost.

2016 ETC Estimate CUT & ADD Registrar

VC Summer and Vogtle Project

Revision 2 - received 2016-10-07

Item #	Project	MEL ID	Bulk Cost Code	Bulk WBS Code	TAG	Location	Commodity Code	Description	Reason for change	Current Quantity/$'s	New Quantity/$	Unit	Request Change By	Date	Rev	Updated/Included in Fluor's ETC Estimate
1	Vogtle		08520	AT01		Site Specific	AT01	Waterproofing-Membrane	per Joe Reese, email, there is no membrane in the STD plant: The waterproofing membrane is specific to the Auxiliary Bldg (both units of course). The reported quantity of approx. 130,000+SF would be accurate as a total for both units. There are NO other locations (TI or BOP) that are designed with waterproofing	133,670	-	SF	Joe Reese	9/15/2016		Yes
2	VCS		08520	AT01		Site Specific	AT01	Waterproofing-Membrane	plant: The waterproofing membrane is specific to the Auxiliary Bldg (both units of course). The reported quantity of approx. 130,000+SF would be accurate as a total for both units. There are NO other locations (TI or BOP) that are designed with waterproofing membrane as a requirement. The design specification is very clear about this. I can't tell you why it is	3,180	-	SF	Joe Reese	9/15/2016		Yes
3	Vogtle		23300			Site Specific		Gravel Surfacing	per Joe Reese email 9/16/16: Honestly, there is no telling how much more will be used in construction areas, could be another 100,000CY..... roughly 1,500 tons per acre at 8-inches deep per lift.	62,551	162,551	CY	Joe Reese	9/16/2016		Yes
4	VCS		02313	CC01		Site Specific	CC01	Flowfill w/ Formwork	no change	no change	no change					N/A
5	VCS		02312	CC01		Site Specific	CC01	Flowfill w/o Formwork	no change	no change	no change					N/A
6	VCS		02310	CC01		Site Specific	CC01	Mudmat w/o Formwork	Installed to Date qtys revised - per Frank McDougall/construction email	7,584	8,627	CY	McDougall	9/21/2016		Yes
7	VCS		02311	CC01		Site Specific	CC01	Mudmat w/ Formwork	Installed to Date qtys revised - per Frank McDougall/construction email	56,633	48,782	CY	McDougall	9/21/2016		Yes
8	VCS		08112	CC01		Site Specific	CC01	Concrete - Foundations	Installed to Date qtys revised - per Frank McDougall/construction email	40,527	63,156	CY	McDougall	9/21/2016		Yes
9	VCS		08113	CC01		Site Specific	CC01	Concrete - Slabs on Grade	Installed to Date qtys revised - per Frank McDougall/construction email	411	12,082	CY	McDougall	9/21/2016		Yes
10	VCS		08115	CC01		Site Specific	CC01	Concrete, Envelopes/Ductbank	Installed to Date qtys revised - per Frank McDougall/construction email	23,882	30,902	CY	McDougall	9/21/2016		Yes
11	VCS		08116	CC01		Site Specific	CC01	Concrete, Equip Foundations	Installed to Date qtys revised - per Frank McDougall/construction email	450	28,417	CY	McDougall	9/21/2016	1	Yes
12	VCS		08117	CC01		Site Specific	CC01	Concrete, Civil Struct CIP	Installed to Date qtys revised - per Frank McDougall/construction email	988	14,715	CY	McDougall	9/21/2016		Yes
12	VCS		8121	CC01		Site Specific	CC01	Concrete, Walls, Columns&Piers	Installed to Date qtys revised - per Frank McDougall/construction email	-	1,028	CY	McDougall	9/21/2016		Yes
13	Vogtle		02313	CC01		Site Specific	CC01	Flowfill w/ Formwork	N/A - no change	no change	no change					N/A
14	Vogtle		02312	CC01		Site Specific	CC01	Flowfill w/o Formwork	N/A - no change	no change	no change					N/A
15	Vogtle		02310	CC01		Site Specific	CC01	Mudmat w/o Formwork	Installed to Date qtys revised - per Enger	4,675.65	26,776.00	CY	Enger	9/21/2016		Yes
16	Vogtle		02311	CC01		Site Specific	CC01	Mudmat w/ Formwork	Installed to Date qtys revised - per Enger	8,093.58	7,482	CY	Enger	9/21/2016		Yes
17	Vogtle		08112	CC01		Site Specific	CC01	Concrete - Foundations	Installed to Date qtys revised - per Enger	7,689.00	69,441.00	CY	Enger	9/21/2016		Yes
18	Vogtle		08113	CC01		Site Specific	CC01	Concrete - Slabs on Grade	Installed to Date qtys revised - per Enger	2,197.00	18,899	CY	Enger	9/21/2016		Yes
19	Vogtle		8114	CC01		Site Specific	CC01	Concrete, Special Slabs on Grade	Installed to Date qtys revised - per Enger	-	900	CY	Enger	9/21/2016		Yes
20	Vogtle		08115	CC01		Site Specific	CC01	Concrete, Envelopes/Ductbank	Installed to Date qtys revised - per Enger	7,652.15	12,522	CY	Enger	9/21/2016		Yes
21	Vogtle		08116	CC01		Site Specific	CC01	Concrete, Equip Foundations	Installed to Date qtys revised - per Enger	4,045.00	9,298	CY	Enger	9/21/2016		Yes
22	Vogtle		08117	CC01		Site Specific	CC01	Concrete, Civil Struct CIP	Installed to Date qtys revised - per Enger	8,032.13	103,723	CY	Enger	9/21/2016		Yes
23	Vogtle		08121	CC01		Site Specific	CC01	Concrete, Walls, Columns&Piers	Installed to Date qtys revised - per Enger	107.10	236	CY	Enger	9/21/2016	2	Yes
24	Vogtle		8124	CC01		Site Specific	CC01	Concrete - Roof Decks	Installed to Date qtys revised - per Enger	-	1,058	CY	Enger	9/21/2016		Yes
25	Vogtle		02400	XR01		Site Specific		Railroads	To Be Installed: per meeting for review with estimating manager, these have all already been installed	26790 LF	-		Gainey	9/21/2016		Yes
26	Vogtle	1297	15100	_PreFabBuilding		Site Specific		Pre-Fabricated Buildings	wrong uom; was EA - change to SF	EA	SF		Gainey	9/21/2016		Yes
27	VCS	1427	07210	_Piles		Site Specific		Steel H & Pipe Pile	Installed Qty: per construction, installed already	-	1,114	CY	Gainey	9/21/2016		Yes
28	Vogtle	1241	07230	_Piles		Site Specific		Concrete Cast In Place Piles	Installed Qty: per construction, installed already	406.00	490,427		Gainey	9/21/2016		Yes
29	Vogtle	1242	07230	_Piles		Site Specific		Concrete Cast In Place Piles	Installed Qty: per construction, installed already	406.00	415		Gainey	9/21/2016		Yes
30	Vogtle	1239	07100	_Piles		Site Specific		Permanent Sheet Piling	Installed Qty: per construction, installed already	-	21,332		Gainey	9/21/2016		Yes
31	Vogtle	1240	07210	_Piles		Site Specific		Steel H & Pipe Piles	Installed Qty: per construction, installed already	-	2,571		Gainey	9/21/2016		Yes

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 128 of 231

2016 ETC Estimate CUT & ADD Registrar

VC Summer and Vogtle Project

Revision 2 - received 2016-10-07

Item #	Project	MEL ID	Bulk Cost Code	Bulk WBS Code	TAG	Location	Commodity Code	Description	Reason for change	Current Quantity/$'s	New Quantity/$	Unit	Request Change By	Date	Rev	Updated/Included in Fluor's ETC Estimate
32	Vogtle	1253	08135	CC01-Precast		Site Specific		MSE Wall - Precast	wrong uom; was EA - change to SF	EA	SF		Gainey	9/21/2016		Yes
33	VCS		22210	Liner Work		Standard Plant		Liner, SS 1/2" Plate - IRWST	Step 1 Reports show it as a WEC procurement. Also, in the Step 1 reports, the quantity was not identified. It was assumed that the liner was part of the CA Modules. It has came to light, that this is not the case and the liner will be field installed.	0	7838	SF	Gainey	9/23/2016		Yes
34	Vogtle		22210	Liner Work		Standard Plant		Liner, SS 1/2" Plate - IRWST	Step 1 Reports show it as a WEC procurement. Also, in the Step 1 reports, the quantity was not identified. It was assumed that the liner was part of the CA Modules. It has came to light, that this is not the case and the liner will be field installed.	0	7838	SF	Gainey	9/23/2016		Yes
35	VCS		01210	_Excavation		Site Specific		Excavation - Soil	**Installed Qty:** per construction, we have only 1,000,000 CY remaining	4,972,748	7,833,082	CY	Cazalet ok'd	10/7/2016	2	Yes

BOE - Attachment 6

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 129 of 231

FLUOR®

VC Summer & Vogtle

Performance Factor Evaluation for ETC – R8

Fluor Confidential, No Release without
prior Project Director approval

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 130 of 231

FLUOR

Tools & Process

The Performance Factor (PF) is a numerical ratio used to measure the actual performance of an individual or team while completing a task. There are various forms of PF associated with cost, schedule and quantities. The ratio is applied to Fluor's standard unit rates to calculate the final production unit rate of a commodity or piece of equipment.

The template utilized is the starting basis for site productivity but must be adjusted to arrive at the "Final" productivity once Project Scope of Work (SOW) , current Project Execution and location factors are incorporated. Any new additional impacts should be supported with calculations. To be used properly, this Productivity Matrix is initially completed early to assist with initial craft loading and indirect/staff estimate development. It is then updated once the final schedule and estimate details are completed to reflect any impacts that are created during estimate development.

The results from this exercise <u>are not</u>:

Directly related to current or past performance/production on VC Summer or Vogtle projects

Directly related to the ongoing projects estimate and/or base rates used to develop same.

In accordance to Practice 000.310.0011, The Construction group (with input from project management) is responsible for providing performance adjustments to the estimating department.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 131 of 231

FLUOR

Clarifications and Exclusions

Exclusions:

1. The PF does not account for rework of any existing in place / installed work.
2. The PF does not account for future rework related to design and engineering changes.
3. The PF does not account for delays related to E&DCR
4. The PF does not account for delays related to DCAF (Design Change After Fabrication)
5. The PF does not account for delays related to N&D, unless the N&D is related to construction workmanship
6. The PF assumes reasonable craft availability to meet the ramp up to support the scheduled requirements.
7. The PF does not account for any offsite parking and/or bussing from same.
8. The PF does not account for extended time delays related to site security access.
9. The PF does not account for delays related to inspection/verification and qualification of current onsite stored materials and equipment.
10. The PF does not account for extended delays (Greater than average of 15 minutes)for QC/ANI inspection hold points.

Clarifications:

1. It is assumed initial Nuclear training and orientation will be included in the estimate as a Direct Distributable cost and therefore not included in the PF calculations.
2. It is assumed ongoing Nuclear training will be included in the estimate as a Direct Distributable cost and therefore not included in the PF calculation.
3. It is assumed Pre-Job Meeting are included in the Nuclear Standard Base rates and therefore not included in the PF calculations.

FLUOR

Craft Availability

Preset Ranges and Percentage

Unemployment	Demand
•**Poor-<40%** – Unemployment rates at or below 2% •**Fair-<60%** – Unemployment rates 2.1% to 4.5% •**Average-<80%** – Unemployment rates 4.6% to 5.5% •**Above Average – 100%** – Unemployment rates 5.6% to 7% •**Ideal -<110%** – Unemployment rates 7.1% and above	•**Poor-<40%** – High demand for craft due to other similar projects •**Fair-<60%** – Moderate demand for craft on other similar projects, •**Average-<80%** – Small demand for craft on similar projects •**Above Average – 100%** – Very limited demand for craft on similar projects •**Ideal -<110%** – No other similar projects in immediate area

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 133 of 231

FLUOR

Craft Availability

Supporting Data - Unemployment

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

VC Summer
Southeast Unemployment for March 2016 = 5.51%
South Carolina Unemployment for March 2016 = 5.70%
Columbia, SC Unemployment for March 2016 = 5.20%
Vogtle
Southeast Unemployment for March 2016 = 5.51%
Georgia Unemployment for March 2016 = 5.50%
Savanna, GA Unemployment for March 2016 = 5.30%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 134 of 231

FLUOR

Craft Availability

Supporting Data - Demand

Data Extracted from - VC Summer
Craft Compensation Review 05/04/2016

Project – Mid Atlantic	Location	Estimated Craft Peak	Mobilization	Completion
VC Summer	Jenkinsville, SC	5,000+		2019/2020
Vogtle	Waynesboro, GA	5,000+		2019/2020
Mercedes Truck	Charleston, SC	1,000	2016	2019
Volvo	Charleston, SC	500	2016	2018
Southern LNG	Elba Island, GA	1,250	2015	2017
Dominion LNG	Lusby, MD	4,000	2014	2018
Dominion Power	Greensville, VA	1,000	2015	2017
Cypress Creek Power	Dendron, VA	1,200	2013	2018

Note: Additional projects will be identified during the Area Labor Market Analysis (ALMA) under development.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 135 of 231

FLUOR®

Craft Availability

Inserted Results

VC Summer and Vogtle
•Unemployment = 5.25% = Average = 80%. •Demand = High = 40% **•For this Pf exercise use Fair = 60%**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 136 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Preset Ranges and Percentages

Demographics	Compensation
•**Poor-<50%** – Poor – Population in the area has not experienced construction to any large degree, or work unrelated to the type of work to be executed, there is no type of craft training in place, not dedicated to the work with probable high absenteeism, safety issues, and quality concerns	•**Poor-<50%** – Poor – Wage rate is 8 to 10% below the average rates in the area with no benefits
•**Fair-<70**% -Population in the area has experienced construction of similar type in the past, there is training of craft in limited fields, work dedication is such that moderate absenteeism, safety, and quality would be moderate	•**Fair-<70**% -Wage rate is 3 to 7% below the average rates in the area with few benefits
•**Average-<90%** – Population in the area has experienced a number of projects recently or ongoing projects, there is a formal training center or programs that actively recruits students to train as craftsman, with work ethic such that work dedication is high enough to impact absenteeism, safety, and quality	•**Average-<90%** – Wage rate is within 1% of the wage rates in the area with comparable benefits
•**Above Average – 100%** – The area is industrial in nature with the type of projects being the norm for work in the area, and training is accomplished through recruiting of students for all phases of construction, with work ethic motivated by minimum absenteeism, good safety and quality results	•**Above Average – 100%** – Wage rate is 1.5 to 5% above the average rates in the area with comparable benefits
•**Ideal -<110%** – Nearly all construction in the area is of the type of project anticipated with community driven to recruit and train local population for the work and a high work ethic driven to excel for being at work, and making the project successful for safety and quality results	•**Ideal -<110%** – Wage rate is in excess of 5% above the average rates in the area with full benefits.

Fluor Confidential, No Release without prior Project Director approval

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 137 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Inserted Results (Subtotal for this Category)

All Islands – VC Summer

Account	Demographics	Comp	%
Earth Work	Average	Fair	80%
Concrete	Average	Fair	80%
Steel/Buildings	Average	Fair	80%
NSSS/STG/CT	Poor	Fair	60%
Mechanical Equipment	Fair	Fair	70%
Pipe	Poor	Fair	60%
Electric	Fair	Fair	70%
Controls	Fair	Fair	70%
Insulation	Average	Fair	80%
Paint/Coatings	Average	Fair	80%

All Islands - Vogtle

Account	Demographics	Comp	%
Earth Work	Average	Average	90%
Concrete	Fair	Average	80%
Steel/Buildings	Fair	Average	80%
NSSS	Poor	Average	70%
Mechanical Equipment	Fair	Average	80%
Pipe	Poor	Average	70%
Electric	Fair	Average	80%
Controls	Fair	Average	80%
Insulation	Fair	Average	80%
Paint/Coatings	Fair	Average	80%

Compensation Basis - VC Summer

Based on Craft Compensation Study for VC Summer 05/04/2016	Mech/ Jrny	Welder
Current Avg. Base Rate	$29.50	$31.50
Avg. Rate within Mid Atlantic	$26.00	$27.10
Competitors (All Regions)	$30.40	$34.93
As Compared to Mid Atlantic Region	11.86%	13.97%
As Compared to Competitors	(2.96%)	(9.82%)

Compensation Basis - Vogtle

- Based on Union Labor Posture, Rates are set by the unions
- Per Construction, no adjustments are required for skill or additional Performance factor for union labor posture.

Fluor Confidential, No Release without prior Project Director approval

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 138 of 231

FLUOR®

Craft Skill/Experience/Work Ethic

Additional Influences

- **Nuclear New Build Craft Knowledge and Experience**
- **Learning Curve - Implementation of Nuclear Policies and Procedures**
- **Craft Turnover up to a Maximum of 10%**

  (If greater than 10%, addressed at "Final Adjustments")
- **Protective Clothing/Apparatus/Confined Space Requirements**
- **Foreign Material Exclusion From Plant Components and Systems**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 139 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Additional Influences

•Nuclear New Build Craft Knowledge and Experience

Account	Nuclear Island		Turbine Island		Balance of Plant	
	PF Loss	PF Mult	PF Loss	PF Mult	PF Loss	PF Mult
Earth Work	0.00%	1.00	0.00%	1.00	0.00%	1.00
Concrete	-0.68%	1.01	-0.50%	1.01	-0.13%	1.00
Steel/Buildings	-0.50%	1.01	-0.38%	1.00	0.00%	1.00
NSSS/STG/CT	-2.13%	1.02	-2.00%	1.02	-0.75%	1.01
Mechanical Equipment	-2.13%	1.02	-2.00%	1.02	-0.75%	1.01
Pipe	-1.50%	1.02	-1.38%	1.01	-0.75%	1.01
Electric	-1.38%	1.01	-1.25%	1.01	-0.40%	1.00
Controls	-1.13%	1.01	-1.00%	1.01	-0.38%	1.00
Insulation	-0.88%	1.01	-0.75%	1.01	-0.25%	1.00
Paint/Coatings	-0.65%	1.01	-0.50%	1.01	-0.05%	1.00

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 140 of 231

FLUOR®

Craft Skill/Experience/Work Ethic

Additional Influences

Learning Curve - Implementation of Nuclear Policies and Procedures*

Account	Nuclear Island		Turbine Island		Balance of Plant	
	PF Loss	PF Mult	PF Loss	PF Mult	PF Loss	PF Mult
Earth Work	-0.13%	1.00	-0.13%	1.00	0.00%	1.00
Concrete	-0.60%	1.01	-0.60%	1.01	0.00%	1.00
Steel/Buildings	-0.50%	1.01	-0.50%	1.01	-0.10%	1.00
NSSS/STG/CT	-0.85%	1.01	-0.50%	1.01	-0.20%	1.00
Mechanical Equipment	-0.45%	1.00	-0.40%	1.00	-0.20%	1.00
Pipe	-0.75%	1.01	-0.65%	1.01	-0.40%	1.00
Electric	-0.73%	1.01	-0.73%	1.01	-0.30%	1.00
Controls	-0.63%	1.01	-0.40%	1.00	-0.30%	1.00
Insulation	-0.48%	1.00	-0.40%	1.00	-0.10%	1.00
Paint/Coatings	-0.25%	1.00	-0.20%	1.00	-0.05%	1.00

•For Learning Curve Portion of Craft Hours, the above have been included with a 2x multiplier.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 141 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Additional Influences

Craft Turnover

(Above 10% will be included with "Final Adjustments" if Required)

Account	All Islands - VCS		All Islands - Vogtle	
	PF Loss	PF Mult	PF Loss	PF Mult
Earth Work	-2.90%	1.03	-8.31%	1.09
Concrete	-2.90%	1.03	-8.31%	1.09
Steel/Buildings	-2.90%	1.03	-8.31%	1.09
NSSS/STG/CT	-2.90%	1.03	-8.31%	1.09
Mechanical Equipment	-2.90%	1.03	-8.31%	1.09
Pipe	-2.90%	1.03	-8.31%	1.09
Electric	-2.90%	1.03	-8.31%	1.09
Controls	-2.90%	1.03	-8.31%	1.09
Insulation	-2.90%	1.03	-8.31%	1.09
Paint/Coatings	-2.90%	1.03	-8.31%	1.09

Per Fluor HR:

VC Summer:

Average 3.05%

Vogtle:

Average 7.5%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 142 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Additional Influences

Special Protective Clothing / Apparatus / Confined Space –

SS & Chrome Pipe Welding Requirements, all others excluded based on MC prior to testing and commissioning

Account	Nuclear Island		Turbine Island		Balance of Plant	
	PF Loss	PF Mult	PF Loss	PF Mult	PF Loss	PF Mult
Earth Work	0.00%	1.00	0.00%	1.00	0.00%	1.00
Concrete	0.00%	1.00	0.00%	1.00	0.00%	1.00
Steel/Buildings	0.00%	1.00	0.00%	1.00	0.00%	1.00
NSSS/STG/CT	0.00%	1.00	0.00%	1.00	0.00%	1.00
Mechanical Equipment	0.00%	1.00	0.00%	1.00	0.00%	1.00
Pipe	0.00%	1.00	0.00%	1.00	0.00%	1.00
Electric	0.00%	1.00	0.00%	1.00	0.00%	1.00
Controls	0.00%	1.00	0.00%	1.00	0.00%	1.00
Insulation	0.00%	1.00	0.00%	1.00	0.00%	1.00
Paint/Coatings	0.00%	1.00	0.00%	1.00	0.00%	1.00

No additional impacts beyond what is included in Fluor's Standard Nuclear Unit Rates

Primarily SS & Chrome Pipe Welding Requirements, all others excluded based on MC prior to testing and commissioning

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 143 of 231

FLUOR

Craft Skill/Experience/Work Ethic

Additional Influences

Foreign Material Exclusion (FME) From Plant Components and Systems

Account	Nuclear Island		Turbine Island		Balance of Plant	
	PF Loss	PF Mult	PF Loss	PF Mult	PF Loss	PF Mult
Earth Work	0.00%	1.00	0.00%	1.00	0.00%	1.00
Concrete	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Steel/Buildings	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
NSSS/STG/CT	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Mechanical Equipment	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Pipe	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Electric	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Controls	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Insulation	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00
Paint/Coatings	-0.00%	1.00	-0.00%	1.00	-0.00%	1.00

No additional impacts beyond what is included in Fluor's Standard Nuclear Unit Rates

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 144 of 231

FLUOR®

Work Space per Head / Congestion

Preset Ranges and Percentages

Workspace/Head	Congestion
The **Work Space** which will be the prevalent conditions of the craft to their job influences how productive they will be. The smaller the work area, the less space for tools, materials, layout, etc. with the mixing of disciplines in a given area further impacting the productivity as each discipline will bring different tools and materials into their work zone. In calculating the work space, the surface area at ground level and the areas on platforms derive the total space with the anticipated head count divided into that number for space per man. **Established Ranges** •**Poor -<60%** – Area < 200 Sf/Man •**Fair-<75%** - Area > 200 Sf/Man to <250 Sf/Man •**Average-<90%** – Area > 250 Sf/Man to <300 Sf/Man •**Above Average – 100%** – Area > 300 Sf/Man to <350 Sf/Man •**Ideal -<110%** – Area > 350 Sf/Man	**Complexity and Congestion** of the unit would force larger number of craftsman into a given area. Construction has provided recommended Pf adjustments for complexity and congestion, their input was based on installing a "AP1000" into an "AP600" design and footprint.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 145 of 231

FLUOR

Work Space per Head / Congestion

Work Space per Head

Nuclear Island

Bldg	SF	P-Hds	80%	Sf/Hd	Ttl Hrs
Containment	43,272	323	258	167	1,597,145
Auxiliary	73,585	722	578	127	944,227
Shield	8,214	108	86	95	436,483
	---				---
	125,071				2,977,855
		Weighted Average		144.15	

SF/Head	200Sf/Hd	250Sf/Hd	300Sf/Hd	350Sf/Hd	400Sf/Hd
Percent	60%	75%	90%	100%	110%
			Use>>>>	**48%**	

Turbine Island

Bldg	SF	P-Hds	80%	Sf/Hd	Ttl Hrs
Annex	61,624	302	242	255	1,227,193
DG	4,489	86	69	65	167,092
RW	12,075	52	42	290	130,856
TB	113,568	630	504	225	2,466,725
	---				---
	191,756				3,991,866
		Weighted Average		229.90	

SF/Head	200Sf/Hd	250Sf/Hd	300Sf/Hd	350Sf/Hd	400Sf/Hd
Percent	60%	75%	90%	100%	110%
			Use>>>>	**69%**	

Basis & Assumptions:

1. Square Footage of Buildings was based on preliminary SF Calculations from engineering.
2. It has been assumed 80% of the peak heads would be working within the building areas, the remaining are assumed to be in assembly yards or other.
3. Due to lack of information, and based on previous estimates, the BOP has been included at 90% which provides for 250 sf to 300 sf per head.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 146 of 231

FLUOR

Work Space per Head / Congestion

Congestion / Complexity

	Nuclear Island			Turbine Island			
Account	**Cont**	**Aux**	**Shield**	**Annex**	**DG**	**RW**	**TB**
Concrete	10.0%	10.0%	10.0%	5.0%	0.0%	2.0%	5.0%
Steel / Buildings	10.0%	0.0%	4.0%	0.0%	0.0%	0.0%	8.0%
STG/CT/NSSS	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	5.0%
Mech	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%
Piping	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	7.5%
Electrical	5.0%	5.0%	5.0%	3.0%	0.0%	0.0%	3.0%
Controls	5.0%	5.0%	5.0%	3.0%	0.0%	0.0%	3.0%
Paint	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	2.0%
Insulation	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	7.5%

The Above percentages represent additional Performance impacts to the Sf/Head show on the previous slide.

Basis & Assumptions:

1. Construction has provided recommended Pf adjustments for complexity and congestion, their input was based on installing a “AP1000” into an “AP600” design and footprint.
2. No adjustment for BOP congestion/complexity has been included.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 147 of 231

FLUOR®

Work Week Hours / Days

Work Week Hours

Another influence to the productivity is the **Work Week** which indicates the impact of worker production for extended hours for extended time. Forty hours per week is the base case and all historical data indicates that this is the optimum production rate. The longer the work week and the more weeks involved the more impact to the workers effort and production. The longer the work week, absenteeism starts to increase as the workers must take time off for personal business or other outside issues. If crews are not complete (i.e. welders or fitters, etc.), it begins to impact the rest of the crews production.

Work Week Days

Compressed Work Week Days is another influence to productivity, working beyond the base case of eight hours per day has similar effects to extended work week hours. Fatigue and Sleep Deprivation has serious detrimental effects on cognitive and motor capabilities, this generates mistakes, oversights, difficult problem solving, and safety concerns.

Project Schedules Included in this PF Evaluation

Site	Days/Week	Hours / Day	Total Wk Hours
VC Summer	6/6/5 Days	10 Hours	60/60/50 Hr/Week
Vogtle	5/5/5/4 Days	12 Hours	60/60/60/48 hr/Week

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 148 of 231

FLUOR

Work Week Hours / Days Cycle

Project Cycles Included in this PF Evaluation

3 Week Cycle	Week	Days/Week	Hours / Day	Total Wk Hours
VC Summer	A	6 Days	10 Hours	60 Hr/Week
VC Summer	B	6 Days	10 Hours	60 Hr/Week
VC Summer	C	5 Days	10 Hours	50 Hr/Week

4 Week Cycle	Week	Days/Week	Hours / Day	Total Wk Hours
Vogtle	A	5 Days	12 Hours	60 Hr/Week
Vogtle	B	5 Days	12 Hours	60 Hr/Week
Vogtle	C	5 Days	12 Hours	60 Hr/Week
Vogtle	D	4 Days	12 Hours	48 Hr/Week

BOE - Attachment 7

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 149 of 231

FLUOR

Work Week Hours

Supporting Data

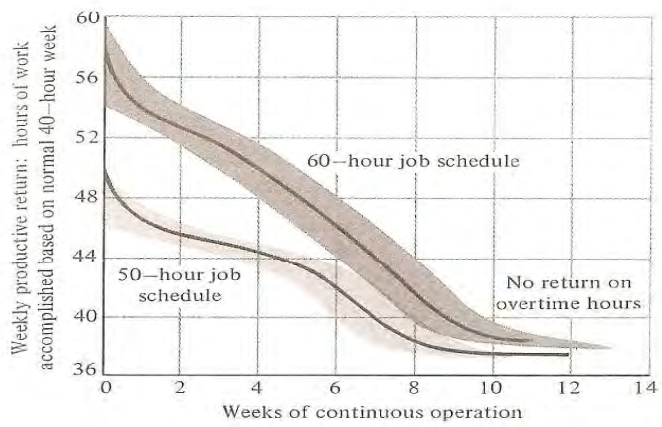


FIGURE 9-8
Effective return from working 50 or 60 hours a week for various numbers of weeks. (*Source:* Business Roundtable Cost Effectiveness Study Report C-3, *November 1980.*)

Preset Ranges for Hours/Week

WORK WEEK	> 10 Wks	8 to 10 Wks	6 to 8 Wks	3 to 6 Wks	< 3 Wks
40 Hours	100%	100%	100%	100%	100%
50 Hours	70-75%	75-80%	80-85%	85-90%	90-95%
60 Hours	60-65%	65-70%	70-75%	80-85%	85-90%
70 Hours	50-55%	55-60%	60-65%	70-75%	80-85%
72 Hours	45-50%	55-60%	60-65%	70-75%	80-85%
84 Hours	35-40%	45-50%	45-50%	60-65%	75-80%

Results Based on Standard Total Work Week Hours

Site	Unit	Week Cycle	Duration	Grade %	Performance*
VC Summer	A	60/60/50	31.4 Mos	68.1%	85.9%
VC Summer	B	60/60/50	41.5 Mos	67.8%	85.8%
Vogtle	A	60/60/60/48	27.1 Mos	68.0%	85.9%
Vogtle	B	60/60/60/48	45.0 Mos	67.5%	85.5%

*Performance value is based on the preset 30% weight for this category

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 150 of 231

FLUOR

Work Hours/Days

Supporting Data

TABLE 9-2
THE INFLUENCE OF OVERTIME ON EFFICIENCY IN CONSTRUCTION CREWS

			Percent inefficiency			
Days	Hours	Weekly hours	7 days	14 days	21 days	28 days
6	9	54	4–6	6–9	8–12	10–15
6	10	60	7–9	11–14	14–18	18–23
6	12	72	12–14	18–21	24–28	30–35
7	8	56	9–11	14–16	18–22	23–27
7	9	63	11–13	17–20	22–26	28–33
7	10	70	14–16	21–24	28–32	35–40
7	12	84	20–22	30–33	40–44	50–55

Source: Qualified contractor, March 1969

Results Based on Standard Daily Work Hours

Site	Work Days	Standard Work Week Daily Hours	Performance (60 Hr Wk)	Daily Avg. Lost time due to 10/12 Hr Day	Performance Impact Based on Work Week Project Cycle
VC Summer	6/6/5	10	97.3%	.27 Hr / 16 Min	97.3%
Vogtle	5/5/5/4	12	94.5%	.66 Hr / 40 Min	94.5%

*For this PF Adjustment, 8 hour work day has been assumed to be the normal work hours per day.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 151 of 231

FLUOR

Work Week / Days
Inserted Results

Vogtle	Work Week Performance	Impact for Daily Hours >8**	Final Impact Related to Work Week and Hours / Day***
VC Summer – 60/60/50			
Unit A (31.4 Mos*)	85.9%	97.3%	84.1%
Unit B (41.5 Mos*)	85.8%	97.3%	83.9%
Vogtle 60/60/60/48			
Unit A (27.1 Mos*)	85.9%	94.5%	80.4%
Unit B (45.0 Mos*)	85.5%	94.5%	80.0%

*Scheduled months to completion have been provided by Project Controls as of the first week of May.
**Impact for 12 & 10 hour days vs 8 hour days includes work week cycle.
***Includes 30% Weight for this "Work Week / Day" Category.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 152 of 231

FLUOR

Shift Work

Description

Shift work impacts production based on Sleeping shortages, difficulties adjusting to "body rhythm" time for overlap, coordination between shifts, and impacts related to poor lighting. Additional impacts maybe applied for lost time due to Paid Lunch, Hours worked on shift, etc

Established Ranges

Established Ranges:

Poor – 70.0% - Triple Shift – 50% of the work

Fair – 82.6% - Double Shift – 50% of the work

Average – 100% - Single Shift

Inserted Results

Project: VC Summer	Project: Vogtle
Shift – Double Percent of work on Second Shift – 40% Subtotal Result – 84.3% Additional PF Impact – Paid Lunch – Not Applicable Subtotal -0.00% **Final Input - 84.3%**	Shift – Double Percent of work on Second Shift – 40% Subtotal Result – 84.3% Additional PF Impact – Paid Lunch – 1/2 hour Subtotal -4.167% **Final Input - 80.1%**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 153 of 231

FLUOR

Plant Type (Site Interferences)

Preset Ranges & Percentages

- **Poor-<40%** – Poor – Revamp only where the scope of work is modification of existing equipment, piping, and electrical/instrumentation.
- **Fair-<60%** - Revamp/new scope of work where portions of unit are modified and portions of a unit have new installations of equipment, piping, and electrical/instrumentation .
- **Average-<80%** – New in existing plant or "brown field" where a site is within an operating plant is the site of work. Can range from installing a unit in area of a removed unit or in area surrounded by existing plant.
- **Above Average – 100%** – Grass roots or "green field" where a site is in a total new area unobstructed by existing plant operations or total new installation.

Inserted Results

Site/Area	% Included up to 12 mos Prior to Comp.*	Final 12 Mos of Construction**	Composite Utilized in PF Calculation*
VC Summer Unit A & BOP	90%	60%	67%
VC Summer Unit B	90%	60%	73%
Vogtle Unit A & BOP	90%	60%	63%
Vogtle Unit B	90%	60%	74%

*- Based on the scheduled dates provided by Project Controls as of first week in May ,2016)
**- Final 12 months is expected to be impacted by Fuel on site, NOTE: It have been indicated by CM that 12 mos is best case time frame – experience has shown 15 months is more typical.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 154 of 231

FLUOR

Work Heights

Preset Ranges & Percentages

- **Poor-<70%** – Poor – Vertical Units.
- **Fair-<80**% - 50% of work above 30 feet.
- **Average-<100%** – Horizontal Units
- **Above Average – 110%** – All work in pipe rack and/or Outside Building limits (OSBL)
- **Ideal – 115% -** All work at grade

Inserted Results

For this PF evaluation, Fair (80%) has been included.

BOE - Attachment 7

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 155 of 231

FLUOR

Site Conditions

Description

Shift conditions consists of several different categories, each category is independently evaluated for performance impacts

Site Conditions Categories

- Temporary Facilities
- Site Conditions
- Construction Equipment
- Laydown Yards
- Parking Facilities and Bussing
- Site Access and Egress
- Materials receipt / commodities
- Large Equipment Deliveries
- Community Size and Commuting Time
- Project QA/QC Requirements
- Design Support
- Schedule Conditions
- Firewatch
- Drills and Evacuations
- Management Staff Experience

BOE - Attachment 7

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 156 of 231

FLUOR®

Site Conditions

Temporary Facilities

The locations of **Temporary Facilities** will affect the productivity of the craftsmen. Will number and quantity of tool rooms be positioned to minimize time from the worksite? The location of clock alleys, office trailers, parking areas, laydown areas, warehouse area, lunch room (change house as appropriate), and general foreman trailers will have a negative influence on productivity.

Established Ranges

- **Poor -<60%** – Remote from work site area
- **Fair-<70%** - In the vicinity
- **Average-<80%** – Some portions of the facilities are adjacent to the work area
- **Above Average – 90%** – All within short walking distance
- **Ideal -<100%** – Adjacent to work site

Inserted Results

	Unit A/BOP	Unit B
VC Summer	60%	60%
Vogtle	60%	60%

Site Conditions

The **Site Conditions** on a project can influence performance. If workers are having to perform their work under conditions such as mud or swamp or rough terrain or in situations where the result of weather or location or facilities design will have craftsmen working in conditions that distracts from their work execution.

Established Ranges

- **Poor -<60%** – All work performed on disturbed soil or in muddy or poor footing situations
- **Fair-<70%** - Most of the work performed on disturbed soil with poor footing situations.
- **Average-<80%** – There is a mix of work with equal portions on paved surface area and balance of the work on disturbed soil.
- **Ideal -<100%** – All work performed on paved surfaces

Inserted Results

	Unit A/BOP	Unit B
VC Summer	70%	70%
Vogtle	70%	70%

BOE - Attachment 7

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 157 of 231

FLUOR®

Site Conditions

Construction Equipment

The amount of and quality of **Construction Equipment** can have an influence to craftsmen work execution. There are also projects where a 3rd party will furnish and manage equipment on the site which when not properly planned will impact productivity.

Established Ranges

- **Poor -<60% –** 3rd party supplied with very little influence as to timing and disposition of equipment scheduling. Equipment is old and of poor maintenance.
- **Fair-<70%** - There is some influence on scheduling of equipment types and sizes and equipment is of moderate age and maintenance.
- **Average-<80% –** Equipment sizes and schedules are influenced by the field forces with the equipment either new or well maintained.
- **Above Average < 90% –** Specific equipment needs are met and the equipment is new and well maintained with latest technology included in equipment (i.e. load weights, etc.)

Inserted Results

	Unit A/BOP	Unit B
VC Summer	~~70%~~ 80%	~~70%~~ 80%
Vogtle	~~70%~~ 80%	~~70%~~ 80%

Laydown Yard/Mat'l Logistics

The Material Logistics/warehousing/laydown yard location can influence the productivity rates if conditions are such that the efficiencies of the work force are limited by the access to the materials in a timely manner or transporting of materials to the work face are not well planned or restricted by site conditions.

Established Ranges

- **Poor -<60% –** Remote and outside the plant requiring excessive travel time and limited access.
- **Fair-<70%** - Inside the plant perimeter but excessive travel time required and minimal access.
- **Average-<80% –** Inside the plant perimeter with minimal travel time required and relative easy access.
- **Above Average <90% –** Near the work site and easy access.
- **Ideal -100% –** Adjacent to work site and easy access.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	~~60%~~ 70%	~~60%~~ 70%
Vogtle	~~60%~~ 70%	~~60%~~ 70%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 158 of 231

FLUOR®

Site Conditions

Site Access and Egress

The ability to perform the work can be limited by the Site access and egress for both the workers and equipment. The potential access and egress can be as extreme as all faces available to single point of access.

Established Ranges

- **Poor -<60% –** Work area limited to one point of access and egress to the work area..
- **Fair-<70%** - Work area is limited to two points of access and egress to the work area or one side of the unit is accessible for craft and equipment to the work area.
- **Average-<80% –** Two sides of the unit are accessible for craft and equipment to the work area.
- **Above Average < 90% –** Three sides of the unit are accessible for craft and equipment to the work area.
- **Ideal < 100% –** All sides of the unit are accessible for craft and equipment to the work area..

Inserted Results

	Unit A/BOP	Unit B
VC Summer	65%	65%
Vogtle	65%	50%*

*Vogtle - Unit B is based on Single in/out access road

Parking Facilities & Bussing

Over crowded and distance to worksite are a couple of things which Parking Facilities and Bussing can have a negative impact to productivity. If craftsman are required to scramble for parking places and than be bussed to their work area, attitude and moral will impact the production of the craftsman.

Established Ranges

- **Poor -<60% –** Remote and outside the plant requiring excessive travel time and limited access.
- **Fair-<70%** - Inside the plant perimeter but excessive travel time required and minimal access.
- **Average-<80% –** Inside the plant perimeter with minimal travel time required and relative easy access.
- **Above Average <90% –** Near the work site and easy access.
- **Ideal -100% –** Adjacent to work site and easy access.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	65%	65%
Vogtle	65%	65%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 159 of 231

FLUOR®

Site Conditions

Mat'l Receipt/Commodities

The timely **Material receipt/commodities and large equipment** deliveries can have a drastic impact to productivity. Slippage in delivery dates or inadequate deliveries of commodities can drive either inefficient use of existing personnel or the added cost and lost production by mobilization and demobilization and remobilization of personnel. This can be a very detrimental influence over the life of a project.

Established Ranges

- **Poor -<60% –** Material promise dates are being missed by 4 or more weeks..
- **Fair-<70%** - Material promise dates are being missed by 2 to 4 weeks.
- **Average-<80% –** Material promise dates are being missed by 0 to 2 weeks.
- **Above Average < 90% –** Material promise dates are being met.
- **Ideal < 100% –** Materials are onsite or delivered on-demand...

Inserted Results

	Unit A/BOP	Unit B
VC Summer	65%	65%
Vogtle	65%	65%

Drills and Evacuations

Loss related to **drills and evacuations**, even if scheduled, impact performance.

Established Ranges

- **Poor -<60% –** Occurrences are totally random and exceed 6 incidents per year.
- **Fair-<70%** - Occurrences are planned and random and occur quarterly.
- **Average-<80% –** No opportunities for random and planned are quarterly.
- **Above Average < 100% –** No need for planned evacuations.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	80%	70%
Vogtle	80%	70%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 160 of 231

FLUOR

Site Conditions

QA/QC Requirements

There is a situation where **QA/QC requirements** on a given project can be an impact to the productivity. Built into the estimating format is an allowance for the level of quality requirements that are standard to a project. There are circumstances where the type of project will require extensive quality monitoring and a larger number of "hold points" which often can disrupt the ebb and flow of the work execution.

Established Ranges

•**Poor -<60%** – Nuclear type facilities or clean room environment where multiple "hold points" are identified with limited 3rd party inspector coverage.
•**Fair-<70%** - Nuclear type facility or unique robust QA/QC requirements with a large number of "hold points" with sufficient 3rd party inspector coverage.
•**Average-<80%** – Normal refinery or chemical plant complex QA/QC requirements with sufficient 3rd party inspector coverage.
•**Above Average < 100%** – Normal refinery or chemical plant complex QAQC requirements with proactive inspection and inspection of "hold points" by qualified and unlimited resources for inspection.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	60%	60%
Vogtle	60%	60%

Design Completion and Support

The status of **Base Design Completion and Constructability Reviews** will have an impact on productivity especially if the requirements of the project are such that construction start and the progress of design overlap. Support of drawings and materials for the field execution can become critical and responding start and stop of the field effort is diminished. **NOTE: THIS COVERS LOSS OF PF FOR "WORK AROUNDS" / RESCHEDULING FOR INCOMPLETE DESIGN DOCS, IT DOES NOT INCLUDE E&DCR IMPACTS.**

Established Ranges

•**Poor -<60%** – Drawing promise dates are being missed by 4 or more weeks.
•**Fair-<70%** - Drawing promise dates are being missed by 2 to 4 weeks.
•**Average-<80%** – Drawing promise dates are being missed by 0 to 2 weeks.
•**Above Average <90%** – Drawing promise dates are being met.
•**Ideal -100%** – Drawings are onsite or delivered on-demand.

Impacts for Design have been excluded from Fluor's estimate

Inserted Results

	Unit A/BOP	Unit B
VC Summer	~~60%~~ 100%	~~60%~~ 100%
Vogtle	~~60%~~ 100%	~~60%~~ 100%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 161 of 231

FLUOR

Site Conditions

Schedule

The potential impact of the **Schedule** duration can play a part in impacting productivity. Granted the initial schedule at time of estimate has considered the impacts be it multiple shifts or work hours, but the aggressiveness of a schedule may not be totally considered in the impact of the work execution.

Established Ranges

•**Poor -<60%** – A very aggressive schedule where flexibility in execution of the work is limited and requires large amounts of "spot overtime". The "float" for material deliveries, drawing deliveries, etc. immediately impacts the work execution..
•**Fair-<70**% - An aggressive schedule that allows some flexibility but is greatly impacted by material and drawing deliveries..
•**Average-<80% –** An aggressive schedule but with some float for deliveries and work forces to be able to work on multiple fronts.
•**Above Average < 100% –** A schedule with timely receipt of materials and drawings and the craftsman and equipment to work multiple fronts in the execution of the work.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	60%	60%
Vogtle	60%	60%

Firewatch

The estimate will generally include an allowance for **Firewatch** in the early considerations. By and large this should not be considered, but is an area where plant types or scope of work may dictate some adjustment in productivity.

Established Ranges

•**Poor -<60% –** Every work activity requires a firewatch.
•**Average-<80% –** Only work activities with spark or flame potential **require a firewatch.**
•**Above Average <100% –** Work location does not require a firewatch.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	70%	70%
Vogtle	70%	70%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 162 of 231

FLUOR

Site Conditions

Management Staff

There is a potential impact that is derived from the **Management staff** experience and Project Type experience. These experience factors can be further defined as the impacts which can on a global picture affect craftsman productivity. If staff and craft experience that have been presented to execute the work is a first time experience, there is the likely potential that a well plotted course of execution may have to be modified a number of times during execution which has a negative impact to the direction of the work execution. Another impact to the experience factors as noted above is the inexperience of the supervision or type of work which may not have sufficient supervision of the craft in the field. An important aspect of this influence is the staff experience working in a location that is new, or the method of execution is a first time experience.

Established Ranges

•**Poor -<60% –** Assembled staff has no experience in the project type, nor have any of the staff worked together either because all new employees or short term with the company. There is no experience working at the location of the job. There is inadequate staffing numbers to fully support the execution of the work.

•**Fair-<70**% - Assembled staff has very limited experience in the project type and some members of the staff have worked together and are 5 year employees of the company. There is minimal experience working at the location of the job. There is sufficient staff to fully support the execution of the work.

•**Average-<80% –** Members of the assembled staff have experience in the project type and members of the staff are 10 year employees of the company. There is some experience working at the location of the job. Field staff is of sufficient numbers to fully support all field activities.

•**Above Average <100% –** The majority of the assembled staff has experience in the project type and location of the job and is 15 year plus employees of the company. The field staff has all aspects covered with support for the field activities.

Inserted Results

	Unit A/BOP	Unit B
VC Summer	70%	80%
Vogtle	70%	80%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 163 of 231

FLUOR®

Climate/Temperature / Precipitation

Working **Climate** at the site will have an impact on productivity. The location of the project can be affected by Climate/Weather/precipitation. The specific items which affect the productivity are temperature, ice/snow, and rain.

VC SUMMER				VOGTLE			
Area Information	**Max**	**Avg**	**Min**	**Area Information**	**Max**	**Avg**	**Min**
Max Temp Range	102	78	40	Max Temp Range	98	76	33
Min Temp Range	78	57	22	Min Temp Range	80	58	21
Average Days above 95		72		Average Days above 95		76	
Average Days below 40		55		Average Days below 40		55	
Ttl Temp Related Days		127		Ttl Temp Related Days		131	
Precipitation	44.29	Inches		Precipitation	43.58	Inches	

Established Ranges

•**Poor -<50%** – Major duration of the project will experience extended periods of cold below 40 degrees F, or in excess of 95 degrees F, or have ice and snow over 6 months at a time, or has rainfall in excess of 200 inches per year.
•**Fair-<65**% - A moderate portion of the project will experience extended periods of cold below 60 degrees F, or in excess above 75 degrees F, or have ice and snow three to six months at a time, or experiences rainfall in the amounts of 100 to 200 inches per year..
•**Average-<80%** – The weather is mild year round with 1 to 2 months of ice and snow and rainfall in the range of 50 to 100 inches per year.
•**Above Average < 100%** – The weather is mild year round with minimal ice and snow and rainfall up to 50 inches per year..
•**Ideal – 110% -** The majority of the work is performed within a sheltered area or inside with weather having no impact on work forces.

Inserted Results

VC Summer	83%
Vogtle	83%

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 164 of 231

FLUOR

Other Site Specific Performance Items

	VC Summer			Vogtle		
	Unit A	BOP	Unit B	Unit A	BOP	Unit B
1. Work package Rewrite/Rework Delays & Craft Training	~~3.78%~~ 0.00%	~~3.60%~~ 0.00%	0.00%	~~3.78%~~ 0.00%	~~3.60%~~ 0.00%	0.00%
2. Constructability (Module Quality Controls) Design and Inspection Requirements	1.10%	1.00%	0.50%	1.10%	1.00%	0.50%
3. Design and Engineering (First of kind) **Base documents** include many E&DCR and Change information	4.00%	0.50%	1.00%	4.00%	0.50%	1.00%
4. Means/Methods/Process Improvements	1.00%	0.87%	0.00%	1.00%	0.87%	0.00%
5. Absenteeism (VC Summer 10%/Vogtle 15% Avg.)	2.53%	2.50%	2.53%	3.44%	3.44%	1.72%
6. SCWE & ECP Impacts	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
7. Add'l Regulatory/Owner Oversight and Wectec Process Requirements	2.00%	2.00%	1.00%	2.00%	2.00%	1.00%
8. Engineering and Design Delays	Excluded from PF, To be addressed via Change order if Req'd					
9. Nuclear Fuel on Site (9 mo prior to completion with security requirements implemented 3 mos prior for a total of 12 Mos of Impact).*	0.17%	0.17%	0.13%	0.20%	0.20%	0.12%

All values represent performance loss

* This is in addition for Plant Type (Slide 25) and Site Conditions (Slides 27-34), Includes items such as Security Checks, NRC Scrutiny, Crane placements, Travel Restrictions, etc.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 165 of 231

FLUOR®

Performance Results (Nuclear Island)

	VC Summer				Vogtle			
	Unit A		Unit B		Unit A		Unit B	
Account	PF	PF Mult	PF	PF Mult	PF	PF Mult	PF	PF Mult
Earthwork	w/BOP	0.00	w/BOP	0.00	w/BOP	0.00	w/BOP	0.00
Concrete	53.1%	1.88	60.9%	1.64	51.5%	1.94	59.2%	1.69
Structural Steel	55.8%	1.79	64.0%	1.56	54.1%	1.85	62.2%	1.61
Arch/Buildings	55.7%	1.79	64.0%	1.56	54.0%	1.85	62.2%	1.61
NSSS/STG/CT	51.9%	1.93	60.2%	1.66	50.4%	1.99	58.6%	1.71
Mechanical Equip	53.6%	1.87	61.5%	1.63	52.0%	1.92	59.8%	1.67
Piping	50.1%	2.00	57.3%	1.74	48.6%	2.06	55.8%	1.79
Electrical	54.6%	1.83	62.6%	1.60	53.0%	1.89	60.9%	1.64
Instruments	55.0%	1.82	63.1%	1.58	53.3%	1.88	61.4%	1.63
Paint/Coatings	55.8%	1.79	64.1%	1.56	54.2%	1.85	62.3%	1.60
Insulation	55.3%	1.81	63.5%	1.58	53.7%	1.86	61.7%	1.62
Area Composite*	**52.75% / 1.90**		**60.42% / 1.65**		**51.17% / 1.95**		**58.98% / 1.70**	

*Composite Based on Bluefin (April 2016) Hours per account
**Account PF is based on Fluor's standard weights for each performance item.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 166 of 231

FLUOR®

Performance Results (Turbine Island)

	VC Summer				Vogtle			
	Unit A		Unit B		Unit A		Unit B	
Account	PF	PF Mult	PF	PF Mult	PF	PF Mult	PF	PF Mult
Earthwork	w/BOP	0.00	w/BOP	0.00	w/BOP	0.00	w/BOP	0.00
Concrete	56.5%	1.77	64.8%	1.54	54.7%	1.83	63.0%	1.59
Structural Steel	56.4%	1.77	64.7%	1.55	54.7%	1.83	62.9%	1.59
Arch/Buildings	56.4%	1.77	64.7%	1.55	54.7%	1.83	62.9%	1.59
NSSS/STG/CT	53.8%	1.86	61.7%	1.62	52.2%	1.92	60.0%	1.67
Mechanical Equip	56.6%	1.77	64.9%	1.54	54.8%	1.82	63.1%	1.58
Piping	52.1%	1.92	59.7%	1.68	50.5%	1.98	58.0%	1.72
Electrical	55.8%	1.79	64.0%	1.56	54.0%	1.85	62.2%	1.61
Instruments	56.7%	1.76	65.0%	1.54	54.9%	1.82	63.3%	1.58
Paint/Coatings	57.4%	1.74	65.9%	1.52	55.7%	1.80	64.1%	1.56
Insulation	56.6%	1.77	64.9%	1.54	54.9%	1.82	63.2%	1.58
Area Composite*	**54.66% / 1.83**		**62.85% / 1.59**		**52.97% / 1.89**		**61.12% / 1.64**	

*Composite Based on Bluefin (April 2016) Hours per account
**Account PF is based on Fluor's standard weights for each performance item.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 167 of 231

FLUOR®

Performance Results (BOP)

	VC Summer		Vogtle	
	BOP		BOP	
Account	PF	PF Mult	PF	PF Mult
Earthwork	73.1%	1.37	73.1%	1.37
Concrete	69.3%	1.44	69.3%	1.44
Structural Steel	69.9%	1.43	69.9%	1.43
Arch/Buildings	69.9%	1.43	69.9%	1.43
NSSS/STG/CT	67.5%	1.48	67.5%	1.48
Mechanical Equip	69.7%	1.44	69.7%	1.44
Piping	67.8%	1.47	67.8%	1.47
Electrical	69.7%	1.43	69.7%	1.43
Instruments	70.0%	1.43	70.0%	1.43
Paint/Coatings	70.6%	1.42	70.6%	1.42
Insulation	81.5%	1.23	81.5%	1.23
Area Composite*	**69.08%**	**/ 1.45**	**69.08%**	**/ 1.45**

*Composite Based on Bluefin (April 2016) Hours per account
**Account PF is based on Fluor's standard weights for each performance item.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 168 of 231

FLUOR®

Comparison to Bluefin (April 2016) (All Island)

	VC Summer			Vogtle		
	Unit A	Unit B	BOP	Unit A	Unit B	BOP
Exercise	PF Mult	PF Mult	PF Mult	PF Mult	PF Mult	PF Mult
Nuclear Island						
Current Exercise	~~1.96~~ 1.90	~~1.67~~ 1.65		~~2.02~~ 1.95	~~1.72~~ 1.70	
Bluefin 04/2016	2.08	1.68		2.08	1.68	
Turbine Island						
Current Exercise	~~1.89~~ 1.83	~~1.61~~ 1.59		~~1.95~~ 1.89	~~1.66~~ 1.64	
Bluefin 04/2016	1.89	1.52		1.89	1.52	
Balance of Plant						
Current Exercise			~~1.50~~ 1.45			~~1.50~~ 1.45
Bluefin 04/2016			1.25			1.25

Differences in Current Plan vs Blufin

See Next Slide

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 169 of 231

FLUOR®

Comparison to Bluefin to Current Exercise

Differences in Current Plan vs Blufin

1. Bluefin Assumed work packages would be re-written and implemented for use on Unit A, B and BOP, Current exercise has the revised work packages available for Unit B only
   (Slide 36)
2. Bluefin Assumed 30% of the Auxiliary and Containment Building work would be performed on second shift, Current exercise has assumed 40% of all the work on second shift
   (Slide 24)
3. Bluefin Assumed a standard 50 hour work week and cycle, Current exercise has assumed and included
   - VC Summer - 60 hr / 60 hr / 50 hr work week cycle
   - Vogtle – 60 hr / 60 hr / 60 hr / 48 hr work week cycle

   (Slide 21-23)
4. Bluefin Assumed a standard 50 hour work would be accomplished over 5 days of 10 hour shifts, Current exercise includes:
   - VC Summer 6 days of 10 hour shifts (For 60 hr weeks), 5 Days of 10 hrs shifts (for 50 hr week),
   - Vogtle 5 days of 12 hours shifts (for 60 hr weeks), 4 days of 12 hr shifts (for 48 hr week)

   (Slide 21-23)

Fluor Confidential, No Release without
prior Project Director approval

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 170 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	616	1100-CA-01	CA	**CA01**	CA01	MEL	Steam Generator Compartments and Refueling Canal		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1		1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	617	1102-CA-02	CA	**CA02**	CA02	MEL	Pressurizer Compartment and IRWST North East Wall		1	Assembly per evaluated actuals hours. Install Est # 16-093-01		Installed 8/15/2016	**From IRWST wall estimate**	1 - Present difference is that VCS is further along in installation than Vgtl 2 - Asselmbly hours reduced , incorrect module assumption taken, corrected by 15,000hrs
Standard Plant	618	1100-CA-03	CA	**CA03**	CA03	MEL	IRWST Southwest Steel Wall Module		1	Install Est # 16-081-01		Installed 7/20/2016	**From IRWST wall estimate +roof**	1 - Installation hours will go up due to hole drilling and geometry of the plates (semi-circular shapes) 2 - Duplex welding hohurs require additional mhrs
Standard Plant	619	1100-CA-04	CA	**CA04**	CA04	MEL	Reactor Vessel Cavity / RCDT		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**Installed before April 2016**	1 - Incorrect entry, MODULES WERE INSTALLED IN BOTH PROJECTS
Standard Plant	620	1122-CA-05	CA	**CA05**	CA05	MEL	CVS / Access Tunnel / PXS-B Walls		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**Installed before April 2016**	NO COMMENT NECESSARY
Standard Plant	621	1206-CA-20	CA	**CA20**	CA20	MEL	Aux Bldg Area 5 and 6 M20 Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**floor modules & leak chase floor + Wall straighting >100**	1 - Vglt omitted the floor(s) installation, thus the increase in Fitup hours
Standard Plant	622	1224-CA-22	CA	**CA22**	CA22	MEL	Floor Module El 82'-6" Col lines 4 - 5 (12151 Ceiling)		1	Used CA22 drawings for welded connections		Installed Prior to April 1		1 - VCS MODULE IS ALREADY INSTALLED
Standard Plant	623	1130-CA-31	CA	**CA31**	CA31	MEL	Steel Floor El 107'-2" Reactor Vessel Cavity (11105 Ceiling)	See Greenberry File	1	Used V. C. Summer Qty. / Hour Data.			**IN CONTAINMENT arround Reactor. This module cannnot be preassembled as a complete module. It must be assembled in place**	1 - consensus reached between teams many closely fitted piece parts in close quarters
Standard Plant	624	1132-CA-32	CA	**CA32**	CA32	MEL	Steel Floor El 107'-2" CVS Room Pipe Tunnel (11209 Ceiling)	See Greenberry File	1	Used CA32 drawings for welded connections				1 - EXPECT CHANGES OF 479 MHR DUE TO MULTIPLE E&DCR, HOURS MOVED FROM ASSEMBLY TO FITUP 2 - Vgtk setting hrs reduced due to better details on installation.
Standard Plant	625	1133-CA-33	CA	**CA33**	CA33	MEL	Steel Floor El 107'-2" CVS Room (11209 Ceiling)	See Greenberry File	1	Used CA33 drawings for welded connections				1 - Team used Vgtl fit up due to ,more detalLED ESTIMATE, Vgtl used VCS assembluy as VCS detail was more rigorous]
Standard Plant	626	1133-CA-34	CA	**CA34**	CA34	MEL	Steel Floor El 107'-2" PXS B Valve Room (11207 Ceiling)	See Greenberry File	1	Used CA34 drawings for welded connections				1 - vcs welding hours, are overstated, reduced by 1,500mhr 2 - VCS augmented Fitup to VGTL as a detailed estimate was performed
Standard Plant	627	1133-CA-35	CA	**CA35**	CA35	MEL	Steel Floor El 107'-2" PXS B Accum Room (11207 Ceiling)	See Greenberry File	1	Used CA35 drawings for welded connections				1 - Vglt omitted beam fabrication, so hours had to go up 2 - VCS overestimated welding hours, reduced accordingly 3 - VCS reduced hours for fit up to Vgtl they performed detailed estimate
Standard Plant	628	1134-CA-36	CA	**CA36**	CA36	MEL	Steel Floor El 107'-2" NRHR Room (11208 Ceiling)	See Greenberry File	1	Used CA36 drawings for welded connections				1 - VCS used VGT detailed estimate values for Fitup 2 - VGT reduced setting hours dur to math error 3 - overall hours are more for VCS as we are getting no preassembled pieces
Standard Plant	629	1132-CA-33	CA	**CA37**	CA37	MEL	Steel Floor El 107'-2" CVS Room Pipe Tunnel (11209 Ceiling)	See Greenberry File	1	Used CA37 drawings for welded connections				2 - EXPECT CHANGES OF 479 MHR DUE TO MULTIPLE E&DCR, HOURS MOVED FROM ASSEMBLY TO FITUP 2 - Vgtk setting hrs reduced due to better details on installation.
Standard Plant	630	1242-CA-41	CA	**CA41**	CA41	MEL	Finned Floor El. 117'-6" I-J (12301 Ceiling, 12401 Floor)	See Greenberry File	1	Used CA41 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	631	1242-CA-42	CA	**CA42**	CA42	MEL	Finned Floor El. 117'-6" J-K (12302 Ceiling, 12401 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	632	1241-CA-44	CA	**CA44**	CA44	MEL	Finned Floor El. 117'-6" L-M (12304 Ceiling, 12404 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	633	1241-CA-45	CA	**CA45**	CA45	MEL	Finned Floor El. 117'-6" M-P (12305 Ceiling, 12405 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	634	1252-CA-51	CA	**CA51**	CA51	MEL	Finned Floor El. 135'-6" I-K (12401 Ceiling, 12501 Floor)	See Greenberry File	1	Used CA51 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	635	1252-CA-52	CA	**CA52**	CA52	MEL	Finned Floor El. 135'-6" K-L (12401 Ceiling, 12501 Floor)	See Greenberry File	1	Used CA52 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	636	1151-CA-55	CA	**CA55**	CA55	MEL	Steel Floor El 135'-3" IRWST South / IHP Storage Stand	See Greenberry File	1	Used CA55 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED. 4 - 2000 hours welding difference between VCS and VGTL are due to work already done by VGTL which has not been completed by VCS

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 171 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	637	1152-CA-56	CA	**CA56**	CA56	MEL	Steel Floor El 135'-3" IRWST West	See Greenberry File	1	Used CA56 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	638	1152-CA-57	CA	**CA57**	CA57	MEL	Steel Floor El 135'-3" IRWST North	See Greenberry File	1	Used CA57 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	639	1154-CA-58	CA	**CA58**	CA58	MEL	Steel Floor El 135'-3" Southeast Quadrant	See Greenberry File	1	Used CA58 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	640	2050-CA-81	CA	**CA81**	CA81	MEL	Conc. Filled Form Module TG Deck El. 150'-161' Col 13.1-18			Used dwgs. To get weights and hours per ton at 50 hr/ton.	Drawing looks like it is embedment plates & structural steel.	Installed	Per the DOR CA81 was expanded to CA81A thru CA81E	VCS is further along than Vgtl - number increase reflects complexity not realized before .
Standard Plant	641	1123-CB-11	CB	**CB11**	CB11	MEL	Northeast Accumulator Pit Lower L Module		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	642	1123-CB-12	CB	**CB12**	CB12	MEL	Southeast Accumulator Pit Lower L Module		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	643	1287-CB-20	CB	**CB20**	CB20	MEL	Passive Cont Cooling Water Tank L Module		1	Estimate generated on 8/24/16	For tank work only no coatings or concrete work included.		Based on previous estimate	VCS has Estimated module fabricating from scratch inclding ALL CUTTING AND WELDING IN THE FIELD 112 SUBMODULES which is not the case in the Vogtle estimate (x4.5 difference) which assemed submodules were fabricated by others in a Fab Yard NOTE: Team has recalculated the lineal feet of welding for all leak chases, nearly another 70,000mhr for welding
Standard Plant	644	1122-CB-21	CB	**CB21**	CB21	MEL	Vertical Access Wall Panel - West El 83' - 107' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	645	1122-CB-22	CB	**CB22**	CB22	MEL	CVS Room Wall Panel - West El 80' 6" - 87' 6"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	646	1122-CB-23	CB	**CB23**	CB23	MEL	CVS Room Wall Panel - North El 80' 6" - 87' 6"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates, weld on studs, Plug Weld & Drill Holes for OLP**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	647	1122-CB-24	CB	**CB24**	CB24	MEL	CVS Room Wall Panel - West El 87' 6" - 96'		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	648	1122-CB-25	CB	**CB25**	CB25	MEL	CVS Room Wall Panel - North El 87' 6" - 96'		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	649	1122-CB-26	CB	**CB26**	CB26	MEL	CVS Room Wall Panel - West El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	650	1122-CB-27	CB	**CB27**	CB27	MEL	CVS Room Wall Panel - North El 96' - 105' 2" (West Side)		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	651	1123-CB-28	CB	**CB28**	CB28	MEL	CVS Room Wall Panel - North El 96' - 105' 2" (East Side)		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	652	1123-CB-31	CB	**CB31**	CB31	MEL	PXS B Valve Room Wall Panel - North El 87' 6" - 96'		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	653	1123-CB-32	CB	**CB32**	CB32	MEL	PXS B Valve Room Wall Panel - East El 87' 6" - 96'		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	654	1123-CB-33	CB	**CB33**	CB33	MEL	PXS B Accum Room Wall Panel - NE El 87' 6" - 96'		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS UNIT 2 INSTALLED
Standard Plant	655	1123-CB-34	CB	**CB34**	CB34	MEL	PXS B Valve Room Wall Panel - North El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 6/25/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	656	1123-CB-35	CB	**CB35**	CB35	MEL	PXS B Valve Room Wall Panel - East El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 5/20/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	657	1123-CB-36	CB	**CB36**	CB36	MEL	PXS B Accum Room Wall Panel - NE El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 4/30/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	658	1123-CB-37	CB	**CB37**	CB37	MEL	RNS Valve Room Wall Panel - North El 94' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates, weld on studs and stiffener plates**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	659	1123-CB-38	CB	**CB38**	CB38	MEL	RNS Valve Room Wall Panel - East El 94' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 6/14/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	660	1124-CB-39	CB	**CB39**	CB39	MEL	RNS Valve Room Wall Panel - South El 94' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 6/14/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 172 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	661	1124-CB-41	CB	**CB41**	CB41	MEL	PXS A Accum Room Wall Panel - East El 87' 6" - 105' 2"		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	662	1124-CB-42	CB	**CB42**	CB42	MEL	PXS A Accum Room Wall Panel - SE El 87' 6" - 96'		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed Prior to April 1		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	663	1124-CB-43	CB	**CB43**	CB43	MEL	PXS A Accum Room Wall Panel - South El 87' 6" - 96'		1	Already install in unit prior to ETC cutoff date 4/16	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	Vogtle Installed
Standard Plant	664	1124-CB-44	CB	**CB44**	CB44	MEL	PXS A Accum Room Wall Panel - SE El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 4/30/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	665	1124-CB-45	CB	**CB45**	CB45	MEL	PXS A Accum Room Wall Panel - South El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.	Installed 4/30/2016		VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	666	1124-CB-46	CB	**CB46**	CB46	MEL	PXS A Valve Room Wall Panel - East El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	667	1124-CB-47	CB	**CB47**	CB47	MEL	PXS A Valve Room Wall Panel - South El 96' - 105' 2"		1		Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	668	1121-CB-51	CB	**CB51**	CB51	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (A)		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	CB51 thru CB54 are welded together to form one unit	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	669	1121-CB-52	CB	**CB52**	CB52	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (B)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	670	1121-CB-53	CB	**CB53**	CB53	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (C)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	671	1121-CB-54	CB	**CB54**	CB54	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (D)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	672	1124-CB-61	CB	**CB61**	CB61	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (A)		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	CB61 thru CB64 are welded together to form one unit	1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	673	1124-CB-62	CB	**CB62**	CB62	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (B)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	674	1124-CB-63	CB	**CB63**	CB63	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (C)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	675	1124-CB-64	CB	**CB64**	CB64	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (D)		1	Already install in unit prior to ETC cutoff date 4/16	Included in above hours	Installed Prior to April 1		1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	676	1110-CB-65	CB	**CB65**	CB65	MEL	Reactor Coolant Drain Tank Room - Door		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1		1 - MODULE ALREADY INSTALLED IN BOTH PROJECTS
Standard Plant	678	1113-CB-66	CB	**CB66**	CB66	MEL	RCDT / Reactor Compartment Passageway		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1		1 - MODULE ALREADY INSTALLED AT BOTH PROJECTS
Standard Plant	679	2041-CG-82	CG	**CG82**	CG82	MEL	Water Box Access Removable Platform El 120' Col 14-15			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCS uses VGTL labored estimate as basis
Standard Plant	680	2042-CG-83	CG	**CG83**	CG83	MEL	Water Box Access Removable Platform El 120' Col 15-16			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCS uses VGTL labored estimate as basis
Standard Plant	681	2047-CG-84	CG	**CG84**	CG84	MEL	Removable Platform Equipment Access Area 7 El 120'			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCS uses VGTL labored estimate as basis
Standard Plant	682	2057-CG-85	CG	**CG85**	CG85	MEL	Removable Platform Equipment Access Area 7 El 141'			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCS uses VGTL labored estimate as basis
Standard Plant	683	2031-CG-87	CG	**CG87**	CG87	MEL	Removable Platform Equipment Access El 100' Col R-P.14 to 15			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	684	2031-CG-88	CG	**CG88**	CG88	MEL	Removable Platform Equipment Access El 100' Col R-P.15 to 16			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	685	2032-CG-89	CG	**CG89**	CG89	MEL	Removable Platform Equipment Access El 100' Col R-P.16 to 17			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	686	2035-CG-91	CG	**CG91**	CG91	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.14 to 15			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	687	2035-CG-92	CG	**CG92**	CG92	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.15 to 16			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	688	2036-CG-93	CG	**CG93**	CG93	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.16 to 17			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	689	1222-CH-21	CH	**CH21**	CH21	MEL	El 82'-6" I-J Outfitted Fl (12101 Ceiling, 12201 Fl)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED
Standard Plant	690	1222-CH-22	CH	**CH22**	CH22	MEL	El 82'-6" J-K Outfitted Fl (12102 Ceiling, 12202 Fl)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED
Standard Plant	691	1222-CH-23	CH	**CH23**	CH23	MEL	El 82'-6" K-L Outfitted Fl (12103 east Ceiling, 12203 & 12207 Floors)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED
Standard Plant	692	1221-CH-24	CH	**CH24**	CH24	MEL	El 82'-6" L-M Outfitted Fl (12104 Ceiling, 12204 Fl)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED
Standard Plant	693	1221-CH-25	CH	**CH25**	CH25	MEL	El 82'-6" M-P Outfitted Fl (12105 Ceiling, 12205 Fl)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 173 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										VOGTLE Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	694	1221-CH-26	CH	**CH26**	CH26	MEL	El 82'-6" P-Q Outfitted Fl (12111 Ceiling, 12211 Fl)			Already install in unit prior to ETC cutoff date 4/16	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS 2 - VGTL UNIT IS INSTALLED
Standard Plant	695	1232-CH-31	CH	**CH31**	CH31	MEL	El 100'-0" I-J Outfitted Fl (12201 Ceiling, 12301 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for Vgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	696	1232-CH-32	CH	**CH32**	CH32	MEL	El 100'-0" J-K Outfitted Fl (12202 Ceiling, 12302 & 12 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	697	1232-CH-33	CH	**CH33**	CH33	MEL	El 100'-0" K-L Outfitted (12203 & 7 Ceiling, 12303 & 13 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	698	1231-CH-34	CH	**CH34**	CH34	MEL	El 100'-0" L-M Outfitted Fl (12204 Ceiling, 12304 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	699	1231-CH-35	CH	**CH35**	CH35	MEL	El 100'-0" M-P Outfitted Fl (12205 Ceiling, 12305 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	700	1164-CH-50	CH	**CH50**	CH50	MEL	Structure SG Compartment East El.166'-3 ¼"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI		VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	701	1153-CH-51	CH	**CH51**	CH51	MEL	El. 135'-3" Operating Floor Outfitted Module			Assumed same as CH50 since no tonnage or drawing available	Allowance		Does not exist in Documentum (Duplicared CA51)	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	702	1151-CH-52	CH	**CH52**	CH52	MEL	FW Nozzle / Upper Manway Platforms (West SG)	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI	Correct tonnage from 22.3 to 3.54	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	703	1151-CH-53	CH	**CH53**	CH53	MEL	Containment Recirc. Platform West El 149'-7"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI	Revised tonnage to latest BOM	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	704	1152-CH-54	CH	**CH54**	CH54	MEL	ADS Platform Module	Straight to NI	1	Model generated from CH54 Platform Module to calculate Tonnage on rest of modules.		Straight to NI		VGTL performed detailed estimate VCS will use their labored values
Standard Plant	705	1152-CH-55	CH	**CH55**	CH55	MEL	West SG Stairs / Structure / ADS Platform	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI		VGTL performed detailed estimate VCS will use their labored values
Standard Plant	706	1154-CH-56	CH	**CH56**	CH56	MEL	FW Nozzle / Upper Manway Platforms (East SG)	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI		1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	707	1154-CH-57	CH	**CH57**	CH57	MEL	Containment Recirc. Platform East El 149'-7"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI		1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	708	1153-CH-58	CH	**CH58**	CH58	MEL	East SG Stairs / Structure (West SG)	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI		1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	709	1102-CH-59	CH	**CH59**	CH59	MEL	Containment Elevator El 107'-2" to 185'-6" Structural Module	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI		1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	710	1254-CH-61	CH	**CH61**	CH61	MEL	Stair / Elevator El 135'-3" to 145'-9" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	711	1254-CH-62	CH	**CH62**	CH62	MEL	Stair / Elevator / Plant Vent El 145'-9" to 162'-6" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	712	1268-CH-63	CH	**CH63**	CH63	MEL	Stair / Elevator / Plant Vent El 162'-6" to 185'-0" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	713	1268-CH-64	CH	**CH64**	CH64	MEL	Stair / Elevator / Plant Vent El 185'-0" to 213' Module			Model generated from CH64 Stair Module to calculate Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	714	1268-CH-65	CH	**CH65**	CH65	MEL	Stair / Elevator / Plant Vent El 213' to 239' Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	715	1278-CH-66	CH	**CH66**	CH66	MEL	Stair / Elevator / Plant Vent El 239' to 256' Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	716	1277-CH-67	CH	**CH67**	CH67	MEL	Upper Annulus Stair / Lift Platform El 243' to 261' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	717	1277-CH-71	CH	**CH71**	CH71	MEL	Circular Platform / Upper Air Baffle El 239' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	VCS performed detailed estimate based on field inputs, VGTL uses VCS labor hours
Standard Plant	718	1277-CH-72	CH	**CH72**	CH72	MEL	PCCS Valve Room (12701) Structure	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	719	1277-CH-73	CH	**CH73**	CH73	MEL	Shield Plate / Wire Mesh / Diffuser Inlet El 266' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS ADDITIONAL FIELD WORK YET TO BE PERFORMED
Standard Plant	720	1130-CH-77	CH	**CH77**	CH77	MEL	Steel Plate and Ladder El. 95'-6" SG Compartment East	On Liscensing Hold	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI. LAR 81 Hold	**dissimilar material welding - SS duplex**	1 - VCS HAS ADDITIONAL FIELD WORK YET TO BE PERFORMED
Standard Plant	721	2031-CH-80	CH	**CH80**	CH80	MEL	Struc Module - South TG Support El. 100' - 148' Col 13.1-14			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed 6/01/2016		1 - VGTL HAS ALREADY INSTALLED MODULE
Standard Plant	723	2031-CH-81B	CH	**CH81-A**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	724	2031-CH-81C	CH	**CH81-B**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	725	2071-CH-89	CH	**CH81-C**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	726	2032-CH-82	CH	**CH82**	CH82	MEL	Struc Module - North TG Support El. 100' - 148' Col 16-18			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed 6/01/2016	Added 135.65 Tons of connecting beams not associated with a specific module	1 - VGTL HAS ALREADY INSTALLED MODULE
Standard Plant	727	2070-CH-85	CH	**CH85**	CH85	MEL	Struc Module - South Roof Col 13.1-16			Part Of Structural Steel (Bulks) assumed hours in this section				VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 174 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	728	2072-CH-86	CH	**CH86**	CH86	MEL	Struc Module - North Roof Col 17-19			Part Of Structural Steel (Bulks) assumed hours in this section				VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
Standard Plant	729	2078-CH-87	CH	**CH87**	CH87	MEL	Struc Module - South Htr Bay Roof El. 193'-6" Col 13.1-15			Part Of Structural Steel (Bulks) assumed hours in this section			DOES NOT EXISTS, Replaced by CH85A & B and CH86A & B	1 - PER DOR, MODULE NO LONGER EXISTS
Standard Plant	730	2079-CH-88	CH	**CH88**	CH88	MEL	Struc Module - Htr Bay Col 13.1-15			Part Of Structural Steel (Bulks) assumed hours in this section			DOES NOT EXISTS, Replaced by CH85A & B and CH86A & B	1 - PER DOR, MODULE NO LONGER EXISTS
				CH89	CH89	MEL	Struc Module - Center Roof Col 16-17			Part Of Structural Steel (Bulks) assumed hours in this section				1 - PER DOR, MODULE NO LONGER EXISTS
Standard Plant	731	2034-CH-91	CH	**CH91**	CH91	MEL	Turbine Bldg Security Structure Level 3			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
Standard Plant	732	2044-CH-92	CH	**CH92**	CH92	MEL	Turbine Bldg Security Structure Level 4			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
Standard Plant	733	2054-CH-93	CH	**CH93**	CH93	MEL	Turbine Bldg Security Structure Level 5			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
			CR	**CR10**	CR10	MEL & Non-MEL	CR10-Ctmt Vessel Bottom Head Concrete Reinforcing Module			Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	Under CVLH curently buried in Concrete	1 - INSTALLED ON BOTH PROJECTS
Standard Plant	735	1133-CS-11	CS	**CS11**	CS11	MEL	Containment North Stairs El 107'-2" to 118'-6"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI	No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	736	1143-CS-12	CS	**CS12**	CS12	MEL	Containment North Stairs El 118'-6" to 135'-3"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI	No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	737	1100-CS-15	CS	**CS15**	CS15	MEL	Containment Vertical Access Tunnel Stairs El 83' to 107'-2"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.		Straight to NI	No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	738	1120-CS-17	CS	**CS17**	CS17	MEL	CVS Room (11209) Stairs and Platform	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.		Straight to NI	No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	739	1201-CS-22	CS	**CS21**	CS21	MEL	Aux Bldg Area 1 Level 1 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	740	1202-CS-21	CS	**CS22**	CS22	MEL	Aux Bldg Area 1 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	741	1205-CS-24	CS	**CS24**	CS24	MEL	Aux Bldg Area 2 Level 1 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	742	1202-CS-25	CS	**CS25**	CS25	MEL	Aux Bldg Area 2 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS27**	CS27	MEL & Non-MEL	CS27-Aux Bldg Stair S05 (Area 2)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS3**	CS3	MEL & Non-MEL	CS3 - Aux Bldg. Roof Platform Stairs (Area 1)			Allowance based on average tonnage of other stairs.				1 - PER DOR THIS MODULE NO LONGER EXISTS
			CS	**CS31**	CS31	MEL & Non-MEL	CS31 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS32**	CS32	MEL & Non-MEL	CS32 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS33**	CS33	MEL & Non-MEL	CS33 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS34**	CS34	MEL & Non-MEL	CS34 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	743	1262-CS-36	CS	**CS36**	CS36	MEL	Aux Bldg Area 1 Roof Platform / Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	744	12268-CS-37	CS	**CS37**	CS37	MEL	WLS Pump Room Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	745	12265-CS-38	CS	**CS38**	CS38	MEL	Waste Monitor Tank Room C Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	746	2030-CS-41	CS	**CS41**	CS41	MEL	Turbine Bldg Area 1 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	747	2040-CS-42	CS	**CS42**	CS42	MEL	Turbine Bldg Area 2 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 175 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	748	2031-CS-43	CS	**CS43**	CS43	MEL	Turbine Bldg Area 1 Level 3 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	749	2041-CS-44	CS	**CS44**	CS44	MEL	Turbine Bldg Area 1 Level 4 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	750	2051-CS-45	CS	**CS45**	CS45	MEL	Turbine Bldg Area 1 Level 5 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	751	2061-CS-46	CS	**CS46**	CS46	MEL	Turbine Bldg Area 1 Level 6 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	752	2071-CS-47	CS	**CS47**	CS47	MEL	Turbine Bldg Area 1 Level 7 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS48**	CS48	MEL & Non-MEL	CS48 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS49**	CS49	MEL & Non-MEL	CS49 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS50**	CS50	MEL & Non-MEL	CS50 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	753	2039-CS-51	CS	**CS51**	CS51	MEL	Turbine Bldg Area 9 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	754	2049-CS-52	CS	**CS52**	CS52	MEL	Turbine Bldg Area 9 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	755	2059-CS-53	CS	**CS53**	CS53	MEL	Turbine Bldg Area 9 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS54	CS54	MEL	Turbine Bldg Area 9 Level 6 Stairs			Allowance based on average stairs tonnage due to lack of scope.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	756	2053-CS-55	CS	**CS55**	CS55	MEL	Turbine Bldg Area 3 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	757	2063-CS-56	CS	**CS56**	CS56	MEL	Turbine Bldg Area 3 Level 6 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS57	CS57	MEL	Turbine Bldg Area 2 Level 5 Stairs			Allowance based on average stairs tonnage due to lack of scope.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS59	CS59	MEL	Turbine Bldg Area 9 Level 7 Stairs			Allowance based on average stairs tonnage due to lack of scope.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	758	4031-CS-61	CS	**CS61**	CS61	MEL	Annex Bldg Area 1 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	759	4031-CS-62	CS	**CS62**	CS62	MEL	Annex Bldg Area 1 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	760	4032-CS-63	CS	**CS63**	CS63	MEL	Annex Bldg Area 2 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	761	4042-CS-64	CS	**CS64**	CS64	MEL	Annex Bldg Area 2 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	762	4033-CS-66	CS	**CS66**	CS66	MEL	Annex Bldg Area 3 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	763	4043-CS-67	CS	**CS67**	CS67	MEL	Annex Bldg Area 3 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	764	4053-CS-68	CS	**CS68**	CS68	MEL	Annex Bldg Area 3 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	765	4033-CS-69	CS	**CS69**	CS69	MEL	Annex Bldg Area 3 100' to 107'-2" Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	766	4034-CS-71	CS	**CS71**	CS71	MEL	Annex Bldg Area 4/2 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 176 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	767	4044-CS-72	CS	**CS72**	CS72	MEL	Annex Bldg Area 4/2 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS86**	CS86	Non-MEL	Turbine Bldg Area 8 Level 6 Stairs			Allowance based on average tonnage of other stairs.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS87	CS87	Non-MEL	Turbine Bldg Area 8 Level 7 Stairs			Allowance based on average tonnage of other stairs.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS91	CS91	Non-MEL	Bldg Area 21 Level 3 Stairs			Allowance based on average tonnage of other stairs.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS92	CS92	Non-MEL	Bldg Area 21 Level 4 Stairs			Allowance based on average tonnage of other stairs.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
				CS93	CS93	Non-MEL	Bldg Area 21 Level 5 Stairs			Allowance based on average tonnage of other stairs.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	6006	1213-KB-04	KB	**KB04**	KB04	MEL	WGS Guard Bed and Delay Beds		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 11/10/15**	1 - NO COMMENT NECESSARY
Standard Plant	6007	1212-KB-10	KB	**KB10**	KB10	MEL	WWS Sump Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed After April 1	**installed 4/22/16**	1 - NO COMMENT NECESSARY
Standard Plant	6008	1214-KB-11	KB	**KB11**	KB11	MEL	WLS Charcoal Filter / Ion Exchanger Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 5/29/15**	1 - NO COMMENT NECESSARY
Standard Plant	6009	1214-KB-12	KB	**KB12**	KB12	MEL	Spent Fuel Demineralizer Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 5/28/15**	1 - NO COMMENT NECESSARY
Standard Plant	6010	1214-KB-13	KB	**KB13**	KB13	MEL	WRS Sump Pump Module		1	Used KB13 Dwgs. for installation hours.		Installed After April 1		1 - NO COMMENT NECESSARY
Standard Plant	6011	1213-KB-14	KB	**KB14**	KB14	MEL	WGS Equipment/Valve Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 11/12/15**	1 - NO COMMENT NECESSARY
Standard Plant	6012	1213-KB-15	KB	**KB15**	KB15	MEL	Degasifier Discharge Pump Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 11/13/15**	1 - NO COMMENT NECESSARY
Standard Plant	6013	1213-KB-16	KB	**KB16**	KB16	MEL	WLS Degasifier Associated Equipment Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 1/1/16**	1 - NO COMMENT NECESSARY
Standard Plant	6014	1226-KB-20	KB	**KB20**	KB20	MEL	WLS Chemical Waste Pump Module		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1	**installed 8/21/15**	1 - NO COMMENT NECESSARY
Standard Plant	6015	1225-KB-21	KB	**KB21**	KB21	MEL	WLS Effl Holdup Pump A Module	One of the site rebuilds	1	Install estimate # 16-69-01				NO COMMENT NECESSARY
Standard Plant	6016	1226-KB-22	KB	**KB22**	KB22	MEL	WLS Effl Holdup Pump B Module		1	Used KB22 Dwgs. for installation hours.			**installed 8/2/16**	NO COMMENT NECESSARY
Standard Plant	6017	1226-KB-23	KB	**KB23**	KB23	MEL	WLS Monitor Pump C Module		1	Already install in unit prior to ETC cutoff date 4/16				NO COMMENT NECESSARY
Standard Plant	6018	1226-KB-25	KB	**KB25**	KB25	MEL	SFS Pump A, Piping, and Valves Module	One of the site rebuilds	1	Module to be sent to site approx. 60% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB25 Dwgs. for installation hours.				1 - VGTL had to assemble 40% of the module, VCS had to assemble 25% 2 - Bolt count corrected, brought down to 4 from 32
Standard Plant	6019	1226-KB-26	KB	**KB26**	KB26	MEL	SFS Pump B, Piping, and Valves Module	One of the site rebuilds	1	Module to be sent to site approx. 60% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB26 Dwgs. for installation hours.			**installed 5/3/16**	NO COMMENT NECESSARY
Standard Plant	6020	1226-KB-27	KB	**KB27**	KB27	MEL	Waste Holdup Pump A Module		1	Used KB27 Dwgs. for installation hours.			**installed 8/2/16**	NO COMMENT NECESSARY
Standard Plant	6021	1226-KB-28	KB	**KB28**	KB28	MEL	Waste Holdup Pump B Module		1	Used KB28 Dwgs. for installation hours.			**installed 8/2/16**	1 - VCS'S MODULE IS ALREADY INSTALLED
Standard Plant	6022	1223-KB-33	KB	**KB33**	KB33	MEL	CVS Makeup Pump Room Platform Module	One of the site rebuilds	1	Used KB33 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6023	1231-KB-36	KB	**KB36**	KB36	MEL	PCS Pump/Valve Module		1	Used KB36 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6024	1235-KB-37	KB	**KB37**	KB37	MEL	WLS Monitor Pump A Module		1	Used KB37 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6025	1236-KB-38	KB	**KB38**	KB38	MEL	WLS Monitor Pump B Module		1	Used KB38 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant				**KB47**	KB47	Non-MEL	WWS Resin Transfer Influent Valve Module - 12372			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
				KB50	KB50	Non-MEL	Air Cooled Chiller Pumps Module			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
Standard Plant				**KB55**	KB55	Non-MEL	PCS Distrubition Supply Valve Module - Room 12701			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
				KB56	KB56	Non-MEL	VXS Air Handling Unit Equipment - Valves			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
Standard Plant	6026	1112-KQ-10	KQ	**KQ10**	KQ10	MEL	Reactor Coolant Drain Tanks & Piping & Pumps Module		1	Used KQ10 Dwgs. for installation hours.				
Standard Plant	6027	1112-KQ-11	KQ	**KQ11**	KQ11	MEL	Containment Sump Pumps & Piping Module		1	Used KQ11 Dwgs. for installation hours.				
Standard Plant	6028	1120-KQ-22	KQ	**KQ22**	KQ22	MEL	Lower CVCS Module		1	Complete assembly required. Includes coating hours. Ass'y Est #16-86-01. Used KQ22 Dwgs. for installation hours.			**module 22 & 23 were previously welded together as a unit for VCS2 - no Assembly hours necessary**	1 - VGTL HAS MUCH RE-WORK TO BE DONE 2 - VCS MODULE ASSEMBLED AND STACKED

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 177 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	6029	1120-KQ-23	KQ	**KQ23**	KQ23	MEL	Upper CVCS Module		1	Complete assembly required. Includes coating hours. Ass'y Est #16-87-01. Used KQ22 Dwgs. for installation hours.			**module 22 & 23 were previously welded together as a unit for VCS2 - no Assembly hours necessary**	1 - VGTL HAS MUCH RE-WORK TO BE DONE 2 - VCS MODULE ASSEMBLED AND STACKED
Standard Plant	6030	1122-KU-20CVA	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6031	1122-KU-20CVB	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6032	1213-KU-20CV4	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6033	1214-KU-21SFA	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6034	1214-KU-21SFB	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6035	1214-KU-21WL6	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6036	1214-KU-21WL7	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6037	1246-KU-21WS3	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
			MZ	**MZ07**	MZ07	MEL & Non-MEL	MZ07-Auxiliary Bldg Inspection Platform			Allowance based on average tonnage of other platforms.				New Fuel Vault Inspection Platform - vcs USING vgtl VALUES AS THEY PERFORMED ESTIMATE
Standard Plant	19783	1123-Q2-23	Q2	**Q223**	Q223	MEL	DVI B Valve Module		1	Used Q223 Dwgs. for installation hours.				1 - overlooked ledger welding added to VCS 2 - no field fab, 100 hrs deleted
Standard Plant	19784	1124-Q2-33	Q2	**Q233**	Q233	MEL	DVI A Valve Module		1	Used Q233 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19785	1120-Q2-40	Q2	**Q240**	Q240	MEL	Normal RHR Piping		1	Install Est. #16-170-01				2 - no field fab, 100 hrs deleted
Standard Plant	19786	1132-Q3-05	Q3	**Q305**	Q305	MEL	CVS/PXS/WLS Containment Isolation Valve Module		1	Used Q305 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19787	1140-Q4-02	Q4	**Q402**	Q402	MEL	CCS Distribution Piping Module		1	Used Q402 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
			Q4	**Q405**	Q405	Non-MEL	Feedwater Piping Module (West)			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
			Q5	**Q509**	Q509	Non-MEL	Passive RHR Supply Piping			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
Standard Plant	19788	1162-Q6-01	Q6	**Q601**	Q601	MEL	PSADS Piping		1	Used Q601 Dwgs. for installation hours.			**(ASSY Hrs) installation of 305SQFT of two (2) grating levels**	2 - no field fab, 100 hrs deleted
Standard Plant	19789	1216-R1-04	R1	**R104**	R104	MEL	El. 74'-10" Commodity Module Room 12172 East-West		1	Install Est # 16-028-01				NO COMMENT NECESSARY
Standard Plant	19790	1215-R1-06	R1	**R106**	R106	MEL	Room 12171 Commodity Module		1	Already install in unit prior to ETC cutoff date 4/16				NO COMMENT NECESSARY
Standard Plant	19791	1214-R1-51	R1	**R151**	R151	MEL	El. 74'-10" Commodity Module Room 12151 North-South		1	Already install in unit prior to ETC cutoff date 4/16			**installed 3/10/15**	
Standard Plant	19792	1213-R1-55	R1	**R155**	R155	MEL	El. 74'-10" Commodity Module Room 12155 North-South		1	Already install in unit prior to ETC cutoff date 4/16			**installed 4/6/16**	
Standard Plant	19793	1215-R1-61	R1	**R161**	R161	MEL	El. 74'-10" Commodity Module Room 12161 North-South		1	Install Est # 16-029-01				NO COMMENT NECESSARY
Standard Plant	19794	1225-R2-16	R2	**R216**	R216	MEL	WLS Valve Module South Wall		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
			R2	**R218**	R218	Non-MEL	Clean Pipe, Raceway & Duct Above Pumps Ceiling			No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
Standard Plant	19795	1226-R2-19	R2	**R219**	R219	MEL	Pipe, Raceway, Duct East-West Module	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
			R2	**R230**	R230	Non-MEL	RNS Pump Isolation Valve Module			No scope provided unable to develop a cost estimate				1 - PIPING ASSEMBLY NOT A MODULE PER DOR
			R2	**R231**	R231	Non-MEL	RNS HX Downstream Pipin/Valve Module			No scope provided unable to develop a cost estimate				1 - PIPING ASSEMBLY NOT A MODULE PER DOR
Standard Plant	19796	1224-R2-51	R2	**R251**	R251	MEL	El. 91' Commodity Module Room 12251	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19797	1225-R2-61	R2	**R261**	R261	MEL	El. 91' Commodity Module Room 12261	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19798	1236-R3-65	R3	**R365**	R365	MEL	Cask Loading, Fuel Xfer Canal, & Spent Fuel Pool Xfer/Drain		1	Used drawings for all installation connections and removal or component installations.			**includes all piping connection between modules 18ea**	NO COMMENT NECESSARY
Standard Plant	19799	1245-R4-51	R4	**R451**	R451	MEL	Corridor 12461 Piping Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19800	1245-R4-74	R4	**R474**	R474	MEL	Train Bay El 125' Commodity Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19801	1255-R5-01	R5	**R501**	R501	MEL	CCS Return Piping		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19802	1255-R5-03	R5	**R503**	R503	MEL	Corridor 12561 Piping/Tray/Duct Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
			SB	**SB**	SB MS-FW	MEL & Non-MEL	SB MS-FW Penetration - Delivery VS2-1278-SC-MS-01		1	No scope provided unable to develop a cost estimate				
			SP	**SP05**	SP05	MEL & Non-MEL	SP05-Platform and Ladder - RCDT Rm 82'-10.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP06**	SP06	MEL & Non-MEL	SP06-Stairway - SG 1 Compt 80' - 83'			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP07**	SP07	MEL & Non-MEL	SP07-Stairway - SG 2 Compt 80' - 83'			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP09**	SP09	MEL & Non-MEL	SP09-Platform - Accum Rm A Center 98' - 3"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP10**	SP10	MEL & Non-MEL	SP10-Platform - Accum Rm B Center 98' - 3"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 178 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
			SP	**SP11**	SP11	MEL & Non-MEL	SP11-Platform and Ladder - SG 1 Compt 104'-7"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP12**	SP12	MEL & Non-MEL	SP12-Platform and Ladder - SG 2 Compt 104'-7"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP13**	SP13	MEL & Non-MEL	SP13-Platform and Stairs - Vertical Access East 107'-2"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP14**	SP14	MEL & Non-MEL	SP14-Platform and Stairs - Vertical Access West 107'-2"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP15**	SP15	MEL & Non-MEL	SP15-Platform and Ladder - SG 2 Compt 116'-4.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP16**	SP16	MEL & Non-MEL	SP16-Platform and Ladder - SG 1 Compt 116'-4.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP17**	SP17	MEL & Non-MEL	SP17-Grating Maintenance Floor / Mezzanine 118'-6"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP20**	SP20	MEL & Non-MEL	SP20-Platform - IRWST Overlook 138'-11.75"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP21**	SP21	MEL & Non-MEL	SP21-IRWST South Platform and Ladders			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP21**	SP21	MEL & Non-MEL	SP21-IRWST North Platform and Ladders			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB Area 7 Stairs 82'-9" to 100'-0"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB Area 2 Stairs 141'-3" to 158'-7"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB 1st Bay Stairs 100'-0" to 117'-6"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB 1st Bay Stairs 117'-6" to 148'-10"			Allowance based on average tonnage of other stairs.				
Standard Plant			xA	**xAI Panels**		MEL & Non-MEL	Air Inlet Panels - Shield Buildng	CBIS to install not part of Fluor scope	43	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xS	**xSB MSFW**		MEL	Main Steam Feed Water Panels - Shield Building		1	Used 1208 Series Dwgs. for installation hours.				0
Standard Plant			xS	**xSB Panels**		MEL & Non-MEL	Lower Panels - Shield Buildiing		167		This is a subcontract with CBI Services and doesn't need to be estimated.			0
Standard Plant			xS	**xSB Roof Steel**		MEL	Roof Steel - Shield Building		1	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xT	**xTR Panels**		MEL & Non-MEL	Tension Ring Panels - Shield Building		11	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xx	**xxRing Girder**		MEL	Pressurizer Ring Girder - RG01		1	Used PH01 Series Dwgs. for fabrication / installation hours.				0
Standard Plant	616	1100-CA-01	CA	**CA01**	CA01	MEL	Steam Generator Compartments and Refueling Canal		1	Ass'y Est # 16-000-01, Used CA01 drawings for welded connectons.				1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	617	1102-CA-02	CA	**CA02**	CA02	MEL	Pressurizer Compartment and IRWST North East Wall		1	Assembly per evaluated actuals hours. Install Est # 16-093-01			**From IRWST wall estimate**	1 - Present difference is that VCS is further along in installation than Vgtl 2 - Asselmbly hours reduced , incorrect module assumption taken, corrected by 15,000hrs
Standard Plant	618	1100-CA-03	CA	**CA03**	CA03	MEL	IRWST Southwest Steel Wall Module		1	Assembly Est #16-123-01.			**From IRWST wall estimate +roof**	1 - Installation hours will go up due to hole drilling and geometry of the plates (semi-circular shapes) 2 - Duplex welding hohurs require additional mhrs
Standard Plant	619	1100-CA-04	CA	**CA04**	CA04	MEL	Reactor Vessel Cavity / RCDT		1	Already install in unit prior to ETC cutoff date 4/16		Installed Prior to April 1		1 - Incorrect entry, MODULES WERE INSTALLED IN BOTH PROJECTS
Standard Plant	620	1122-CA-05	CA	**CA05**	CA05	MEL	CVS / Access Tunnel / PXS-B Walls		1	Install Est # 16-158-01. Used CA05 drawings for welded connections				1 - Vgtl hours are up after completion of detailed estimate 2 - VCS ommited overlay plate and B plate welding
Standard Plant	621	1206-CA-20	CA	**CA20**	CA20	MEL	Aux Bldg Area 5 and 6 M20 Module		1	Current Budget - going in the hole incomplete on 19AUG16	Allow 100k hours for scope transferred to hole		**Wall seams, ledger angles floor modules & leak chase floor**	1 - Vgtl math error of 100,000, deleted from formula 2 - VCS does not have assembly hours as it has been placed already 3 - Fld fitup needs to go up by 15,000 or so due to previouslu omitted overlay plates and miscellaneous bulk steel. 4 - 16,800=14wks x 20 craft x 10hrs/day x 6 days /week (reversed emgineered number of actual hoursat VCS
Standard Plant	622	1224-CA-22	CA	**CA22**	CA22	MEL	Floor Module El 82'-6" Col lines 4 - 5 (12151 Ceiling)		1	Used CA22 drawings for welded connections				1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	623	1130-CA-31	CA	**CA31**	CA31	MEL	Steel Floor El 107'-2" Reactor Vessel Cavity (11105 Ceiling)	See Greenberry File	1	Used V. C. Summer Qty. / Hour Data.			**IN CONTAINMENT arround Reactor. This module cannnot be preassembled as a complete module. It must be assembled in place**	1 - consensus reached between teams many closely fitted piece parts in close quarters
Standard Plant	624	1132-CA-32	CA	**CA32**	CA32	MEL	Steel Floor El 107'-2" CVS Room Pipe Tunnel (11209 Ceiling)	See Greenberry File	1	Used CA32 drawings for welded connections				1 - EXPECT CHANGES OF 479 MHR DUE TO MULTIPLE E&DCR, HOURS MOVED FROM ASSEMBLY TO FITUP 2 - Vgtk setting hrs reduced due to better details on installation.
Standard Plant	625	1133-CA-33	CA	**CA33**	CA33	MEL	Steel Floor El 107'-2" CVS Room (11209 Ceiling)	See Greenberry File	1	Used CA33 drawings for welded connections				1 - Team used Vgtl fit up due to ,more detailLED ESTIMATE, Vgtl used VCS assembluy as VCS detail was more rigorous)
Standard Plant	626	1133-CA-34	CA	**CA34**	CA34	MEL	Steel Floor El 107'-2" PXS B Valve Room (11207 Ceiling)	See Greenberry File	1	Used CA34 drawings for welded connections				1 - vcs welding hours, are overstated, reduced by 1,500mhr 2 - VCS augmented Fitup to VGTL as a detailed estimate was performed
Standard Plant	627	1133-CA-35	CA	**CA35**	CA35	MEL	Steel Floor El 107'-2" PXS B Accum Room (11207 Ceiling)	See Greenberry File	1	Used CA35 drawings for welded connections				1 - Vgtl omitted beam fabrication, so hours had to go up 2 - VCS overestimated welding hours, reduced accordingly 3 - VCS reduced hours for fit up to Vgtl they performed detailed estimate
Standard Plant	628	1134-CA-36	CA	**CA36**	CA36	MEL	Steel Floor El 107'-2" NRHR Room (11208 Ceiling)	See Greenberry File	1	Used CA36 drawings for welded connections				1 - VCS used VGT detailed estimate values for Fitup 2 - VGT reduced setting hours dur to math error 3 - overall hours are more for VCS as we are getting no preassembled pieces
Standard Plant	629	1134-CA-37	CA	**CA37**	CA37	MEL	Steel Floor El 107'-2" PXS A Room (11206 Ceiling)	See Greenberry File	1	Used CA37 drawings for welded connections				1 - VCS is rqrd to assemble all piece parts where Vgtl parts come pre-assembled
Standard Plant	630	1242-CA-41	CA	**CA41**	CA41	MEL	Finned Floor El. 117'-6" I-J (12301 Ceiling, 12401 Floor)	See Greenberry File	1	Used CA41 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	631	1242-CA-42	CA	**CA42**	CA42	MEL	Finned Floor El. 117'-6" J-K (12302 Ceiling, 12401 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 179 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	V O G T L E Summary: Estimate Comments 1	V O G T L E Summary: Estimate Comments 2	VC Summer Estimate: Comments 1	VC Summer Estimate: Comments 2	Module Estimate Reconciliation Comments
Standard Plant	632	1241-CA-44	CA	**CA44**	CA44	MEL	Finned Floor El. 117'-6" L-M (12304 Ceiling, 12404 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	633	1241-CA-45	CA	**CA45**	CA45	MEL	Finned Floor El. 117'-6" M-P (12305 Ceiling, 12405 Floor)	See Greenberry File	1	Similar to CA41 used same figures.				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	634	1252-CA-51	CA	**CA51**	CA51	MEL	Finned Floor El. 135'-6" I-K (12401 Ceiling, 12501 Floor)	See Greenberry File	1	Used CA51 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	635	1252-CA-52	CA	**CA52**	CA52	MEL	Finned Floor El. 135'-6" K-L (12401 Ceiling, 12501 Floor)	See Greenberry File	1	Used CA52 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	636	1151-CA-55	CA	**CA55**	CA55	MEL	Steel Floor El 135'-3" IRWST South / IHP Storage Stand	See Greenberry File	1	Used CA55 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED. 4 - 2000 hours welding difference between VCS and VGTL are due to work already done by VGTL which has not been completed by VCS
Standard Plant	637	1152-CA-56	CA	**CA56**	CA56	MEL	Steel Floor El 135'-3" IRWST West	See Greenberry File	1	Used CA56 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	638	1152-CA-57	CA	**CA57**	CA57	MEL	Steel Floor El 135'-3" IRWST North	See Greenberry File	1	Used CA57 drawings for welded connections			**The roof of IRWST Tank**	1 - VCS IS FARTHER ALONG INP PROGRESS THEREFORE THE DIFFERENCE STANDS IN THE ASSEMBLY HOURS 2- VCS DID NOT ADD THE WELDING TO EMBED PLATES AND THE B PLATES, VCS HOURS ARE GOING UP BY 14758 3 - VGTL ADDED HOURS FOR B PLATE WELDING AND REFUELING FLOOR PREV. OMITTED.
Standard Plant	639	1154-CA-58	CA	**CA58**	CA58	MEL	Steel Floor El 135'-3" Southeast Quadrant	See Greenberry File	1	Used CA58 drawings for welded connections				1 - VCS overstated welding rates, reduced 2 - Fit up hrs used are VGTL with a detailed estimate
Standard Plant	640	2050-CA-81	CA	**CA81**	CA81	MEL	Conc. Filled Form Module TG Deck El. 150'-161' Col 13.1-18			Used dwgs. To get weights and hours per ton at 50 hr/ton.	Drawing looks like it is embedment plates & structural steel.		Per the DOR CA81 was expanded to CA81A thru CA81E	VCS is further along than Vgtl - number increase reflects complexity not realized before .
Standard Plant	641	1123-CB-11	CB	**CB11**	CB11	MEL	Northeast Accumulator Pit Lower L Module		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 0	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	642	1123-CB-12	CB	**CB12**	CB12	MEL	Southeast Accumulator Pit Lower L Module		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 0	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	643	1287-CB-20	CB	**CB20**	CB20	MEL	Passive Cont Cooling Water Tank L Module		1	Used estimate generated on 8/24/16.	For tank work only no coatings or concrete work included.		Based on previous estimate	VCS has Estimated module fabricating from scratch inclding ALL CUTTING AND WELDING IN THE FIELD 112 SUBMODULES which is not the case in the Vogtle estimate (x4.5 difference) which assemed submodules were fabricated by others in a Fab Yard NOTE: Team has recalculated the lineal feet of welding for all leak chases, nearly another 70,000mhr for welding
Standard Plant	644	1122-CB-21	CB	**CB21**	CB21	MEL	Vertical Access Wall Panel - West El 83' - 107' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 0	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	645	1122-CB-22	CB	**CB22**	CB22	MEL	CVS Room Wall Panel - West El 80' 6" - 87' 6"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 1	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	646	1122-CB-23	CB	**CB23**	CB23	MEL	CVS Room Wall Panel - North El 80' 6" - 87' 6"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 2	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates, weld on studs, Plug Weld & Drill Holes for OLP**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	647	1122-CB-24	CB	**CB24**	CB24	MEL	CVS Room Wall Panel - West El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 3	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	648	1122-CB-25	CB	**CB25**	CB25	MEL	CVS Room Wall Panel - North El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 4	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates, weld on studs, Plug Weld & Drill Holes for OLP**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	649	1122-CB-26	CB	**CB26**	CB26	MEL	CVS Room Wall Panel - West El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 5	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	650	1122-CB-27	CB	**CB27**	CB27	MEL	CVS Room Wall Panel - North El 96' - 105' 2" (West Side)		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 6	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	651	1123-CB-28	CB	**CB28**	CB28	MEL	CVS Room Wall Panel - North El 96' - 105' 2" (East Side)		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 7	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	652	1123-CB-31	CB	**CB31**	CB31	MEL	PXS B Valve Room Wall Panel - North El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 8	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	653	1123-CB-32	CB	**CB32**	CB32	MEL	PXS B Valve Room Wall Panel - East El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 9	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	654	1123-CB-33	CB	**CB33**	CB33	MEL	PXS B Accum Room Wall Panel - NE El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	655	1123-CB-34	CB	**CB34**	CB34	MEL	PXS B Valve Room Wall Panel - North El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 9	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	656	1123-CB-35	CB	**CB35**	CB35	MEL	PXS B Valve Room Wall Panel - East El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 9	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	657	1123-CB-36	CB	**CB36**	CB36	MEL	PXS B Accum Room Wall Panel - NE El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 180 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	658	1123-CB-37	CB	**CB37**	CB37	MEL	RNS Valve Room Wall Panel - North El 94' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 9	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates, weld on studs and stiffener plates**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	659	1123-CB-38	CB	**CB38**	CB38	MEL	RNS Valve Room Wall Panel - East El 94' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	660	1124-CB-39	CB	**CB39**	CB39	MEL	RNS Valve Room Wall Panel - South El 94' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 9	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	661	1124-CB-41	CB	**CB41**	CB41	MEL	PXS A Accum Room Wall Panel - East El 87' 6" - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	662	1124-CB-42	CB	**CB42**	CB42	MEL	PXS A Accum Room Wall Panel - SE El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 11	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	663	1124-CB-43	CB	**CB43**	CB43	MEL	PXS A Accum Room Wall Panel - South El 87' 6" - 96'		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	664	1124-CB-44	CB	**CB44**	CB44	MEL	PXS A Accum Room Wall Panel - SE El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 11	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	665	1124-CB-45	CB	**CB45**	CB45	MEL	PXS A Accum Room Wall Panel - South El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 10	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	666	1124-CB-46	CB	**CB46**	CB46	MEL	PXS A Valve Room Wall Panel - East El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 11	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	667	1124-CB-47	CB	**CB47**	CB47	MEL	PXS A Valve Room Wall Panel - South El 96' - 105' 2"		1	Included Nelson Studs On E&DCR No. APP-CB00-GEF-014, Rev. 12	Similar Installation as CB51 thru 54 Modules used same template with qty changes.		**Attach Overlay Plates & weld on studs**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	668	1121-CB-51	CB	**CB51**	CB51	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (A)		1	CB51 thru 54 are welded together as a module. Install Est #16-146-01			**CB51 thru CB54 are welded together to form one unit. Attach Overlay Plates, weld on studs, Plug Weld & Drill Holes for OLP**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	669	1121-CB-52	CB	**CB52**	CB52	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (B)		1		Included in above hours			1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	670	1121-CB-53	CB	**CB53**	CB53	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (C)		1		Included in above hours			1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	671	1121-CB-54	CB	**CB54**	CB54	MEL	SG 1 Room Wall Panel - El 80'-0" - 83'-0" (D)		1		Included in above hours			1 - CB51-52-53 AND 54 ARE INSTALLED AS SINGLE UNIT UNDER CB51
Standard Plant	672	1124-CB-61	CB	**CB61**	CB61	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (A)		1	CB61 thru 64 are welded together as a module. Install Est # 16-147-01			**CB61 thru CB64 are welded together to form one unit. Attach Overlay Plates, weld on studs, Plug Weld & Drill Holes for OLP**	VCS is copying all labored hours from VGTL as they performed more detaled estimates on CB modules
Standard Plant	673	1124-CB-62	CB	**CB62**	CB62	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (B)		1		Included in above hours			1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	674	1124-CB-63	CB	**CB63**	CB63	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (C)		1		Included in above hours			1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	675	1124-CB-64	CB	**CB64**	CB64	MEL	SG 2 Room Wall Panel - El 80'-0" - 83'-0" (D)		1		Included in above hours			1 - CB61-62-63 AND 64 ARE INSTALLED AS A SINGLE UNIT UNDER CB61
Standard Plant	676	1110-CB-65	CB	**CB65**	CB65	MEL	Reactor Coolant Drain Tank Room		1	Already install in unit prior to ETC cutoff date 4/16			**Attach Overlay Plates, weld on couplers, Plug Weld & Drill Holes for OLP**	1 - VCS HAS YET TO Attach Overlay Plates, weld on couplers, Plug Weld & Drill Holes for OLP 2 - VGTL HAS ASSUMED THEIR MODULE WILL COME IN 100% FABRICATED
Standard Plant	678	1113-CB-66	CB	**CB66**	CB66	MEL	RCDT / Reactor Compartment Passageway		1	Already install in unit prior to ETC cutoff date 4/16				1 - VCS HAS YET TO Attach Overlay Plates, weld on couplers, Plug Weld & Drill Holes for OLP 2 - VGTL HAS ASSUMED THEIR MODULE WILL COME IN 100% FABRICATED
Standard Plant	679	2041-CG-82	CG	**CG82**	CG82	MEL	Water Box Access Removable Platform El 120' Col 14-15			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCVS uses VGTL labored estimate as basis
Standard Plant	680	2042-CG-83	CG	**CG83**	CG83	MEL	Water Box Access Removable Platform El 120' Col 15-16			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCVS uses VGTL labored estimate as basis
Standard Plant	681	2047-CG-84	CG	**CG84**	CG84	MEL	Removable Platform Equipment Access Area 7 El 120'			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCVS uses VGTL labored estimate as basis
Standard Plant	682	2057-CG-85	CG	**CG85**	CG85	MEL	Removable Platform Equipment Access Area 7 El 141'			Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCVS uses VGTL labored estimate as basis
Standard Plant	683	2031-CG-87	CG	**CG87**	CG87	MEL	Removable Platform Equipment Access El 100' Col R-P.14 to 15			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	684	2031-CG-88	CG	**CG88**	CG88	MEL	Removable Platform Equipment Access El 100' Col R-P.15 to 16			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	685	2032-CG-89	CG	**CG89**	CG89	MEL	Removable Platform Equipment Access El 100' Col R-P.16 to 17			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	686	2035-CG-91	CG	**CG91**	CG91	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.14 to 15			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	687	2035-CG-92	CG	**CG92**	CG92	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.15 to 16			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS
Standard Plant	688	2036-CG-93	CG	**CG93**	CG93	MEL	Removable Platform Equipment Access El 100' Col J15-I.2.16 to 17			Part Of Structural Steel (Bulks) assumed hours in this section				VCS is deleting all these labored values. Westinghouse DID NOT offer up tonnage for any of these, these will become part of DEVIATIONS

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 181 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	689	1222-CH-21	CH	**CH21**	CH21	MEL	El 82'-6" I-J Outfitted Fl (12101 Ceiling, 12201 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	690	1222-CH-22	CH	**CH22**	CH22	MEL	El 82'-6" J-K Outfitted Fl (12102 Ceiling, 12202 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	691	1222-CH-23	CH	**CH23**	CH23	MEL	El 82'-6" K-L Outfitted Fl (12103 east Ceiling, 12203 & 12207 Floors)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	692	1221-CH-24	CH	**CH24**	CH24	MEL	El 82'-6" L-M Outfitted Fl (12104 Ceiling, 12204 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	693	1221-CH-25	CH	**CH25**	CH25	MEL	El 82'-6" M-P Outfitted Fl (12105 Ceiling, 12205 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	694	1221-CH-26	CH	**CH26**	CH26	MEL	El 82'-6" P-Q Outfitted Fl (12111 Ceiling, 12211 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	1 - VGTL UNITS ARE INSTALLED, FRED EVANS OF VGTL CONSULTED WITH WEC ENGINEER TO IDENTIFY SO CALLED MODULE WICH VCS HAS IDENTIFIED AS BULK STEEL PIECE PARTS
Standard Plant	695	1232-CH-31	CH	**CH31**	CH31	MEL	El 100'-0" I-J Outfitted Fl (12201 Ceiling, 12301 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	696	1232-CH-32	CH	**CH32**	CH32	MEL	El 100'-0" J-K Outfitted Fl (12202 Ceiling, 12302 & 12 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	697	1232-CH-33	CH	**CH33**	CH33	MEL	El 100'-0" K-L Outfitted (12203 & 7 Ceiling, 12303 & 13 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	698	1231-CH-34	CH	**CH34**	CH34	MEL	El 100'-0" L-M Outfitted Fl (12204 Ceiling, 12304 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	699	1231-CH-35	CH	**CH35**	CH35	MEL	El 100'-0" M-P Outfitted Fl (12205 Ceiling, 12305 Fl)			Used an evaluated unit rate from supplemental steel installation actuals.	Supplemental Steel		DOES NOT EXIST IN DOCUMENTUM OR DOR	VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	700	1164-CH-50	CH	**CH50**	CH50	MEL	Structure SG Compartment East El.166'-3 ¼"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				VCS could not locate as modules, Westinghouse located them for VVgtl as bulk items, VCS copies Vgtl labored hours
Standard Plant	701	1153-CH-51	CH	**CH51**	CH51	MEL	El. 135'-3" Operating Floor Outfitted Module			Assumed same as CH50 since no tonnage or drawing available	Allowance		Does not exist in Documentum (Duplicared CA51)	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	702	1151-CH-52	CH	**CH52**	CH52	MEL	FW Nozzle / Upper Manway Platforms (West SG)	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			Correct tonnage from 22.3 to 3.54	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	703	1151-CH-53	CH	**CH53**	CH53	MEL	Containment Recirc. Platform West El 149'-7"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			Revised tonnage to latest BOM	VGTL performed detailed estimate VCS will use their labored values
Standard Plant	704	1152-CH-54	CH	**CH54**	CH54	MEL	ADS Platform Module	Straight to NI	1	Model generated from CH54 Platform Module to calculate Tonnage on rest of modules.				VGTL performed detailed estimate VCS will use their labored values
Standard Plant	705	1152-CH-55	CH	**CH55**	CH55	MEL	West SG Stairs / Structure / ADS Platform	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				VGTL performed detailed estimate VCS will use their labored values
Standard Plant	706	1154-CH-56	CH	**CH56**	CH56	MEL	FW Nozzle / Upper Manway Platforms (East SG)	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	707	1154-CH-57	CH	**CH57**	CH57	MEL	Containment Recirc. Platform East El 149'-7"	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.				1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	708	1153-CH-58	CH	**CH58**	CH58	MEL	East SG Stairs / Structure (West SG)	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - DIFFERENTIAL HOURS ARE DUE TO WELD CALCULATION DIFFERENCES, VGLT IS BY LINEAL FEET , VCS USES A MORE RIGOROUS APPROACH OF WELDING POSITION, AND WELD DEPOSITION RATES.
Standard Plant	709	1102-CH-59	CH	**CH59**	CH59	MEL	Containment Elevator El 107'-2" to 185'-6" Structural Module	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	710	1254-CH-61	CH	**CH61**	CH61	MEL	Stair / Elevator El 135'-3" to 145'-9" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	711	1254-CH-62	CH	**CH62**	CH62	MEL	Stair / Elevator / Plant Vent El 145'-9" to 162'-6" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	712	1268-CH-63	CH	**CH63**	CH63	MEL	Stair / Elevator / Plant Vent El 162'-6" to 185'-0" Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.				1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	713	1268-CH-64	CH	**CH64**	CH64	MEL	Stair / Elevator / Plant Vent El 185'-0" to 213' Module			Model generated from CH64 Stair Module to calculate Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	714	1268-CH-65	CH	**CH65**	CH65	MEL	Stair / Elevator / Plant Vent El 213' to 239' Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	715	1278-CH-66	CH	**CH66**	CH66	MEL	Stair / Elevator / Plant Vent El 239' to 256' Module			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	716	1277-CH-67	CH	**CH67**	CH67	MEL	Upper Annulus Stair / Lift Platform El 243' to 261' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS MORE FIELD WORK TO BE DONE AS MODULES ARE ASSEMBLED TO A LESSER DEGREE
Standard Plant	717	1277-CH-71	CH	**CH71**	CH71	MEL	Circular Platform / Upper Air Baffle El 239' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	VCS performed detailed estimate based on field inputs, VGTL uses VCS labor hours
Standard Plant	718	1277-CH-72	CH	**CH72**	CH72	MEL	PCCS Valve Room (12701) Structure	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	VGTL performed detailed estimate VCS will use their labored values

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 182 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	719	1277-CH-73	CH	**CH73**	CH73	MEL	Shield Plate / Wire Mesh / Diffuser Inlet El 266' Module	Pre-Installation Scope	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	1 - VCS HAS ADDITIONAL FIELD WORK YET TO BE PERFORMED
Standard Plant	720	1130-CH-77	CH	**CH77**	CH77	MEL	Steel Plate and Ladder El. 95'-6" SG Compartment East	Straight to NI. LAR 81 Hold	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			**dissimilar material butt welding - SS duplex**	1 - VCS HAS ADDITIONAL FIELD WORK YET TO BE PERFORMED
Standard Plant	721	2031-CH-80	CH	**CH80**	CH80	MEL	Struc Module - South TG Support El. 100' - 148' Col 13.1-14			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed			1 - VGTL HAS ALREADY INSTALLED MODULE
Standard Plant	723	2031-CH-81B	CH	**CH81-A**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed AFTER April cutoff		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	724	2031-CH-81C	CH	**CH81-B**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed AFTER April cutoff		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	725	2071-CH-89	CH	**CH81-C**	CH81	MEL	Struc Module - Center TG Support El. 100' - 148' Col 15			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed	Installed AFTER April cutoff		1 - VGTL HAS ALREADY INSTALLED MODULE 2 - VCS YET TO INSTALL MODULE(S)
Standard Plant	726	2032-CH-82	CH	**CH82**	CH82	MEL	Struc Module - North TG Support El. 100' - 148' Col 16-18			Already install in unit prior to ETC cutoff date 4/16	Per J. Rees Already Installed			1 - VGTL HAS ALREADY INSTALLED MODULE
Standard Plant	727	2070-CH-85	CH	**CH85**	CH85	MEL	Struc Module - South Roof Col 13.1-16			Part Of Structural Steel (Bulks) assumed hours in this section				VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
Standard Plant	728	2072-CH-86	CH	**CH86**	CH86	MEL	Struc Module - North Roof Col 17-19			Part Of Structural Steel (Bulks) assumed hours in this section				VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
Standard Plant	729	2078-CH-87	CH	**CH87**	CH87	MEL	Struc Module - South Htr Bay Roof El. 193'-6" Col 13.1-15			Part Of Structural Steel (Bulks) assumed hours in this section				1 - PER DOR, MODULE NO LONGER EXISTS
Standard Plant	730	2079-CH-88	CH	**CH88**	CH88	MEL	Struc Module - Htr Bay Col 13.1-15			Part Of Structural Steel (Bulks) assumed hours in this section				1 - PER DOR, MODULE NO LONGER EXISTS
				CH89	CH89	MEL	Struc Module - Center Roof Col 16-17			Part Of Structural Steel (Bulks) assumed hours in this section				1 - PER DOR, MODULE NO LONGER EXISTS
Standard Plant	731	2034-CH-91	CH	**CH91**	CH91	MEL	Turbine Bldg Security Structure Level 3			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
Standard Plant	732	2044-CH-92	CH	**CH92**	CH92	MEL	Turbine Bldg Security Structure Level 4			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
Standard Plant	733	2054-CH-93	CH	**CH93**	CH93	MEL	Turbine Bldg Security Structure Level 5			Ballistic Resistant Enclosure BRE) Supplied By S/C. Install only.			DOES NOT EXIST IN DOCUMENTUM	1 - VCS USED VGTL ESTIMATE BASED LABORED HOURS
			CR	**CR10**	CR10	MEL & Non-MEL	CR10-Ctmt Vessel Bottom Head Concrete Reinforcing Module			Already install in unit prior to ETC cutoff date 4/16			Under CVLH curently buried in Concrete	1 - INSTALLED ON BOTH PROJECTS
Standard Plant	735	1133-CS-11	CS	**CS11**	CS11	MEL	Containment North Stairs El 107'-2" to 118'-6"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	736	1143-CS-12	CS	**CS12**	CS12	MEL	Containment North Stairs El 118'-6" to 135'-3"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	737	1100-CS-15	CS	**CS15**	CS15	MEL	Containment Vertical Access Tunnel Stairs El 83' to 107'-2"	Straight to NI	1	Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	738	1120-CS-17	CS	**CS17**	CS17	MEL	CVS Room (11209) Stairs and Platform	Straight to NI	1	Based on model generated from CH54 Platform Module to Tonnage on rest of modules.			No Longer a Module, To be erected in the field	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	739	1201-CS-22	CS	**CS21**	CS21	MEL	Aux Bldg Area 1 Level 1 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	740	1202-CS-21	CS	**CS22**	CS22	MEL	Aux Bldg Area 1 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	741	1205-CS-24	CS	**CS24**	CS24	MEL	Aux Bldg Area 2 Level 1 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	742	1202-CS-25	CS	**CS25**	CS25	MEL	Aux Bldg Area 2 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS27**	CS27	MEL & Non-MEL	CS27-Aux Bldg Stair S05 (Area 2)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS3**	CS3	MEL & Non-MEL	CS3 - Aux Bldg. Roof Platform Stairs (Area 1)			Allowance based on average tonnage of other stairs.				1 - PER DOR THIS MODULE NO LONGER EXISTS
			CS	**CS31**	CS31	MEL & Non-MEL	CS31 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS32**	CS32	MEL & Non-MEL	CS32 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS33**	CS33	MEL & Non-MEL	CS33 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 183 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
			CS	**CS34**	CS34	MEL & Non-MEL	CS34 - Aux Bldg. (Area 5) Level 1, 2, 3, 4)			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.	Added to list was in drawing package given so assumed required.			No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	743	1262-CS-36	CS	**CS36**	CS36	MEL	Aux Bldg Area 1 Roof Platform / Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS36**	CS36	MEL & Non-MEL	CS36-Aux Bldg Area 2 Roof TB Roof Access Platform / Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	744	12268-CS-37	CS	**CS37**	CS37	MEL	WLS Pump Room Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	745	12265-CS-38	CS	**CS38**	CS38	MEL	Waste Monitor Tank Room C Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	746	2030-CS-41	CS	**CS41**	CS41	MEL	Turbine Bldg Area 1 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	747	2040-CS-42	CS	**CS42**	CS42	MEL	Turbine Bldg Area 2 Level 2 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	748	2031-CS-43	CS	**CS43**	CS43	MEL	Turbine Bldg Area 1 Level 3 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	749	2041-CS-44	CS	**CS44**	CS44	MEL	Turbine Bldg Area 1 Level 4 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	750	2051-CS-45	CS	**CS45**	CS45	MEL	Turbine Bldg Area 1 Level 5 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	751	2061-CS-46	CS	**CS46**	CS46	MEL	Turbine Bldg Area 1 Level 6 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	752	2071-CS-47	CS	**CS47**	CS47	MEL	Turbine Bldg Area 1 Level 7 External Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS48**	CS48	MEL & Non-MEL	CS48 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS49**	CS49	MEL & Non-MEL	CS49 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
			CS	**CS50**	CS50	MEL & Non-MEL	CS50 - Turbine Building (Allowance of 35 Ton)			Allowance based on tonnage provided on Master List.				No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	753	2039-CS-51	CS	**CS51**	CS51	MEL	Turbine Bldg Area 9 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	754	2049-CS-52	CS	**CS52**	CS52	MEL	Turbine Bldg Area 9 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	755	2059-CS-53	CS	**CS53**	CS53	MEL	Turbine Bldg Area 9 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	756	2053-CS-55	CS	**CS55**	CS55	MEL	Turbine Bldg Area 3 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	757	2063-CS-56	CS	**CS56**	CS56	MEL	Turbine Bldg Area 3 Level 6 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	758	4031-CS-61	CS	**CS61**	CS61	MEL	Annex Bldg Area 1 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	759	4031-CS-62	CS	**CS62**	CS62	MEL	Annex Bldg Area 1 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	760	4032-CS-63	CS	**CS63**	CS63	MEL	Annex Bldg Area 2 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	761	4042-CS-64	CS	**CS64**	CS64	MEL	Annex Bldg Area 2 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	762	4033-CS-66	CS	**CS66**	CS66	MEL	Annex Bldg Area 3 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 184 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	763	4043-CS-67	CS	**CS67**	CS67	MEL	Annex Bldg Area 3 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	764	4053-CS-68	CS	**CS68**	CS68	MEL	Annex Bldg Area 3 Level 5 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	765	4033-CS-69	CS	**CS69**	CS69	MEL	Annex Bldg Area 3 100' to 107'-2" Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	766	4034-CS-71	CS	**CS71**	CS71	MEL	Annex Bldg Area 4/2 Level 3 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	767	4044-CS-72	CS	**CS72**	CS72	MEL	Annex Bldg Area 4/2 Level 4 Stairs			Based on model generated from CH64 Stair Module to Tonnage on rest of modules.			DOES NOT EXIST IN DOCUMENTUM	No tonnage provided by Westinghhouse - VCS is using all labored ours from the VGTL estimate as whatsoever informastin was granted by Westinghouse
Standard Plant	6006	1213-KB-04	KB	**KB04**	KB04	MEL	WGS Guard Bed and Delay Beds		1	Already install in unit prior to ETC cutoff date 4/16				1 - VGTL 'S MODULE IS ALREADY INSTALLED
Standard Plant	6007	1212-KB-10	KB	**KB10**	KB10	MEL	WWS Sump Module		1	Module to be sent to site approx. 60% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB10 Dwgs. for installation hours.				1 - VCS HAS ADDITIONAL RE-WORK TO PERFORM THAN VGTL
Standard Plant	6008	1214-KB-11	KB	**KB11**	KB11	MEL	WLS Charcoal Filter / Ion Exchanger Module		1	Ass'y Est #16-047-01; Install Est #16-067-01				1 - VCS HAS ADDITIONAL RE-WORK TO PERFORM THAN VGTL
Standard Plant	6009	1214-KB-12	KB	**KB12**	KB12	MEL	Spent Fuel Demineralizer Module		1	Ass'y Est #16-048-01; Install Est #16-068-01				VCS Added labor for all missed bolts, drilling, torquing and grouting
Standard Plant	6010	1214-KB-13	KB	**KB13**	KB13	MEL	WRS Sump Pump Module		1	Module to be sent to site approx. 60% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB13 Dwgs. for installation hours.				1 - VCS HAS ADDITIONAL SITEWORK TO PERFORM THAN VGTL
Standard Plant	6011	1213-KB-14	KB	**KB14**	KB14	MEL	WGS Equipment/Valve Module		1	Install estimate # 16-30-01				1 - NO COMMENT NECESSARY
Standard Plant	6012	1213-KB-15	KB	**KB15**	KB15	MEL	Degasifier Discharge Pump Module		1	Already install in unit prior to ETC cutoff date 4/16				1 - NO COMMENT NECESSARY
Standard Plant	6013	1213-KB-16	KB	**KB16**	KB16	MEL	WLS Degasifier Associated Equipment Module		1	Already install in unit prior to ETC cutoff date 4/16				1 - NO COMMENT NECESSARY
Standard Plant	6014	1226-KB-20	KB	**KB20**	KB20	MEL	WLS Chemical Waste Pump Module		1	Module to be sent to site approx. 50% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB20 Dwgs. for installation hours.				1 - NO COMMENT NECESSARY
Standard Plant	6015	1225-KB-21	KB	**KB21**	KB21	MEL	WLS Effl Holdup Pump A Module	One of the site rebuilds	1	Install estimate # 16-69-01				NO COMMENT NECESSARY
Standard Plant	6016	1226-KB-22	KB	**KB22**	KB22	MEL	WLS Effl Holdup Pump B Module		1	Module to be sent to site approx. 85% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB22 Dwgs. For installation hours.				NO COMMENT NECESSARY
Standard Plant	6017	1226-KB-23	KB	**KB23**	KB23	MEL	WLS Monitor Pump C Module		1	Module sent to site approx. 50% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB23 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6018	1226-KB-25	KB	**KB25**	KB25	MEL	SFS Pump A, Piping, and Valves Module	One of the site rebuilds	1	Used KB25 Dwgs. for installation hours.				1 - VGTL had to assemble 40% of the module, VCS had to assemble 25% of the module 2 - Bolt count corrected, brought down to 4 from 32
Standard Plant	6019	1226-KB-26	KB	**KB26**	KB26	MEL	SFS Pump B, Piping, and Valves Module	One of the site rebuilds	1	Used KB26 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6020	1226-KB-27	KB	**KB27**	KB27	MEL	Waste Holdup Pump A Module		1	Module to be sent to site approx. 50% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB27 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6021	1226-KB-28	KB	**KB28**	KB28	MEL	Waste Holdup Pump B Module		1	Module to be sent to site approx. 50% assembled. Includes coating hours. Ass'y Est #16-089-01, Used KB28 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6022	1223-KB-33	KB	**KB33**	KB33	MEL	CVS Makeup Pump Room Platform Module	One of the site rebuilds	1	Used KB33 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6023	1231-KB-36	KB	**KB36**	KB36	MEL	PCS Pump/Valve Module		1	Used KB36 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6024	1235-KB-37	KB	**KB37**	KB37	MEL	WLS Monitor Pump A Module		1	Used KB37 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant	6025	1236-KB-38	KB	**KB38**	KB38	MEL	WLS Monitor Pump B Module		1	Used KB38 Dwgs. for installation hours.				NO COMMENT NECESSARY
Standard Plant				**KB47**	KB47	Non-MEL				No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS
Standard Plant				**KB55**	KB55	Non-MEL				No scope provided unable to develop a cost estimate				1 - PER DOR THIS MODULE NO LONGER EXISTS

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 185 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
Standard Plant	6026	1112-KQ-10	KQ	**KQ10**	KQ10	MEL	Reactor Coolant Drain Tanks & Piping & Pumps Module		1	Module sent to site approx. 38% assembled. Includes coating hours. Ass'y Est #16-089-01. Used KQ10 Dwgs. for installation hours.				
Standard Plant	6027	1112-KQ-11	KQ	**KQ11**	KQ11	MEL	Containment Sump Pumps & Piping Module		1	Used KQ11 Dwgs. for installation hours.				
Standard Plant	6028	1120-KQ-22	KQ	**KQ22**	KQ22	MEL	Lower CVCS Module		1	Complete assembly required. Includes coating hours. Ass'y Est #16-86-01. Used KQ22 Dwgs. for installation hours.			DOUBLE HANDLING OF 22 TO 23 +double handling of both to set-tack-final base weld	NO COMMENT NECESSARY
Standard Plant	6029	1120-KQ-23	KQ	**KQ23**	KQ23	MEL	Upper CVCS Module		1	Complete assembly required. Includes coating hours. Ass'y Est #16-87-01. Used KQ22 Dwgs. for installation hours.			DOUBLE HANDLING OF 22 TO 23 +double handling of both to set-tack-final base weld	NO COMMENT NECESSARY
Standard Plant	6030	1122-KU-20CVA	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6031	1122-KU-20CVB	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6032	1213-KU-20CV4	KU	**KU20**	KU20	MEL	High Pressure Filter/Floor Modules		1	Used KU20 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6033	1214-KU-21SFA	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6034	1214-KU-21SFB	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6035	1214-KU-21WL6	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6036	1214-KU-21WL7	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
Standard Plant	6037	1246-KU-21WS3	KU	**KU21**	KU21	MEL	Low Pressure Filter/Floor Modules		1	Used KU21 Dwgs. for installation hours.				1 - VCS DETERMIINED FILTER BOXES TO BE FIELD WELDED COMPLETELY 2 - VGTL ASSUMES ONLY TOP OF BOX REQUIRES FIELD WELD
			MZ	**MZ07**	MZ07	MEL & Non-MEL	MZ07-Auxiliary Bldg Inspection Platform			Allowance based on average tonnage of other platforms.				New Fuel Vault Inspection Platform - vcs USING vgtl VALUES AS THEY PERFORMED ESTIMATE
Standard Plant	19783	1123-Q2-23	Q2	**Q223**	Q223	MEL	DVI B Valve Module		1	Used Q223 Dwgs. for installation hours.				1 - overlooked ledger welding added to VCS 2 - no field fab, 100 hrs deleted
Standard Plant	19784	1124-Q2-33	Q2	**Q233**	Q233	MEL	DVI A Valve Module		1	Used Q233 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19785	1120-Q2-40	Q2	**Q240**	Q240	MEL	Normal RHR Piping		1	Install Est. #16-170-01				2 - no field fab, 100 hrs deleted
Standard Plant	19786	1132-Q3-05	Q3	**Q305**	Q305	MEL	CVS/PXS/WLS Containment Isolation Valve Module		1	Used Q305 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19787	1140-Q4-02	Q4	**Q402**	Q402	MEL	CCS Distribution Piping Module		1	Used Q402 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19788	1162-Q6-01	Q6	**Q601**	Q601	MEL	PSADS Piping		1	Used Q601 Dwgs. for installation hours.				2 - no field fab, 100 hrs deleted
Standard Plant	19789	1216-R1-04	R1	**R104**	R104	MEL	El. 74'-10" Commodity Module Room 12172 East-West		1	Used Highbridge estimate to assemble module excluding paint. 100% Assembly. Install Est # 16-028-01				NO COMMENT NECESSARY
Standard Plant	19790	1215-R1-06	R1	**R106**	R106	MEL	Room 12171 Commodity Module		1	Module sent to site approx. 90% assembled. Includes coating hours. Ass'y Est #16-089-01, Install Est. # 16-019-01				NO COMMENT NECESSARY
Standard Plant	19791	1214-R1-51	R1	**R151**	R151	MEL	El. 74'-10" Commodity Module Room 12151 North-South		1	Used Highbridge estimate to assemble module excluding paint. 100% Assembly. Install Est # 16-028-01				1 - reduced VGTL Fld Fab by 754hrs as a result of deleting module painting
Standard Plant	19792	1213-R1-55	R1	**R155**	R155	MEL	El. 74'-10" Commodity Module Room 12155 North-South		1	Used Est # 16-190-01 with 20% Inefficiency for assembly excludes painting. Ass'y Est #16-089-01				1 - Module is field rebuilt
Standard Plant	19793	1215-R1-61	R1	**R161**	R161	MEL	El. 74'-10" Commodity Module Room 12161 North-South		1	Used Highbridge estimate to assemble module excluding paint. 100% Assembly. Install Est # 16-028-01				NO COMMENT NECESSARY
Standard Plant	19794	1225-R2-16	R2	**R216**	R216	MEL	WLS Valve Module South Wall		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19795	1226-R2-19	R2	**R219**	R219	MEL	Pipe, Raceway, Duct East-West Module	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19796	1224-R2-51	R2	**R251**	R251	MEL	El. 91' Commodity Module Room 12251	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19797	1225-R2-61	R2	**R261**	R261	MEL	El. 91' Commodity Module Room 12261	One of the site rebuilds	1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19798	1236-R3-65	R3	**R365**	R365	MEL	Cask Loading, Fuel Xfer Canal, & Spent Fuel Pool Xfer/Drain		1	Used drawings for all installation connections and removal or component installations.			includes all piping connection between modules 18ea	NO COMMENT NECESSARY
Standard Plant	19799	1245-R4-51	R4	**R451**	R451	MEL	Corridor 12461 Piping Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19800	1245-R4-74	R4	**R474**	R474	MEL	Train Bay El 125' Commodity Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19801	1255-R5-01	R5	**R501**	R501	MEL	CCS Return Piping		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
Standard Plant	19802	1255-R5-03	R5	**R503**	R503	MEL	Corridor 12561 Piping/Tray/Duct Module		1	Used drawings for all installation connections and removal or component installations.				NO COMMENT NECESSARY
			SB	**SB**	SB MS-FW	MEL & Non-MEL	SB MS-FW Penetration - Delivery VS2-1278-SC-MS-01		1	No scope provided unable to develop a cost estimate				
			SP	**SP05**	SP05	MEL & Non-MEL	SP05-Platform and Ladder - RCDT Rm 82'-10.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP06**	SP06	MEL & Non-MEL	SP06-Stairway - SG 1 Compt 80' - 83'			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers

SCE Attachment 8

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 186 of 231

Combined Module List_Basis of Estimate.xlsx

Standard Plant MEL Module Data Vogtle Units 3 & 4

										V O G T L E Summary		VC Summer Estimate		
SP/SS	MEL ID	Tag #	Mod	MEL Commodity Code	Sub Module Number	Source	Commodity Description	Comments	MEL Quantity Required	Estimate Comments 1	Estimate Comments 2	Comments 1	Comments 2	Module Estimate Reconciliation Comments
			SP	**SP07**	SP07	MEL & Non-MEL	SP07-Stairway - SG 2 Compt 80' - 83'			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP09**	SP09	MEL & Non-MEL	SP09-Platform - Accum Rm A Center 98' - 3"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP10**	SP10	MEL & Non-MEL	SP10-Platform - Accum Rm B Center 98' - 3"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP11**	SP11	MEL & Non-MEL	SP11-Platform and Ladder - SG 1 Compt 104'-7"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP12**	SP12	MEL & Non-MEL	SP12-Platform and Ladder - SG 2 Compt 104'-7"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP13**	SP13	MEL & Non-MEL	SP13-Platform and Stairs - Vertical Access East 107'-2"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP14**	SP14	MEL & Non-MEL	SP14-Platform and Stairs - Vertical Access West 107'-2"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP15**	SP15	MEL & Non-MEL	SP15-Platform and Ladder - SG 2 Compt 116'-4.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP16**	SP16	MEL & Non-MEL	SP16-Platform and Ladder - SG 1 Compt 116'-4.5"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP17**	SP17	MEL & Non-MEL	SP17-Grating Maintenance Floor / Mezzanine 118'-6"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP20**	SP20	MEL & Non-MEL	SP20-Platform - IRWST Overlook 138'-11.75"			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP21**	SP21	MEL & Non-MEL	SP21-IRWST South Platform and Ladders			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SP	**SP21**	SP21	MEL & Non-MEL	SP21-IRWST North Platform and Ladders			Allowance based on average tonnage of other platforms.				VGTL did more rogorous estimate VCS will use their numbers
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB Area 7 Stairs 82'-9" to 100'-0"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB Area 2 Stairs 141'-3" to 158'-7"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB 1st Bay Stairs 100'-0" to 117'-6"			Allowance based on average tonnage of other stairs.				
			SS	**SS01**	SS01	MEL & Non-MEL	SS01-TB 1st Bay Stairs 117'-6" to 148'-10"			Allowance based on average tonnage of other stairs.				
Standard Plant			xA	**xAI Panels**		MEL & Non-MEL	Air Inlet Panels - Shield Buildng	CBIS to install not part of Fluor scope	43	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xS	**xSB MSFW**		MEL	Main Steam Feed Water Panels - Shield Building		1	Used 1208 Series Dwgs. for installation hours.				
Standard Plant			xS	**xSB Panels**		MEL & Non-MEL	Lower Panels - Shield Buildiing		167		This is a subcontract with CBI Services and doesn't need to be estimated.			0
Standard Plant			xS	**xSB Roof Steel**		MEL	Roof Steel - Shield Building		1	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xT	**xTR Panels**		MEL & Non-MEL	Tension Ring Panels - Shield Building		11	Used 1278 Series Dwgs. for fabrication / installation hours.				By CB&I services?
Standard Plant			xx	**xxRing Girder**		MEL	Pressurizer Ring Girder		1	Used PH01 Series Dwgs. for fabrication / installation hours.				0
				XXX Upender Pit		Non-MEL				No scope provided unable to develop a cost estimate				0
				CH85-B	**CH85-B**									0
				CH85-B	**CH85-B**									VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
				CH86-B	**CH86-B**									VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
				CH86-B	**CH86-B**									VGTL uses VCS number as VCS performed detailed estimate, VCS reduced mhr/ton as it was overstated at 200mhr/ton
							VCS Unit 2						See IRWST Estimate and Basis	#N/A
							VCS Unit 2						See IRWST Estimate and Basis	#N/A
							VCS Unit 3						See IRWST Estimate and Basis	#N/A
							VCS Unit 3						See IRWST Estimate and Basis	#N/A

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 187 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 188 of 231

Demobilization

VC Summer CONSTRUCTION

This is an OOM (Order Of Magnitude) estimate for the demobilization of the Project.

Basis of Estimate.

1. Field Non-Manual (FNM) Supervision Cost are covered in the staffing curve and additional FNM are not included in this cost.
2. Landscaping, hydro seeding and plants included in Subcontract Budget already and therefore in not included in this estimate.($2,177,000).
3. Asphalt paving is in the Subcontract Budget and already included in the estimate. ($737,000)
4. Site Building demolition is included. This is to match up with the $1M Fluor is carrying to demo SNC buildings. Assume same is required at VCS.
5. Does not include transportation off-site of equipment.
6. Assume temporary buildings and trailers will be sold with no residual value. Buyer will remove.

Site Restoration Quantities in Site Specific estimate. (Not included in this OOM)

1. Slope Protection Rip-Rap
2. Gravel Surfacing
3. Paving (Asphalt and concrete)
4. Guard Railing
5. Guard posts and bollards

OOM SUMMARY

1. Demolish Buildings	**$ 1,000,000**
2. Heavy Lift Derrick	**$ 4,000,000**
3. Refurbish Buildings	**$ 800,000**
4. Balance of Demob	**$ 3,498,000**
Total	**$ 9,298,000**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 189 of 231

OOM Estimate (from below)= $8,968,226 (OOM itemized below)

Heavy Lift Derrick

The HLD shall be disassembled and removed from the Site. This is also a prerequisite to loading fuel in Unit-4 and may be required prior to implementing full security measures for Unit-3.

$4M

Refurbish Buildings

All permanent SNC 300-series buildings that were temporarily used for construction purposes shall be restored to their original "Turnover" conditions (Bldgs 303, 306, 307, etc.). This will occur prior to Project Demobilization.

Painting 100,000 SF x $3 SF = $300,000
Carpeting 100,000 SF x $5 SF = $500,000

Total OOM for building repair = $800,000

Balance of demobilization

Work includes:
All temporary modularized facilities shall be removed.

i. All temporary construction concrete pads within the security fence line shall be removed.
ii. The concrete batch plant shall be removed.
iii. All laydown yards shall be cleared.
iv. The concrete spoil pile(s) shall be pulverized and the resulting aggregate disposed of or turned over to SNC for reuse.
v. The offsite warehouse in Waynesboro will be evacuated.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 190 of 231

b. Notable cost and schedule items if removal is ultimately required by SNC –
   i. Building-1xx and -2xx series of temporary structures and pads including:
      1. Construction shops and craft change buildings (steel framed and sided)
      2. Module Assembly Building/MAB (Bldg-150)
      3. Onsite warehouse (Bldg-104)
      4. Containment vessel fabrication and assembly pad (Bldg-108)
   ii. Roller compacted concrete (RCC)/Soil Cemented parking areas and roads
      1. Field Non-Manual (FNM) parking lot (NOI-10)
      2. Craft parking lot (Bldg-114)
      3. All surfaced roads that are not part of the permanent plant facilities
      4. If the roller compacted concrete (RCC) parking areas and roads described above have to be restored, they will require extensive heavy equipment activity and modification of existing storm drainage inlets in order to achieve final grade configuration and to accommodate seeding and/or tree planting.

   iii. Temporary underground construction utilities (mechanical and electrical)
      1. Removal of thousands of lineal feet of construction utilities would impact installed permanent electrical grounding grid and in-service permanent mechanical utilities, including Plant Fire Protection.

c. Final site grading per design within the security fence line and in the outlying NOI's shall be performed to comply with State of Georgia Environmental Protection Division (EPD) storm water and sheet flow drainage regulations.
   i. Final Finish Site grading shall be performed to design drawing requirements.
      1. Includes at least the partial demolition of the HLD ring foundation and possibly the top of the tension tie-column counterweight (extent to be determined through negotiation with SNC).
      2. Will include some cut and fill of material, particularly in NOI-5 (Power Block area) and NOI-6 (Cooling Tower area). Some as yet undetermined amount will have to be performed prior to the implementation of full security measures for Unit-3.

Cost estimate for Balance of Demobilization

Assume 6 months demolition
Assume 50 persons (working 50 hour weeks)

Labor
50 hrs x 4.33 wks/month x 6 months = 1,299 Hours per per person

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 191 of 231

1,299 x 50 people = 64,950 manhours
64,950 mh's x $31.00 (indirect rate) = $2,013,450 Labor

Small tools/Equipment ($7 x 64,950) = $454,650
Consumables ($2 x 64,950) = $129,900
Special Equipment = Allowance of $200,000 (Concrete pulverizes)
Site Grading Subcontract (100 acres x $2,000) = $200,000
Remove gravel parking lots = $250,000
Disposal Allowance = $250,000

Total = $3,498,000

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 192 of 231

Demobilization

VOGTLE CONSTRUCTION

This is an OOM (Order Of Magnitude) estimate for the demobilization of the Project.

Basis of Estimate.

1. Field Non-Manual (FNM) Supervision Cost are covered in the staffing curve and additional FNM are not included in this cost.
2. Landscaping (hydro seeding and planting) not included in this project. (Site Management note on quantity report). No cost added in the OOM for this activity.
3. Site Building demolition is not in the OOM estimate. Subcontract notes indicate that Fluor is carrying $1M to demo SNC buildings.
4. Does not include transportation off-site of equipment.
5. Assume temporary buildings and trailers will be sold with no residual value. Buyer will remove.

Site Restoration Quantities in Site Specific estimate. (Not included in this OOM)

1. Slope Protection Rip-Rap
2. Gravel Surfacing
3. Paving (Asphalt and concrete)
4. Guard Railing
5. Guard posts and bollards

OOM SUMMARY

1. Heavy Lift Derrick		**$ 4,000,000**
2. Refurbish Buildings	**$**	**800,000**
3. Balance of Demob		**$ 4,168,226**
Total	**$**	**8,968,226**

OOM Estimate (from below)= $8,968,226 (OOM itemized below)

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 193 of 231

Heavy Lift Derrick

The HLD shall be disassembled and removed from the Site. This is also a prerequisite to loading fuel in Unit-4 and may be required prior to implementing full security measures for Unit-3.

$4M

Refurbish Buildings

All permanent SNC 300-series buildings that were temporarily used for construction purposes shall be restored to their original "Turnover" conditions (Bldgs 303, 306, 307, etc.). This will occur prior to Project Demobilization.

Painting 100,000 SF x $3 SF = $300,000
Carpeting 100,000 SF x $5 SF = $500,000

Total OOM for building repair = $800,000

Balance of demobilization

Work includes:
All temporary modularized facilities shall be removed.

i. All temporary construction concrete pads within the security fence line shall be removed.
ii. The concrete batch plant shall be removed.
iii. All laydown yards shall be cleared.
iv. The concrete spoil pile(s) shall be pulverized and the resulting aggregate disposed of or turned over to SNC for reuse.
v. The offsite warehouse in Waynesboro will be evacuated.

b. Notable cost and schedule items if removal is ultimately required by SNC –
   i. Building-1xx and -2xx series of temporary structures and pads including:
      1. Construction shops and craft change buildings (steel framed and sided)

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 194 of 231

2. Module Assembly Building/MAB (Bldg-150)
3. Onsite warehouse (Bldg-104)
4. Containment vessel fabrication and assembly pad (Bldg-108)

ii. Roller compacted concrete (RCC)/Soil Cemented parking areas and roads
1. Field Non-Manual (FNM) parking lot (NOI-10)
2. Craft parking lot (Bldg-114)
3. All surfaced roads that are not part of the permanent plant facilities
4. If the roller compacted concrete (RCC) parking areas and roads described above have to be restored, they will require extensive heavy equipment activity and modification of existing storm drainage inlets in order to achieve final grade configuration and to accommodate seeding and/or tree planting.

iii. Temporary underground construction utilities (mechanical and electrical)
1. Removal of thousands of lineal feet of construction utilities would impact installed permanent electrical grounding grid and in-service permanent mechanical utilities, including Plant Fire Protection.

c. Final site grading per design within the security fence line and in the outlying NOI's shall be performed to comply with State of Georgia Environmental Protection Division (EPD) storm water and sheet flow drainage regulations.

i. Final Finish Site grading shall be performed to design drawing requirements.
1. Includes at least the partial demolition of the HLD ring foundation and possibly the top of the tension tie-column counterweight (extent to be determined through negotiation with SNC).
2. Will include some cut and fill of material, particularly in NOI-5 (Power Block area) and NOI-6 (Cooling Tower area). Some as yet undetermined amount will have to be performed prior to the implementation of full security measures for Unit-3.

Cost estimate for Balance of Demobilization

Assume 6 months demolition
Assume 50 persons (working 50 hour weeks)

Labor
50 hrs x 4.33 wks/month x 6 months = 1,299 Hours per per person
1,299 x 50 people = 64,950 manhours
64,950 mh's x $37.47 (indirect rate) = $2,433,676 Labor

Small tools/Equipment ($7 x 64,950) = $454,650

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 195 of 231

Consumables ($2 x 64,950) = $129,900
Special Equipment = Allowance of $200,000 (Concrete pulverizes)
Site Grading Subcontract (100 acres x $2,000) = $200,000
Remove Roller compacted Concrete $500,000
Disposal Allowance = $250,000

Total = $4,168,226

Vogtle Subcontract List 5-25-16

	Contract Number	Brief Description	Commercial Management		Construction Supervision	
			Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
1	1270	General Maintenance	X		X	
2	1275	Site Prep & Environ. Maint.	X		X	
3	1278	Temporary Phones & IT work for On-Site		X		X
4	1398	Geotechnical	X		X	
5	1399	Excavation NI - misc earth work as needed	X		X	
6	1421	Concrete and Soils Testing	X		X	
7	1422	Backfill around nuclear units	X		X	
8	1428	Personal Access Point		X		X
9	1430	River Water Intake area - Well Monitoring	X		X	
10	1452	Underground HDPE Pipe Installation	X		X	
11	1456	River Water Intake Structure - Civil only	X		X	
12	1459	Crane / Operator Rental - callout	X		X	
13	1460	Maintenance Support	X		X	
14	1464	Durawall	X		X	
15	1466	NDE Testing	X		X	
16	1468	High Voltage Electrical Work on site		X	X	
17	1471	CWT Basin Ringwall	X		X	
18	1472	Waterproof Coating for Nuclear Island	X		X	
19	1477	Productivity Survey Consultant	X		X	
20	1600	Landscaping and Paving	X		X	
21	1608	Electric Heat Tracing & Associated Insulation	X		X	
22	1612	Specialized Field Machining		X		X
23	1613	ISO Phase & Non-Seg Bus Duct	X		X	
24	1614	Transformer Dress-Out	X		X	
25	1615	Lightning Protection	X		X	
26	1618	Coatings	X		X	
27	1619	Receiving Warehouse	X		X	
28	1620	Trash Hauling / Disposal for project	X		X	
29	1622	Shoring & Forming	X		X	
30	1623	Field Craft Productivitiy - Consultant		X		X
31	1625	HVAC Fab & Installation Unit 3 only	X		X	
32	1626	Main Warehouse	X		X	
33	1627	Field Erected Tanks - EPC (16 tanks)	X		X	
34	1629	Crane / Operator Rental - callout	X		X	
35	1630	Crane / Operator Rental - callout	X		X	
36	1631	Vacuum Trucks - Call out	X		X	
37	1632	Shield Building Erection		X		X
38	1633	Potable Water System - Maintenance	X		X	
39	1636	Cooling Tower Construction	X		X	
40	1637	Small Tools and Consumables Supply	X		X	
41	1801	Concrete Pump Trucks	X		X	
42	1802	Concrete Pump Trucks	X		X	
43	1803	Post Weld Heat Treatment	X		X	
44	1804	Vacuum Trucks - Call out	X		X	
45	1805	Vacuum Trucks - Call out	X		X	
46	1806	Concrete and Soils Testing	X		X	
47	1807	Special High Value tools	X		X	
48	1808	Heavy Haul	X		X	
49	1809	Raw Water Pump Replacement	X		X	

VCS Subcontract List 5-25-16

Contract Number	Brief Description	Commercial Management		Construction Supervision	
		Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
1160	Surveying Services		X	X	
1166	Geologic Mapping		X	X	
1167	Fencing Work	X		X	
1171	Transmission Switchyard (ZBS)		X	X	
1180	Geotechnical Site Investigation Srvcs		X	X	
1182	Hydroseeding; Philen Construction	X		X	
1183	Destructive & Non-Destructive Testing		X	X	
1186	Asphalt Paving Work	X		X	
1189	OWS Water Treatment Facility		X	X	
1190	Temp Retaining Wall	X		X	
1193	Triple Stack Microwave Links	X		X	
1194	Circulating Water System (CWS) Cooling Towers		X	X	
1196	FET Work	X		X	
1198	Heat Tracing Work	X		X	
1203	Fire Protection - Std Plant & Balance of Plant		X	X	
1204	Waste Wtr Sys (WWS)		X	X	
1206	Crane Rental	X		X	
1207	Heavy Haul	X		X	
1208	Ice House Services	X		X	
1209	Access Control Point (ACP)		X	X	
1210	Personnel Entry		X	X	
1211	Services Permanent Building		X	X	
1212	Landscaping - Grass, Shrubs, Trees, etc	X		X	
1546	Metal Siding		X	X	
1547	Above Ground Pipe Heat Trace, Ins, & Lagging	X		X	
1548	HVAC Insulation - Standard Plant	X		X	
1549	Penetration Seals - Fire Stop	X		X	
1550	Active Vehicle Barriers	X		X	
1551	Speciality Coatings	X		X	
1552	Elevators - Traction	X		X	
1554	Fire Alarm Panels	X		X	
1555	Reactor Coolant Loop Piping Installation		X		X
1556	Cooling Tower Piling	X		X	
1557	NDE Service		X	X	
1558	Electrical Labor	X		X	
1607	Security Services III		X		X
1638	WWS Retention Basin Liner	X		X	
1639	Shield Building Erection U2/U3		X		X
1641	Isophase & Non Seg. Bus Duct	X		X	
1642	Material Testing	X		X	
1643	Unit 2 Waterproof Membrane	X		X	
1644	Jack & Bore Work	X		X	
1646	Specialized Pipe Cleaning Services	X		X	
1647	Transformer Dress Out Services		X	X	
1743	Elevators - Rack & Pinion	X		X	
1744	Architectural Finishes - Std Plant Bldgs		X	X	
1745	HVAC Duct -Standard Plant, Unit 2		X	X	
1746	EFS Communication System	X		X	
1747	Membrane Roof Systems - Standard Plant Building		X	X	

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 196 of 231

Vogtle Subcontract List 5-25-16

	Contract Number	Brief Description	Commercial Management		Construction Supervision	
			Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
50	1810	Chemical Cleaning	X		X	
51	1811	Traction elevators (12 Elevators)	X		X	
52	1812	Fire Protection and Detection	X		X	
53	1813	Permanent Plant Communications		X	X	
54	1814	SWS Chemical Treatment Bldg	X		X	
55	1815	Insulation Unit 3 (conventional)	X		X	
56	1816	HSS Piping Statistical Analysis - Consultant		X		X
57	1817	Metal Siding Pkg. 1	X		X	
58	1818	Membrane Roofing	X		X	
59	1819	Penetration Seals (Blockouts & Barriers)	X		X	
60	1820	Railroad Track installation & maintenance	X		X	
61	1821	Fireproofing (Structural Steel)	X		X	
62	1822	Annulus Seal - Waterproof Sealants	X		X	
63	1824	Permanent Plant Security System		X	X	
64	1837	Bulk Gas Storage	X		X	
65	1866	Construction Air Services - On site	X		X	
66	1875	HVAC Fab & Installation Unit 4 only	X		X	
67	1876	HVAC Unit 3&4 Testing & Balance	X		X	
68	1877	MAB Support & NI-3	X		X	
69	1878	Craft Support for MAB	X		X	
70	1879	Jack & Bore underground drilling	X		X	
71	1880	Wireless Site Network		X		X
72	1882	Machine Welders	X		X	
73	1885	General Construction Services	X		X	
74	1886	Construction Air Services - On site	X		X	
75	1887	Electrical Services Subcontract	X		X	
76	1888	Demo. SNC Bldg/Infrastr. & U/G Perm Works		X	X	
77	1889	Site Prep.		X		X
78	1891	Consulting Service - FE - work package	X		X	
79	1892	ECAR Consulting		X		X
80	1893	Security (SGI) Consulting		X		X
81	2018	CWT Pump Structure - Stabilization	X		X	
82	2092	Diesel Generator Building (1 ea. Unit)	X		X	
83	2093	Weld Test Facility	X		X	
84	2094	General Services & Staffing	X		X	
85	2096	Rack & Pinion Elevators (4 Elevators)	X		X	
86	2097	Unarmed Security Guards		X		X
87	2098	Safeguards Security Wall	X		X	
88	2099	Plant Mapping / Technical Services	X		X	
89	2100	CV Ring HVAC Duct Work Installation		X		X
90	2101	Precision Measurement	X		X	
91	2103	ECAR Consulting		X		X
92	2105	Unit 3 Concrete and Rebar Installation	X		X	
93	2110	Shield Building Consultant		X		X
94	2111	ECP Consulting		X		X
95	2113	Above Ground SES / EFS / ZFS Installation		X	X	
96	2115	Welder Pkg 3	X		X	
97	2119	ECAR Program Consulting		X		X
98	2120	Construction Management, Etc.		X		X

VCS Subcontract List 5-25-16

Contract Number	Brief Description	Commercial Management		Construction Supervision	
		Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
1763	Overhead Crane Main.	X		X	
1765	U2/U3 Field Erected Tanks - Carbon & Stainless Construction	X		X	
1766	Welding Services - General Site	X		X	
1776	Miscellaneous Civil Works - Final Site Grade & Other	X		X	
1777	Masonry Services	X		X	
1779	HDPE Pipe Installation	X		X	
1781	High Mast Security Lighting (Plant Area Lighting)	X		X	
1782	Concrete Pumping Services	X		X	
1783	Bulk Gas Storage System	X		X	
1784	U2/U3 Modular Srvc Wtr (SWS) Chemical Treatment Bldgs		X	X	
1785	Railroad Service	X		X	
1786	Remove and Replace MAB Siding and Columns	X		X	
1787	Permanent Security Fencing	X		X	
1788	MSE Wall Work	X		X	
1793	General Vacuum Services II	X		X	
1794	Modular Insualtion	X		X	
1795	Pre-Heat/Post Weld Heat Treatment	X		X	
2125	Durawall Fire Protection	X		X	
2126	Passivation Duplex SS Modules	X		X	
2127	Lightning Protection	X		X	
2128	Steel Fireproofing	X		X	
2129	Permanent Warehouse		X	X	
2231	General Site Services	X		X	
2232	NI Fire Protection - Scope Seismic and QA related		X	X	
2234	Annulus Seal Design	X		X	
2235	Module Fitup and Welding Module Fab Wrk Units 2 & 3		X		X
2236	Drilled Piers	X		X	
2237	Vacuum Services - III	X		X	
2240	Electricians	X		X	
2241	Hydraulic Lifts	X		X	
2242	Fire Protection Inspections & Maintenance	X		X	
2243	Precision Measurements - Shield Building		X	X	
2244	Per Diem Audit		X	X	
2245	Shield Wall Tension Ring		X		X
2246	Temporary Power & Light (TPL) Electrical Services	X		X	
2250	Containment Vessel Temporary Attachments		X		X
2312	Ph 14 Laydown / Site Grading	X		X	
2313	Concrete Demolition	X		X	
2315	Coatings II	X		X	
2318	Fiber Installation & Splicing (Onsite)	X		X	
2319	Machining Services		X		X
2320	Security Services		X		X
2366	Condenser Waterbox Liners		X	X	
2368	Third Party Inspection Services		X	X	
2369	Materials Storage Building	X		X	
2370	Recycling		X	X	
2371	Rebar Installation	X		X	
2372	Tank Inspections		X		X
2373	Blasting Services	X		X	

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 197 of 231

Vogtle Subcontract List 5-25-16

			Commercial Management		Construction Supervision	
	Contract Number	Brief Description	Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
99	2377	CWT Concrete placement - RCC	X		X	
100	2380	Communication Support (Bldg 305)		X		X
101	2378	Coatings 2nd Pkg	X		X	
102	2166	Turbine Center-Line Work - Toshiba		X		X
103	TBD	RWI Structure Work - Phase III	X		X	
104	TBD	Insulation Unit 4 (conventional)	X		X	
105	TBD	Above Ground Electrical Installation Unit #3 and #4	X		X	
106	TBD	Metal Siding Pkg. 2	X		X	
107	2379	NDE - Pkg 2	X		X	
108	TBD	Earthwork & Erosion Control	X		X	
109	TBD	Spoils Maintenance & Concrete Crushing	X		X	
110	TBD	Surveying	X		X	
111	TBD	Yard Area Pools/Liners	X		X	
112	TBD	Architechtural Finishes	X		X	
113	TBD	Battery Testing	X		X	
114	TBD	RCL - NSSS Work		X		X
115	TBD	Shield Building Tension Ring		X	X	
116	TBD	Shield Building Tank		X	X	
117	TBD	Personal Access Point (Bldg 304 Subcontract 2)		X	X	
118	TBD	Demo (No Mans Land) Work		X	X	
119	TBD	Final Paving	X		X	

VCS Subcontract List 5-25-16

		Commercial Management		Construction Supervision	
Contract Number	Brief Description	Fluor	WECTEC/ Westinghouse	Fluor	WECTEC/ Westinghouse
2374	Fiber Services (Offsite)	X		X	
2432	Turbine Generator Center Line Erection		X		X
2433	Concrete Repair	X		X	
2434	Remote Cleaning and Inspection Services	X		X	
2435	Schweitzer Relays, CWS PDCs	X		X	
2536	Battery Charger Testing, CWS PDCs	X		X	

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 198 of 231

ELECTRONICALLY FILED 2018 September 24 3:38 PM SCPSC - Docket # 2017-370-E - Page 169 of 231

VC Summer Subcontractors List

Comm. Mgnt	Dir/Ind	Contract Number	Description	WECTEC Provided EAC	Fluor Contracts Best Fcst at EAC	Fluor Contracts Best Fcst ETC (EAC - Vouchered)	Inserted into Fluor's Estimate	Account Inserted to;
Fluor	Direct	1182	Hydroseeding	$2,059,850	$2,080,132	$232,985	Yes	30
		1186	Asphalt Paving Work	$1,112,736	$2,931,630	$2,555,632	Yes	30
		1193	Triple Stack Microwave Links	$557,252	$4,250,000	$4,250,000	Yes	60
		1196	Field Erected Tanks	$3,486,036	$3,500,000	$13,964	Yes	40
		1198	Heat Tracing	$380,113		$275,150	Yes	60
		1212	Landscaping - Grass, Shrubs, Trees, Etc	$2,176,950	$2,176,950	$2,176,950	Yes	80
		1309	Cathodic Protection	$0	$0	No Information Provided, Craft Lbr Incl'd as Self Perf		
		1547	Above Ground Pipe Heat Trace, Ins, & Lagging	$27,712,465	$27,000,000	$27,000,000	Yes	82
		1548	HVAC Insulation	$3,655,295	$20,000,000	$20,000,000	Yes	82
		1549	Penetrations - Fire Stop	$3,859,827	$23,520,000	$23,520,000	Yes	70
		1550	Active Vehicle Barriers	$20,388,397	$20,388,396	$20,388,396	Yes	80
		1551	Specialty Coatings	$30,625,362		$30,625,362	Yes	80
		1552	Elevators - Traction	$3,295,941	$6,500,000	$6,500,000	Yes	30
		1554	Fire Alarm Panels	$721,722		$123,759	Yes	60
		1556	Cooling Tower Pilings	$7,650,837	$7,635,450	$221,125	Yes	60
		1588	Electrical Labor	$0	$7,635,450	$2,960,418	Yes	60.2[illegible]3
		1638	WWS Retention Basin Liner	$1,592,523		$1,091,910	Yes	80
		1641	Isophase & Non Seg Bus Duct	$20,979,471	$18,000,000	$18,000,000	Yes	60.201
		1643	Unit 2 Waterproofing	$2,475,728	$1,540,588	$575,707	Yes	10
		1644	Jack and Bore Work	$0	$15,000	$15,000	Yes	30
		1646	Specialized Pipe Cleaning	$0	$1,500,000	$1,500,000	Yes	30
		1743	Elevators - Rack & Pinion	$712,639	$4,000,000	$4,000,000	Yes	30
		1744	Architectural Finishes	$14,086,170	$14,086,170	$14,086,170	Yes	30
		1746	EFS Communications System	$0	$5,325,000	$5,325,000	Yes	60.2[illegible]
		1765	Construction - U2/U3 Field Erected Tanks	$9,088,496	$38,000,000	$38,000,000	Yes	30
		1766	Welding Services (119,600 Welder Hours)	$500,000	$17,608,513	$17,608,513	Yes	50
		1776	Miscellaneous Civil Works - Final Site Grade & Other	$0	$1,000,000	$1,000,000	Yes	30
		1777	Masonry Services	$86,696	$0		No	30
		1779	HDPE Pipe Installation; C A Murren & Sons	$7,581,172	$9,577,030	$7,148,203	Yes	30
		1781	High Mast Security Lighting (Plant Area Lighting)		$2,800,000	$2,800,000	Yes	30
		1783	Bulk Gas Storage System	$403,696	$7,500,000	$7,500,000	Yes	30
		1786	Remove and Replace MAB Siding and Columns	$1,176,301	$4,373,156	$3,995,158	Yes	41
		1787	Permanent Security Fencing		$2,500,000	$2,500,000	Yes	30
		1788	MSE Wall Work	$3,390,000	$2,913,500	$2,913,500	Yes	30
		1794	Modular Insulation	$280,380	$175,000	$0	No/Excl'd	Excl'd
		2125	Durawall Fire Protection		$4,500,000	$4,500,000	Yes	30
		2126	Passivation Duplex SS Modules		$1,250,000	$1,250,000	Yes	41
		2127	Lightning Protection		$750,000	$750,000	Yes	60.2[illegible]
		2128	Steel Fireproofing		$3,500,000	$3,500,000	Yes	41
		2234	Annulus Seal Design		$2,000,000	$2,000,000	Yes	30
		2236	Drilled Piers	$486,445	$757,222	$757,222	Yes	30
		2240	Electricians - Staff Augmentation		$0			
		2241	Floor Module Assembly - Hydraulic Lifts to Install	$178,928	$29,475,000	$29,475,000	Yes	30
		2315	Coatings II		$25,000,000	$25,000,000	Yes	81
		2318	Fiber Installation & Splicing (Onsite)	$200,000	$200,000	$85,923	Yes	60.206
		2369	Materials Storage Building #338		$0		Yes	30
		2373	Blasting Services	$275,000	$275,000	$68,617	Yes	30
		2433	Concrete Repair	$300,000	$198,421	$198,421	Yes	10
		2435	Schweitzer Relays, CWS PDCs		$2,200,000	$2,200,000	Yes	60.2[illegible]
		2436	Battery Charger Testing, CWS PDCs		$900,000	$900,000	Yes	30
		2437	HVAC - Unit 3	$44,988,721	$0	$0	Excl'd	
		2442	Pipe Flushing Services		$10,000,000	$10,000,000	Yes	50
		2501	First Bay Concrete Repair		$2,000,000	$2,000,000	Yes	30
		TBD	Diesel Generator testing - S/U		$531,600	$531,600	Yes	30
			Hydraulic Lifts		$11,256,000	$11,256,000	Yes	40
			MOV/AOV Valve Actuator Services - S/U		$1,500,000	$1,500,000	Yes	50
			VFD Testing - S/U		$58,608	$58,608	Yes	60
	Direct Total			**$216,465,149**	**$354,883,816**	**$364,934,293**		
	IND	1167	Fencing Work	$151,742	$1,363,481	$1,252,350	Yes	91-61
		1206	Crane Rental	$157,187	$150,000	$150,000	Yes	96-10
		1207	Heavy Haul	$8,125,895		$6,779,452	Yes	95-13
		1190	Temporary Retainng Wall	$9,271,282	$9,070,644	$114,794	Yes	91-60
		1208	Ice House Services	$0	$504,632	$279,632	Yes	92-12
		1558	Electrical Labor (temporary Power)	$3,433,084	$5,000,000	$2,960,418	Yes	91-41
		1642	Material Testing	$2,641,945	$18,596,000	$16,189,343	Yes	92-17
		1763	Overhead Crane Maintenance	$117,080	$100,000	$65,923	Yes	95-14

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 200 of 231

VC Summer Subcontractors List

Comm. Mgnt	Dir/Ind	Contract Number	Description	WECTEC Provided EAC	Fluor Contracts Best Fcst at EAC	Fluor Contracts Best Fcst ETC (EAC - Vouchered)	Inserted into Fluor's Estimate	Account Inserted to;
		1782	Concrete Pumping Services	$1,440,806	$1,301,233	$527,000	Yes	95-13
		1785	Railroad Service	$100,922	$100,000	$163,000	Yes	95-13
		1793	General Vacuum Services II	$4,141,667	$4,050,000	$1,348,278	Yes	92-18
		1795	Pre-Heat/Post Weld Heat Treatment		$11,000,000	$11,000,000	Yes	92-17
		2231	General Site Services; Thompson Turner Construction	$2,702,315	$2,972,618	$2,134,776	Yes	92-11
		2237	Vacuum Services - III	$2,958,333	$14,705,408	$12,067,533	Yes	92-19
		2242	Fire Protection Inspections & Maintenance		$0	$0	Yes	92-[illegible]
		2246	Temporary Power & Light (TPL) Electrical Services		$0	$0	Yes	91-[illegible]
		2312	Ph 14 Laydown / Site Grading		$0	$0	Yes	91-66
		2313	Concrete Demolition	$50,000	$140,000	$115,816	Yes	91-[illegible]
		2371	Rebar Installation		$0	$0	Yes	91-[illegible]
		2374	Fiber Services (Offsite)		$0	$0	Yes	91-[illegible]
		2434	Remote Cleaning and Inspection Services	$800,000	$2,528,442	$1,728,442	Yes	92-[illegible]
		2494	Construction		$0	$0	No	
		2495	Construction		$0	$0	No	
		TBD	Crane Testing Services - S/U		$1,800,000	$1,800,000	Yes	95-[illegible]
		(blank)	Augmented Subcontract Labor Training		$0	$2,724,993	Yes	92-[illegible]
			Bldg 302 10 Plex		$0	$400,000	Yes	91-[illegible]
			Containmen Vessel Rodational Dome		$0	$140,000	Yes	91-14
			FAA 12B Expand Parking Lot 3		$0	$1,040,000	Yes	91-[illegible]
	IND Total			**$36,092,258**	**$73,382,458**	**$62,981,750**		

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 201 of 231

Vogtle Subcontractors List

Comm. Mgnt	Dir/Ind	Contract Number	Description	WECTEC Provided EAC	Fluor Contracts Best Fcst at EAC	Fluor Contracts Best Fcst ETC (EAC - Vouchered)	Inserted into Fluor's Estimate	Account Inserted to;
Fluor	Direct	1399	Excavation NI - misc earth work as needed	$119,114,491	$123,352,767	$23,774,711	Yes	00
		1422	Non-Union - Backfill around nuclear units	$63,855,430	$64,397,423	$2,228,834	Yes	00
		1430	River Water Intake area - Well Monitoring	$19,386,814	$20,113,512	$3,202,471	Yes	00
		1452	Underground HDPE Pipe Installation	$23,843,884	$21,033,752	$3,283,864	Yes	50-211
		1456	River Water Intake Structure - Civil only	$28,378,448	$30,223,827	$27,633,052	Yes	00
		1460	Building 303 - Maintenance Support	$15,224,317	$15,224,316	$120,926	Yes	30
		1464	Durawall	$3,000,000	$3,000,000	$3,000,000	Yes	30
		1471	CWT Basin Ringwall	$18,624,366	$18,624,366	$740,080	Yes	10
		1472	Waterproof Coating for Nuclear Island	$9,800,000	$9,583,769	$785,322	Yes	10
		1600	Landscaping & Paving	$12,173,016	$1,500,000	$1,500,000	Yes	00
		1608	Electric Heat Tracing & Associated Insulation	$1,227,826	$1,500,000	$1,500,000	Yes	60.208
		1613	ISO Phase & Non-Seg Bus Duct	$33,057,611	$17,392,820	$17,392,820	Yes	60.201
		1614	Transformer Dress-Out	$6,200,000	$6,325,300	$6,325,300	Yes	60.203
		1615	Lightning Protection	$750,000	$750,000	$750,000	Yes	60.207
		1618	Coatings	$86,892,047	$85,202,047	$58,859,499	Yes	81
		1619	Building 306 - Receiving Warehouse	$5,772,040	$5,772,039	$133,855	Yes	30
		1622	Form Work	$21,347,010	$30,807,907	$30,807,907	Yes	10
		1625	HVAC Fab & Installation Unit #3	$53,234,950	$53,464,287	$0	No	Excluded
		1626	Building 307 - Main Warehouse	$12,073,744	$12,073,744	$1,188,645	Yes	30
		1627	Field Erected Tanks - EPC (12 tanks)	$16,702,057	$17,245,536	$12,647,278	Yes	40
		1636	Cooling Tower Construction	$128,450,561	$106,955,094	$33,792,877	Yes	40
		1809	Raw Water Pump Replacement	$0	$0	$0	No	Excluded
		1810	Chemical Cleaning	$0	$0	$0	No	Excluded
		1811	Traction elevators (12 Elevators)		$6,500,000	$6,500,000	Yes	40
		1812	Fire Protection and Detection		$57,000,000	$57,000,000	Yes	60
		1814	SWS Chemical Treatment Bldg		$8,500,000	$8,500,000	Yes	30
		1815	Insulation Unit 3 (conventional)		$11,000,000	$11,000,000	Yes	82
		1817	Metal Siding Pkg. 1 (Unit #3)		$24,800,000	$24,800,000	Yes	30
		1818	Membrane Roofing		$10,000,000	$10,000,000	Yes	30
		1819	Penetration Seals (Blockouts & Barriers)		$25,000,000	$25,000,000	Yes	30
		1820	Railroad Track installation & maintenance	$408,615	$408,615	$321,451	Yes	00
		1821	Fireproofing (Structural Steel)	$1,000,000	$1,000,000	$1,000,000	Yes	30
		1822	Annulus Seal - Waterproof Sealants	$2,000,000	$2,000,000	$2,000,000	Yes	30
		1837	Bulk Gas Storage Facility	$8,600,000	$8,600,000	$8,600,000	Yes	30
		1875	HVAC Fab & Installation Unit #4	$37,000,000	$37,000,000	$0	No	Excluded
		1876	HVAC Unit 3&4 Testing & Balance	$10,000,000	$10,000,000	$0	No	Excluded
		1877	MAB Support & NI-3	$217,182,398	$243,980,643	$115,038,934	Yes	41
		1878	Craft Support for MAB	$103,324,613	$133,539,443	$72,259,418	Yes	41
		1879	Jack & Bore underground drilling	$2,744,906	$2,744,906	$21,320	Yes	00
		1882	Machine Welders	$2,208,750	$2,208,750	$2,208,750	Yes	50.203
		1887	Electrical Services Subcontract	$0	$0	$0	No	Excluded
		2018	CWT Intake Structure - Stabilization	$5,000,000	$5,000,000	$5,000,000	Yes	00
		2092	Diesel Generator Bldg U3 & U4	$3,000,000	$3,000,000	$3,000,000	Yes	30
		2378	Coatings - Pkg 2	$20,000,000	$15,000,000	$15,000,000	Yes	81
		TBD	Above Ground Electrical Installation	$10,000,000	$10,000,000	$10,000,000	Yes	60
			Architechural Finishes	$250,000	$250,000	$250,000	Yes	30
			Final Paving	$3,000,000	$4,000,000	$4,000,000	Yes	00
			Insulation Unit 4 (conventional)	$10,000,000	$8,000,000	$8,000,000	Yes	82
			Metal Siding Pkg. 2 (Unit #4)	$11,000,000	$10,000,000	$10,000,000	Yes	30
			RWI Structure Work - Phase III	$3,000,000	$3,000,000	$3,000,000	Yes	40
			Yard Area Pools/Lining	$500,000	$500,000	$500,000	Yes	40
	Direct Total			**$1,129,327,894**	**$1,287,574,863**	**$632,667,314**		
	Indirect	1270	Non-Union - General Maintenance	$35,630,177	$38,970,629	$23,909,688	Yes	92-12
		1275	Non-Union - Site Prep & Environ. Maint.	$54,872,678	$51,448,277	$5,162,269	Yes	91-62
		1398	Geotechnical	$965,226	$965,225	$20,785	Yes	92-17
		1421	Concrete and Soils Testing	$56,369,171	$63,439,241	$26,931,599	Yes	92-17
		1459	Crane / Operator Rental - callout	$100,000	$100,000	$100,000	Yes	95-10
		1466	NDE Testing	$40,754,374	$37,086,086	$21,424,858	Yes	92-17
		1477	Productivity Survey Consultant	$284,785	$284,785	$3,123	Yes	92-17
		1620	Trash Hauling / Disposal for project	$4,091,667	$4,204,003	$2,483,846	Yes	92-12
		1629	Crane / Operator Rental - callout	$100,000	$100,000	$100,000	Yes	95-10
		1630	Crane / Operator Rental - callout	$100,000	$100,000	$68,161	Yes	95-10
		1631	Vacuum Trucks - Call out	$24,975,410	$25,497,371	$20,390,209	Yes	92-18
		1633	Potable Water System - Maintenance	$300,140	$295,840	$177,505	Yes	92-12
		1637	Small Tools and Consumables Supply	$56,120,519	$75,247,575	$69,790,858	Yes	95-20
		1801	Concrete Pump Trucks	$50,000	$50,000	$41,050	Yes	95-10
		1802	Concrete Pump Trucks	$5,515,219	$5,490,450	$3,325,915	Yes	95-10
		1803	Post Weld Heat Treatment	$10,684,401	$10,539,108	$9,318,368	Yes	92-15
		1804	Vacuum Trucks - Call out	$32,837,000	$32,837,000	$24,955,620	Yes	92-18
		1805	Vacuum Trucks - Call out	$21,270,403	$26,209,093	$15,875,578	Yes	92-18
		1806	Concrete and Soils Testing	$5,938,009	$6,127,956	$2,758,892	Yes	92-17
		1807	Special High Value tools	$26,437,222	$36,572,029	$21,445,446	Yes	95-20
		1808	Heavy Haul	$11,675,795	$15,255,071	$7,086,584	Yes	95-13
		1866	Construction Air Services - On site		$3,500,000	$3,500,000	Yes	95-20

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 202 of 231

Vogtle Subcontractors List

Comm. Mgnt	Dir/Ind	Contract Number	Description	WECTEC Provided EAC	Fluor Contracts Best Fcst at EAC	Fluor Contracts Best Fcst ETC (EAC - Vouchered)	Inserted into Fluor's Estimate	Account Inserted to;
		1885	Union - General Construction Services	$400,000	$0	$400,000	Yes	92-14
		1891	Consulting Service - FE - work package	$623,426	$623,426	$623,426	Yes	92-17
		2093	Weld Test Facility	$2,064,540	$2,064,539	$2,064,539	Yes	92-11
		2094	General Services & Staffing	$2,600,000	$3,600,000	$1,498,009	Yes	93-30
		2099	Plant Mapping / Technical Services	$810,060	$810,060	$340,772	Yes	92-12
		2101	Precision Measurement	$1,045,780	$1,045,780	$172,741	Yes	92-17
		2102	Scaffolding Mgmt / System		$0	$0	Yes	92-17
		TBD	Battery Testing	$200,000	$200,000	$200,000	Yes	92-15
			Traffic Singage - Upgrade to LED Lights			$600	Yes	92-17
			Concrete Spoils Crushing	$1,500,000	$1,800,000	$1,800,000	Yes	92-12
			Earth Work & Ersosion Control	$5,000,000	$5,000,000	$5,000,000	Yes	91-62
			NDE - Pkg 2	$13,000,000	$20,000,000	$20,000,000	Yes	92-17
			Surveying	$2,000,000	$2,000,000	$2,000,000	Yes	92-12
			Containment Vessel Rotational Dome Cover	$0	$140,000	$140,000	Yes	91-14
	Indirect Total			**$418,316,002**	**$471,603,544**	**$293,110,441**		
Fluor Total				$1,547,643,896	$1,759,178,407	$925,777,755		

Fluor Confidential, No Release without prior Project Director Approval.

ETC Cost Summary - VC Summer

Client: Westinghouse Electric Company
Project: VC Summer Nuclear Power Station - Units 2 & 3
Location: Jenkensville, SC
Project Description: Estimate to Complete Units 2 & 3

FLUOR

Estimate Date: 10/21/2016
File Print Date: 10/21/2016
Rev: Rev 0
Resp Estimator: Fluor

Acct	Description	Wage Rate	Unit Rate $$/Unit - UNO	Est Qty	Unit	Direct Hire Labor Site Hours	Direct Hire Labor ($US)	Contracts S/C Hrs	Contracts ($US)	Material Costs ($US)	Other Costs Unit Rate	Other Costs ($US)	Total ($US)
00	Site Prep, Roads, Excav, & Piling	$ 20.22	$ 46,251,381	1	LS	1,552,025	$ 31,381,940		$ 14,869,441	$ -			$ 46,251,381
10.000	Concrete	$ 27.32	20.7 /Mhrs/Cy	235,741	CY	4,878,978	$ 133,293,681		$ 2,774,128	$ -			$ 136,067,809
10.101	Concrete - Other	$ 27.32	4.36 /Mhrs/Cy	1	LS	1,028,965	$ 28,111,315		$ -	$ -			$ 28,111,315
20.000	Steel	$ 29.01	76.01 /Mhrs/Unit	30,182	TN	2,294,063	$ 66,550,760		$ -	$ -			$ 66,550,760
30.000	Buildings	$ 26.46	$ 59,441,372	1	LS	53,730	$ 1,421,702		$ 58,019,670	$ -			$ 59,441,372
30.101	HVAC Excluded - All HVAC Work is WEC Commercial Managed												$ -
40.000	Equipment	$ 27.93	$ 176,972,376	1	LS	2,410,992	$ 67,339,015		$ 109,633,361	$ -			$ 176,972,376
41.000	Modules	$ 28.61	6,037 /Mhrs/Unit	497	EA	3,000,582	$ 85,846,648		$ 5,245,158	$ -			$ 91,091,806
50.000	Piping	$ 26.23	5.16 /Mhrs/Unit	495,860	LF	2,559,205	$ 67,127,936		$ 10,000,000	$ -			$ 77,127,936
50.201	UG Pipe - Circ Water	$ 26.23	28.64 /Mhrs/Unit	5,487	LF	157,155	$ 4,122,178		$ -	$ -			$ 4,122,178
50.202	Pipe - Valves	$ 26.23	8.02 /Mhrs/Unit	19,526	EA	156,604	$ 4,107,714		$ 1,500,000	$ -			$ 5,607,714
50.203	Pipe - Othe NOTE: Average Wage Rate Reduced due to Seconded Lab	$ 25.37	$ 111,557,073.50	1	LS	3,644,135	$ 92,448,560		$ 19,108,513	$ -			$ 111,557,073
50.211	Pipe (UG)	$ 26.23	4.92 /Mhrs/Unit	163,111	LF	802,191	$ 21,041,461		$ 7,148,203	$ -			$ 28,189,664
50.212	Pipe (Non-Alloy AG)	$ 26.23	2.81 /Mhrs/Unit	5,861	LF	16,498	$ 432,750		$ -	$ -			$ 432,750
50.213	Pipe (High Energy Alloy AG)	$ 26.23	10.59 /Mhrs/Unit	7,789	LF	82,484	$ 2,163,559		$ -	$ -			$ 2,163,559
60.000	Electrical	$ 28.72	$ 7,172,888	1	LS	152,259	$ 4,372,888		$ 2,800,000	$ -			$ 7,172,888
60.201	Switchyard &/or Transmission	$ -	$ 18,000,000	1	LS	0	$ -		$ 18,000,000	$ -			$ 18,000,000
60.202	Electrical (Auxiliary Systems)	$ 28.72	$ 6,928,641.2	1	LS	51,528	$ 1,479,882		$ 5,448,759	$ -			$ 6,928,641
60.203	Electrical Equipment	$ 28.72	$ 51,701,147	1	LS	618,920	$ 17,775,371		$ 33,925,776	$ -			$ 51,701,147
60.204	Cable Tray (Excl. Supports, covers, etc.)	$ 28.72	1.17 /Mhrs/Unit	189,189	LF	221,122	$ 6,350,624		$ -	$ -			$ 6,350,624
60.205	Conduit (Excl. Supports/clamps, etc)	$ 28.72	.73 /Mhrs/Unit	1,541,165	LF	1,117,698	$ 32,100,273		$ -	$ -			$ 32,100,273
60.206	Wire & Cable (Incl Terms)	$ 28.72	.11 /Mhrs/Unit	10,059,515	LF	1,136,569	$ 32,642,263		$ 85,923	$ -			$ 32,728,186
60.207	Grounding	$ 28.72	.47 /Mhrs/Unit	800,744	LF	378,596	$ 10,873,284		$ 750,000	$ -			$ 11,623,284
60.208	Other	$ 28.72	$ 91,591,927	1	LS	3,189,134	$ 91,591,927		$ -	$ -			$ 91,591,927
70.000	Control Systems	$ 25.89	$ 3,350,790	1	LS	129,424	$ 3,350,790		$ -	$ -			$ 3,350,790
70.101	Instruments	$ 25.89	25.93 /Mhrs/Unit	4,454	EA	115,472	$ 2,989,564		$ -	$ -			$ 2,989,564
70.301	Instrument Bulks	$ 25.89	$ 5,091,238	1	LS	196,649	$ 5,091,238		$ -	$ -			$ 5,091,238
81.000	Paint	$ -	. /Mhrs/Unit	5,168,619	SFCA	0	$ -		$ 55,625,362	$ -			$ 55,625,362
82.000	Insulation	$ -	. /Mhrs/Unit	174,777	LF	0	$ -		$ 20,000,000	$ -			$ 20,000,000
83.000	Scaffolding (Included with Indirects)	$ -	0.00%	0	hrs	0	$ -		$ -	$ -			$ -
	Premium Paid over Day S.T. ($1.00 for 2nd Shift + OT)	$ 3.96	14.58%		Oth		$ 118,703,362						$ 118,703,362
		$ 27.18											
	Subtotal: Direct Field Costs	**$ 31.15**				**29,944,977**	**$ 932,710,687**	**0**	**$ 364,934,294**			**$ -**	**$ 1,297,644,981**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 203 of 231

Fluor Confidential, No Release without prior Project Director Approval.

ETC Cost Summary - VC Summer

Client: Westinghouse Electric Company
Project: VC Summer Nuclear Power Station - Units 2 & 3
Location: Jenkensville, SC
Project Description: Estimate to Complete Units 2 & 3

FLUOR

Estimate Date: 10/21/2016
File Print Date: 10/21/2016
Rev: Rev 0
Resp Estimator: Fluor

Acct	Description	Wage Rate	Unit Rate $$/Unit - UNO	Est Qty	Unit	Direct Hire Labor Site Hours	Direct Hire Labor ($US)	Contracts S/C Hrs	Contracts ($US)	Material Costs ($US)	Other Costs Unit Rate	Other Costs ($US)	Total ($US)
	: Indirect Field Costs												
91-00	: Temp Construction Buildings & Facilities	$ 26.24				2,204,831	$57,852,000		$6,023,378	$44,598,500		$ 9,298,000	$ 117,771,878
92-00	: Construction Services	$ 32.53				11,971,085	$389,415,762		$47,472,997	$123,917,922		$ 18,480,450	$ 579,287,131
93-00	: Field Staff (incl. policy costs and overhead)	$ 74.38	Base Wages, B&B,, Overheads			13,847,143	$ 1,030,015,120					$ 217,788,000	$ 1,247,803,120
94-00	: Craft Payroll Burdens & Benefits + Per Diem					0	$16,178,886		$0	$0		$ 828,417,250	$ 844,596,136
95-00	: Constr Equipment & Cranes & Heavy Haul	$ 27.12				4,906,035	$133,039,500		$2,705,923	$186,362,400		$ 66,317,971	$ 388,425,794
95-00	: Constr Small Tools, Consumables	$ -				0	$0		$6,779,452	$10,063,300		$ 3,025,367	$ 19,868,119
96-00	Insurance, Permits, Sales Tax, Misc, etc.	$ -				0	$0		$0	$0		$ -	$ -
96-00	: Misc. Field Indirects					0	$0		$0	$0		$ 357,300	$ 357,300
	: Subtotal: Indirect Field Costs					**32,929,094**	**$ 1,626,501,268**		**$ 62,981,750**			**$ 1,143,684,338**	**$ 3,198,109,478**
	: Construction / Pre-Operational Testing & Commissioning												
	: Construction Testing(Phase 1) - Craft	$ -	Included within Unit Man-Hour Rates in Directs			0	$ -		$ -			$ -	$ -
	: Construction Testing(Phase 1) - Staff & Other Costs	$ -	Included within Acct. 93-00 Above			0	$ -		$ -			$ -	$ -
	: Const Testing (Phase 2) Pre-Op Testing(Phase 3) - Craft	$ 41.14	Average All-in Labor Rate			413,000	$ 16,989,384		$ -		$.91 /Mhr	$ 375,816	$ 17,365,200
	: Const Testing (Phase 2) Pre-Op Testing(Phase 3) - Staff & Other C	$ 112.50	All in Labor Rate Except Policy & Per Diem)			88,365	$ 9,941,003		$ -		$55.61 /Mhr	$ 4,914,157	$ 14,855,160
	: Start Up Testing / Commissioning - Craft Excluded	$ -				0	$ -		$ -			$ -	Excluded
	: Start Up Testing / Commissioning - Staff & Other Excluded	$ -				0	$ -		$ -			$ -	Excluded
	: Subtotal: Constr. / Pre-Operational Testing					**501,365**	**$ 26,930,387**	**0**	**$ -**			**$ 5,289,973.00**	**$ 32,220,360**
	: Home Office Costs												
	: Home Office Support	$ -				0	$ -		$ -			$ -	$ -
	: IPMO Support (50% Allocation to Each Site)	$ 140.31	Direct Labor - Base & Burdens			72,435	$ 10,163,100		$ -		$13.44 /Mhr	$ 973,526	$ 11,136,626
	: Fluor Engineering	$ -				0	$ -		$ -			$ -	Excluded
	: DEC Engineering	$ -				0	$ -		$ -			$ -	Excluded
	: Bond / Bank Guarantee / LOC	$ -				0	$ -		$ -			$ -	Excluded
	: Subtotal: Home Office Costs					**72,435**	**$ 10,163,100**		**$ -**			**$ 973,526**	**$ 11,136,626**
	: Total: Field & Home Office Costs					**63,447,871**	**$ 2,596,305,442**		**$ 427,916,044**			**$ 1,149,947,837**	**$ 4,539,111,445**
	: Other Project Costs												
	: Escalation											Excluded	Excluded
	: Contingency - Estimate (Estimated and Included by Wec)											Excluded	Excluded
	: Contingency - Event (BRMF) - (Estimated and Included by Wec)											Excluded	Excluded
	: Contingency - Schedule - (Estimated and Included by Wec)											Excluded	Excluded
	: Warranty - (Estimated and Included by Wec)											Excluded	Excluded
	: Extended Warranty - (Estimated and Incuded by Wec)											Excluded	Excluded
	: Business Line Overhead (Included in Above Labor Line items)											Included Above	Incuded Above
	: G&A / Fee											$ 200,000,000	$ 200,000,000
	: FLUOR TOTAL					**63,447,871**	**$ 2,596,305,442**		**$ 427,916,044**			**$ 1,349,947,837**	**$ 4,739,111,445**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 204 of 231

Fluor Confidential, No Release without prior Project Director Approval.

ETC Cost Summary - Plant Vogtle

Client: Westinghouse Electric Company
Project: Vogtle Nuclear Power Station - Units 3 & 4
Location: Waynesboro, GA
Project Description: Estimate to Complete Units 3 & 4

FLUOR

Estimate Date: 10/21/2016
File Print Date: 10/21/2016
Rev: Rev 0
Resp Estimator: Fluor

Acct	Description	Wage Rate	Unit Rate $$/Unit - UNO	Est Qty	Unit	Direct Hire Labor Site Hours	Direct Hire Labor ($US)	Contracts S/C Hrs	Contracts ($US)	Material Costs ($US)	Other Costs Unit Rate	Other Costs ($US)	Total ($US)
00	Site Prep, Roads, Excav, & Piling	$ 18.69	$ 87,278,481	1	LS	1,048,509	$ 19,596,642		$ 67,681,839	$ -			$ 87,278,481
10.000	Concrete	$ 29.51	31.69 /Mhrs/Cy	174,815	CY	5,540,640	$ 163,504,286		$ 32,333,309	$ -			$ 195,837,595
10.101	Concrete - Other	$ 29.51	5.92 /Mhrs/Cy	1	LS	1,035,555	$ 30,559,218		$ -	$ -			$ 30,559,218
20.000	Steel	$ 28.97	70.07 /Mhrs/Unit	31,044	TN	2,175,318	$ 63,018,958		$ -	$ -			$ 63,018,958
30.000	Buildings	$ 26.58	$ 98,129,556	1	LS	20,170	$ 536,130		$ 97,593,426	$ -			$ 98,129,556
30.101	HVAC Excluded - All HVAC Work is WEC Commercial Managed												$ -
40.000	Equipment	$ 29.82	$ 120,002,817	1	LS	2,131,545	$ 63,562,662		$ 56,440,155	$ -			$ 120,002,817
41.000	Modules NOTE: Average Wage Rate Reduced due to Seconded Lab	$ 23.90	6,331 /Mhrs/Unit	495	EA	3,133,636	$ 74,897,410		$ 187,298,352	$ -			$ 262,195,762
50.000	Piping	$ 37.14	5.39 /Mhrs/Unit	490,472	LF	2,644,368	$ 98,211,834		$ -	$ -			$ 98,211,834
50.201	UG Pipe - Circ Water	$ 37.14	29.54 /Mhrs/Unit	5,487	LF	162,120	$ 6,021,139		$ -	$ -			$ 6,021,139
50.202	Pipe - Valves	$ 37.14	9.7 /Mhrs/Unit	18,008	EA	174,756	$ 6,490,447		$ -	$ -			$ 6,490,447
50.203	Pipe - Other Items	$ 37.14	$ 155,676,526.25	1	LS	4,132,143	$ 153,467,776		$ 2,208,750	$ -			$ 155,676,526
50.211	Pipe (UG)	$ 37.14	6.93 /Mhrs/Unit	155,375	LF	1,076,501	$ 39,981,257		$ 3,283,864	$ -			$ 43,265,121
50.212	Pipe (Non-Alloy AG)	$ -	. /Mhrs/Unit	0	LF	0	$ -		$ -	$ -			$ -
50.213	Pipe (High Energy Alloy AG)	$ 37.14	10.92 /Mhrs/Unit	7,789	LF	85,030	$ 3,158,012		$ -	$ -			$ 3,158,012
60.000	Electrical	$ 28.56	$ 4,792,657	1	LS	167,810	$ 4,792,657		$ -	$ -			$ 4,792,657
60.201	Switchyard &/or Transmission	$ -	$ 17,392,820	1	LS	0	$ -		$ 17,392,820	$ -			$ 17,392,820
60.202	Electrical (Auxiliary Systems)	$ 28.56	$ 781,017	1	LS	27,347	$ 781,017		$ -	$ -			$ 781,017
60.203	Electrical Equipment	$ 28.56	$ 22,859,084	1	LS	578,914	$ 16,533,784		$ 6,325,300	$ -			$ 22,859,084
60.204	Cable Tray (Excl. Supports, covers, etc.)	$ 28.56	1.15 /Mhrs/Unit	171,433	LF	196,663	$ 5,616,707		$ -	$ -			$ 5,616,707
60.205	Conduit (Excl. Supports/clamps, etc)	$ 28.56	.81 /Mhrs/Unit	1,030,315	LF	830,983	$ 23,732,877		$ -	$ -			$ 23,732,877
60.206	Wire & Cable (Incl Terms)	$ 28.56	.12 /Mhrs/Unit	9,197,777	LF	1,146,928	$ 32,756,253		$ 67,000,000	$ -			$ 99,756,253
60.207	Grounding	$ 28.56	.38 /Mhrs/Unit	1,852,673	LF	710,382	$ 20,288,508		$ 750,000	$ -			$ 21,038,508
60.208	Other	$ 28.56	$ 95,333,254	1	LS	3,285,478	$ 93,833,254		$ 1,500,000	$ -			$ 95,333,254
70.000	Control Systems	$ 36.34	$ 4,510,440	1	LS	124,118	$ 4,510,440		$ -	$ -			$ 4,510,440
70.101	Instruments	$ 36.34	27.04 /Mhrs/Unit	4,900	EA	132,498	$ 4,814,984		$ -	$ -			$ 4,814,984
70.301	Instrument Bulks	$ 36.34	$ 7,800,976	1	LS	214,666	$ 7,800,976		$ -	$ -			$ 7,800,976
81.000	Paint	$ 25.04	.03 /Mhrs/Unit	5,271,680	SFCA	161,461	$ 4,042,989		$ 73,859,499	$ -			$ 77,902,488
82.000	Insulation	$ -	. /Mhrs/Unit	177,098	LF	0	$ -		$ 19,000,000	$ -			$ 19,000,000
83.000	Scaffolding (Included with Indirects)	$ -	0.00%	0	hrs	0	$ -	0	$ -	$ -			$ -
	Premium Paid over Day S.T. ($0.25 for 2nd Shift + OT)	$ 5.00	16.43%		Oth		$ 154,816,266						$ 154,816,266
		$ 30.46											
	Subtotal: Direct Field Costs	**$ 35.47**				**30,937,540**	**$ 1,097,326,481**	**0**	**$ 632,667,314**			**$ -**	**$ 1,729,993,795**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 205 of 231

Fluor Confidential, No Release without prior Project Director Approval.

ETC Cost Summary - Plant Vogtle

Client: Westinghouse Electric Company
Project: Vogtle Nuclear Power Station - Units 3 & 4
Location: Waynesboro, GA
Project Description: Estimate to Complete Units 3 & 4

FLUOR

Estimate Date: 10/21/2016
File Print Date: 10/21/2016
Rev: Rev 0
Resp Estimator: Fluor

Acct	Description	Wage Rate	Unit Rate $$/Unit - UNO	Est Qty	Unit	Direct Hire Labor Site Hours	Direct Hire Labor ($US)	Contracts S/C Hrs	Contracts ($US)	Material Costs ($US)	Other Costs Unit Rate	Other Costs ($US)	Total ($US)
	Indirect Field Costs												
91-00	Temp Construction Buildings & Facilities					2,422,377	$59,854,700		$12,767,408	$29,335,700		$ 8,968,226	$ 110,926,034
92-00	Construction Services					10,041,545	$343,410,100		$173,387,010	$85,766,145		$ 12,356,187	$ 614,919,442
93-00	Field Staff (incl. policy costs and overhead)					13,450,219	$ 978,451,720		$1,498,009	$0		$ 327,791,696	$ 1,307,741,425
94-00	Craft Payroll Burdens & Benefits + Per Diem					0	$0		$0	$0		$ 891,325,300	$ 891,325,300
95-00	Constr Equipment & Cranes & Heavy Haul					5,063,962	$129,693,700		$98,371,430	$171,665,900		$ 58,417,050	$ 458,148,080
95-00	Constr Small Tools, Consumables					0	$0		$7,086,584	$0		$ -	$ 7,086,584
96-00	Insurance, Permits, Sales Tax, Misc, etc.					0	$0		$0	$0		$ -	$ -
96-00	Misc. Field Indirects					0	$0		$0	$0		$ 15,493,300	$ 15,493,300
	Subtotal: Indirect Field Costs					**30,978,103**	**$ 1,511,410,220**		**$ 293,110,441**			**$ 1,314,351,759**	**$ 3,405,640,165**
	Construction / Pre-Operational Testing & Commissioning												
	Construction Testing(Phase 1) - Craft	$ -	Included within Unit Man-Hour Rates in Directs			0	$ -		$ -			$ -	$ -
	Construction Testing(Phase 1) - Staff & Other Costs	$ -	Included within Acct. 93-00 Above			0	$ -		$ -			$ -	$ -
	Const Testing (Phase 2) Pre-Op Testing(Phase 3) - Craft	$ 47.90	Average All-in Labor Rate			413,000	$ 19,784,384		$ -		$.91 /Mhr	$ 375,816	$ 20,160,200
	Const Testing (Phase 2) Pre-Op Testing(Phase 3) - Staff & Other C	$ 112.50	All in Labor Rate Except Policy & Per Diem)			88,365	$ 9,941,003		$ -		$55.61 /Mhr	$ 4,914,157	$ 14,855,160
	Start Up Testing / Commissioning - Craft Excluded	$ -				0	$ -		$ -			$ -	Excluded
	Start Up Testing / Commissioning - Staff & Other Excluded	$ -				0	$ -		$ -			$ -	Excluded
	Subtotal: Constr. / Pre-Operational Testing					**501,365**	**$ 29,725,387**	**0**	**$ -**			**$ 5,289,973.00**	**$ 35,015,360**
	Home Office Costs												
	Home Office Support	$ -				0	$ -		$ -			$ -	$ -
	IPMO Support (50% Allocation to Each Site)	$ 140.31	Direct Labor - Base & Burdens			72,435	$ 10,163,100		$ -		$13.44 /Mhr	$ 973,526	$ 11,136,626
	Fluor Engineering	$ -				0	$ -		$ -			$ -	Excluded
	DEC Engineering	$ -				0	$ -		$ -			$ -	Excluded
	Bond / Bank Guarantee / LOC	$ -				0	$ -		$ -			$ -	Excluded
	Subtotal: Home Office Costs					**72,435**	**$ 10,163,100**		**$ -**			**$ 973,526**	**$ 11,136,626**
	Total: Field & Home Office Costs					**62,489,443**	**$ 2,648,625,189**		**$ 925,777,755**			**$ 1,320,615,259**	**$ 5,181,785,947**
	Other Project Costs												
	Escalation											Excluded	Excluded
	Contingency - Estimate (Estimated and Included by Wec)											Excluded	Excluded
	Contingency - Event (BRMF) - (Estimated and Included by Wec)											Excluded	Excluded
	Contingency - Schedule - (Estimated and Included by Wec)											Excluded	Excluded
	Warranty - (Estimated and Included by Wec)											Excluded	Excluded
	Extended Warranty - (Estimated and Incuded by Wec)											Excluded	Excluded
	Business Line Overhead (Included in Above Labor Line items)											Included Above	Incuded Above
	G&A / Fee											$ 100,000,000	$ 100,000,000
	FLUOR TOTAL					**62,489,443**	**$ 2,648,625,189**		**$ 925,777,755**			**$ 1,420,615,259**	**$ 5,281,785,947**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 206 of 231

ETC Estimate - By Bldg and Account

Direct Craft ManhHour Summary - VC Summer

VC Summer	0 Acct	1 Acct	2 Acct	3 Acct	4 Acct	Modules	5 Acct	6 Acct	7 Acct	Coatings 81 Acct	Insul 82 Acct	Total
Containment (NI)		1,051,816	112,419	2,661	903,005	921,313	982,297	1,360,591	146,840	-	-	**5,480,942**
Auxiliary Bldg (NI)		1,319,173	209,355	6,965	138,327	859,805	1,032,378	1,557,599	97,605	-	-	**5,221,207**
Shield Bldg (NI)		579,893	546,352	-	-	0	-	1,316	-	-	-	**1,127,561**
Turbine Bldg (TI)		1,017,281	615,594	22,511	1,317,059	1,064,047	3,520,883	1,460,225	142,181	-	-	**9,159,781**
Annex Bldg (OBS)		883,210	350,587	13,666	15,451	49,991	739,344	1,078,140	29,446	-	-	**3,159,835**
Radwaste Bldg (OBS)		70,447	50,677	4,973	3,513		115,727	41,918	4,546	-	-	**291,802**
Diesel Generator Bldg (OBS)		30,931	29,569	2,954	8,291		96,302	73,206	10,394	-	-	**251,647**
MAB											-	**0**
Standard Plant	-	4,952,752	1,914,553	53,730	2,385,646	2,895,156	6,486,932	5,572,995	431,012	-	-	**24,692,775**
Site	1,548,625	585,897	353,437	0	9,706		881,748	1,130,117	5,456	-	-	**4,514,986**
Standard Plant Yard	3,399.57	369,294	26,073	0	12,239		48,963	98,334	3,321	-	-	**561,624**
BOP	1,552,025	955,191	379,510	-	21,945	-	930,711	1,228,451	8,777	-	-	**5,076,610**
To Be Determined					3,400	105,426	629	60,411	1,756.00			**171,622**
TBD - To Be Determined								3,971				**3,971**
Grand Total	**1,552,025**	**5,907,943**	**2,294,063**	**53,730**	**2,410,991**	**3,000,582**	**7,418,272**	**6,865,828**	**441,545**	**0**	**0**	**29,944,978**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 207 of 231

ETC Estimate - By Bldg and Account

Direct Craft ManhHour Summary - Plant Vogtle

Plant Vogtle	0 Acct	1 Acct	2 Acct	3 Acct	4 Acct	Modules	5 Acct	6 Acct	7 Acct	Coatings 81 Acct	Insul 82 Acct	Total
Containment (NI)		1,425,896	105,328	1,313	931,885	1,081,145	1,000,688	1,424,312	150,166		-	**6,120,733**
Auxiliary Bldg (NI)		1,346,623	245,596	8,716	165,791	1,592,852	1,439,834	1,688,518	98,403	45,776	-	**6,632,109**
Shield Bldg (NI)		451,613	562,888	-	-	-	-	1,326		41,853	-	**1,057,680**
Turbine Bldg (TI)		882,353	618,488	2,559	956,469	322,749	3,612,594	1,471,537	145,300	16,951	-	**8,029,000**
Annex Bldg (OBS)		804,347	290,356	5,755	16,074	49,697	734,850	1,011,096	29,322	44,315	-	**2,985,813**
Radwaste Bldg (OBS)		72,623	51,877	-	3,628		115,727	43,310	4,452	6,444	-	**298,062**
Diesel Generator Bldg (OBS)		31,927	30,287	618	8,622		110,190	76,254	10,388	1,919	-	**270,205**
MAB												
Standard Plant	**-**	**5,015,382**	**1,904,820**	**18,961**	**2,082,469**	**3,046,443**	**7,013,882**	**5,716,353**	**438,031**	**157,258**	**-**	**25,393,600**
Site	1,042,541	1,088,328	235,932	1,210	33,755		1,197,934	1,080,552	28,288	4,204	-	**4,712,745**
Standard Plant Yard	5,968.33	472,484	34,566	0	12,176		62,485	83,956	3,156	-		**674,791**
BOP	**1,048,509**	**1,560,812**	**270,498**	**1,210**	**45,931**	**0**	**1,260,419**	**1,164,508**	**31,444**	**4,204**	**0**	**5,387,536**
To Be Determined				0	3,145	87,194	616	63,643	1,808.00			**156,406**
Grand Total	**1,048,509**	**6,576,195**	**2,175,318**	**20,171**	**2,131,545**	**3,133,637**	**8,274,918**	**6,944,504**	**471,283**	**161,462**	**0**	**30,937,542**

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 208 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 209 of 231

printed: 10/21/2016

Field Non Manual Summary - VC Summer

FLUOR CONFIDENTIAL

VC Summer Staffing Plan

		Total Hours	Base Labor + Burdens	Overheads	Disbursements	Business Expense Meals/Car/Hotel	Policy Expense	Fee	Estimate Total
Project Management	Plan	85,405	$ 14,056,800	$ 268,300	$ 167,700	$ 213,500	$ 1,397,000	$ 644,100	$ 16,747,400
	Fcst.	85,405	$ 14,056,800	$ 268,300	$ 167,700	$ 213,500	$ 1,397,000	$ 644,100	$ 16,747,400
	Act.	0							
Construction Management	Plan	515,700	$58,316,000	$1,941,000	$1,213,100	$515,700	$5,103,500	$2,683,600	$69,772,900
	Fcst.	515,700	$58,316,000	$1,941,000	$1,213,100	$515,700	$5,103,500	$2,683,600	$69,772,900
	Act.	0							
Construction	Plan	1,808,793	$151,662,220	$7,235,170	$4,521,980	$1,539,330	$21,910,820	$7,474,780	$194,344,300
	Fcst.	1,808,793	$151,662,220	$7,235,170	$4,521,980	$1,539,330	$21,910,820	$7,474,780	$194,344,300
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Field Engineering	Plan	5,988,180	$448,857,100	$23,952,700	$14,970,500	$5,988,200	$26,052,300	$20,792,800	$540,613,500
	Fcst.	5,988,180	$448,857,100	$23,952,700	$14,970,500	$5,988,200	$26,052,300	$20,792,800	$540,613,500
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Project Administration	Plan	100,088	$4,844,400	$400,400	$250,200	$100,100	$454,400	$242,000	$6,291,400
	Fcst.	100,088	$4,844,400	$400,400	$250,200	$100,100	$454,400	$242,000	$6,291,400
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Communications	Plan	6,555	$345,400	$26,200	$16,400	$6,600	$120,100	$20,600	$535,300
	Fcst.	6,555	$345,400	$26,200	$16,400	$6,600	$120,100	$20,600	$535,300
	Act.	0	$0	$0	$0	$0	$0	$0	$0
PBS - Finance	Plan	187,589	$12,999,800	$711,800	$444,800	$187,600	$2,101,600	$657,800	$17,103,400
	Fcst.	187,589	$12,999,800	$711,800	$444,800	$187,600	$2,101,600	$657,800	$17,103,400
	Act.	0	$0	$0	$0	$0	$0	$0	$0
HR / IR	Plan	552,932	$36,249,100	$2,173,100	$1,358,200	$552,900	$6,465,500	$1,872,000	$48,670,800
	Fcst.	552,932	$36,249,100	$2,173,100	$1,358,200	$552,900	$6,465,500	$1,872,000	$48,670,800
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Project Controls	Plan	647,385	$54,535,200	$2,589,500	$1,618,500	$647,400	$7,221,200	$2,664,500	$69,276,300
	Fcst.	647,385	$54,535,200	$2,589,500	$1,618,500	$647,400	$7,221,200	$2,664,500	$69,276,300
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Estimating	Plan	38,855	$4,182,700	$155,400	$97,100	$38,900	$676,700	$206,000	$5,356,800
	Fcst.	38,855	$4,182,700	$155,400	$97,100	$38,900	$676,700	$206,000	$5,356,800
	Act.	0	$0	$0	$0	$0	$0	$0	$0
IT	Plan	495,900	$23,876,600	$1,984,400	$1,240,300	$496,100	$5,459,900	$1,322,300	$34,379,500
	Fcst.	495,900	$23,876,600	$1,984,400	$1,240,300	$496,100	$5,459,900	$1,322,300	$34,379,500
	Act.	0	$0	$0	$0	$0	$0	$0	$0
HSE	Plan	1,192,308	$78,399,700	$4,769,200	$2,980,800	$1,192,300	$13,093,900	$4,017,400	$104,453,300
	Fcst.	1,192,308	$78,399,700	$4,769,200	$2,980,800	$1,192,300	$13,093,900	$4,017,400	$104,453,300
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Quality	Plan	1,870,840	$127,879,500	$7,483,400	$4,677,100	$1,870,800	$14,047,700	$6,238,300	$162,196,800
	Fcst.	1,870,840	$127,879,500	$7,483,400	$4,677,100	$1,870,800	$14,047,700	$6,238,300	$162,196,800
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Contracts Management	Plan	329,115	$30,463,400	$1,316,500	$822,800	$329,100	$2,954,700	$1,435,500	$37,321,900
	Fcst.	329,115	$30,463,400	$1,316,500	$822,800	$329,100	$2,954,700	$1,435,500	$37,321,900
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Procurement	Plan	584,925	$39,613,800	$2,339,700	$1,462,300	$584,900	$4,904,700	$1,956,200	$50,861,700
	Fcst.	584,925	$39,613,800	$2,339,700	$1,462,300	$584,900	$4,904,700	$1,956,200	$50,861,700
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Regulatory Affairs	Plan	23,805	$2,246,100	$95,200	$59,500	$23,800	$452,400	$115,100	$2,992,100
	Fcst.	23,805	$2,246,100	$95,200	$59,500	$23,800	$452,400	$115,100	$2,992,100
	Act.	0	$0	$0	$0	$0	$0	$0	$0
Ops Readiness	Plan	161,570	$11,645,100	$646,300	$403,900	$161,600	$1,721,300	$583,100	$15,161,300
	Fcst.	161,570	$11,645,100	$646,300	$403,900	$161,600	$1,721,300	$583,100	$15,161,300
	Act.	0	$0	$0	$0	$0	$0	$0	$0
TOTAL STAFF FTE	Plan	**67,799**							
	Fcst.	**67,799**							
	Act.	**0**							
TOTAL STAFF HOURS	Plan	**14,589,943**							
	Fcst.	**14,589,943**							
	Act.	**0**							
TOTAL STAFF COST	Plan	**$1,376,080,293**	$1,100,172,920	$58,088,270	$36,305,180	$14,448,830	114,137,720	52,926,080	1,376,078,700
	Fcst.	**$1,376,080,293**	$1,100,172,920	$58,088,270	$36,305,180	$14,448,830	114,137,720	52,926,080	1,376,078,700
	Act.	**$0**							
TOTAL STAFF COST	Plan	**$1,376,080,293**	$1,100,172,920	$58,088,270	$36,305,180	$14,448,830	$114,137,720	$52,926,080	$1,376,078,700
	Fcst.	**$1,376,080,293**	$1,100,172,920	$58,088,270	$36,305,180	$14,448,830	$114,137,720	$52,926,080	$1,376,078,700
	Fcst.	**$0**	$0	$0	$0	$0	$0	$0	$0
TOTAL SECONDED	Plan	742,800	$70,157,800	$2,970,800	$1,856,800	$0	$364,400	$3,014,100	$78,364,000
	Fcst.	742,800	$70,157,800	$2,970,800	$1,856,800	$0	$364,400	$3,014,100	$78,364,000
	Act.								
TOTAL STAFF MINUS SECONDED	Plan	13,847,143	$1,030,015,120	$55,117,470	$34,448,380	$14,448,830	$113,773,320		$1,247,803,120
	Fcst.	13,847,143	$1,030,015,120	$55,117,470	$34,448,380	$14,448,830	$113,773,320		$1,247,803,120
	Act.								

Field Non Manual Summary - Plant Vogtle

Plant Vogtle Unit 3 & 4

14-Oct-16

Total Fluor Self Perform Value

Department	Total MH		Total Dollars	Percent of Total MH		All-In Avg $/MH
CM	2,946,060	$	298,818,909	22%	$	101.43
CO	9,264	$	1,118,257	0%	$	120.71
Contracts	132,834	$	12,777,302	1%	$	96.19
FE	5,160,239	$	519,120,054	38%	$	100.60
HR	252,762	$	24,765,621	2%	$	97.98
HSE	826,618	$	76,892,006	6%	$	93.02
IT	27,982	$	2,892,499	0%	$	103.37
PBS	153,829	$	11,154,141	1%	$	72.51
PC	699,022	$	72,551,493	5%	$	103.79
PR	1,145,438	$	89,848,157	9%	$	78.44
QC	1,986,659	$	184,600,334	15%	$	92.92
RA	109,512	$	11,704,643	1%	$	106.88
	13,450,219	**$**	**1,306,243,416**	**100%**	**$**	**97.12**

Note: All-In Avg $/MH rate does not include fee.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 210 of 231

Field Non Manual Summary - Plant Vogtle

RECAP W/O WEC	Base Labor + Burdens	Overheads	Disbursements	Business Expense Meals/Car/Hotel	Policy Expense	Estimate Total	Pre Hours	Post Hours	Total Hours
CM	$ 223,892,445	$ 11,755,280	$ 7,375,275	$ 2,946,060	$ 52,849,849	$ 298,818,909	12,010	2,934,050	2,946,060
CO	$ 825,300	$ 42,256	$ 28,035	$ 9,264	$ 213,402	$ 1,118,257	650	8,614	9,264
Contracts	$ 10,078,812	$ 536,536	$ 336,960	$ 132,834	$ 1,692,160	$ 12,777,302	650	132,184	132,834
FE	$ 385,930,477	$ 20,652,156	$ 12,911,098	$ 5,160,239	$ 94,466,085	$ 519,120,054	1,400	5,158,839	5,160,239
HR	$ 19,272,517	$ 1,027,528	$ 659,780	$ 252,762	$ 3,553,034	$ 24,765,621	7,270	245,492	252,762
HSE	$ 58,284,357	$ 3,317,912	$ 2,077,270	$ 826,618	$ 12,385,849	$ 76,892,006	1,430	825,188	826,618
IT	$ 2,254,821	$ 117,128	$ 74,830	$ 27,982	$ 417,738	$ 2,892,499	650	27,332	27,982
PBS	$ 8,944,329	$ 622,596	$ 391,398	$ 153,829	$ 1,041,990	$ 11,154,141	910	152,919	153,829
PC	$ 56,269,258	$ 2,824,888	$ 1,774,555	$ 699,022	$ 10,983,770	$ 72,551,493	3,600	695,422	699,022
PR	$ 70,238,679	$ 4,626,872	$ 2,918,320	$ 1,145,438	$ 10,918,848	$ 89,848,157	10,850	1,134,588	1,145,438
QC	$ 133,136,505	$ 7,956,556	$ 4,975,948	$ 1,986,659	$ 36,544,667	$ 184,600,334	1,240	1,985,419	1,986,659
RA	$ 9,324,220	$ 401,568	$ 252,005	$ 109,512	$ 1,617,338	$ 11,704,643	650	108,862	109,512
Totals	$ 978,451,720	$ 53,881,276	$ 33,775,473	$ 13,450,219	$ 226,684,728	$ 1,306,243,416	41,310	13,408,909	13,450,219

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 211 of 231

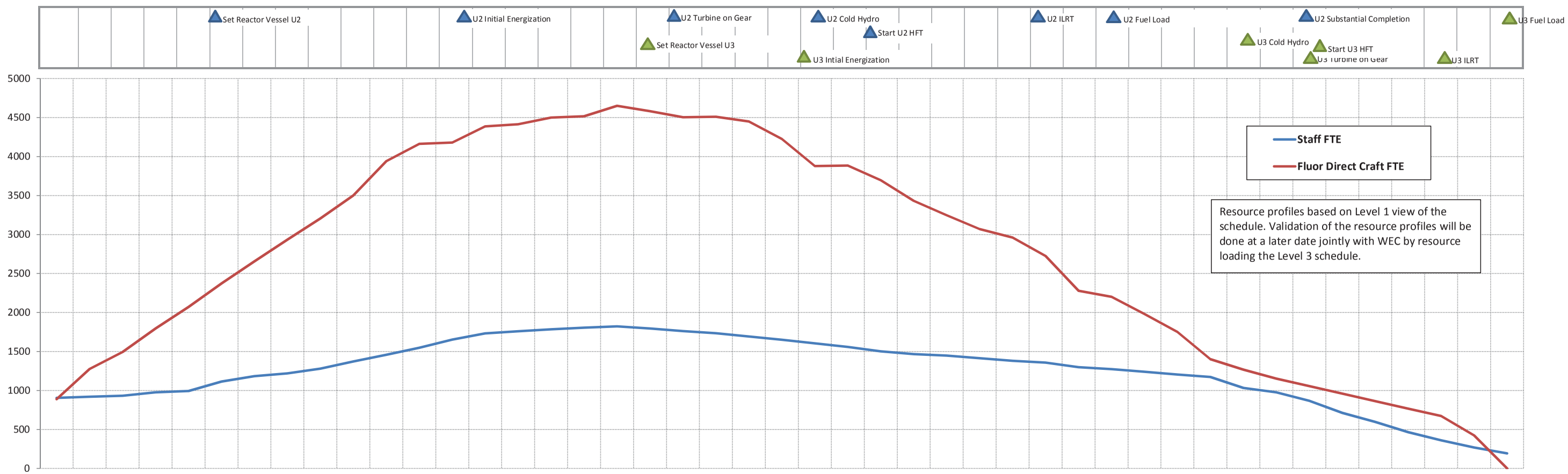
Resource Curve - Fluor Direct Craft and FNM Staff

FLUOR

Project: S3MM

Status: October 21 2016

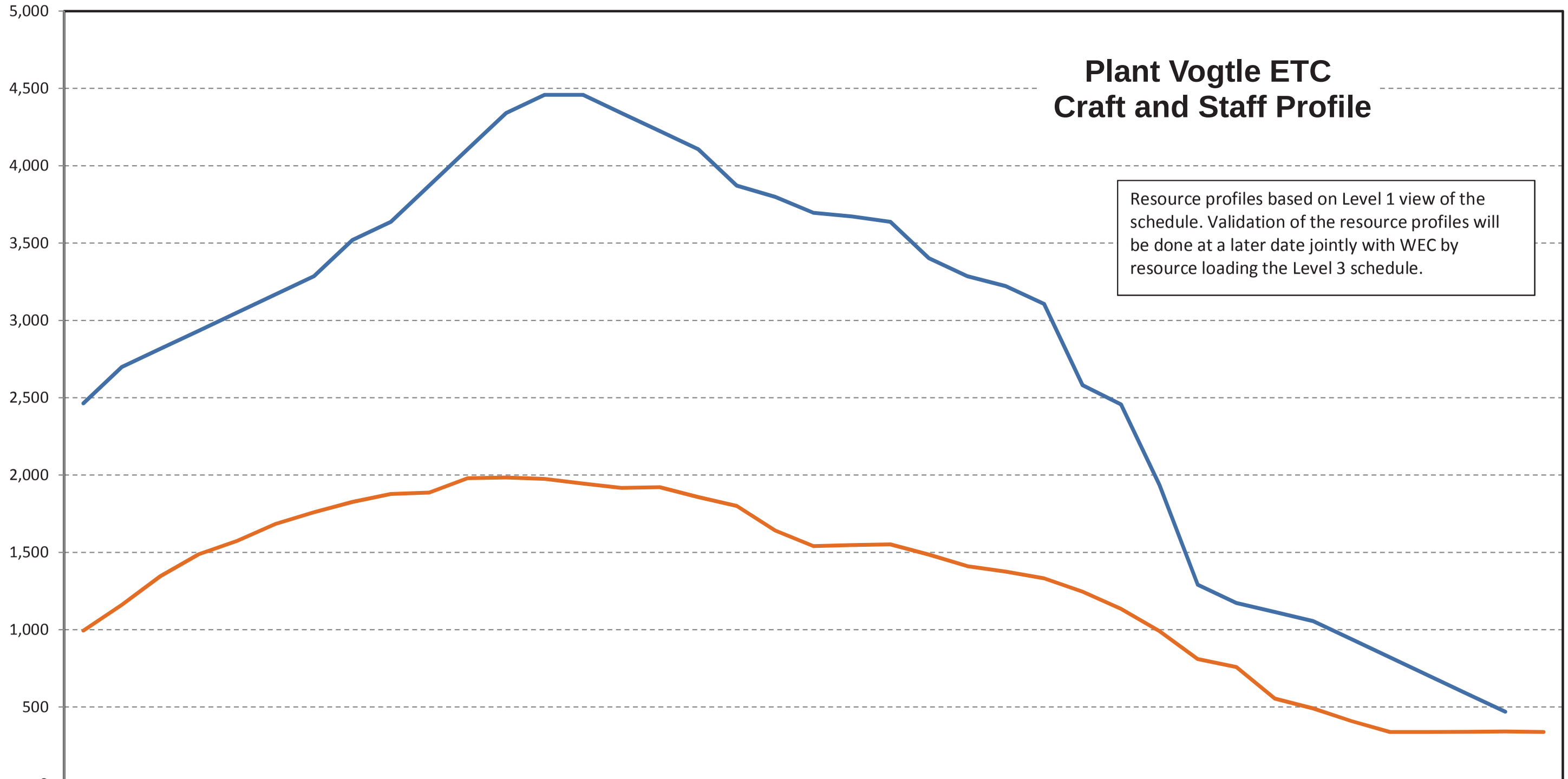
VC Summer Nuclear Power Project
Direct Craft and FNM Profile



	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Staff FTE	904	920	932	976	993	1,115	1,184	1,219	1,279	1,372	1,457	1,548	1,652	1,731	1,760	1,784	1,806	1,823	1,796	1,762	1,734	1,693	1,650	1,605	1,559	1,503	1,466	1,447	1,414	1,380	1,358	1,299	1,274	1,239	1,204	1,173	1,034	977	867	713	596	466	361	268	194
Fluor Direct Craft FTE	889	1,275	1,493	1,796	2,072	2,373	2,656	2,935	3,206	3,502	3,941	4,164	4,180	4,388	4,413	4,500	4,516	4,652	4,581	4,505	4,512	4,451	4,227	3,878	3,884	3,697	3,432	3,248	3,070	2,961	2,726	2,278	2,201	1,981	1,751	1,402	1,267	1,152	1,055	960	864	768	672	423	0
Ratio FNM to Craft	102%	72%	62%	54%	48%	47%	45%	42%	40%	39%	37%	37%	40%	39%	40%	40%	40%	39%	39%	39%	38%	38%	39%	41%	40%	41%	43%	45%	46%	47%	50%	57%	58%	63%	69%	84%	82%	85%	82%	74%	69%	61%	54%	63%	N/A

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 212 of 231

Resource Curve - Fluor Direct Craft and FNM Staff



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Total DH Direct Craft	2,464	2,699	2,816	2,933	3,051	3,168	3,285	3,520	3,637	3,872	4,107	4,341	4,459	4,459	4,341	4,224	4,107	3,872	3,798	3,696	3,672	3,637	3,403	3,285	3,222	3,107	2,581	2,457	1,936	1,291	1,173	1,115	1,056	939	821	704	587	469	
Total Staff	994	1,161	1,346	1,488	1,574	1,684	1,760	1,826	1,878	1,887	1,980	1,984	1,975	1,945	1,916	1,921	1,857	1,800	1,641	1,540	1,548	1,552	1,486	1,410	1,376	1,333	1,246	1,136	990	810	759	555	491	409	339	339	340	342	339

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 213 of 231

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 214 of 231

[SCANA] - SCANA Corporation
Third Quarter 2016 Earnings Conference Call/Webcast
Thursday, October 27, 2016 3:00 PM Eastern

Officers
Susan Wright; Director Financial Planning & IR
Jimmy Addison; CFO
Steve Byrne; SCE&G; COO

Analysts
Michael Weinstein, Credit Suisse
Julien Dumoulin-Smith, UBS
Travis Miller, Morningstar
Chris Ellinghaus, Williams Capital Group
Paul Patterson, Glenrock Associates
Dan Jenkins, State of Wisconsin Investment Board
Jim von Riesemann, Mizuho Securities United States
Greg Rice, Millennium

Presentation

Operator: Good afternoon, ladies and gentlemen. Thank you for standing by. I will be your conference facilitator today.

At this time, I would like to welcome everyone to the SCANA Corporation conference call. All lines have been placed on mute to prevent any background noise. After the speakers' remarks, there will be a question-and-answer period. (Operator Instructions). As a reminder, this conference call is being recorded on Thursday, October 27, 2016. Anyone who does not consent to the taping may drop off the line.

At this time I would like to turn the call over to Susan Wright, Director of Financial Planning and Investor Relations. Please go ahead.

Susan Wright: Thank you, and welcome to our analyst call. As you know, earlier today we announced financial results for the third quarter of 2016.

Joining us on the call today are Jimmy Addison, SCANA's Chief Financial Officer, and Steve Byrne, Chief Operating Officer of SCE&G. During the call, Jimmy will provide an overview of our financial results and Steve will provide an update on our restoration efforts after Hurricane Matthew and our new nuclear project.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 215 of 231

After our comments, we will respond to your questions. Please note that the presentation slides referred to during the call are only available through our webcasting service, until the Q&A session begins. When our Q&A session starts, the full presentation will be available at Scana.com in the Webcasts and Presentations section of the Investor webpage.

Additionally, we post information related to our new nuclear project and other investor information directly to our website at Scana.com. On SCANA's homepage, there is a yellow box containing links to the Nuclear Development and Other Investor Information sections of the website.

It is possible that some of the information that we post directly to our website may be deemed material information that has not otherwise become public. You can sign up for email alerts under the Investor section of Scana.com to notify you when there is a new posting in the Nuclear Development and/or Other Investor Information sections of the website.

Finally, before I turn the call over to Jimmy, I would like to remind you that certain statements that may be made during today's call are considered forward-looking statements and are subject to a number of risks and uncertainties as shown on slide 2.

The Company does not recognize an obligation to update any forward-looking statements. Additionally, we may disclose certain non-GAAP measures during this presentation. The required Reg G information can be found in the Investor section of our website under Webcasts and Presentations.

I'll now turn the call over to Jimmy.

Jimmy Addison: Thanks, Susan, and thank you all for joining us today.

I'll begin our earnings discussion on slide 3. Earnings in the third quarter of 2016 were $1.32 per share, compared to $1.04 per share in the same quarter of 2015. Electric margins benefited from a Base Load Review Act rate increase, customer growth, and extremely hot weather in the third quarter of 2016 when compared to the same quarter of last year. As an example, Charleston, South Carolina, one of our largest metropolitan areas, registered their hottest month on record in July.

Results also improved due to increased gas margins. As a reminder, during the third quarter of 2015, SCE&G adopted new depreciation rates for electric plant as a result of a study. These new rates, which produce an annual decrease in depreciation expense of approximately $29 million, were effective as of January 1, 2015, resulting in the application of three quarters worth of depreciation savings being applied during the third quarter of 2015. Additionally, increases in O&M, interest, and property taxes had a negative impact on earnings.

At the bottom of the slide you will note that abnormal weather increased electric margins by $0.27 per share in the third quarter of 2016 and $0.11 per share in the third quarter of 2015, resulting in a positive $0.16 per share impact to earnings quarter-over-quarter.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 216 of 231

Slide 4 shows earnings per share for the 9 months ended September 30, 2016 were $3.29 per share versus $4.53 per share in 2015. The decline is mainly attributable to the net of tax gains on the sales of CGT and SCI. Otherwise, higher electric margins, due primarily to a Base Load Review Act rate increase, customer growth, and the positive impact of abnormal weather year-to-date would have resulted in improved comparative results.

These increases were partially offset by lower gas margins and expected increases in O&M and CapEx related items, including depreciation, interest and property taxes.

Abnormal weather increased electric margins by $0.27 per share for the three quarters ending September 30, 2016 and $0.22 per share for the same period in 2015, resulting in a favorable $0.05 per share impact to earnings.

Now on slide 5, I'd like to briefly review results for our principal lines of business.

South Carolina Electric & Gas Company's third quarter 2016 earnings were up $0.26 per share compared to the same period of 2015. The increase in earnings is due to higher electric margins principally as a result of the continued recovery of financing costs through the BLRA and customer growth, in addition to abnormally hot weather.
These items were partially offset by an increase in operations and maintenance expenses, as well as increases in expenses related to our capital program including interest, depreciation, and property taxes. Year to date, SCE&G's earnings were up by $0.20 per share in 2016 over the same period of 2015.

PSNC Energy reported a seasonal loss of $0.05 per share in the third quarter of 2016, compared to a loss of $0.04 per share in the same quarter of the prior year primarily due to higher interest expense and depreciation related to the expansion of PSNC Energy's system. For the 9 months ended September 30, earnings were down $0.01 per share in 2016 over the comparative period of 2015.

SCANA Energy provided a $0.02 per share increase in third quarter earnings over the previous year primarily due to higher margins during the third quarter of 2016 as compared to 2015. Year-to-date earnings are $0.16 per share compared to $0.17 per share in the prior year, down primarily due to milder weather in the first quarter.

SCANA's corporate and other businesses reported a loss of $0.05 per share in the third quarter of 2016, compared to a loss of $0.06 per share in the comparative quarter. For the 9 month period, these businesses reported a loss of $0.10 cents per share in 2016, compared to earnings of $1.32 in 2015 primarily due to the net of tax gains on the sales of CGT and SCI of $1.41 per share, as well as the foregone earnings contributed by CGT and SCI prior to the closing of the sales in the first quarter of 2015.

I would now like to touch on economic trends in our service territory on slide 6. We are pleased by the continued economic growth in our service territories as evidenced by announcements to invest approximately $1.2 billion, with the expectation of creating approximately 4,600 jobs.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 217 of 231

At the bottom of the slide you can see the national unemployment rate, along with the rates for the three states where SCANA has a presence, and SCE&G's Electric territory. South Carolina's unemployment rate is now at 4.9%, as is the estimated rate in SCE&G's electric territory. Attesting to our state's strong economic growth, almost 56,000 more South Carolinians are working today than a year ago.

Slide 7 presents customer growth and electric sales statistics. On the top half of the slide is the customer growth rate for each of our regulated businesses. SCE&G's electric business added customers at a year-over-year rate of 1.5%. Our regulated gas businesses in North Carolina and South Carolina added customers at a rate of 2.8% and 2.9%, respectively. As you can see, the rates are trending fairly consistent over the year.

The bottom table outlines our actual and weather normalized kilowatt hour sales for the 12 months ended September 30, 2016. Overall, weather normalized total retail sales were basically flat on a 12 month ended basis.

Now please look to slide 8 which recaps our regulatory rate base and returns. The pie chart on the left presents the components of our regulated rate base of approximately $10.6 billion. As denoted in the two shades of blue, approximately 86% of this rate base is related to the electric business. In the block on the right, you will see SCE&G's base electric business, in which we are allowed a 10.25% return on equity.

The earned return for the 12 months ended September 30th, 2016 in the base electric business continues to meet our stated goal of earning a return of 9% or higher to prevent the need for non-BLRA related base rate increases during the peak nuclear construction years. We continue to be pleased with the execution of our strategy.

Continuing down the page, on our new nuclear business, we were allowed an 11% return on equity under the Base Load Review Act for all Annual Requests for Revised Rates that were approved prior to 2016. The approval of our 2015 Petition revised this allowed ROE down to 10.5% for prospective Requests for Revised Rates, which applied to the request that was approved last week and will become effective in November.

Under the terms of our recently announced Settlement Agreement with the ORS and four other interveners -- and which Steve will discuss in more depth shortly -- the allowed ROE for the new nuclear business will be 10.25% for all prospective Requests for Revised Rates beginning in 2017, if approved by the Public Service Commission of South Carolina.

As a reminder, we are allowed a return on equity of 10.25% in our gas LDC in South Carolina. If the earned ROE of the gas business for the 12 months ending March 31st falls outside of a range of 50 basis points above or below that allowed ROE, then we file to adjust rates under the Rate Stabilization Act.

As of March 31, 2016, the 12 month earned return for SCE&G Gas was below the band and we filed for an annual increase in mid-June. The Public Service Commission approved an annual

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 218 of 231

increase of $4.1 million in September with rates going into effect with the first billing cycle of November.

As you are also aware, during the first quarter of 2016, we filed an application with the North Carolina Utilities Commission requesting an annual revenue increase at PSNC Energy in response to the normal attrition in the earned returns in that business. In late August, PSNC Energy entered into a settlement with the Public Staff, and we expect a decision from the NCUC to be made sometime shortly.

As part of the Settlement Agreement, PSNC Energy agreed to a $19 million revenue increase and an authorized ROE of 9.7%. In addition, the settlement agreement allows PSNC Energy to track and receive ongoing recovery of capital expenses related to its distribution and transmission pipeline integrity management programs.

We estimate that slightly more than 20% of our CapEx over the next three years will be subject to this integrity management rider. The new rates associated would be effective beginning November 1, 2016.

Slide 9 presents our CapEx forecast. This forecast reflects the Company's current estimate of new nuclear spending through 2018 and reflects the Fixed Price Option spending as represented in the ORS Settlement Agreement as filed September 1.

As a reminder, these schedules reflect the existing payment plan and do not incorporate the construction milestone payment schedule, as it is still being addressed through the dispute resolution board process. Therefore, it is unlikely that the timing of these expenditures will occur exactly as presented.

At the bottom of the slide, we recap the estimated new nuclear CWIP from July 1 through June 30 to correspond to the periods on which the BLRA rate increases are historically calculated.

Next, on slide 10, I would like to mention a recent tax election we made to claim section 174 research and experimentation deductions for some of our new nuclear costs. After evaluating this section of the tax code, including recent court decisions and recently issued final regulations, and after obtaining extensive external advice, we concluded that the regulations allow application of section 174 research and experimentation deductions to our AP 1000 units as a pilot model. We first claimed these deductions on our 2015 return which was filed last month and plan to make similar claims on our prospective returns. Essentially, this code section allows a current tax deduction for certain costs incurred, in the year they are incurred, rather than waiting to receive the deduction through accelerated or bonus tax depreciation once the units are placed in service.

By claiming these deductions as costs are incurred, we will forego the depreciation deduction later. In short, it functions much like bonus depreciation in that the deduction is simply accelerated, although in this case it is accelerated and is realized as the money is spent rather than at the time the units are placed into service.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 219 of 231

This election will result in an increase in available cash in the near term, and will therefore lessen the need for debt and equity issuances. This should benefit customers in several ways and also benefit existing shareholders through lower dilution. While the exact amounts are not completely known, we have estimated the impact by year through 2018.

While at a minimum, customers will benefit from the impact of this cash source in the form of enhanced credit metrics supporting credit ratings, these deductions will also result in accumulation of a deferred tax credit. Deferred taxes are not contemplated by the BLRA law and will, therefore, be associated with our base electric business as a reduction to rate base.

As such, we have proposed to the ORS that, as this credit to retail electric rate base builds, and our resulting retail earned returns increase, we will also flow benefits directly back to customers through a credit or decrement rider to base electric rates.

We also plan to propose this to the PSC in an accounting petition for their approval. This strategy does not change the timing or amounts of the BLRA revised rate increases through the remainder of the new nuclear construction.

We believe this decrement rider treatment will allow us to offset some of the BLRA rate increases our customers will see during the peak construction years. Additionally, it allows for market ROEs for our shareholders consistent with our stated strategy of earning a reasonable return on the base business while avoiding rate increases other than those associated with the BLRA.

We do not project this election and proposed treatment will change our earnings guidance, as lower dilution and the rate decrements essentially offset one another from an EPS perspective.

Now, please look to slide 11 to review our estimated financing plan through 2018. This plan has been updated to reflect our results year-to-date, the election of the fixed price option, as well as the expected impact of the section 174 deductions. Note that we have completed all of our planned financings for 2016.

As a reminder, we have switched to open market purchases instead of issuing new shares to fulfill our 401(k) and DRIP plans until we have incremental equity needs which we currently estimate to be in 2018.

Again, it is unlikely that these issuances will occur in the exact amounts or timing as presented, as they are subject to changes in our funding needs for planned project expenses and may change based upon the outcome of the Petition filing, the dispute resolution board, and the actual achievement of milestones. We continue to adjust the financing to match the related project CapEx on a 50/50 debt and equity basis.

On slide 12, we are reaffirming our 2016 GAAP-adjusted weather-normalized earnings guidance is $3.90 per share to $4.10 per share with an internal target of $4 per share.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 220 of 231

Our long-term GAAP-adjusted weather-normalized average annual growth guidance target remains unchanged, as we plan to deliver 4% to 6% earnings growth over 3 to 5 years using a base of 2015's GAAP-adjusted weather-normalized EPS of $3.73 per share.

We plan to address 2017 earnings guidance on the fourth quarter call after the receipt of the construction milestone payment schedule and the conclusion of the Petition process.

I'll now turn the call over to Steve to provide an update on our nuclear project.

Steve Byrne: Thanks, Jimmy. On slide 13, you can see a photo of Hurricane Matthew making landfall on the South Carolina coast, almost a year to the date of the historic flooding that happened in South Carolina in 2015. I'd like to thank those of you who reached out and continue to appreciate your thoughts and prayers for those who were affected by this storm and in some cases, are still trying to recover from last year's flood.

I'd also like to thank our linemen, tree crews, and support staff, as well as those who were dispatched from other areas as far away as Oklahoma, Texas, and Mississippi. Immediately following the impact of the storm, we had approximately 290,000 customers who reported outages. Within 48 hours, we had restored power to 190,000 and in 72 hours had restored 250,000. Restoration was complete within 8 days.

Over the next few months, we will try to measure the Company's impact from this storm, but it will not compare to the significant upheaval in the lives of those who were ultimately affected.

Please now turn to slide 14. I'd like to discuss the Petition that SCE&G filed with the Public Service Commission of South Carolina on May 26 of this year seeking approval to update the construction milestone schedule, as well as the capital cost schedule for the two new nuclear units. We are hopeful that the PSC will approve the Settlement Agreement we entered into with the ORS and four other interveners related to the aforementioned Petition.

This settlement agreement signifies that no contested issues exist among the settling parties and supports the approval of the revised construction and capital cost schedules. As Jimmy has already mentioned, the settling parties also agreed to revise the allowed return on equity to 10.25% from 10.5% for calculating prospective revised rates sought under the BLRA on or after January 1 of 2017. In addition, SCE&G will not file for future requests to amend capital cost schedules until after January 28, 2019.

Slide 15 presents the relative schedule for the Petition filing. We filed our direct testimony at the beginning of July and the ORS followed suit with their testimony and the Settlement Agreement at the beginning of September.

Our hearing with the PSC took place at the beginning of this month, concluding after a minor delay due to Hurricane Matthew. The ORS presented the terms of the Settlement Agreement at the hearing. A decision by the PSC will come no later than November the 28th.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 221 of 231

Moving to some activities at the New Nuclear Construction site, slide 16 presents an aerial photo of the construction tabletop from June of this year. Here you can see the significant progress that has been made so far on the project, and I have labeled both Units 2 and 3, as well as many other areas of the construction site.

Slide 17 presents a schematic view of the five large structural modules or CA modules that are located inside the containment vessel. We have now placed all of the major CA modules for Unit 2, as we have previously placed CA-01, CA-03, CA-04, and CA-05, and have more recently placed CA-02. We have also placed CA-04 and CA-05 for Unit 3.

Slide 18 shows an aerial view of the Unit 2 nuclear island and containment vessel. Looking down into the containment vessel, you can see the first ring section and the aforementioned structural modules, as well as the reactor vessel which was recently placed and which I will discuss more shortly. Outside of the containment vessel, you can see Auxiliary Building module CA-20 and the shield building, which surrounds the containment vessel.

Slide 19 shows a picture of the Unit 2 CA-02 module being placed back in early August. CA-02 is a wall section that forms part of the in-containment refueling water storage tank.

On slide 20, you can see a picture of the Unit 2 reactor vessel being placed. On August 30, this reactor vessel was placed on top of module CA-04 inside the containment vessel. This is a significant milestone for our project, as this is the first reactor vessel to be set at a new nuclear plant in the United States in more than 30 years.

Slide 21 shows the placement of the second half of the Unit 3 module CA-20, which is an auxiliary building module that is located outside and adjacent to the containment vessel. As you may recall, the first half of this module was previously placed in order to move forward with shield building erection.

Slide 22 shows a picture of the fabrication of the Unit 3 module CA-01. This module houses the steam generators and the pressurizer and forms the refueling canal inside of the containment vessel. Currently, all 47 sub-modules are on site and 44 of those sub-modules are upright and being welded together in the Module Assembly Building or MAB.

Slide 23 shows a picture of the Unit 3 module CA-02 being fabricated in the MAB. Currently 2 of the 5 sub-modules have been upended and all 5 sub-modules are on site.

On slide 24, you can see a photo of the Unit 2 deaerator being placed on the Unit 2 Turbine Building in late August. We have previously shown pictures of this massive 140 foot long, 18 foot diameter component as it was transported to the site by truck. This component purifies feed water by removing dissolved gases.

Slide 25 shows the generator stator being lifted up to the Unit 2 Turbine Deck. This is the stationary portion of the main generator and was set on Tuesday this week.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 222 of 231

Lastly, on slide 26, you can see the Unit 3 Turbine Building where we placed the upper and lower sections of all three low-pressure turbine condensers in September.

That concludes our prepared remarks. We'll now be glad to respond to any questions you might have.

Question-and-Answer Session

Operator^ We will now begin the question-and-answer session. (Operator Instructions). Michael Weinstein with Credit Suisse.

Michael Weinstein: Glad to hear that the storm recovery efforts are going well and my best wishes to everybody.

Jimmy Addison: Thank you.

Michael Weinstein: The cash benefit from the R&D tax credit, the total you show there is $1.1 billion. Is that the total that you anticipate or are there further benefits in 2019 and 2020 through the construction period?

Jimmy Addison: Yes, these are the substantial benefits that are applicable to 2015 and forward that we would realize in cash. There are some substantial benefits in 2014 and earlier that would require amended returns; and, frankly, we would not get the benefit of any cash from until the issue will resolve. So we've not delineated those here on this chart, but these are the substantial benefits that we expect to see a cash benefit from until the issue is resolved which we expect to take likely several years.

Michael Weinstein: Do have an estimate for what the total benefit could be upon resolution?

Jimmy Addison: The periods from the time we began the project up through 2014 -- and, let me clarify. 2015's return, as I said in the prepared remarks, was filed September 15, so that number is in the 2016 benefit. We're showing the year that the cash benefit would show up. So 2014 and earlier could amount to in excess of $500 million on a comparable basis.

Michael Weinstein: Okay. And how much nuclear rate base do you anticipate will be assigned to 10.5% ROE in 2016, and how much has already been assigned 11%?

Jimmy Addison: Let's see, the chart on page 8 shows our nuclear CapEx of about $4.2 billion and that includes some of all three. I don't know that I have it at my fingertips, but we can break that down for you and the IR staff can provide that afterwards. So this includes some -- the majority is at the 11% and then would include some at the 10.5% as well, that the new rates will be effective next week -- or excuse me -- in December.

Michael Weinstein: All right. Thank you.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 223 of 231

Operator: Julien Dumoulin-Smith of UBS.

Julien Dumoulin-Smith: So perhaps just to go back to this issue really quickly on taxes -- just to clarify twofold. One, in terms of the impact, basically if you think about it in a bonus depreciation comparable way, this is effectively equal to the $125 million you previously forecast for 2017 equity issuance, give or take $0.04, kind of cumulative through the forecast period here?

Jimmy Addison: No, you're going to have to run that one by me again, Julien. I'm not sure I'm following you.

Julien Dumoulin-Smith: All right. So I just wanted to make sure I heard you guys right. So when you discussed the negative earnings impact of recognizing the taxes, as you've just filed on a prospective basis, that is equal through the 2018 period to the reduction in equity issuance, i.e., the less dilution that you would suffer [to] the $125 million of equity.

Jimmy Addison: Let me recap it. So the positive benefit is obviously from less dilution and less interest related to debt that will not be issued as well. Offsetting that would be when our returns increase on the base electric business because of the accumulation of this deferred tax credit reducing rate base. We're proposing to offset electric rates in the future, lower base electric rates, to mitigate that. So that would be the offset.

Julien Dumoulin-Smith: Right. And perhaps could you quantify, what's the reduction in rate base cumulatively through the 2018 period that you're showing?

Jimmy Addison: It'll be the amount of cash that's shown on here, so cash is what would be offset against rate base.

Julien Dumoulin-Smith: Okay. One for one, right?

Jimmy Addison: Right.

Julien Dumoulin-Smith: Okay, great. Thank you. And then so separately, what's the status on the Dispute Resolution Board? Just I suppose they gave you an update or there was a production of a press release that said negotiations should continue. What is the latest perhaps or why the continuation as such?

Steve Byrne: This is Steve. The continuation was because we were really not in disagreement over the total amount and we were in general agreement on the milestones. The only disagreement was on timing. So the dispute resolution board, this is the first issue that's come before them, so they were kind of getting up to speed on the project as well on the parties. And they wanted to give us basically an extra month or so to see if we could reach agreement before they would hand one back to us.

So we're in discussions now with Westinghouse to see if we can come to an agreement and give

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 224 of 231

that back to the Dispute Resolution Board prior to them issuing a ruling to us.

Julien Dumoulin-Smith: Okay. And then a last quick clarification here -- in terms of any risk of delay of the project, what's the status of the efforts to extend the PTC? And then also I suppose before, at least in the case of your peer who's pursuing this, I suppose if the project wasn't completed by 2020, there would also be a potential less qualification of bonus depreciation for the asset? But given the shift in tax recognition, is that also another implicit benefit or offset should there be a further delay?

Jimmy Addison: That is an implicit benefit. We're essentially taking some of that -- economically at least -- earlier. The other implicit benefit we haven't really talked about or focused on to this point is that by moving this, what would've been bonus depreciation or MACRS depreciation earlier, it gives us more headroom to deal with PTCs down the road in general.

Julien Dumoulin-Smith: Right, absolutely. And then where does that effort from a legislative process stand?

Steve Byrne: We're not directly plugged into the effort. Our understanding is that it came out of committee favorably, that it may be taken up by the Congress shortly, so it is a -- that date isn't a law, so it would require a change in law to change the in-service date.

Julien Dumoulin-Smith: Got it, great. Thank you so much.

Operator: Travis Miller with Morningstar.

Travis Miller: I was wondering on the petitions, the settlements and as it relates to both the capital cost and milestone revisions in the fixed-price option, what are the tracks there for those? You laid out pretty clearly that the petition was a capital cost adjustment and the milestones. What's the track look like for the fixed-price option and how closely related are those two?

Jimmy Addison: Travis, do you mean timing-wise or -- they were all part of the same settlement heard by the Commission in the same docket. So we would expect all to be ruled on likely in the next 30 days.

Travis Miller: Okay. So just one ruling on the whole thing?

Jimmy Addison: Yes, yes.

Travis Miller: Okay. Okay. And then the petition numbers would also include those updated numbers for the fixed costs?

Jimmy Addison: That's right.

Travis Miller: Okay. That's all I had at this time. Thanks a lot.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 225 of 231

Operator: Chris Ellinghaus with Williams Capital.

Chris Ellinghaus: Do you have any -- is the goal with the conversation with Westinghouse to meet the deadline for the resolution board? Are you optimistic you can achieve that deadline?

Steve Byrne: Yes, the Dispute Resolution Board has given us a deadline that's in about 10 days, I think it is, maybe a little less than that. Do I think we could? It really depends on how much both parties want to meet the deadline to avoid going back before that Dispute Resolution Board. I don't know that I'd handicap what the odds are, but yes, the goal is that we -- for both sides is that we reach resolution and go back to the Dispute Resolution Board with a solution such that they don't have to issue us a ruling. Both sides are clear on that one.

Chris Ellinghaus: Okay. Jimmy, it's not entirely clear on a couple of issues relative to the Section 174 discussion. I appreciate that you removed the 2017 dilution. One, this wasn't originally in your growth expectations, the selection of using the credits?

Jimmy Addison: You're speaking of earnings growth?

Chris Ellinghaus: Yes.

Jimmy Addison: No, it was not, and nor was the rate decrement rider which I referred to, and as I said in the prepared remarks, they essentially offset each other from an earnings perspective. So it really doesn't alter the earnings growth, our forecast.

Chris Ellinghaus: Great. And particularly since you had a bit of a windfall in the third quarter -- it's almost $40 million from weather -- is there a chance that the 2018, after you've gone through the process with the commission in terms of the decrement rider and having a really good third quarter, that there could be additional changes to the 2018 equity expectation?

Jimmy Addison: As I also said, there's always a chance that those equity expectations could change, but I'd say much more significant than that are likely due to the timing of the payment milestone schedule that we've been talking about with several questioners earlier. So that's going to cause us to readjust our nuclear CapEx once that comes out and that's more likely to be a significant driver than anything else. Of course, that will be timing.

Chris Ellinghaus: Okay. And one last thing -- as far as the PSNC order goes, is there anything that's leading them to take the maximum time or is that just traditional regulator scheduling?

Jimmy Addison: We haven't been in front of them in 8 years, so we don't have a lot of experience there. But I'd say that from what I know, it more has to do with one intervener who did not settle, the North Carolina Attorney General, and some back and forth between her and our attorneys with the commission just clarifying some positions.

Chris Ellinghaus: Okay, great. Thanks for the color.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 226 of 231

Operator: Paul Patterson with Glenrock Associates.

Paul Patterson: Most of my questions have been answered. Just I think on sales growth, it seems that residential made a big change, the trailing 12 months versus last quarter. It looks like it was up plus 2% and now it's only 0.3% or something. I've got to look at the numbers again. But it seemed like quite a big change. I was wondering what -- this is the weather normalized is what I'm talking about. What happened?

Jimmy Addison: Yes, you have the numbers correct, and I can't answer your question specifically. That's why we try to really look at these things over time to come up with any trend. One thing I will tell you is it's the hottest quarter that I remember in my career, my 25 years here at SCANA.

And as I have said to you before, there's not an exact science in separating the weather and the average usage. And I wouldn't get too hung up about something to the 10th of a percentage in one quarter, with a quarter -- with this extreme weather.

Paul Patterson: Right. But this is for the last 12 months though; that's the reason why. I can understand in the quarter, things are a little bit wacky. It just seems like, if I might, this is the trailing 12 months and it seemed like it was a big delta. Let me ask you this -- is leap year in this number?

Jimmy Addison: Yes, it is.

Paul Patterson: So in other words, it includes an extra day for that?

Jimmy Addison: It does.

Paul Patterson: Okay. And then just in general, going forward, could you just refresh my memory as to what your retail sales growth is embedded in your numbers, your outlook?

Jimmy Addison: For 2016 or longer term?

Paul Patterson: Yes, longer term, but 2016, sure, whatever you have.

Jimmy Addison: Sure, I'll give you both. So for 2016, it was virtually flat. There's just a slight negative that we'd expected overall for the year for 2016 in our plan that the $4 and $3.90 to $4.10 are based off of. Longer term, in our IRP, we expect about 1.3% net and that's 1.6% gross, net of about 30 basis points of energy efficiency demand-side management.

Paul Patterson: Okay. And that's over a 10-year period?

Jimmy Addison: 15.

Paul Patterson: 15-year period, okay.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 227 of 231

Jimmy Addison: Yes. And a lot of that is being driven off of industrials, especially in the nearer term and we continue to have incredible economic growth here in South Carolina. So that's driving it as well.

Paul Patterson: If we were to take that out, what would residential and commercial -- what are you guys just generally thinking about that?

Jimmy Addison: We don't break the IRP down into those categories. It's really there for planning for generation expansion. So whether it's industrial or residential, we've going to have the capacity there, so we really don't break it down over the long term by classes.

Paul Patterson: Okay. The rest of my questions have been answered. Thanks so much.

Operator: Dan Jenkins with State of Wisconsin Investment Board.

Dan Jenkins: First one, your changes to the financing plan, you eliminated the issuance for this year and then increased the debt issuance for 2017 and 2018. Is that being driven more by just construction payments requirements or is that the tax benefit or is it both?

Jimmy Addison: It's both, but I'd say more significantly the tax cash.

Dan Jenkins: Okay. And then I think you mentioned at Unit 3, you placed CA-20 and did you say CA-4, is that correct?

Steve Byrne: Yes, Dan, we placed the first half of CA-20; we placed it earlier in the year. The second half of CA-20, we placed recently. So the first half was in order so we could use it as framework to do other concrete pours to get moving with the shield building. But, yes, it is now -- all sections of CA-20 are now in place.

Dan Jenkins: Okay. So what's the next critical path on that? Is it the CA-01 or is it the shield building?

Steve Byrne: Yes, the critical path for both units now, after CA-20 was set on Unit 3, the critical path for both units now runs through the shield building. The CA-01 for Unit 3 is not far off, but right now, everything runs through the shield building from both units.

Dan Jenkins: So related to that, are you still waiting on some of the panels to get onsite for both units or --

Steve Byrne: Yes, Dan, still waiting for some panels; nothing that's holding me up right now. We're through 5 courses of the shield building on Unit 2. I've got all the [course 6s]. We weld the panels that come in together and lift them in 2s and place them, so I've got them all welded together in 2s already. So those are all ready to go, and I've got the first couple of courses for -- in fact, I think I've got the first 5 or 6 courses for this trailing unit, Unit 3. So I'm not waiting on construction for any of the panels. I still don't have all of them in, so some of the higher elevation panels are not in, but I'm not waiting on the panels for anything.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 228 of 231

Dan Jenkins: Okay. And then I think in your last update report, there was also some discussion about Fluor maybe having some troubles in terms of staffing up for the evening shift or whatever. I wondered if you could update us on that.

Steve Byrne: Yes, Fluor, when they first came in, identified the need to increase staffing and wanted to staff a full back-shift or night-shift because we'd been operating with a skeleton crew night-shift or back-shift up to that point. Initially, they had some difficulty in hiring, but I'd say that they recently have rectified that. They're now hiring at about -- adding net about 150 people a month. So they laid out a target when they got here to hire 1,200 people this year. They will probably exceed that total.

So now what they're doing is they're focusing on the specific craft discipline needs. So if I hire 100 people that are all carpenters and I need welders, that doesn't do me any good. So right now, they're focusing on those craft that we need so they're doing well. The craft that we need are welders and fitters or rod-busters for conduit.
So they're doing a good job. They're trying some innovative things, implementing multilingual workforces, those kinds of things. So we're very happy with what Fluor is doing for us. So they've been very successful recently.

Dan Jenkins: Okay. So that second shift then is pretty operational then now?

Steve Byrne: The second shift is up and running; it's not fully staffed. They'd like to have probably 1,000 people on that second shift, which would include the craft plus [field] non-manual and supervision. They're probably somewhere along the lines of 60% to 70% of the way there.

Dan Jenkins: Okay. Thank you.

Operator: Jim von Riesemann with Mizuho Securities.

Jim von Riesemann: Three housekeeping items and then we're going to go back to this infamous slide #10. Can you just remind us on your targeted capital structure, the targeted FFO metrics and what your dividend policy is again?

Jimmy Addison: Yes. So FFO, we want to obviously be above 13 to be able to maintain credit ratings. And I'd say that obviously, this cash benefit of those taxes you referred to has a substantial benefit there. So we feel much better about that. The second part of your question?

Jim von Riesemann: (Inaudible) maybe the targeted capital structure and then the dividend policy.

Jimmy Addison: Yes, so the dividend policy is 55% to 60% payout and we're about the middle of that now. So we're in good shape there.

Jim von Riesemann: Okay. And I guess let's just go back to this slide 10 question. So trying to

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 229 of 231

simplify everything you said -- so you get the cash benefit today; you get no rate base hit until the units are placed into service and the true-up happens, is that correct? Because you guys are basically a CWIP -- your BLRA is set up using CWIP, is that right?

Jimmy Addison: No, I don't think I've got that clear for you. Let me start over there. So you get the cash benefit today.

Jim von Riesemann: Right.

Jimmy Addison: And deferred taxes are not contemplated in the BLRA law. Therefore, it defaults over to the base electric business. Even though it originates from the new nuclear spending, the deferred tax credit and the credit to rate base will apply to the rest of the electric business, if you will.

So if we did nothing on the rate decrement, our strategy to keep earnings from -- returns from 9% to 10.25% would grow over the 10.25%. So our proposal to the Office of Regulatory Staff is to take those earnings that are above that band, or beyond that band, and pass those back to the customers through a base electric decrement that would coincide with the same timing that the BLRA increases occur through revised rates each year, basically at the end of --

Jim von Riesemann: I get it; yes, I get it. Okay. Thank you.

Operator: (Operator Instructions). Greg Rice with Millennium.

Greg Rice: I just wanted to kind of follow up on what Jim was talking about right there and the way this decrement rider is going to work. So basically, as your earnings on the base business increase, because I guess the rate base is decreasing, does this essentially mean that you'll be earning that 10.25% because you'll be refunding everything above the 10.25% to ratepayers through the rider?

Jimmy Addison: We haven't been that precise yet with our discussions with the regulators, with the ORS. What we're proposing -- what we've said all along is if we're in that 9% to 10.25% range, we feel good about that, about what we're doing in the base business. So we're not paying it at 10.25% necessarily. But we're in discussions with them as long as we can stay in that range of 9% to 10.25%.

And necessarily there's going to be a little bit of a timing issue here because we're going to need to see what did we earn and then pass it back kind of on a prospective basis. So I suspect we'll be more down in that range, not at 10.25%. You look at our track record and we've been earning right about 9.75%, 9.5%, this quarter 10.10%, but was driven about 50 bps driven off of weather there. So we've been in the 9.5%, 9.75% range. And hopefully, as we implement this, we could be in that range prospectively.

Greg Rice: Got you, got you. Okay. That makes sense. So maybe you kind of set a cap saying if you ever go above the 10.25%, you'll end up refunding. Is that the way to think about it? It seems like you shouldn't be refunding anything if you're in a 9.5% band.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 230 of 231

Jimmy Addison: What we're doing here is trying to work, which we always do, with our regulatory staff to do something reasonable with the customers. And we're not trying to set up a mechanism that's completely mechanical, driven off the top of the 10.25%. We're trying to also mitigate the rate increases on the customer. The BLRAs work real well; we recognize that and we want to share these cash benefits back. And as I said, we don't really see it impacting our earnings guidance. So that's why we proposed what we have.

Greg Rice: And then just on the nuclear spend, how much have you spent year-to-date on the project?

Jimmy Addison: Year-to-date, let's see if I have that nearby. I don't even know that I have that at my fingertips. I really don't have year-to-date spend here at my fingertips.

Greg Rice: Not a problem; I could follow up afterwards.

Jimmy Addison: I know we're estimating for the entire year to be around $950 million or so and I don't think we will be off that substantially, but I don't have the through September 30 number.

Greg Rice: And I just wanted to confirm, I guess, for spend that's happened on the nuclear project after 6/30, 2016 which (inaudible) everything before that would have gone in this last BLRA. Would you be earning AFUDC earnings basically all the way through December of 2017 on that spend when you finally get the next BLRA increase?

Jimmy Addison: Yes.

Greg Rice: Okay, perfect. Thank you.

Operator: This concludes our question-and-answer session. I would like to turn the conference back over to Jimmy Addison for any closing remarks.

Jimmy Addison: Well, thank you. We look forward to concluding the regulatory proceedings before the South Carolina and North Carolina Public Service Commissions and the receipt of the construction milestone payment schedule.

And as a side note, we'll be attending the EEI Conference in a couple of weeks and hope to see many of you there. Thank you for joining us today and for your interest in SCANA.

Operator: The conference is now concluded. Thank you for attending today's presentation. You may now disconnect.

ELECTRONICALLY FILED - 2018 September 24 9:38 PM - SCPSC - Docket # 2017-370-E - Page 231 of 231

Operator: Ladies and gentlemen, this will conclude our question-and-answer session. I would like to turn the conference back over to Jimmy Addison for any closing remarks.

Jimmy Addison: We continue to look forward to concluding the regulatory proceedings before the South Carolina and North Carolina public service commissions and the receipt of the construction milestone payment schedule. As a side note, we will be attending the EEI conference in the upcoming weeks and hope to see all of you there.

Thank you for joining us today and for your interest in SCANA.

Operator: The conference has now concluded. Thank you for attending today's presentation. You may now disconnect.