

SOUTH CAROLINA PROCUREMENT REVIEW PANEL

In re: Contract Controversy – Agricultural
Biotechnology/Molecular Biology Complex

EllisDon Construction, Inc.

vs.

Clemson University

Case No. 2005-2

ORDER

This matter is before the South Carolina Procurement Review Panel (the “Panel”) pursuant to an appeal of a decision by the Chief Procurement Officer for Construction (“CPO”), by EllisDon Construction, Inc. (“EllisDon”), and by Clemson University (“Clemson”). This case involves numerous disputes concerning the contract between EllisDon and Clemson regarding the construction of the Agriculture Biotechnology/Molecular Biology Complex State Project No. P20-9518-M (the “Project”) at Clemson. Taking into account and considering all of the testimony, the demeanor and the credibility of the witnesses, and the evidence, stipulations, pleadings, and documents submitted by the parties, and of the memoranda, and the argument made by counsel to the parties, the Panel hereby submits this ORDER.

Procedural History

Like many other facets of this case, the procedural history to bring the parties to this point is itself complicated. The exclusive means to resolving a controversy between the State and a contractor concerning a contract solicited and awarded under the provisions of the South Carolina Consolidated Procurement Code (the “Procurement Code”) is set forth in S.C. Code § 11-35-4230. EllisDon filed a Request for Resolution (“RFR”) of the contract controversy with Clemson with the CPO on April 23, 2003 pursuant to S.C. Code § 11-35-4230. After mediation failed, the CPO heard testimony

and held a hearing on February 2-11, 2004. Following the conclusion of the hearing, the CPO urged the parties to engage in mediation a second time. After the second mediation failed to resolve the dispute, the parties submitted written closing arguments. The CPO posted his decision on January 11, 2005 (the “CPO Decision”) as required under S.C. Code § 11-35-4230(4).¹

On January 21, 2005, EllisDon timely requested a review of the CPO Decision pursuant to S.C. Code § 11-35-4230 (the “Request for Review Letter”).² The Panel was empowered to review and determine the CPO Decision *de novo* pursuant to S.C. Code § 11-35-4410(1)(a). On March 22, 2005, the Panel appointed a hearing officer to conduct the administrative review and report to the Panel pursuant to S.C. Code § 11-35-4410(5). Following an attempt by the hearing officer to create a manageable scheduling order, EllisDon filed a Motion to Limit Issues On Appeal To Be Considered By the Procurement Review Panel. A hearing on this motion was held in June 2005. An Order by the hearing officer on this motion was filed on June 25, 2005; a simultaneously issued Conference and Scheduling Order set the case for a final hearing later that summer.

Instead of proceeding to a final hearing, EllisDon, with Clemson’s consent, announced its intention to file an interlocutory appeal of the June 25, 2005 Order.³ EllisDon sought a supplemental order and a stay of the June 25, 2005 Conference and

¹ The CPO apparently logged more than 350 hours of review of the testimony and documents provided by the parties to this dispute.

² The CPO Decision is “final and conclusive” unless a party adversely affected by it, like EllisDon, requests administrative review by the Panel. S.C. Code § 11-35-4230(6).

³ Despite the hearing officer’s successful effort to schedule a timely hearing that was mutually convenient for all parties in the summer of 2005, EllisDon and Clemson had apparently pre-determined that one or the other of them would file an appeal of the Order following the Motion to Limit Issues On Appeal To Be Considered By The Procurement Review Panel. This decision to seek interlocutory review of a pre-hearing procedural decision based on the evidence to be heard by the Panel caused considerable delay. The CPO did not consent to the request for a review by the circuit court and the stay.

Scheduling Order. At the request of EllisDon and Clemson, the hearing officer issued a Stay of the June 25, 2005 Conference and Scheduling Order so that the parties could appeal the June 25, 2005 Order.⁴

Following argument by the parties, the Court of Common Pleas issued an Order that denied the relief sought by EllisDon on January 12, 2006. The hearing officer conferred with the parties and again issued a Conference and Scheduling Order on March 21, 2006, setting the case for a hearing on June 21, 2006. Following five full days of testimony during the week of June 21, 2006, the parties elected to hold the hearing open for additional testimony. At the request of Clemson and EllisDon, the hearing officer held the hearing open until the parties were prepared to present additional testimony and final argument. When the parties indicated that they were prepared to proceed, a Final Conference and Scheduling Order was issued on September 25, 2006, and final testimony and argument was heard on October 25 and 26, 2007.

At the request of the Panel, and in compliance with the Conference and Scheduling Order on March 21, 2006, the parties set forth the issues on appeal, filed a joint pre-hearing brief, and stipulated to the admissibility of many of the exhibits. In short, the parties have stipulated and agreed that only those issues set forth in J.A. Exhs 1.F, 1.I, and 1.J are before the Panel.

The Nature of the Project

The Project involved a complex multi-step sequence of demolition and construction of a new laboratory building, headhouse, and greenhouses at Clemson.

⁴ EllisDon also sought a supplemental order requesting that the full South Carolina Procurement Review Panel re-hear its motion. Relying on the earlier appointment dated March 22, 2005, the full Panel elected not to hear interlocutory appeals of pre-hearing motions in this matter or to convert the June 25, 2005 Order into a full Panel Order.

Clemson and EllisDon entered into a Standard Form of Agreement between Owner and Contractor (AIA A101-1987 Edition) (the "Agreement") dated January 17, 2002. Pursuant to Article 1 of the Agreement, the "Contract Documents" consists of (a) the Agreement, (b) the General Conditions of the Contract for Construction, (c) the Supplementary Conditions, (d) addenda issued prior to execution of the Agreement (e) drawings, (f) specifications, and (g) other documents listed in the Agreement as well as modifications issued after execution of the Agreement (J.A. Exh. 2). HOK Architects, Inc. ("HOK") acted as the Project Architect. The original "Contract Sum" to be paid by Clemson to EllisDon in connection with the Project was \$23,091,701. The original "Contract Time" was 600 calendar days.⁵

In accordance with the Contract Documents, EllisDon had to maintain the existing headhouse and three of the existing greenhouses in operation until at least one-half of the new greenhouses were ready for use. Although it was clear that the Project consisted of two phases, with the Laboratory Building being one phase and the balance of the Project being the second phase, the Agreement specified only one period of performance (i.e., 600 calendar days) and, therefore, only one date for Substantial Completion for the Project.

Clemson issued the SE-390, Notice to Proceed, to EllisDon on February 7, 2000 (J.A. Exh. 18A). The Date of Commencement established in the Notice to Proceed was February 8, 2000. Accordingly, EllisDon was initially required to achieve Substantial Completion by September 29, 2001. The Contract Sum and Contract Time were both modified by a series of seventeen Change Orders. The parties have stipulated that through Change Order No. 17, the Contract Amount had been increased to \$23,977,433 and 17

⁵ Most of the underlying facts that frame the Project are not in dispute and were stipulated to by the parties in the Joint Pre-Hearing Brief at pages 1-4.

calendar days were added to the Contract Time, which allowed EllisDon until October 16, 2001 to achieve Substantial Completion of the Project.

Clemson made the decision to terminate EllisDon for alleged default and assumed responsibility for completion of the work on January 6, 2003 (J.A. Exhs. 3I-J, 3N-Q). HOK declared the Project substantially complete as of June 4, 2002 (J.A. Exh. 4S). Numerous stop work orders, design changes, changes in construction sequencing, and extensions in the duration of many elements of construction work were issued, made, and accepted during the course of the Project. Most of the disputes between EllisDon and Clemson concern how the Contract Time, and ultimately, the Contract Sum were affected by these changes and extensions and which entity bore the liability for the changes and extensions.⁶

Specifically, of the adjusted Contract Sum of \$23,977,433 as agreed-upon through Change Order 17, Clemson withheld payment of (a) \$231,000 in liquidated damages, representing 231 days of disparity between the adjusted contract date to obtain substantial completion of October 16, 2001 and HOK's declared date of Substantial Completion of June 4, 2002; (b) \$150,000 for the value of punch list work contracted for but allegedly unperformed by EllisDon; and (c) \$516,838 for alleged floor flatness deficiencies in the floors of the Laboratory Building. EllisDon disputes the validity of all of these deductions from the Contract Sum. In addition, EllisDon asserts claims seeking increases in the Contract Sum and Contract Time arising out of (a) unresolved items included in Change Order No. 18; (b) general conditions costs for increases in Contract Time for various items

⁶ EllisDon submitted Change Order No. 18 to Clemson, which Clemson and/or HOK refused to approve and execute (J.A. Exh. 2J). Change Order No. 19 includes deductions from the unpaid Contract Sum which EllisDon disputed and, accordingly, refused to execute (J.A. Exh. 2K).

included in Change Order No. 18; (c) adjustments to the Contract Time and Contract Sum for other alleged compensable project delays; (d) payment of amounts deducted from the Contract Sum in Change Order No.19; and (e) interest on amounts withheld from payment.

The Issue of Delay

Before damages and remedies can be awarded to either party in this appeal, there must be some discussion about the date of Substantial Completion and the cause, if any, for delays and whether these delays are compensable. The parties stipulated and the CPO Decision recognized that the Contract Documents contemplated two phases of the project, each requiring significant and complex performance, but defined only one period of performance and therefore only one date for Substantial Completion of the entire Project. Indeed, a great deal of testimony and the issues in this case concern whether there were delays, whether those delays were compensable, and which entity was responsible for any delay.

The Contract Documents and the Change Orders accepted by all sides set forth a targeted Substantial Completion Date of October 16, 2001. By letter dated March 29, 2002, EllisDon notified HOK that, in its opinion, the Laboratory Building (the final phase of the Project) had achieved Substantial Completion (J.A. Exh. 4C). After a series of communications, negotiations, and arguments, HOK certified Substantial Completion on June 4, 2002 (J.A. Exh. 4S). The initial question before this Panel is whether either party bears responsibility for the delays which occurred between October 16, 2001 and the date the Project achieved Substantial Completion.

There are several provisions of the Contract Documents that intersect on the issues of Substantial Completion and the Contract Time. Article 3 of the Agreement provides

for the Substantial Completion and the penalties related to the date of Substantial Completion:

3.2 The Contractor shall achieve Substantial Completion of the entire Work not later than 600 calendar days after the Date of commencement as established in the Notice to Proceed (SE-390), subject to adjustments of this Contract Time as provided in the Contract Documents.

The Owner shall retain as Liquidated Damages the sum of One Thousand Dollars (\$1,000.00) for each calendar day the actual Construction Time to achieve Substantial Completion exceeds the specified or adjusted Contract Time for Substantial Completion as provided in the Contract Documents.

(J.A. Exh. 2B). The General Conditions of the Contract for Construction (J.A. Exh. 2C) (the “General Conditions”) and/or the Supplementary Condition (J.A. Exh. 2D) contained the following provisions:

4.3.8.1 If the Contractor wishes to make a claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor’s Claim shall include an estimate of the cost and of the probable effect of delay on the progress of the Work. In the case of a continuing delay only one Claim is necessary ...

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Paragraph 9.8.

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Agency or A/E, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, ... or other causes beyond the Contractor’s control, ... or by other causes which the A/E determines may justify delay, then the Contract Time

shall be extended by Change Order for such reasonable time as the Architect may determine.

8.3.3 This Paragraph 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or the designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

Other provisions in Articles 4, 7, 8 and 9 set forth the nature of Change Orders and Construction Change Directives required to change the Work (as defined in the Agreement), and adjusting the Contract Sum and/or Contract Time, the claims process, the recovery of damages, and the required interaction between HOK, Clemson, and EllisDon regarding these matters.

Both parties assign blame to the other and assert remedial damages for the delay. Clemson contends that EllisDon controlled the Project and was to blame for the delay; therefore Clemson is entitled to liquidated damages under the Contract because HOK did not declare Substantial Completion until June 4, 2002. In other words, Clemson argues that the delay was inexcusable (i.e., caused by EllisDon), and therefore Clemson is entitled to recover liquidated damages in the amount of \$1,000 for each day of inexcusable delay. Finding 231 days of delay, Clemson withheld \$231,000 from the final payment on the Contract Sum.

EllisDon, on the other hand, assigns blame to Clemson for the delays and suggests that the Contract Time should be extended and should be compensable under Article 8.3 of the Supplemental Conditions by as many as 175 days (J.A. Exhs. 2C-D). EllisDon not only argues that these owner-caused delays defend its actions against Clemson's claim for liquidated damages, but the parties appear to agree that EllisDon is entitled to recover the

damages resulting from such “compensable delay” (i.e., caused by Clemson) that arise under common law⁷ or the Contract Documents – meaning that if EllisDon prevails on this issue, it is entitled to recover those damages that are the natural and probable consequence of the increase in the Contract Time.

Events of Delay

EllisDon listed eight different events of delay in the Project that were caused by Clemson, which, according to EllisDon, should extinguish Clemson’s claim for liquidated damages and entitle EllisDon to damages for an increase in Contract Time. Clemson does not dispute the existence of these events or that they occurred, though Clemson asserts several defenses, which will be taken up later in this Order. Clemson has the initial burden of proof as to the award of an extension of Contract Time. EllisDon has the initial burden of proof as to the CPO’s failure to increase the Contract Sum for the days awarded.

(1) Wiring for Greenhouse Louvers – 7 potential days

The new greenhouses included louvers as part of the environmental control system. These louvers were presumably intended to be operable. In March 2001, EllisDon notified HOK that the wiring was not contained in the electrical drawings. Apparently (and all the parties concede), the Contract Drawings omitted the necessary power wiring to the motors for the louvers. HOK directed EllisDon to install the required wiring. On March 12, 2001, HOK confirmed its direction to EllisDon to proceed with installing the required wiring, provided the cost to install such wiring was not to exceed

⁷ “The common-law basis for the imposition of damages for “compensable” delay is the owner’s breach of the mutual obligations implied in every contract (1) to act in good faith, (2) to cooperate in carrying out its contract obligations, and (3) to do nothing to delay, hinder or interfere with the contract performance of the other party. The implied mutual duties to cooperate and not hinder is a universally recognized principle of contract law.” Philip L. Bruner and Patrick J. O’Conner, Jr., *Bruner & O’Conner on Construction Law*, § 15:50, at 137 (West 2002). The Procurement Code requires that all contractual obligations must be conducted with honesty in fact and pursuant to reasonable commercial standards of fair dealing. S.C. Code § 11-35-30.

\$7,500⁸ and the time impact was not to exceed one week for the Phase I greenhouses. While HOK (and Clemson) later indicated that the additional time was not meant for the project as a whole and that the delays in the work were actually due to other concurrent delays caused by EllisDon, the initial written response that the delay was acceptable is sufficient to add these days to the Contract Time. The Panel finds that EllisDon was reasonably entitled to rely on HOK's initial evaluation of its request for a time extension of seven days (J.A. Exh. 13).

(2) Greenhouse Under-bench Heating System – 4 potential days

Clemson requested that steam heating pipes be installed under the growing benches, a request which was not originally part of the Project. Although the Contract Drawings did not call for direct heating of the growing benches in the greenhouses, it is undisputed that this system was installed by EllisDon at Clemson's request and that it was accepted by Clemson. The parties entered into Construction Change Directive 005, which provided that the Contract Time be increased by four days. As with the issue involving the wiring of the louvers, Clemson (and HOK) later indicated that the additional time was not compensable because of concurrent delays. However, this initial written response that the delay was accepted is sufficient to add these days to the Contract Time. The Panel finds that EllisDon was reasonably entitled to rely on the four days set forth in CCD 005 (J.A. Exh. 14).

(3) Laboratory Roof Extensions – 4 potential days

By stipulation, EllisDon is entitled to a four day increase to the Contract Time for the delay related to the Laboratory Roof Extensions.

⁸ Clemson paid EllisDon \$7,320, by written change order, for the direct costs of this additional work (J.A. Exh. 13C).

(4) Phase I Greenhouse Lead Contamination Delay – 15 potential days

The start of the Project was delayed by concerns Clemson had regarding the potential improper handling of lead-contaminated material in the greenhouses. Apparently Clemson has not appealed the CPO's decision to award 15 days for this delay. Even had Clemson appealed or disputed this award, the Panel adopts the findings made in the CPO Decision on this issue and finds that EllisDon is properly entitled to an additional 15 days of Contract Time.

(5) Steam Line Expansion Restraints – 4 potential days

During the course of construction of the steam lines in the headhouse, EllisDon raised a concern about the need to provide restraints to absorb the forces generated by the expansion of the steam lines as the lines heated up. While there were no contemporaneous records approving of the delay or extension in Contract Time, HOK did admit in June 2002 that these changes produced a four day delay (J.A. Exh. 16F). Despite Clemson's attempt to back away from this statement, HOK's written response that the delay was acceptable is sufficient to add these days to the Contract Time. The Panel finds that EllisDon is properly entitled to an additional four day extension of Contract Time.

The next three issues of delay are substantial and more difficult to categorize. These delays are marked not only by the parties' failure to stipulate to an extension in the Contract Sum or Contract Date, but also by their failure to make decisions contemporaneous with the issues that caused delay. Dating and assigning responsibility for these delays also requires a discussion of the critical path method of scheduling and of other defenses raised by Clemson, which will be addressed later in this Order.

(6) *Headhouse Demolition Delays – 31 potential days*

On February 2, 2001, EllisDon began demolition of the existing headhouse. On February 12, 2001, EllisDon was verbally directed by Clemson to stop demolition of the headhouse because of the discovery of asbestos in the existing headhouse (J.A. Exh. 19A). EllisDon sought direction from Clemson on how to proceed. EllisDon stated that this matter “was of highest priority” and advised that this “situation will rapidly become a project delay and may require an extension of compensable contract time” (J.A. Exh. 19A). Although the asbestos abatement appeared resolved by February 22, 2001, *see* J.A. Exh. 19C, concerns over a potentially high lead content subsequently ensued (J.A. Exhs. 19D-F). The parties later disagreed over the costs of the delay and whether the Contract Time should be extended (J.A. Exhs. 19I-O).

In its contemporaneous communications with Clemson and HOK, EllisDon clearly informed Clemson that the delay in the headhouse demolition would create the need for an extension of Contract Time. Removal of the existing headhouse was important to completion of the Phase I greenhouses because the undemolished existing headhouse prevented completion of the storm sewer line that serviced the Phase I greenhouses. The testimony of Mr. Taylor credibly showed that it was not possible to occupy the Phase I greenhouses until the storm sewer line was operable.

EllisDon advised Clemson *as the matter was developing* that the headhouse demolition and Phase II site work had been put on hold for 31 calendar days (J.A. Exh. 19J-K). Later communications confirmed EllisDon’s position. *See, e.g.*, J.A. Exh. 19O. In short, Clemson was on notice of EllisDon’s claim and knew that work had stopped on this portion of the Project. There does not appear to be any dispute that work was stopped on February 12, 2001 and resumed on March 14, 2001. Although Clemson suggested that

the work stoppage was not necessary, the better evidence and testimony suggests that this work stoppage was excusable, if not one directed or required by Clemson. The Panel makes a finding that the delays associated with the demolition of the existing headhouse did cause a delay for which Clemson bore some responsibility.

(7) Phase II Greenhouse Demolition Delays – Potential 22 days

After completion of the Phase I greenhouses in May 2001, the remaining original greenhouses were to be demolished. Because of concerns of improper handling of lead-contaminated material in the original greenhouses, Clemson undertook itself to demolish the remaining original greenhouses. EllisDon argues that because Clemson took longer than was scheduled to actually demolish the greenhouses, the Contract Time should be extended for as many as 22 days.⁹

There were communications by and between EllisDon and HOK regarding this delay in May and June 2001 (J.A. Exhs. 12A-G, I). On June 22, 2001, EllisDon requested a delay of as many as 62 days (J.A. Exh. 12G).¹⁰ Although it had previously questioned whether this delay was caused by Clemson, HOK formally responded by denying the claim for extended time on June 25, 2002 (J.A. Exh. 12H). It is clear from the contemporaneous documents that EllisDon suspended work on the demolition until Clemson demolished the existing greenhouses. HOK admitted that EllisDon had scheduled 21 calendar days for the greenhouse demolition and that demolition actually

⁹ EllisDon justifies this length of time by using the schedule analysis of 91, Inc. According to EllisDon, the original time allotted by EllisDon to schedule the demolition was 15 working days (J.A. Exh. 18B). Substantial Completion of the Phase I greenhouses was established by the project architect as May 14, 2001. It took Clemson 43 calendar days to demolish the existing greenhouses, 22 days longer than planned by EllisDon.

¹⁰ This request was modified to 22 calendar days in a letter dated October 15, 2001 from EllisDon to HOK (J.A. Exh. 12K).

took 43 days (J.A. Exh. 12H). Both parties introduced evidence of offering and making mitigating gestures, including EllisDon's burial of the remaining rubble in the earth fill and Clemson's taking partial occupancy of the Phase I greenhouses early. Even with these mitigating measures, however, the Panel makes a finding that the hazardous material abatement issues did cause a delay for which Clemson bore some responsibility.

(8) *Heating System Revision – 122 potential days*

By far the most significant aspect and allegation of compensable delay involved the heating system revision. The design of the heating system for the Project was based on the use of natural gas supplied to the headhouse through a four-inch pipeline. During construction EllisDon noted to HOK that the existing line was only two inches in diameter and questioned the ability of the existing line to supply the required amount of fuel, specifically observing that the line would not be sufficient to meet the demands of the boilers being installed in the headhouse (J.A. Exh. 18A). EllisDon sought information and direction from HOK on this matter, and after considerable discussion among the parties, Clemson directed that the heating system be completely redesigned. Clemson abandoned the heating systems originally designed and specified in the Contract Documents and decided, instead, to install a 900 Flextube Boiler (which replaced three boilers itemized in the original Contract Documents), along with adding heat exchangers and utilizing steam furnished by Clemson's Facilities Department (J.A. Exh. 18J).

The testimony and documentation regarding this matter confirms that the redesign issue debate was protracted. Chris Cullum testified extensively and persuasively as to the complexity of the work, the significance of the revisions, and the delays associated with

the heating system changes. The redesign caused the special order and delivery of major pieces of mechanical equipment and added significant mechanical work and installation.¹¹

The turnover of the Phase I greenhouses was originally scheduled to occur December 29, 2000 (J.A. Exh. 17B). With approved fourteen day time extensions (for weather delays), the Phase I greenhouses should have been ready for turnover to Clemson on January 12, 2001. Substantial completion of the Phase I greenhouses was established May 14, 2001, by HOK. Therefore, EllisDon argues that there was a compensable delay of 122 calendar days.

As is the case with other issues, the most credible evidence reviewed by the Panel is the contemporaneous documentation associated with the delay as opposed to carefully tailored testimony and post-dispute (i.e., between October 2001 and June 2002) explanations, rationalizations and calculations. The notification of a potential problem was documented on March 28, 2000 (J.A. Exh. 18A). After considering this matter, HOK formally responded and directed EllisDon to proceed “as discussed” on July 31, 2000. *Id.* In the meantime, EllisDon submitted two CSIs that memorialized the significant changes in July 2000, which forecast an increase in Contract Time and Contract Cost (J.A. Exhs. 18G-H). After Clemson made its decisions, EllisDon requested that the requisite equipment be purchased on July 14, 2000 (J.A. Exh. 18I). A CCD was issued on July 20, 2000, which provided that the Contract Time “remain unchanged” (J.A. Exh. 18J). EllisDon promptly responded on July 26, 2000 that “it is still too soon to know what, if any, the impacts may be” (J.A. Exh. 18K). Other CSIs submitted in August relating to the

¹¹ The un rebutted testimony was that Cullum, an EllisDon subcontractor, alone logged almost 3000 additional work-hours as a result of the heating system revisions. Clemson noted, however, that the direct costs added by these revisions were a fraction of Cullum’s overall work in its subcontract with EllisDon. *See* Cullum 398:7-399:11.

heating system revisions showed that EllisDon anticipated an increase in cost and/or time (J.A. Exh. 18L-R).¹² Clemson did not dispute the allegation that although the parties had talked about the redesign issues for several months, important mechanical equipment was not ordered until October 2000 and was not received until November 24, 2000 (J.A. Exh. 18CC).

There is no documentation that EllisDon estimated or informed Clemson about a specific or substantial time impact caused by the heating system revisions before April 2001. In letters dated April 18, 2001 and April 23, 2001, EllisDon alleged that the project was delayed for 60 days as a result of the greenhouse heating revisions (J.A. Exhs. 18U-V). EllisDon repeated this allegation of a 60 day delay on June 13, 2001 (J.A. Exh. 18BB). It appears that EllisDon sought formal compensable delay on October 15, 2001 (J.A. Exh. 18CC). In a detailed explanation, EllisDon alleged that the heating revisions caused 126 days of delay. *Id.*; *see also* J.A. Exh. 18Y (letter indicating that the “redesign of the heating system resulted in a project delay of 126 calendar days.”). HOK formally responded and denied the claim for extended Contract Time on this issue on May 27, 2002 (J.A. Exh. 18Z).

Both sides assert that they took mitigating steps and/or provided accommodations to offset the delays associated with the greenhouse heating revisions. *See, e.g.*, J.A. Exhs. 18EE, 18FF. In the fall of 2000, despite having issued CSIs anticipating an extension of time for heating system revision issues, EllisDon repeatedly asserted that the Project was on schedule or slightly off schedule and anticipated substantial completion by October 2001. Even in December 2000, *after* the mechanical equipment was designed, ordered,

¹² Two subsequent CSIs showed that the changes regarding the fin tube radiation covers would not require additional time (J.A. Exhs. 18S-T).

and received, EllisDon predicted substantial completion in October 2001 (J.A. Exh. 18FF). Indeed, there is little difference between EllisDon's predictions of when substantial completion would occur in May and June 2000 and those in November and December 2000, even though it clearly was aware of the heating system revisions and its potential significance.

Clemson rightly argues that there is no contemporaneous indication when the heating revisions were debated and installed that the Project could conceivably have been under the influence of a delay event which would extend the Project completion date by more than 120 calendar days. In light of the massive changes that were made, EllisDon's optimism and lack of predictive ability was unfortunate. There is little doubt that EllisDon's contemporaneous schedule reporting in late 2000 and early 2001 – and its failure to properly account for the heating system revision delays – had the potential to mislead Clemson on the status of the Project.¹³

Despite this contemporaneous misreporting, it is equally clear that Clemson made significant revisions to the heating system. It is not surprising that the changed scope and additional work may have caused a delay in the Project. Even taking into account the mitigating measures offered by Clemson relating to the heating system changes and EllisDon's contemporaneous misreporting, however, the Panel finds that the heating system revisions did cause some delay, for which Clemson was responsible.

¹³ There is some question as to whether Clemson was actually misled, as Mr. Keeshen, the architect who arrived on site for this Project after September 2000, testified that he did not rely on EllisDon's scheduling reports, instead determining that a delay was possible from what he witnessed as the Project was developing.

Clemson Defenses

As set forth above, Clemson does not dispute that the eight events of delay introduced by EllisDon actually occurred or that these events were changes/revisions that it directed and/or accepted. Rather, Clemson forcefully argues that several arguments, defenses, or mitigating factors make these events of delay non-compensable (and conversely, entitle Clemson to liquidated damages). First, Clemson argues that EllisDon failed to comply with the contractual scheduling and reporting requirements contained in the Contract Documents. Second, Clemson alleges that EllisDon's analysis of the schedule/delays was inaccurate or misleading. Third, Clemson contends that the delays were in fact or alternatively caused by EllisDon's other problems – the concurrent failure to complete the Project within the durations originally scheduled. These issues, and their impact on whether the delays are compensable, will be discussed in detail below.

- (1) EllisDon failed to comply with the contractual scheduling and reporting requirements contained in the Contract Documents.

A threshold issue to be addressed is the implementation by the parties of the scheduling requirements of the Contract Documents throughout the Project. Clemson's witnesses testified that EllisDon failed to hire appropriate scheduling help, did not conduct a timely pre-scheduling conference, did not submit a timely and complete construction schedule, did not provide scheduling change submissions on approved software, and did not provide appropriate earnings reports. Clemson did not focus on these alleged contractual deficiencies, however, and did not credibly attempt to connect these alleged technical breaches of the Contract Documents with a noncompensable delay, to the extent that such delays were caused by Clemson. The Panel finds that to the extent that credible evidence of these alleged nonconformities were introduced by Clemson, the

nonconformities do not relate to the actual delay or compensation for the delay, and therefore should not excuse compensation for the delay.

A more pertinent question raised particularly by Clemson is whether EllisDon's failure to follow the Contract Documents for obtaining an increase in Contract Time dooms its efforts to seek compensable delay. According to Clemson, Time Impact Analyses ("TIA") were the only proper methodology by which EllisDon could obtain extensions of Contract Time under the Contract Documents. Technically, Clemson correctly states that TIAs were contemplated, if not required, in the Contract Documents. TIAs would have helped to predict the impact of a proposed change prior to its incorporation into the Project. Presumably, properly submitted TIAs would have provided Clemson and EllisDon (and HOK) with the time and information to evaluate the effect of a proposed change before it was implemented, especially with regard to extensions of Contract Time requested by EllisDon.

Clemson's accusations on this point, however, ring hollow as the parties clearly engaged in an alternative course of operating for all phases of the Project. Verbal direction and changes and inquiries were often memorialized in one of several ways, including Requests for Information, Memoranda, Contractors Supplemental Instruction ("CSI"), Change Order Requests ("COR"), Construction Change Directives ("CCD"), memoranda hotlists, and letters between the parties. *See, e.g.,* Taylor 90:14-106:24. Though one can question their accuracy in predicting Project delays, the evidence and testimony showed that EllisDon submitted many different types of reports to Clemson, including regular project schedule updates. There was no compelling evidence that HOK or Clemson objected to the failure to follow the technical aspects of the Contract Documents, especially with EllisDon's use of CSIs or other forms of communications

instead of TIAs. CSIs were practically adopted as a standard document for the Project. Both Clemson and EllisDon acknowledged during the hearing that the CSI format was the written format used by the parties to provide written communication and notice of changes to the Project. Specifically, the CSI was used by EllisDon to notify Clemson if a particular change in the work might result in the need for time extension. If EllisDon created alternative systems of communication rather than relying on Contract Requirements, its methods were recognized and acquiesced to, if not adopted by, Clemson. Neither Clemson nor HOK informed EllisDon that compensable delays would only be approved if accompanied by properly submitted TIAs. To the contrary, HOK granted some time extensions without EllisDon having issued a TIA. If indeed there are compensable delays attributable to Clemson, those delays should not be excused because EllisDon failed to submit TIAs or otherwise breached the technical scheduling and reporting requirements in the Contract Documents.

A more serious issue is Clemson's charge that EllisDon, under the pretext of both negligent and malicious reasoning, routinely falsified data, under-reported problems, and glossed over critical issues in the reports and schedule updates that were provided in the context of meeting Contract Document requirements. Throughout the year 2000, even after some of the problems asserted in this dispute had been identified and remedied, EllisDon maintained and insisted that the Project would be Substantially Complete within the Contract Time (or in some instances, shortly thereafter). For example (and there are many others), EllisDon informed Clemson on October 24, 2000 that "the schedule is indicating substantial completion by October 17, 2001" (J.A. Exh. 17M). Moreover, this update referenced the greenhouse heating revisions and potential mitigation of delay by the revised sequence and logic of the headhouse roof construction. *Id.*

These representations were inaccurate and misleading. Even in January and February 2001, EllisDon stubbornly asserted that the Project was not headed for a serious delay. EllisDon continued to maintain that the Project was on schedule. For example, Stephen Chapman at EllisDon wrote to Bob Wells at Clemson on January 17, 2001, requesting an early payout of the escrowed fees held by Clemson (J.A. Exh. 17N). In this letter requesting early payment, Chapman represented twice that the project was “on schedule.” *Id.* EllisDon opened itself up to the charge that it provided untrue and optimistic scheduling reports until Clemson refused to accede to EllisDon’s request for early payment in January 2001, after which EllisDon began to document more substantial and specific heating system (and other) delays attributable to Clemson after hiring a professional scheduler. Indeed, based on the evidence and testimony produced at trial, EllisDon’s failure to properly predict and/or report long term delays in 2001 or early 2002 is astonishing,¹⁴ and EllisDon never fully or adequately justified these misrepresentations.

¹⁴ Other than confusion or just being wrong and misinformed (*see e.g.*, Cullum 372:13-375:23), the testimony tended to show at least three other plausible rationales for the misrepresentations concerning the delays. The first, more charitable to EllisDon, is that EllisDon wanted to reduce subcontractor claims. Related to this was EllisDon’s desire to solidify its relationship with Clemson with this Project and its personnel may have tempered forecasts of delay, with the hope of making up “lost time” in the future, and of maintaining a good relationship with Clemson as a contracting partner. The second, less charitable to EllisDon, was that the forecasts of being “on-time” were an attempt to divert attention from the shortcomings related to the greenhouse delays and the concrete foundation issues. As with the first rationale, EllisDon hoped to maintain a good relationship with Clemson instead of stirring up trouble with forecasts of significant delay. Finally, the least charitable rationale involved the testimony that EllisDon may have mis-bid or under-bid this Project and, once the Project was underway, knew or suspected that the greenhouse/concrete delays were going to delay Substantial Completion. The false projections were maintained in order to induce Clemson to release some of the money retained by Clemson (J.A. Exh. 17N). Whether innocent, negligent, or malicious, there is no question that EllisDon misrepresented or misanalyzed the schedule and the reporting of the schedule. *See, e.g.*, Taylor 318:5-8.

(2) EllisDon's schedule analysis of the delay was inaccurate or misleading

The parties engaged in a "critical path method" ("CPM") of scheduling this Project. The use of CPM to plan and schedule work is an accepted standard within the industry. As set forth in page 42 of the CPO Decision:

The Critical Path method is a management technique or discipline for assembling a large quantity of information in a format that allows the manager specifically to identify the time frame during which different activities collectively comprising a project must be performed to achieve a resulting project completion date. At the heart of this technique is a flowchart that depicts each of the "activities" comprising the project and the logical relationship that exist between those activities.

citing R. Bednar *et al.*, Construction Contracting at p. 622 (2d ed. 1993). "[B]oards of contract appeals and courts have shown a willingness to utilize network analysis techniques to identify delays and disruptions on projects, as well as the causes of the delays and disruptions." Wickwire *et al.*, Construction Scheduling: Preparation, Liability and Claims at p. 257 (2d ed.). CPM is advantageous in that it allows "both the executor of the project (during construction) and the finder of fact (during analysis of delays) the ability to discriminate between critical and noncritical delays, even in the context of concurrent delays." *Id.* at p. 261.

In employing the CPM, courts have routinely stated that only construction work on the "critical path" has an "impact" on which the project is completed. "Delay involving work not on the critical path generally ha[s] no impact on the eventual completion date of the project." *Fortec Constructors v. United States*, 8 Cl. Ct. 490, 505 (1985), *aff'd* 804 F.2d 141 (Fed. Cir. 1986), quoting *G.M. Shupe Inc. v. United States*, 5 Cl. Ct. 662, 728 (1984). This standard, without analysis, would doom much of EllisDon's claim for delay-related damages, as Clemson and

HOK have repeatedly shown (and EllisDon has conceded) that many of EllisDon's requested compensable delays were for items not originally or seemingly on the Project's critical path at the time they were requested, which was consistent with EllisDon's contemporaneous reporting on potential delay to Clemson.

Further analysis is required, however, as the critical path can change "and items not originally on the critical path can become critical." *Fortec*, 8 Cl. Ct. at 505. EllisDon attempted to show, through expert testimony and otherwise, that items not originally on the critical path did become critical. Indeed, EllisDon asserted that these changes to the critical path were the cause, in part, of its misunderstandings and misrepresentations to Clemson about delay to the Project and the effect of the particular delays (i.e., heating system revisions) on the Contract Time.

The advantages to using CPM as a resource for scheduling and for measuring delay and damages, however, are "lost if the parties do not update the critical path diagram to properly reflect delays and time extensions." *Wickwire et al.*, at p. 262. "[I]f the CPM is to be used to evaluate delay on the project, it must be kept current and must reflect delays as they occur." *Fortec*, 8 Cl. Ct. at 505. In order to use the CPM to measure delay, "it must reflect actual project conditions." *Id.* at 506. If the CPM is not appropriately updated it is "impossible to determine whether or not any particular work activity was or was not on schedule." *Id.* at 507. A CPM that does not reflect the work actually being accomplished in the field will not accurately identify the project's critical path. *Wickwire et al.* at pp. 264-65.

Accurate CPM schedule updates produced during actual construction are better evidence of the critical path than the baseline CPM schedule provided at the beginning of the project. As this court acknowledged in *Blinderman Constr. Co. v. United States*, 39 Fed. Cl. 529 (1997), "accurate, informed assessments of the effect of delays upon critical path activities are possible only if up-to-date CPM schedules are faithfully maintained throughout the course of construction." *Id.* at 585.

George Sollitt Constr. Co. v. United States, 64 Fed. Cl. 229, 241 (2005).

Whether fault can be attributable to Clemson for not establishing a reasonable phasing of events to occur or for not issuing suitable time extensions to EllisDon's delay requests or attributable to EllisDon by inputting wrong data or misinterpreting critical path events or failing to revise or update the CPM in a timely manner that was informative or accurate, it is clear that reliance on the CPM for evaluating or denying the delay claims in this case is misplaced.¹⁵ The CPM was not reasonable in its original logic sequence and not accurately updated or maintained. Mr. Robinson was hired to assist with scheduling of the Project in February 2001, after many of the misrepresentations had occurred. The failure to adjust the logic and sequencing, modifying the quantities in response to change and not correctly stating the progress of the work prior to February 2001 led to incorrect projections and forecasts.¹⁶ Both parties subsequently mastered and

¹⁵ It should be noted that both sides contributed to the overall confusion of as-built scheduling delay. EllisDon's shortcomings in this regard were well-chronicled in the testimony and in this Order. Clemson, however, did not initially have the ability or personnel to adequately review electronic scheduling changes, and the personnel assigned to this Project may not have had adequate experience with a construction project of this magnitude. More relevant, the original phasing concept may not have been reasonable as the systems (i.e., between the laboratory, greenhouses and laboratory) were much more interdependent than originally designed and envisioned by Clemson personnel. *See, e.g., Guedel* at 42-45. In addition, there were corporate structure shifts which impacted local office personnel for both HOK and EllisDon during the Project, which undermined a smooth transition or clear communications, especially prior to February 2001.

¹⁶ Indeed, Clemson charged that the adjustments made by EllisDon appear to have been accomplished to benefit EllisDon rather than to produce a scheduling tool capable of accurately forecasting the completion of the Project.

manipulated the CPM charts to show that any particular delay was respectively critical or non-critical.¹⁷ The use of the CPM in this case, as an after-the-fact guide to measure delay and damages, is suspect, if not futile.

In this case, the only contractual obligation was to obtain Substantial Completion within the Contract Time. The parties did not contract for or provide remedies for intermediate milestones, and EllisDon had discretion, under the Contract Documents, to arrange the activities on the schedule, provided that it delivered the completed Project within the Contract Time. The CPM was not accurately maintained during the construction (especially before February 2001), and therefore its use by the Panel is limited. Mr. Robinson confirmed that EllisDon failed to accurately input impacts to the schedule before February 2001. Robinson: 1181:4-1182:22.¹⁸ Even if Mr. Robinson is correct in his assessments of what (looking back) was on the critical path and led to the Project delay, EllisDon still failed in its responsibility to provide accurate information and reasonable projections in 2000 and early 2001. While Mr. Warner testified about the concurrent delays and events on the critical path, his supporting schedule analysis was not submitted into evidence.

¹⁷ Mr. Warner and Mr. Robinson both based their conclusions in their analysis of the records as to the work actually being accomplished in the field, demonstrating that after-the-fact analyses can draw contrary results. It does not excuse or completely remedy the fact that – especially before February 2001 – the schedules reviewed in the field did not reflect actual job progress conditions.

¹⁸ As EllisDon hired Mr. Robinson after Clemson refused to honor the early payment request made by Mr. Chapman, its motives for hiring a scheduling expert and relying on his conclusions must be scrutinized. While Mr. Robinson's schedule analysis might be correct, based on events that actually occurred, the fact remains that EllisDon represented to Clemson that the critical path was through the laboratory before, during, and even after the heating system revisions were identified and completed. It was not until Mr. Robinson did his analysis that EllisDon changed its position on where the critical path ran.

A thorough evaluation of the testimony and evidence submitted in this case confirms that the CPO astutely analyzed the impact of the CPM on this Project:

While CPM has been recognized as a beneficial and effective tool, it is no magic wand... The CPOC recognizes that a CPM analysis is only as credible as the underlying information and logic.... To the extent a CPM schedule has any validity it must be based on a set of sound assumptions about the specific project. For this Project, the key assumptions were embodied in the phasing plan established by [Clemson]. In summary, the plan was:

1. Demolish a portion of the existing Greenhouse structure and commence construction of the new Head House and the first set of new Green Houses. This was referred to as Phase I of the Project.
2. Until at least half of the Phase I Green Houses were ready for use, the contractor had to maintain the existing Head House and three (3) of the existing Green Houses in operation.
3. In parallel with, but independent of, the Head House/Green House construction, the contractor was to construct the new Laboratory Building.
4. When the Phase I Greenhouses were usable, [Clemson] would vacate the few existing Green Houses and the contractor could complete the demolition of the existing structures and complete the Phase II Green Houses and the Laboratory Building....

[Consequently, T]here was no dispute that [EllisDon] began the Project believing, without objection from [Clemson], that the Project's original schedule for completion was driven by the work associated with the construction of the Head House and the new Greenhouses. As a consequence of this belief, the construction plan for the Laboratory Building was clearly arranged so as to fit within the available Contract Time without being a part of the Project critical path. That is, the original schedule contains no evidence of any interconnection between the activities in the Laboratory Building construction sequence and the remainder of the Project. Lacking this interconnection, any changes in the start, finish or duration of intermediate events in one construction path will have no apparent effect on the completion of the other path.

In considering all of the testimony of the various witnesses, the CPOC finds that the original Project Schedule as developed by [EllisDon] was fatally flawed by virtue of the unworkable construction phasing plan devised by [Clemson]. The CPOC further finds that the Construction Schedule, as implemented by the parties during the execution of the Work, any statements made on the basis of its projections, are not credible with respect to the criticality or non-criticality of any specific event.

CPO Decision at 43-46. This conclusion was supported by the testimony and evidence before the Panel, and the Panel adopts this finding of the CPO.

(3) Concurrent Delays Attributable to EllisDon and Other Mitigation Efforts

Clemson further excused any owner-caused delay by claiming that EllisDon-caused delays were more substantial than owner-caused delays. Moreover, Clemson argued that the compensable delays claimed by EllisDon did not consider the mitigating efforts taken by Clemson and/or accommodations Clemson provided in order to get the Project completed. Indeed, EllisDon admitted that it had serious concrete foundation issues in the laboratory and the greenhouses (which will be discussed later in this Order) and indisputably had a difficult time with its subcontractors in the Phase I greenhouse installation, both of which caused substantial delay on those aspects of the Project.

This issue – comparing the delays by one party or the other and reviewing concurrent delays – conflates with the CPM arguments raised above. The Panel finds that the CPM analysis in this case simply cannot reliably parse out the delay attributable to either party. The parties were able to manipulate the schedule, which was not updated and/or inaccurately maintained in real time, and to argue where the critical path truly existed and whether delay could be attributable to one side or the other. The Panel finds that EllisDon did cause some problems that led to delay and it was widely accepted that Clemson (and EllisDon, for that matter) mitigated some of the delays.

Conclusion: Compensable Delay and Liquidated Damages

Although the parties in essence stipulated that delay would compensate one party or the other (Clemson with liquidated damages and EllisDon with general conditions expenses), another option is available to the Panel. In the usual case regarding an assessment of liquidated damages, the owner may meet its initial burden by showing that

contractual performance was not substantially completed on time and the burden shifts to the contractor “to show that any delays were excusable and that it should be relieved of all or part of the assessment.” *PCL Construction Servs., Inc. v. United States*, 53 Fed. Cl. 479, 484 (2002) (internal citations omitted). However,

[w]hen performance of the contract is delayed by the government and the contractor, “the rule of the original contract cannot be insisted upon, and liquidated damages measured thereby are waived.” ... The United States Court of Claims specifically addressed the situation in which the government attempts to recover liquidated damages in contracts during the performance of which concurrent delay occurred. The court held that “where delays are caused by both parties to the contract the court will not attempt to apportion them, but will simply hold that the provisions of the contract with reference to liquidated damages will be annulled.”

Id. at 484-85 (internal quotations and citations omitted). The *PCL* Court went on to say that apportionment may be appropriate under some circumstances: “where both parties contribute to a delay neither can recover damage, *unless there is in the proof a clear apportionment of the delay and the expense attributable to each party.*” *Id.* at 487 (quotations omitted) (emphasis added).

In the case at hand, there is ample evidence that both Clemson and EllisDon contributed to the overall delay of the Project. Although Clemson did not delay the project to the extent claimed by EllisDon, Clemson nonetheless clearly contributed to the delay. As set forth above, the design changes and lead/asbestos abatement issues added to the scope of the Project, and more likely than not delayed the completion of the Project, even if those issues weren’t represented, at the time, as being on the “critical path.” EllisDon wasn’t without its own problems and issues: in addition to failing to provide accurate and up to date CPM schedules, EllisDon more likely than not contributed to the delay by its problems with the concrete flooring, and its subcontractors contributed to significant delays to the greenhouse construction. The Panel finds that both parties significantly

contributed to the delays, that both parties attempted (sometimes successfully) to mitigate the other parties' cause of delay, that EllisDon misreported and misrepresented the delay, that Clemson occasionally failed to timely address the claims and/or the possibility of delay,¹⁹ and that the post-dispute testimony regarding the schedule analysis and CPM has been used to both support and refute each party's delay.

The Panel has already found that it is unable to rely with any confidence on the CPM analysis testimony to determine delay and causation in this case. After consideration of the testimony, the evidence, and the documents presented at the hearing, the Panel finds that the first five incidents of delay described above are clearly apportioned against the owner – Clemson – and should constitute compensable delay. Thus, EllisDon is entitled to a Contract Time extension of 34 days and should be compensated in the manner set forth below. The Panel cannot make a finding because it cannot make a clear apportionment of the remainder of the time. Consequently, EllisDon is not entitled to any additional compensable delays for the greenhouse and headhouse demolition delays and/or the heating system revisions, and nor is Clemson entitled to liquidated damages for the delay in Substantial Completion. While both parties set forth their reasoning and attempted to provide evidence – most of it the CPM analysis – for the delay attribution, neither provided sufficient contemporaneous evidence for a clear apportionment of those delays. On this ground alone, the Panel supports its findings for no other compensable damages and no liquidated damages.

¹⁹ While not emphasized in this Order (primarily because even Mr. Taylor backed away from the relevance of this proposition under cross-examination), the Panel notes that there was evidence that Clemson and/or HOK failed to respond to requests for information and even requests for compensable delay in a timely manner throughout the Project. EllisDon routinely documented this delay with regular “submittal turn around summaries.”

Beyond this finding, however, the Panel finds that any delays caused by and/or misrepresentations made by EllisDon completely offset any further delays that might have been caused by Clemson. It is somewhat remarkable, considering the magnitude of this Project and the ramifications of delay, both contractual and real, that EllisDon was not more diligent about maintaining an accurate and predictive schedule before February 2001. The Panel strains to give credibility to a company that attributes minimal delay to the heating system revisions when they are being debated and installed, and after installation, the delay is declared to be more than 60 days, which several months later is determined to be more than 120 days. This analysis of scheduling delay seems opportunistic, at best, and does not credibly assist the Panel in the attribution and apportionment of delays. Moreover, it simply was not credible that the problems admittedly faced by EllisDon (i.e., concrete issues and problems with the completion of the Phase I greenhouses) did not also contribute to the delay of the Project. Maintaining an accurate contemporaneous scheduling process was clearly EllisDon's responsibility. Therefore, the Panel finds that any additional delays caused by Clemson are offset by EllisDon's own delays and its contemporaneous misrepresentations.²⁰

²⁰ It should be noted that the Panel rejects EllisDon's position that the liquidated damages were improper "penalties" and should therefore not be assessed. However, the conclusion reached by the Panel means that a finding on the date of Substantial Completion – March 29 or June 4, 2002 – is no longer relevant. As the Panel finds that liquidated damages are annulled as the result of joint contributory delay, it does not matter whether Substantial Completion occurred on March 29 or June 4, or whether Clemson's concurrent delays (i.e. the failure to obtain safety features before use of the building could occur) should offset its entitlement to liquidated damages. Were such a finding necessary, however, the Panel would agree with and adopts the CPO Decision finding: "in considering the totality of the testimony and evidence presented, in particular the results of the preliminary inspection performed and documented in Exh. 30D [J.A. 17 MM], the CPOC finds the actions and opinions of Mr. Keeshen to be the more credible. The CPOC concludes that the Laboratory Building was not substantially complete on March 29, 2002 but on the date determined by the architect, i.e. June 4, 2002...." CPO Decision at p. 50; *see also* Keeshen 450:3-461:8. Even with such a conditional finding, however, the Panel has some lingering doubt as to Clemson's ability to collect liquidated damages (if the Panel found them to be properly assessable) when it was clear that the building could not be used for its intended purpose as a result of concurrent safety and other concerns that were clearly the responsibility of Clemson. There is some inconsistency in the notion that Clemson wanted "EllisDon to finish their contract," Keeshen 680:12-681:1, but did not take timely steps to use and occupy the laboratory building.

What is the compensable amount for the delay?

For the 34 days awarded to EllisDon as compensable delay, the Panel must make a finding as to the amount to be awarded for the effect of this delay. EllisDon is entitled to recover those damages that are the natural and probable consequence of the increase in the Contract Time. In ¶4.3.8.1 of the Contract Documents, EllisDon agreed to a partial limit of its recovery:

Monetary adjustments made for the Agency-caused delays, if allowed, shall be limited to job specific costs. Adjustments shall not be allowed for either [1] indirect costs to the Project, including but not limited to, home office overhead and unrealized profit or [2] overhead and profit[,] other than that allowed by Subparagraph 7.1-5 [sic].²¹

EllisDon may not recover for any lost profits or home office overhead expenses related to the increased costs caused by delay, except as provided in Subparagraph 7.1.5 of the Contract Documents. Paragraph 7.1.5 allows for overhead and profit by allowing a specific percentage markup to be added to the changes in the Contractor's direct cost of performance of the Work:

Delete Subparagraph 7.1.5 and substitute the following:

7.1.5 In determining the cost to the Agency resulting from either an increase or a decrease in the Work, by either Change Order or Construction

Though the Panel appreciated Mr. Wells' testimony and logistical challenges of occupancy, Wells 727:23-732:8, it does not satisfy the concerns repeatedly raised by Mr. Stelpstra – Clemson withheld funds from EllisDon while simultaneously failing to use the building or ensuring timely modifications so that it could use the building when the Project was substantially complete.

²¹ The General Conditions also provide that adjustments to the contrast sum may not include home office overhead. Subparagraph 7.2.3 provides as follows:

7.2.3 Adjustments to the Contrast Sum shall include only direct costs directly attributable to the Change Order. Costs such as lost profit and home office overhead shall not be included in the adjustment.

As also reflected in paragraph 14.3.4, the intent of the Contract Documents was to prohibit the recovery of extended home office overhead, except as provided by paragraph 7.1.5, by limiting recovery to job specific costs plus a fixed percentage markup.

14.3.4 Adjustments made in the cost of performance shall be limited to job specific costs. No adjustment shall be approved for overhead and profit other than that allowed by Subparagraph 7.1.5 nor for any indirect costs to the project.

Change Directive, the allowances for overhead and profit combined, included in the total cost to the Agency, shall not exceed the percentages as follows:

.1 For the Prime Contractor, for any Work performed by his own forces, 15% of the cost;

.2 For the Prime Contractor, for Work performed by his Subcontractors, 7% of the amount due the Subcontractor;

.3 For each Subcontractor involved, for Work performed by his own forces, 15% of the cost;

.4 For the Subcontractor, for Work performed by lower tier Subcontractors, 7% of the amount due the Subcontractor.

(J.A. Exh. 2D).

In determining the adjustment to the Contract Sum due to these compensable delays, EllisDon contends that the CPO applied the incorrect daily overhead rate for EllisDon. EllisDon contends the correct daily rate to be \$3,788/day, rather than \$2,637/day as determined by the CPO. The CPO determined that the values of \$1850/day for EllisDon and \$787/day for its subcontractor, Cullen, were the appropriate measures of damages for general conditions costs to the extent any entitlement for compensable project delay is established.

The most credible evidence and testimony showed that EllisDon and Clemson had negotiated an “extended overhead rate” of \$2,637/day. The testimony and documentation supporting that testimony indicated that the parties, through a course of dealing, had agreed on an “extended overhead rate” of \$2,637/day. *See, e.g.,* Taylor 227:14-232:13; Keeshen 504:14-509:15. Although EllisDon argued that these negotiations should support only those delays that were resolved and/or compromised, the Panel finds that Mr. Keeshen’s testimony is more credible, that this amount is reasonable, and that this amount should be applied to the compensable delay sought by EllisDon in this litigation. The Panel therefore finds that this daily amount (\$2,637) is the appropriate measure of

damages for general conditions costs for compensable project delay. Consequently, for the compensable delay of 34 days, \$89,658.00 should be added to the Contract Sum.

Stand-by Equipment Costs

Proposed Change Order 18 (J.A. Exh. 2J) is comprised of several COR items, for which Clemson approved an increase in the Contract Sum totaling \$167,511. However, the parties were able to resolve all but one of the COR items in Change Order 18 prior to the hearing. The only remaining disputed item in Change Order 18 relates to EllisDon’s alleged standby equipment costs (COR 45.2).²² EllisDon bears the initial burden of proof on this issue.

The parties do not dispute that EllisDon is entitled to an increase in the Contact Sum due to standby equipment costs resulting from demolition delays caused by the detection of hazardous materials in the buildings to be demolished. EllisDon sought payment for costs incurred by its grading subcontractor while awaiting Clemson to resolve issues regarding the presence of asbestos and lead in the existing headhouse. Clemson contends that the \$5,989 amount included in Change Order 18 is the proper adjustment to

²² The following table summarizes the values of the COR items included in Change Order 18:

Change Order 18 Cost Element	Original Value	Undisputed Value	Disputed Value
COR 10.3 Greenhouse Heating Changes	\$200,333.00	\$200,333.00	0
COR 42.2 Wiring for Greenhouse Louvers	\$7,320.00	\$7,320.00	0
COR 43.2 Greenhouse Underbench Heating	\$31,117.00	\$31,117.00	0
COR 44 Change to Head House Ceilings	(\$27,531.00)	(\$27,531.00)	
COR 45.2 Standby Equipment Costs	\$5,989.00	\$0.00	\$83,550
COR 46.4 Extended Laboratory Roof	\$19,100.00	\$19,100.00	0
COR 54 Steam Line Expansion Anchors	\$3,818.00	\$3,818.00	0
COR 76 Head House Grow Lights	(\$20,013.00)	\$0.00	0
Credit for Self-Performed Landscaping Work	(\$52,622.00)	(\$27,578.88)	
Total	\$167,511.00	\$206,578.12	\$290,128.12

the Contract Sum. EllisDon contends the proper adjustment to the Contract Sum for these costs should be \$89,539. In that Clemson has agreed to pay \$5,989 for standby equipment costs, EllisDon seeks an increase in the Contract Sum for the difference of \$83,550 (\$89,539 - \$5,989).²³

The Panel has already addressed the delays regarding the presence of asbestos and other hazardous materials involved in the headhouse demolition. The Panel determined that Clemson bore some responsibility for the delay and that EllisDon's caution with regard to the lead and asbestos abatement was justified. HOK concluded, however, that EllisDon's request regarding standby equipment charges was excessive, including rates that were disproportionate, charges for dump trailers that were not on site, and three pieces of equipment that were on standby for only a portion of the requested time. The Panel agrees.

EllisDon provided contemporaneous notice to Clemson that its grading subcontractor intended to file a claim for its equipment standby time and asked for advice as to whether the grader should demobilize (J.A. Exhs. 19D-F). EllisDon submitted testimony and documents showing that the unit prices charged to EllisDon by its grading subcontractor for the standby equipment are those set forth in Schedule A of EllisDon's subcontract with C&C Grading (J.A. Exh. 19F). EllisDon applied markups, pursuant to the Agreement with Clemson, to these costs (J.A. Exhs. 19Q-U).

Nonetheless, the cost to a contractor for idle equipment is compensated only upon a showing that the equipment was reasonably and necessarily set aside for performance

²³ Clemson included \$5,989 in Change Order No. 18 for standby equipment costs claimed by EllisDon under COR No. 45. Although EllisDon never signed COR No. 45, Clemson paid \$5,989 for this item.

under the contract, the contractor's decision to maintain the equipment in a state of readiness was prudent and reasonable under the specific circumstances, and that actual costs were incurred. In this case, the more credible testimony showed that the grading subcontractor's personnel and equipment were not idle during the headhouse demolition delays or that the segregation of this equipment *at this price* was reasonable under these circumstances. Under cross-examination, Mr. Taylor was forced to admit his prior testimony indicating the personnel and equipment were idle during this delay was not accurate. *See, e.g.,* Taylor 239:2-241:21. Superintendent reports showed that C&C Grading personnel were on-site and working during the delay. By stretching the testimony to suggest that all of the subcontractor's employees and equipment were not and could not have been deployed on this Project or elsewhere strained the credibility of the EllisDon witnesses on this issue.

Moreover, the evidence showed that C&C Grading may not have had other opportunities for which it could have used the equipment and personnel. Les Taylor's testimony confirmed that the Project was C&C Grading's only job and only source of revenue. There was no evidence that had Clemson allowed or permitted demobilization, C&C Grading had any other prospects of using the equipment. The testimony tended to show that the Project was C&C Grading's only **potential** source of revenue at this time. C&C Grading was not precluded from seeking other opportunities and it was not clear from the testimony that EllisDon accepted and paid out C&C Grading's claim for equipment standby costs. There was no testimony that C&C Grading could have or would have been able to use the equipment for another purpose during or after the delay. There was no testimony that C&C Grading did use the equipment for another purpose *after* the delay. To the contrary, C&C Grading subsequently went out of business (EllisDon did

other grading work on the Project itself), suggesting that it did not incur any substantial actual or additional costs from the delay. *See generally*, Taylor 173:1-178:25.²⁴

In short, EllisDon is entitled to some costs for standby equipment for the headhouse demolition delay. The Panel agrees with HOK's analysis on the amount owed to EllisDon on this issue. *See* Keeshen 517:16-520:23. The Panel finds that EllisDon failed to meet its burden of proof to its entitlement to additional standby equipment costs.

Floor Flatness in the Laboratory Building

Technical Specifications 03300 (J.A. Exh. 2G) requires that the laboratory building floors meet certain criteria for flatness and levelness. Clemson withheld \$516,838 due to alleged defects in the flatness of the floors in the Laboratory building. EllisDon contends this deduction was improper. EllisDon seeks payment of the \$516,838 amount withheld by Clemson. Because this claim involves a "set off" from EllisDon's Contract Sum, Clemson bears the initial burden of proof.

The parties stipulated to the following on this issue:

(a) The flatness and levelness²⁵ requirements, whose interpretations are in dispute, are included in Specification 03300, Paragraph 3.11.D, as follows:

2. Finish surfaces to the following tolerances, measured within 24 hours according to ASTM E 1155M [Exh. 22B] for a randomly trafficked floor surface:

a. Specified overall values of flatness, F_F35 ; and levelness, F_L25 ; with minimum local values of flatness F_F24 ; and levelness, F_L17 ; for slabs-on-grade

²⁴ The implication that the evidence showed that the standby *caused* C&C Grading to go out of business was not credibly supported by evidence before the Panel and therefore rejected.

²⁵ The term "flatness" refers to the degree that the floor dips and rises as one walks across the floor. The term "levelness" refers to the degree to which a floor has an overall slope. Eldon Tipping provided an excellent explanation of the issues regarding flatness and levelness testing. *See, e.g.*, Tipping 41:20-49:6.

3. Finish and measure surface so gap at any point between concrete surface and an unlevelled freestanding 10-foot-long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed the following:

a. ¼ inch.

(J.A. Exh. 2G).

(b) In addition to the interpretation of the above paragraphs, the parties also disagree on the assignment of responsibility for any testing of the concrete to determine compliance with Specification 03300. The inspection and testing requirements are contained in Specification 01400, Paragraph 1.3.A, which states in relevant part:

Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. Costs for these services are included in the Contract Sum.

1. Where individual Sections specifically indicate that certain inspections, tests and other quality-control service are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.

2. Where individual Sections specifically indicate that certain inspections, tests and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.

(J.A. Exh. 2G).

(c) In addition, Technical Specification 0300, Paragraph 3.16.A, 3.16.B and 3.16.G provides, in relevant part, the following with respect to testing:

3.16.A: Testing Agency: Owner will engage in qualified independent testing and inspection agency to sample materials, perform tests and submit test reports during concrete placement. Sampling and testing for quality control may include those specified in this Article.

3.16.B: Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed to the following

requirements; [there follows eight paragraphs describing tests on the material properties of the concrete] . . .

3.16.G: Additional Tests: Testing and inspecting agencies shall make additional tests of concrete when tests indicate a slump, air content, compression strength or other requirements have not been met, as directed by Architect.

J.A. Exh. 2G)

There was little doubt that the concrete flooring issues bedeviled EllisDon on this Project, especially with regard to the laboratory building floors, which had an impact on the Contract Time in addition to this allegation of nonconformity. Because of the nature of the work and research to be performed in the laboratory building, Clemson argued that concrete specification for levelness and flatness was critically important.

In its argument, Clemson appropriately relied on Specification 03300. Clemson maintained that the overall flatness/levelness standards as set forth in the Contract Specifications and the BLE Reports (J.A. Exh. 9A & documents behind Tab 10) applied to floor slabs and slab on grade issues. Clemson also contended that its testing obligations under Specification 03300, Paragraph 3.16.A are limited to the specific tests identified in Paragraph 3.16.B. Inasmuch as paragraph 3.16.B does not specifically list floor flatness measurements, Clemson concluded that such measurements were the responsibility of EllisDon, pursuant to Specification 01400, Paragraph 1.3.A.1. Clemson also relied upon subparagraph 3.3.4 of the General Conditions of the Contract (J.A. Exh. 2C), which provides:

The Contractor shall be responsible for inspection of portions of Work already performed under the Contract to determine that such portions are in proper condition to receive subsequent work.

After completion of the first pour on the second floor of the laboratory building, Clemson determined that the finish of the floors did not conform to the concrete

specifications of the Contract Documents. Clemson subsequently hired BLE, Inc. to perform appropriate tests to see if the floors met the contract specifications. These tests revealed non-conforming conditions (J.A. Exh. 9A).

The Project architect further testified that he thought the flooring was non-conforming and that EllisDon repeatedly assured him the floor deficiencies would be corrected. However, the architect testified that on several occasions, including November 2001 when the laboratory casework was being installed, and April 2002 in a Substantial Completion review, he found areas of the floors where a 10-foot straight edge revealed gaps of as much as one inch.²⁶

EllisDon, not surprisingly, makes a contrary argument. With respect to the issue of the applicable standards for flatness and levelness, EllisDon contends that paragraph 3.11.D.2 of Specification 03300 applies only to slabs-on-grade and that paragraph 3.11.D.3 applies to suspended slabs. In support of its position, EllisDon offered the report (J.A. Exh. 9L) and testimony of an expert witness, Eldon Tipping of Structural Services, Inc., who stated that in his professional opinion, paragraph 3.11.D.2 applies only to slabs-on-grade and that paragraph 3.11.D.3 applies to suspended slabs. Mr. Tipping testified that such an interpretation and application of Specification 03300 is logical and would comport with what one would normally expect to see for this type of construction. Mr. Tipping testified that the F_F or F_L values or requirements do not normally apply to suspended slabs, as these slabs are prone to movement either when the supports are removed or when the slabs assume additional loads. EllisDon's other witnesses also

²⁶ In March 2002, the Architect was walking the building and attempted to move a bench when it fell off a stack of washers EllisDon had installed. He performed more measurements and confirmed the fact that the floors remained in a non-conforming condition.

testified that they understood Specification 03300, Paragraph 3.11.D.2 to apply to slabs on grade and Specification 03300, Paragraph 3.11.D.3 to apply to suspended slabs.

With respect to any testing to demonstrate its compliance with the flatness and levelness requirements, EllisDon contends that any such testing was the responsibility of Clemson. In support of this contention, EllisDon relies upon Paragraphs 3.18.B and 3.16.G, of Specification 03300, as quoted above. EllisDon contends that pursuant to Specification 03300, Paragraph 3.16.A, Clemson was responsible to perform all tests and inspections necessary during the concrete placement, including any tests for floor flatness. EllisDon contends that Clemson's obligations under Paragraph 3.16.A are not limited to the specific tests identified in Paragraph 3.16.B. Bolstering this interpretation, EllisDon maintains that pursuant to Specification 01400 Paragraph 1.3.A.2, Clemson has the responsibility for performing such tests. In further support of this argument, EllisDon notes that Clemson never requested EllisDon to perform floor flatness tests, but chose to have these tests performed by BLE (J.A. Exh. 9A).

To the extent Clemson might have a valid claim for defective concrete work in the Laboratory Building, EllisDon disputes Clemson's quantification of that claim. First, EllisDon argues that no testing was performed by Clemson (or by BLE) on the slab-on-grade to determine whether the flatness of that floor surface complies with the requirements of the applicable standard, Specification 03300, Paragraph 3.11.D.2. Second, EllisDon contends that BLE's flatness measurements included all pours of the second floor slab and two out of three pours on the third floor slab (J.A. Exh. 9A). However, none of the testing of the upper floors was performed to determine compliance with Specification 03300, Paragraph 3.11.D.3. In testing the upper floor slabs for flatness using the "F-test" method, BLE tested the elevated slabs for compliance with a technical

standard that did not apply to those slabs. Accordingly, EllisDon argues that Clemson does not know the full extent of non-compliance, if any, of the floors in the Laboratory building with the applicable flatness and levelness standards. Third, EllisDon notes that neither Clemson nor BLE re-inspected the floors following EllisDon's corrective work.

Finally, EllisDon argues that the dollar amount Clemson has withheld is based on an estimate for repair work that would result in floors having flatness and/or levelness exceeding the applicable specification standards. Clemson performed no repairs to the floors in the Laboratory Building and had no specific or firm intention of performing any repairs. EllisDon contends that all amounts deducted from the Contract Sum due to alleged floor flatness deficiencies should be paid by Clemson, plus accrued interest on such amount.

For this matter, the Panel initially agrees with the conclusions and expert testimony of Eldon Tipping that the flatness and levelness tolerances do not apply to the suspended slabs for the project and that subparagraph D.3 would apply (the gap below the straight edge approach) for the suspended slabs. *See, e.g.,* Tipping 52:17-53:23. This testimony was corroborated by other testimony, most notably that of the Architect, regarding the standards for slab on grade and elevated slabs. In short, the Panel finds that BLE tested the elevated slabs for compliance with a technical standard that did not apply to those slabs.²⁷

It is clear that at the time of BLE's testing, however, it appeared that EllisDon did not construct the floors of the Laboratory Building in conformance with the flatness

²⁷ The Panel also agrees with the CPO that no testing was performed to determine whether the levelness of the slab-on-grade complied with the Contract requirements as it was not done within 24 hours of concrete placement. Clemson could not meet its burden of proof as to the levelness of the slab on grade in the laboratory building. *See* CPO Decision at p. 27.

standards of the Contract Documents. To the extent that Clemson had an obligation to test, or that the testing which occurred did not occur in a timely manner, such a failure is immaterial: the great weight of the evidence demonstrated that EllisDon recognized the nonconformity, or at least the potential for nonconformity, and made some attempt to cure its defective work.²⁸ The evidence that EllisDon did any testing of any nature of the floors, which appeared to be limited to Mr. Taylor's informally conducting a "gap test," was not credible testimony.²⁹ Once informed of potential problems, EllisDon never retested or provided quality-control services related to the concrete finishing or sought timely independent testing. The Panel adopts the CPO's conclusion: "All that matters is once a noncompliance was identified, it was E-D's responsibility to correct the noncompliance and provide the evidence that the work, as repaired, met the contract requirements." CPO Decision at p. 26. Indeed, although EllisDon appeared to dismiss or ignore its responsibility with regard to the flooring, the evidence showed the deficient

²⁸ Despite his disavowal of BLE's findings, Mr. Taylor agreed that EllisDon started making corrections to the floors "based upon the deficiencies that BLE determined were there." 205:4-7; *see also* Keeshen 490:1-492:4.

²⁹ The primary testimony on this point was by Les Taylor at 152:3-153:5:

Q: And did you go through the entire project, every floor with that straight edge and measure the --- what's called the gap test, measure the floors to see if there were any areas that did not meet the quarter inch gap and ten foot requirement?

A: Yes, that was our intention.

Q: And whenever you identified an area that did not meet that quarter inch and ten foot gap, how did you identify it, how did you mark that area?

A: I think we painted them.

Q: Spray painted the concrete and circled the area, or something?

A: Yes.

Q: Okay, and the areas that were identified, were they repaired?

A: Sure.

This testimony was representative, and the way in which it was presented to and observed by the hearing officer, was not direct, sure, or firm, and it did not inspire confidence that EllisDon did any careful testing or did any adequate retesting or any sufficient repairs of the nonconforming areas. *Cf.* Taylor 153:1-5 (hedging on the amount of testing done because "at that time my recollection on the job that this was not about to become a big issue"). The testimony tended to show that EllisDon had a dismissive attitude about the concrete flooring issues *after* receiving the BLE reports and on notice that Clemson was concerned about the issue.

work of a type that was indisputably within its scope of responsibility. The Panel finds that testing performed by BLE and testimony provided in this case convincingly showed nonconforming work with regard to the floor slab flatness, and the testimony that EllisDon cured *all* of the nonconformities was not compelling.³⁰ The Panel agrees with the Architect's opinion that even after Substantial Completion, nonconformities more likely than not existed in the concrete flooring.

Clemson claims that when the BLE tests demonstrated the non-conforming conditions of the floors, Clemson could have stopped work or stopped payment until the conditions were corrected. Not wanting to unduly impede progress of the project, Clemson alleged that it simply insisted the condition be fixed.³¹ Clemson also alleged that had EllisDon fixed the problem when it was discovered, flowable fill could have been easily applied and all the floors could have been fixed for significantly less than the cost to fix them now. Accordingly, in lieu of requiring the removal and correction of this work, and after Substantial Completion had occurred, Clemson elected to reduce the Contract

³⁰ While the Panel was impressed by the testimony of Mr. Tipping, he was unable to offer an opinion on the condition of the flooring at or near the time the concrete placement was made, and he could not perform any testing on the flooring because the building was near completion during his inspection. *See, e.g.*, Tipping 61:22-62:22; 66:17-68:1. Mr. Tipping also admitted that there was at least one section of the laboratory flooring in which he suspected nonconformity. Tipping 63:16-64:8; *cf* Taylor 162:16-164:10. In that the flooring issues were brought to EllisDon's attention relatively early in the Project (late 2000 according to the Taylor testimony), it is not favorable to EllisDon that it did not retain an expert like Mr. Tipping until two years after BLE conducted their investigation, nor did it perform comprehensive testing to show that the flooring met Contract specifications.

³¹ While not given equal weight, the Panel does note that Clemson and HOK bear some responsibility for the deficiencies in that once the problems were identified, neither Clemson nor HOK submitted plans, procedures, or processes for identifying, correcting, and minimizing future concrete pours. Clemson never verified that corrective work was or was not done, and certainly did not re-test following EllisDon's claims that the deficiencies were corrected. Clemson did not request that EllisDon furnish it with reports of its testing. Clemson did not verify where nonconformities remained. Clemson appeared to do very little to address the flooring issues between BLE's testing in late 2000 and the events surrounding Substantial Completion in the spring of 2002. By waiting and not insisting that the floors be fixed *when they could be fixed in a cost-reasonable manner*, Clemson and HOK perpetuated the problem for which they complain today. In light of the important research to be done in that facility, Clemson's excuse that it did not want to unduly delay the Project at this stage was unfortunate.

sum in the amount of \$516,838.00.³² Clemson had not made any repairs, alleging that it put a hold on accomplishing any repairs until the EllisDon claim was resolved.

Despite the finding that nonconformities in the flooring flatness exist, The Panel simply cannot agree that Clemson's proposed remedy is appropriate. The undisputed testimony was that Clemson – at the time of the hearing having had more than four years of beneficial use of the laboratory – expended no dollars to fix the floor deficiencies. It is also unlikely, in the Panel's opinion, based on the weight and nature of the testimony, that Clemson will spend any dollars on the floor deficiencies at any time in the near future. Clemson's attempts to justify the amount it withheld was introduced primarily through hearsay evidence, *see, e.g.*, Wells 800:20-815:6, and otherwise deemed dubious by the Panel. It is manifestly clear from the testimony that the laboratory has been used for research³³ and that the majority of floor deficiencies have been either adequately fixed (as EllisDon testified) or otherwise mitigated or accommodated.³⁴ The more credible evidence and testimony supported the notion that Clemson's proof of damages caused by these nonconformities was speculative. Clemson provided no proof of nonconformities in any specific areas or costs to repair any specific areas of floors. Clemson provided no

³² Clemson determined the reduction for the floors by extrapolating the cost to fix one lab suite from the assignable square feet in the lab (approximately 60,000 SF). There are 12 lab suites with 6 large and 2 small pieces of casework. According to Clemson, the estimated cost for one suite would be close to \$95,000 alone to remove tile and base, remove casework and utilities, patch floor as required, and put everything back. The amount held back from EllisDon would cover only 5 of 12 lab suites and not correct any other floor deficiencies in offices or corridors.

³³ Indeed, the testimony was undisputed that the research in the laboratory has been tremendously successful. *See* Wells 749:3-12. Although the Panel credits the testimony of Mr. Wells and others that the flooring issues remain apparent in the laboratory building, there was no testimony that the floor deficiencies precluded any work of substance from being successfully performed in the laboratory.

³⁴ It should be noted that no weight was given to the quotes or thoughts attributed to Clemson in the newspaper article (Anderson Independent Mail) dated March 25, 2003 that was introduced by EllisDon. Similarly, no weight was given to the notes produced by Mr. Keeshen (Exh. 24); *see* Keeshen 475:8-477:6.

evidence that it had to expend any additional funds for its equipment placed in the laboratory building. There was no compelling evidence that the research mission in the building has been or will be impacted or imperiled. There was no credible evidence that all of the flooring in each of the labs was nonconforming and in need of further repair.³⁵ Clemson's claimed remedy extended to fixes that were well beyond the scope of the nonconformities. There is no compelling proof of any diminution in value to the laboratory, and to the extent that Clemson's witnesses testified in that regard, such testimony was not deemed credible.

Pursuant to the terms of the Contract, Clemson is entitled to accept non-conforming work (J.A. Exh. 2C).

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

The Panel has the obligation to review what is "appropriate and equitable." In this case, there is not sufficient evidence to offset the Contract Sum for the amounts alleged by Clemson relating to any future repairs. However, the Panel did find that EllisDon would have had the responsibility and would have been required to fix the concrete deficiencies earlier in the Project had it been appropriately diligent with regard to the concrete portion of the Project. Clemson itself asserted that "had EllisDon fixed the problem when it was discovered, flowable fill could have been easily applied and all the floors could have been

³⁵ The Panel shares the CPO's concern that Clemson, despite withholding nearly \$600,000 for the stated purpose of making repairs to the floors, did very little to determine the actual extent of nonconformance and potential reasonable repair costs at the hearing. The excuse that determining the extent of the nonconformity and repair is itself expensive and prohibitive helps prove the point that Clemson may never repair the nonconformities, instead working around and mitigating the flooring issues.

fixed for significantly less than the cost to now fix them.” No costs or estimates were entered into evidence that demonstrated how “significantly less” the cost to fix the problem when it was discovered would be; as EllisDon would have had the obligation to fix these problems, however, it saved some time and money by not taking these curative steps. In other words, by not making those fixes, and not engaging in proper testing or retesting, EllisDon saved a sum of money that it otherwise would have – and should have – spent to fix this problem so that it did not remain a problem at the time of Substantial Completion, much less at the time of the hearing. EllisDon should not be rewarded for failing to make proper curative repairs when it could have done so when its work was nonconforming. The Panel, making use of the “appropriate and equitable” language in 12.3.1, hereby makes a finding that the Contract Sum should be reduced by \$100,000 – a rough calculation of EllisDon’s savings under the Contract for not fixing the problem when it could have done so for “significantly less.”³⁶

Punch List Holdback

Clemson withheld \$150,000 due to alleged incomplete or defective work. EllisDon contends this deduction to be improper. EllisDon seeks payment of the \$150,000 amount withheld by Clemson, plus accrued interest. Since this claim involves a “set off” from EllisDon’s Contract Sum, Clemson bears the burden of proof.

In unsigned Change Order 019 (J.A. Exh. 2K), Clemson deducted \$150,000 from the Contract Sum to account for the cost of work Clemson deemed to be unfinished at the

³⁶ Taylor testified that the “grinding” and “filling” done in the spring 2002 to cure the nonconformities cost EllisDon about \$70,000, 156:8-157:9, and admitted that any further repairs could be done for \$25,000, 164:11-165:2; 331:14-22. Curiously, EllisDon never submitted any formal report or re-testing to show that the floors met Contract specifications after these repairs. Nonetheless, the Panel projects that the costs to do what Clemson suggested would have “solved” the problem in 2000 may have exceeded the superficial efforts EllisDon expended at the tail end of the Project, thus supporting the finding of a \$100,000 offset.

time of Substantial Completion. Clemson contends that EllisDon was given ample and timely notice of the unfinished work and that EllisDon failed to pursue an extensive list of incomplete or deficient work as documented in a punch list over forty pages long (J.A. Exh. 4Q).

EllisDon contends that the sum withheld by Clemson is excessive, that EllisDon was willing to perform any unfinished work and, finally, that any work remaining unfinished at the time of termination was due to Clemson's failure to complete work that was a prerequisite to EllisDon completing its work. Alternatively, EllisDon believes the value of the incomplete punch list work is approximately \$25,000.

Subparagraph 9.8.2 of the Contract states in relevant part:

9.8.2 When the Contractor considers that the Work, or designated portion thereof, is substantially complete, the Contractor shall prepare and submit to the A/E a request for a Substantial Completion inspection along with a comprehensive list of times to be completed or corrected.

.1 No Substantial Completion inspection shall be made until such time as the A/E, the Agency and the OSE have received a letter in the following words:

"The work on the Contract for (insert Project Number and Name as it appears on the Contract), having been completed except as stipulated herein below, it is requested that a Substantial Completion inspection be made promptly by the A/E. The following work is incomplete through no fault or negligence of the Contractor: (List any work the Contractor regards as exceptionable and after each item substantiate why its incompleteness is not due to his fault or negligence)."

.2 The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

(J.A. Exh. 2D).

Having reviewed all of the evidence and the testimony on this matter, the Panel finds that Clemson failed to meet its burden of proof of showing damages on this issue. The Chief Facilities Officer at Clemson gave vague and unconvincing testimony about

contractors giving him verbal estimates to justify this \$150,000 holdback. Wells 788:1-789:10. His testimony regarding work actually completed on the punch list, and on the value of this work, was not sufficiently corroborated.³⁷ The Panel does find that EllisDon may not have sufficiently finished the Project pursuant to the Contract Documents; however, the more credible evidence, especially that of Jack Stelpstra, favored EllisDon on what was left unfinished and the value of the unfinished work. The greater weight of the evidence shows that the amounts at issue to be withheld approximated \$25,000 – and not \$150,000 – due to alleged incomplete punch list work. The Panel finds that the value of the punch list work withheld by Clemson should be \$25,000.

Interest

The Panel has considered and read the parties' arguments regarding interest owed to EllisDon for late/due payments. Paragraph 9.7.2 of the Supplement Conditions states that Clemson "shall pay interest on delayed certified progress payments to [EllisDon] in accordance with Section 29-6-50 of the S.C. Code of Laws." The fundamental purpose of this statute (part of The Prompt Payment Act) is that a contractor who properly performs its contract is entitled to timely payment. While it is indisputable that this statute applies to public entities and was referenced in the Contract Documents, this statutory pre-judgment interest remedy is limited in two relevant ways. First, the owner may refuse to put in a pay request due to reasons including defective work, lack of progress, or disputed work. S.C. Code § 29-6-40. Second, if a contractor wants to use this statute, it must notify the owner *at the time that the request is made*. S.C. Code § 29-6-50. There is no evidence that EllisDon informed Clemson about the Prompt Payment Act or referenced

³⁷ Because Clemson "retained" money from the amount in escrow for both the flooring issues and the punch list items, it is puzzling that Clemson had not spent the money (with regard to the flooring) and could not sufficiently corroborate if or how the punch list holdback was or should be spent.

the statute or even the possibility of collecting interest at the time it demanded payment. There is nothing in the statute or the precedent cited by EllisDon suggesting that this requirement was waived or could be waived by its insertion in the Contract Documents. These statutory provisions do not appear to have been interpreted by South Carolina courts. Therefore, the Panel finds that EllisDon has not met the requirements to recover interest under this section because the amount was disputed and EllisDon failed to provide the requisite notice. *See Appeal of McCarter Electric Co.*, S.C. Procurement Panel Case No. 1992-21.

EllisDon makes an alternative argument that it is entitled to interest pursuant to S.C. Code § 34-31-20. Counsel for Clemson and the CPO argue that South Carolina courts would not permit the recovery of interest against a state entity except where statute expressly allows or the parties contract to the contrary. The cases they cite, however, do not make that express holding, and at least one, *Division of General Services v. Ulmer*, 256 S.C. 523, 183 S.E.2d 315 (S.C. 1971), was overruled by *McCall v. Batson*, 285 S.C. 243, 329 S.E.2d 741 (S.C. 1985). There is no case that expressly holds that S.C. Code § 34-31-20 does not apply to state entities – and South Carolina Courts have had an opportunity to make this holding – or to matters litigated under the Procurement Code. Moreover, there is no case that suggests that S.C. Code § 29-6-50, broadly or particularly, precludes the effect of S.C. Code § 34-31-20.

The Panel is sympathetic with EllisDon's request for interest as the amounts owed to EllisDon have remained owed and due for quite some time. It does seem inequitable (and would send the wrong message to other state entities who withhold amounts owed or retain such amounts) that EllisDon could not collect pre-judgment interest. Although the parties contracted for a higher rate of interest pursuant to S.C. Code § 29-6-50, the Panel

finds that the standards to recover interest under the Prompt Payment Act were not met. However, the Panel finds that S.C. Code § 34-31-20 can be applied to recover interest under these circumstances, and interest is awarded at the statutory amount (8.75 percent) for amounts owed since August 1, 2002.

Summary

Accordingly, based on a review of the testimony (including the credibility and demeanor of the witnesses), the documents, and the evidence presented to the Panel, as reported by the Hearing Officer, the Panel finds that EllisDon is entitled to the following:

- A. On EllisDon's claim for compensable delay, the Panel grants an extension to the contract time extension of 34 days; the Panel finds that the value of each day is \$2637.00 per the negotiated agreement between the parties, which means that EllisDon is entitled to an increase in the Contract Sum of \$89,658.00;
- B. Any remaining time claimed by EllisDon and the liquidated damages claim asserted by Clemson are offset and rejected; therefore, EllisDon is entitled to recover \$231,000, representing the entire amount of liquidated damages assessed and retained by Clemson;
- C. EllisDon is not entitled to recover any additional compensation for its claim for standby equipment costs;
- D. On EllisDon's claim that Clemson improperly retained \$516,838 for flooring and concrete defects, the Panel finds that EllisDon is entitled to recover all but \$100,000 of the amount retained by Clemson, which amounts to \$416,838;

- E. On EllisDon's claim that Clemson improperly retained \$150,000 for punch list items, the Panel finds that EllisDon is entitled to recover all but \$25,000 of the amount retained by Clemson, which amounts to \$125,000;
- F. Apparently EllisDon has still not received credit for the grow lights and landscaping work, which was not disputed and yet retained by Clemson; EllisDon is entitled, therefore, to \$45,056 of this undisputed amount; and
- G. EllisDon may recover interest at the statutory rate of 8.75 percent on the amounts owed under this Order running from August 1, 2002.

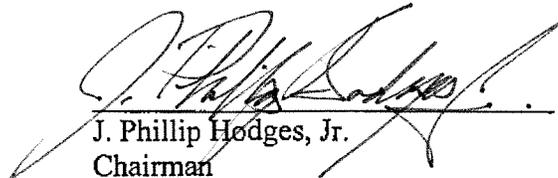
Reported to the Panel by:



Mark W. Bakker
Hearing Officer

IT IS SO ORDERED.

SOUTH CAROLINA PROCUREMENT
REVIEW PANEL



J. Phillip Hodges, Jr.
Chairman

Date: JULY 5, 2007