ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of --	)	
	)	
Buck Town Contractors & Co.	)	ASBCA Nos. 60939, 60940, 60941
	)	
Under Contract No. W912P8-09-D-0052	)	

APPEARANCES FOR THE APPELLANT:

W. Lee Kohler, Esq.
Douglas A. Kewley, Esq.
Thomas F. Gardner, Esq.
Gardner & Kewley, APLC
Metairie, LA

APPEARANCES FOR THE GOVERNMENT:

Michael P. Goodman, Esq.
Engineer Chief Trial Attorney
Stephen S. Bland, Esq.
William G. Meiners, Esq.
Engineer Trial Attorneys
U.S. Army Engineer District, New Orleans

OPINION BY ADMINISTRATIVE JUDGE D'ALESSANDRIS

The United States Army Corps of Engineers (government or Corps) awarded a contract to appellant, Buck Town Contactors & Co. (Buck Town), to reconstruct a hurricane protection levee in St. Charles Parish, Louisiana. Buck Town subcontracted the work in question to Circle LLC (Circle). The contract required placement of a layer of geotextile material at the base of the levee, and required that the geotextile be provided in continuous machine-direction lengths without seams, with all seams and overlaps to be installed perpendicular to the centerline of the levee. In order to minimize waste, Circle installed two full-length 120 foot rows of geotextile from each 300 foot roll and then formed rows by joining the 60 foot remainders with an overlap running parallel to the centerline of the levee. The Corps objected to this method only after one reach[1] of the levee was complete (and the geotextile buried) and another reach had a large part of the geotextile installed. Buck Town was required to remedy this situation by degrading the levee and installing a second layer of geotextile material in rows without seams before rebuilding the levee to the required elevation. However, Buck Town did not timely perform the required quality-control tests of the fabric required by the contract. After tested material produced conflicting results, the Corps ordered Buck Town to exhume full-width samples of the second layer of geotextile material actually installed in the levee. The tests of exhumed geotextile material failed to meet the strength specified in

[1] A reach is a continuous, typically uniform, section of a levee.

the contract. The Corps subsequently required Buck Town to degrade a portion of the levee and install a third layer of geotextile material, and again rebuild the levee to grade.

In an opinion dated January 11, 2018, we granted summary judgment in favor of the Corps on an issue of contract interpretation, holding that Buck Town was required to install the geotextile in full-length rows without seams. *Buck Town Contractors & Co.*, ASBCA No. 60939, 18-1 BCA ¶ 36,951. A two-day hearing on liability was held in New Orleans, Louisiana in November 2018. Buck Town alleges that it is entitled to compensation for the first rework of the levee, which Buck Town refers to as its claim 1 (ASBCA No. 60939) under a waiver and acceptance theory, a superior knowledge theory, and because of "new evidence" that Buck Town believes should cause us to reexamine our January 2018 opinion. Buck Town additionally alleges entitlement to compensation for the second rework of the levee, which Buck Town refers to as its claim 3 (ASBCA No. 60941) under an economic waste theory. Buck Town's initial complaint contained a claim 2 (ASBCA No. 60940) alleging that the Corps' direction to exhume a sample of the second layer of installed geotextile material constituted a constructive change to the contract. Buck Town abandoned its claim 2 in its motion for leave to amend its complaint, filed September 4, 2018 (app. mot. leave to amend). As explained below, we find that Buck Town has demonstrated entitlement for claim 1 pursuant to a constructive waiver theory, but deny entitlement for Buck Town's claim 3.

FINDINGS OF FACT

The parties submitted a joint statement of undisputed facts (JSF) which we adopt and supplement with additional findings of fact relevant to the issues before us.

I. The Reach 1A Contract

Contract No. W912P8-09-D-0052, Task Order 0004, was awarded to Buck Town on September 28, 2009, in the amount of $9,052,369.05 (JSF ¶ 1; R4, tab 78). The contract provided for the structural demolition of the existing Gulf South Pipeline Floodwall and adjacent scour protection, construction of the proposed Gulf South Pipeline Floodwall and all embankment placement and grading, relocation, access roads, scour protection, pipeline protection and all other work associated with the floodwall as shown in the drawings (JSF ¶ 1). The work also consisted of clearing and grubbing the existing levee and berms, borrow area preparation, degrading the existing levee, placement of reinforcement geotextile fabric, placement of compacted fill, enlargement of the existing levee, new access road, fertilizing and seeding and other incidental work (*id.*). The levee in question protects residences and businesses from potential flooding from Lake Pontchartrain (tr. 1/171-75). The levee is part of a "high risk system" and a breach of the levee system could result in the inundation of 191,000 structures, property damage of $47 billion and a substantial loss of life similar to that during Hurricane Katrina (tr. 2/122-25; R4, tab 134 at GOV57178).

The contract duration upon award was 420 days with an expected completion date of December 3, 2010 (JSF ¶ 2). Construction began on November 2, 2009 (*id.*). Per contract clause 52.211-12, the contractor was obligated to pay the government $2,555.00 for each calendar day of delay until the work was completed or accepted (*id.*). The required contract work included installation of reinforcement geotextile fabric (JSF ¶ 3; R4, tab 5). Buck Town subcontracted the geotextile work to Circle, LLC (JSF ¶ 3). Installation of the geotextile was a design feature of the levee and its purpose is to provide increased strength to the levee foundation (JSF ¶ 4).

The geotextile also allowed the levee to be constructed within a designated footprint (tr. 1/126-27). Reinforcement geotextile is similar to, but different from, separator geotextile typically used to separate two types of material, for example in building a roadbed (*id.* at 127-28). The levee was designed to reach an acceptable level of safety without considering strength gains achieved by consolidation of the levee fill (R4, tab 134 at GOV57175).

The geotextile specifications in the contract included provisions relating to the placement of the geotextile and minimum strength requirements of the fabric (*id.*). In particular, the specification Section 31 05 19.05 12, "Reinforcement Geotextile" included the following relevant provisions regarding the geotextile:

a. Paragraph 1.3.1 states, in part: "The contractor shall establish and maintain quality control for the geotextile and placement to assure compliance with contract requirements;"

b. Paragraph 1.5 states, in part: "The Contractor shall submit a work plan to the Contracting Officer. The plan should include . . . A detailed description of how the geotextile will be placed;"

c. Paragraph 3.1.1 states, in part: "All seams and overlaps shall be placed perpendicular to the centerline of the levee. Fill shall not be placed on the geotextile until the seams or overlaps are within 5 degrees of being perpendicular to the levee centerline;"

d. Paragraph 3.1.2.2 states, in part: "All corrective actions are subject to prior approval of the Contracting Officer. Geotextile that is rejected, or damaged due to Contractor negligence shall be tested and repaired or replaced as directed by the Contracting Officer at no additional expense to the Government;"

e. Paragraph 3.3.1 states, in part: "Geotextile panels shall be sewn along the selvedge edges so that seams run parallel with the machine direction to produce geotextile pieces that are wider than the weaving machine produces;"

f. Paragraph 3.3.2 states: "Overlaps may be used at [points of intersection[2]], or to join pieces of geotextile that become too heavy to handle with construction machinery. All overlaps shall run in the same direction as the seams. A minimum of two feet is required at each overlap;"

g. Paragraph 3.5.1.1 states: "Wide-width tests shall be performed to verify the tensile strength of geotextile that was delivered to the site. One sample shall be taken from the first panel and additionally at 3,000 feet increments, measured along the levee centerline. Samples shall be obtained from the end of the panel;"

h. Paragraph 3.5.1.2 states: "Seams shall be tested using ASTM D 4884test [sic] to verify tensile strength of the seams. Tests shall be performed at intervals of 2,000 feet, measured along the levee [centerline], or at a location specified by the Contracting Officer that will equal the same number of tests. Seam and geotextile panel samples shall not be taken from adjacent panels. All samples shall be taken from the end of the panel, unless directed to do otherwise by the Contracting Officer." (*Id.*; R4, tab 5 at GOV108-13);

i. Paragraph 3.6 "Field Quality Control" provides that "[i]n the event that samples fail to meet the specified results, the Contracting Officer has the right to direct the Contractor to perform additional tests on samples taken between the location of the failed test and the location of the previous successful test. . . . If the Contractor places fill on top of a seam, or geotextile which fails to meet the specified test results, then the fill shall be removed and the defective geotextile or seam shall be repaired. The Contractor will not be paid for any work or supplies in this paragraph." (R4, tab 5 at GOV113)

Contract Section 31 05 19.05 12 also included the following table of physical requirements for the reinforcement geotextile:

PHYSICAL REQUIREMENTS FOR REINFORCEMENT GEOTEXTILE

Geotextile type:	Woven permeable geotextile	
Property	Test Method	Minimum Certifiable Value
@ 5% strain	ASTM D 4595	1450 lbs/in
@ ultimate		2900 lbs/in for polyester 2650 lbs/in for polypropylene 4800 lbs/in for polyethylene
Seam Strength (*) Factory or Field	ASTM D 4884	300 lbs/in

(*) All of the samples shall yield test values that are greater than the minimum value that is specified (JSF ¶ 5; R4, tab 5 at GOV113-14).

[2] A point of intersection is where the centerline of the levee changes direction.

The contract contains FAR 52.246-12 "Inspection of Construction (AUG 1996)." The FAR provision provides at subsection (f) that the contractor is required to replace or correct non-conforming work "unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price." (R4, tab 77 at GOV1074-75)

The original sequence of work required in the areas with reinforcement geotextile fabric was as follows: (1) Degrade existing levee to El. +3.0' (NAVD88); (2) Install reinforcement geotextile fabric with a strength of 1,450 lbs./in.; (3) Ensure geotextile overlaps are perpendicular to the levee centerline within 5 degrees before placing fill on the geotextile; (4) Place and compact fill on geotextile to the required construction grade (JSF ¶ 6). The contract also required the contractor to construct typical "Levee Section-1" to elevation 13.5' during non-hurricane season, and to elevation 16.5' during hurricane season (JSF ¶ 7; R4, tab 79 at GOV1890). The Corps anticipated that consolidation of the fill material would subsequently allow the Corps to raise the levee to a higher elevation without requiring the purchase of additional right-of-way (tr. 1/122). The levee design anticipated that future levee lifts would be required due to subsidence and sea level rise to maintain the initial level of protection and planned increases in the levee height (R4, tab 134 at GOV57181). The Corps designed the levee to be suitable for an increase to +18.5 feet (R4, tab 26; tr. 1/54-55, 167, 2/71).

On or about September 4, 2009, the Corps' Engineering Division prepared a report of the Engineering Considerations and Instructions for Field Personnel for the Reach 1A Project (JSF ¶ 8; app. supp. R4, tab 163). The Engineering Considerations and Instructions included no discussion relating to the placement procedures for reinforcement geotextile (JSF ¶ 8). On or about October 19, 2009, the Corps prepared its site-specific Quality Assurance Plan for the Reach 1A Project (JSF ¶ 9; app. supp. R4, tab 113). The Quality Assurance Plan included only the following statement with regard to use of overlaps in connection with the placement of reinforcement geotextile: "Ensure minimum of 2 feet of overlap at joined pieces" (JSF ¶ 9; app. supp. R4, tab 113 at GOV7082). On December 3, 2009, Buck Town submitted Transmittal No. 31 05 19.05 12-3, its "Geotextile Fabric Placement Plan" (JSF ¶ 10). The placement plan included a drawing which did not depict overlaps placed parallel to the levee centerline (*id.*). In referring to the placement of geotextile, a note on the plan stated "Laid perpendicular to Levee Centerline" (*id.*). This geotextile placement work plan was approved by the Corps (COR Falati), with remarks, on December 7, 2009 (*id.*; R4, tab 6).

The Corps assigned three on-site quality assurance inspectors to represent the Corps on the Reach 1A Project: (1) Mr. William Tholborn, (2) Mr. Raul Diaz, and (3) Mr. Michael Hudson (JSF ¶ 11). On December 30, 2009, a Preparatory Phase Meeting was held to begin the three-phase inspection process for the reinforcement geotextile definable feature of work (JSF ¶ 12). The only persons who attended the Preparatory Phase Meeting on behalf of the Corps were the three quality assurance inspectors, Mr. Tholborn, Mr. Diaz and Mr. Hudson (*id.*). The Preparatory Phase

Meeting Checklist Form included the following note: "Ensure 2ft. overlap is used, when placing material" (*id.*; R4, tab 7 at GOV119).

Buck Town completed degrading of the levee in preparation for the placement of reinforcement geotextile fabric prior to January 3, 2010 (JSF ¶ 13). On January 3, 2010, Buck Town began the installation of reinforcement geotextile on the Reach 1A Project (*id.*). The contractor quality control (QC) report for January 3, 2010 states that Buck Town began installing geotextile fabric starting on the western most limit of work on the project at STA 260+35.01, progressing east (JSF ¶ 14). In the course of installing the reinforcement geotextile, Buck Town installed some of the geotextile rows using overlapped, partial-length pieces of geotextile, when the end of a geotextile roll was reached in the middle of installing a row (JSF ¶ 15). That incomplete row would then be completed with another partial-length piece from a new roll of geotextile (*id.*). Project records do not specify the exact location of the rows with overlapped partial-length pieces, of geotextile, or whether any of the rows with overlapped partial-length pieces of geotextile were located adjacent to other rows with overlapped partial-length pieces of geotextile (tr. 1/64-66).

The January 3 quality control report included the following language to describe the method that was used to install the reinforcement geotextile: "Geotextile was unrolled from South [protected side] to North [flood side]. Geotextile was overlapped 2' when continuation occurred from West to East. 2' overlapping was applied at every adjoining new roll of geotextile." (JSF ¶ 16; R4, tab 8 at GOV120) A January 3, 2010, government quality assurance (QA) report included the following language:

> Circle Construction Company (CCC) installed geo-textile fabric today. The fabric was installed on a smooth dirt surface graded to elevation +3.00. The fabric covered 45' to the protected side and 75' to the flood side from the [centerline] of levee. CCC started laying perpendicular to [centerline] at station 260+35 and continued to station 263+85 for a total of 350 linear feet. As each fabric strip was installed, CCC overlapped the previously installed piece by 2'. During the installation of the geo-textile fabric, specially designed geo-textile nails or staples were pushed through the fabric and into the dirt surface to hold the fabric in place as it was installed and later covered with dirt. CCC fabricated a spreader bar system that was attached to the bucket of a Komatsu PC 300 track excavator to which the 1600 pound roll of fabric was inserted and spooled off.
>
> After the fabric had been installed 50' or so, CCC had two Cat D6N bulldozers and a Volvo EC 290C LR track excavator start placing dirt on top. The track excavator

> placed buckets of dirt to basically tack the fabric down. The 2 bulldozers pushed dirt from the protected side stockpile. The dozers pushed perpendicular to [centerline]. CCC installed between 15" & 18" of dirt for the initial lift over the fabric. All the following lifts will be 12".

(JSF ¶ 17; R4, tab 9 at GOV126)

Buck Town's subcontractor Circle installed geotextile on the Reach 1A Project from January 3-29, 2010 (JSF ¶ 18). Each of Buck Town's subsequent daily quality control reports included a nearly identical statement to describe the method that was used to install the reinforcement geotextile (*id.*; app. supp. R4, tabs 11, 13, 21, 23, 25, 27, 29, 31, 33, 35). Each of the subsequent quality assurance reports prepared by the Corps found Buck Town's work to be in full compliance with the specifications (app. supp. R4, tabs 10, 12, 14, 22, 24, 26, 28, 30, 32, 34, 36).

On January 3, 2010, a representative of the Corps photographed Buck Town in the process of installing geotextile (JSF ¶ 19; app. supp. R4, tab 166). One photograph depicts a geotextile row which was installed using overlapped, partial-length pieces of geotextile (JSF ¶ 19). A second photograph taken that day appears to show two adjacent rows with overlapped, partial-length pieces of geotextile (app. supp. R4, tab 167). Buck Town's quality control report for January 5, 2010 indicates that Mr. Jeff Falati and Mr. Stuart Waits visited the Reach 1A site on that date (JSF ¶ 20; app. supp. R4, tab 11 at FOIA1725). On January 6, 2010, a representative of the Corps photographed Buck Town's geotextile installation (JSF ¶ 21). Two of the photographs taken on January 6, 2010 depict a geotextile row which was installed using overlapped, partial-length pieces of geotextile (*id.*; app. supp. R4, tabs 18, 19). On January 23, 2010, a representative of the Corps photographed Buck Town's geotextile installation (JSF ¶ 22). Two of the photographs taken on January 23, 2010 depict a geotextile row which was installed using overlapped, partial-length pieces of geotextile (*id.*; app. supp. R4, tabs 37, 38). The Project Engineer, Mr. Bobby Akins, visited the site and observed geotextile installation on January 4, 2010, and again on January 22, 2010 (app. supp. R4, tabs 9 at FOIA1722, 33 at FOIA1773). On January 22, 2010, Mr. Akins additionally authorized Buck Town to begin placing embankment fill on top of the geotextile to build the levee (app. supp. R4, tab 33 at FOIA1773). Buck Town installed at least seven feet of fill before the Corps discovered the improper geotextile installation (app. supp. R4, tab 126). After the discrepancy was discovered, Mr. Akins said that he was unaware that Buck Town's parallel overlaps were a violation of the project specifications because he did not understand that the overlaps were prohibited by the specifications (tr. 1/178-79).

On January 26, 2010 an Initial Phase Meeting was conducted and the Initial Phase Checklist Form was completed (JSF ¶ 23; R4, tab 10). The Initial Phase Meeting was attended by Mr. David Arizola, Buck Town's quality control manager, and Mr. William Tholborn, one of the Corps' quality assurance inspectors (JSF ¶ 23). The Initial Phase Checklist Form

included the following statements:

> Is work in full compliance with plans, specifications and submittals. Are procedures and quality control measures being used acceptable. Yes.
>
> * * *
>
> Quality of work performed? Acceptable.

(*Id.*; R4, tab 10 at GOV128)

II. The Reach 2A and 2B Contracts

On December 17, 2009, the Corps awarded contract No. W912P8-09-D-0052, Task Order 0005, to Buck Town for the construction of the St. Charles Parish Levee, Reach 2A, Shell Pipeline to Goodhope and Shell Pipeline Floodwall (Reach 2A) (JSF ¶ 24). The Reach 2A Project also involved the construction of a hurricane protection levee in which a layer of reinforcement geotextile was to be installed in the base of the levee (*id.*).

At the same time that the Reach 1A and Reach 2A Projects were ongoing, the Corps awarded contract No. LPV-05.2B, to Phylway Construction for the construction of a hurricane protection levee in St. Charles Parish from Good Hope to Cross Bayou, Phase 2 (Reach 2B Project) (JSF ¶ 25). The Reach 2B Project also involved the construction of a hurricane protection levee in which a layer of reinforcement geotextile was to be installed in the base of the levee (*id.*). On March 6, 2010, on the Reach 2B Project, Phylway Construction installed some of its geotextile rows using overlapped, partial-length pieces of geotextile (JSF ¶ 26). The Corps' on-site quality assurance inspector notified Mr. Jeff Falati of Phylway's installation using overlapped, partial-length pieces and requested a clarification as to whether Phylway's installation method complied with the contract requirements (*id.*). Mr. Falati informed Phylway and his on-site inspector that the use of overlapped, partial-length geotextile pieces was not allowed by the contract (*id.*).

On March 10, 2010, Buck Town, Circle, and the Corps held a Reinforcement Geotextile Preparatory Phase Meeting for the Reach 2A project. The checklist from that meeting provides that:

> The reinforcement geotextile will be installed at the distance specified on the drawing of approximately 90 feet.[3] The material for two (2) rows will be installed in complete/whole

[3] Reach 2A was 90 feet across whereas Reach 1A was 120 feet.

> 90 foot sections. Every third row / panel an overlap will be required at the parallel seam/lap.

(App. supp. R4, tab 47 at CI803)

On March 24, 2010, while the Corps was performing a field inspection on the Reach 2A Project (LPV-05.2a), Mitch Thomas of the Corps' Engineering Division noticed that the contractor had installed the reinforcement geotextile fabric using overlapped, partial-length panels (JSF ¶ 27). Because it had not rebuilt the levee on top of the geotextile in Reach 2A, Buck Town elected to reinstall the geotextile in Reach 2A (app. supp. R4, tab 126). No costs related to reach 2A are included in these appeals.

In an After Action Review, the Corps found a number of lapses that allowed the geotextile to be installed incorrectly, including a "clear lack of attention to detail and an obvious lack of knowledge and understanding of the contract requirements on the [Corps quality assurance] onsite staff as well as [contractor quality control] personnel" (app. supp. R4, tab 133 at GOV20950). The report found that Corps employees failed to "accurately review the Engineering Considerations" and subsequently failed to pick-up on and emphasize the importance of the geotextile placement, and failed to ensure that the contractor's work conformed to the contract specifications (*id.* at GOV20950-51).

III. The First Reconstruction of Reach 1A

Because Buck Town was the contractor for both the Reach 1A Project and the Reach 2A Project, the Corps' quality assurance personnel contacted the on-site quality assurance inspectors for the Reach 1A Project and confirmed that Buck Town and Circle had also installed reinforcement geotextile on the Reach 1A Project using overlapped, partial-length panels (JSF ¶ 28). On March 25, 2010, letter C-022 was issued (by COR Falati) to Buck Town to notify the contractor of Deficiency No. 001, which was generated by the Corps to address reinforcement geotextile overlaps which were placed parallel to the centerline of the levee (JSF ¶ 29; R4, tab 12). The deficiency referenced Specification 31 05 19.05 12 paragraph 3.1.1, "Procedure," which states "All seams and overlaps shall be placed perpendicular to the centerline of the levee. Fill shall not be placed on the geotextile until the seams or overlaps are within 5 degrees of being perpendicular to the levee centerline." (JSF ¶ 29; R4, tab 5 at GOV111) This deficiency required that the contractor provide a corrective action plan no later than March 30, 2010 (JSF ¶ 29). On March 26, 2010, Buck Town responded to Deficiency No. 1 with a letter to the Corps (JSF ¶ 30; R4, tab 14). Buck Town stated that, based on information provided by several geotextile engineers, it had "concluded that corrective action is not needed for this issue" (JSF ¶ 30; R4, tab 14).

By letter of November 19, 2010, the Corps (ACO Falati) advised Buck Town that it still had not provided an acceptable corrective action plan for the incorrectly installed reinforcement geotextile and that "continued abandonment of the project is not acceptable"

(JSF ¶ 31; R4, tab 33 at GOV269). Mr. Falati directed Buck Town to either comply with the original contract documents or construct the degraded sections of levee in accordance with an alternative levee section that the Corps had developed (JSF ¶ 31). Mr. Falati provided four sketches for the contractor's use. Drawing C-101A required the contractor to degrade to El. +4 (one foot above the existing layer of geotextile fabric), install a second layer of geotextile fabric, and install compacted embankment to the construction grade of El. +16.5' (*id.*; R4, tab 33 at GOV271).

On December 2, 2010, Buck Town responded to the Corps' letter dated November 19, 2010 (JSF ¶ 32; R4, tab 34). Buck Town denied that it had been dilatory in developing a corrective action plan and stated that it had not abandoned the project (JSF ¶ 32; R4, tab 34 at GOV275). Buck Town stated that the analysis of its consultant, Eustis, took longer than expected, but that it would demonstrate that no corrective work would be needed on Reach 1A to meet the design factor of safety (JSF ¶ 32; R4, tab 34 at GOV276). Buck Town also stated that the Corps' demand to degrade and rebuild Levee Reach 1A, and complete the work by January 8, 2011 would be an extremely expensive undertaking that would result in no appreciable improvement to the levee and would constitute economic waste (JSF ¶ 32; R4, tab 34 at GOV276).

By letter of December 23, 2010, Buck Town addressed the directive that it perform rework for the geotextile reinforcement (JSF ¶ 33; R4, tab 43). The letter included a revised construction work schedule and included a narrative plan of action to complete the corrective work directed by the Corps (JSF ¶ 33.).

On December 28, 2010, Buck Town sent a "Notice of Claim for Constructive Change Pursuant to Article 52.243-4(b)" (JSF ¶ 34; R4, tab 45). In summary, Buck Town's letter stated that: Levee reach 1A, as-built, was safe and served the purpose for which it was intended; no corrective action was necessary; and, alleged that the Corps' instructions, requiring it to degrade and completely rebuild Levee Reach 1A, amounted to a constructive change in the work, entitling it to an equitable adjustment to the price and time of the contract (JSF ¶ 34, R4, tab 45 at GOV565).

On January 24, 2011, Buck Town submitted a "Proposal for Equitable Adjustment for Constructive Change Pursuant to Article 52.243-4(e)" (JSF ¶ 35; R4, tab 46). This request for equitable adjustment included a proposed increase in price equal to $1,668,828 and a proposed increase in time equal to 104 days (JSF ¶ 35; R4, tab 46 at GOV593).

Buck Town began the work to reconstruct the Reach 1A Levee in January 2011 (JSF ¶ 36). On February 7, 2011, the Corps (Contracting Officer Enclade) responded to Buck Town's letters dated December 28, 2010 and January 24, 2011 (*id.*). The contracting officer's response notified Buck Town that she found that no constructive change occurred; and, therefore, an equitable adjustment was not warranted (JSF ¶ 37; R4, tab 48 at GOV669). The contracting officer stated that Buck Town had failed to construct

the project in accordance with the original plans and specifications (JSF ¶ 32). She also stated that Buck Town had failed to adhere to specifications section 31 05 19.05 (12), paragraph 3.1.1, by incorrectly installing reinforcement geotextile overlaps parallel to the centerline of the levee whereas the specifications clearly require this material to be installed "perpendicular" to the centerline of the levee (*id.*).

On March 2, 2011 an initial inspection was performed to verify that the geotextile rework was being performed in accordance with the contract plans and specifications (JSF ¶ 38). The initial phase meeting minutes indicate that the geotextile fabric was being installed correctly (*id.*; R4, tab 49). This time, three runs of 122' came off of each 366' roll of geotextile fabric (JSF ¶ 38.).

IV. Testing of the First Reconstruction Geotextile Fabric

The contract contained a sampling protocol that required Buck Town to take samples of the geotextile material during installation (R4 tab 5 at GOV112-13). Buck Town did not comply with the sampling protocol and provided after the fact test results, without the required sampling location information and, more significantly, the test results showed that the geotextile did not meet the contractual strength requirements (tr. 2/19-20). By letter of June 28, 2011, the Corps (ACO Falati) notified Buck Town that the geotextile fabric test results submitted in Transmittal No. 31 05 19.05 12-6 did not meet the requirements listed in the specifications (JSF ¶ 39; R4, tab 50). These test results were for the new geotextile placed at El. +4.0' (JSF ¶ 39). Mr. Falati required Buck Town to provide a proposed corrective action no later than July 5, 2011 (*id.*).

Specification section 31 05 19.05 12, paragraph 3.5 FIELD SPECIMEN LOCATIONS, requires that the contractor perform wide width tests on a sample from the first panel and additionally at 3,000-foot increments, measured along the levee centerline (JSF ¶ 40; R4, tab 5 at GOV112). This specification also required that samples be obtained from the end of the panel (JSF ¶ 40). Regarding testing of seams, the specification requires tests to be performed at intervals of 2,000 feet, measured along the levee centerline, or at a location specified by the Contracting Officer that will equal the same number of tests (*id.*; R4, tab 5 at GOV113). The specifications require that the geotextile fabric have a minimum tensile strength of 1,450 lbs. /in at 5% strain and the submitted test results showed that the geotextile fabric sample did not meet this requirement (JSF ¶ 40; R4, tab 51).

On July 21, 2011, the Corps (ACO Falati) sent letter C-0077 to Buck Town requiring it to perform a wide width test on a sample of reinforcement geotextile which was installed to correct Deficiency No. 1 (JSF ¶ 41; R4, tab 54). On 11 October 2011, a sample of STF SC-46k geotextile fabric was obtained (JSF ¶ 42).

On December 9, 2011, Earth Improvement Technologies (EIT) provided a letter to Buck Town containing the geotextile testing results (JSF ¶ 43; R4, tab 60). The testing

results from the October 11, 2011 sample showed that the tensile strength at 5% strain was 789 lbs./in. (1,450 lbs./in. required per specification Section 31 05 19.05 12 paragraph 3.6) and the tensile strength at ultimate strain was 2,809 lbs./in (2,900 lbs./in. required per specification Section 31 05 19.05 12 paragraph 3.6) (JSF ¶ 43; R4, tab 60 at CI15935). EIT explained that, while the individual layers of geotextile had not met the minimum contract requirements, the average strength of both layers of geotextile fabric exceeded contract requirements (JSF ¶ 43; R4, tab 60 at CI15937). The Corps rejected Buck Town's averaging methodology, and stated that the proposed analysis did not meet "required design factors of safety for a continuous levee section" (R4, tab 62). As the Corps' expert, Mr. Templeton explained, levee systems are "only as strong as their weakest links" (R4, tab 132 at GOV39288).

V. Second Levee Reconstruction

By letter of January 12, 2012, the Corps (ACO Falati) advised Buck Town that the Corps disagreed with the statement that the strength of both layers of geotextile meet the contract requirements (JSF ¶ 44; R4, tab 61). The Corps disagreed with Buck Town's stated rationale and required the contractor to provide a proposed corrective action plan to address the failed test results no later than January 24, 2012 (JSF ¶ 44.). The Corps considered time to be of the essence in resolving the issue because the contract prohibited degrading the levee during hurricane season (June 1 to November 30) (R4, tabs 100 at GOV36971, 78 at GOV1313).

On January 10, 2012, Mr. Richard Pinner, Chief of the Geotechnical Branch of the Corps' Engineering Division, issued a "Boring Request Memorandum," requesting that additional soil borings be taken within the limits of the Reach 1A Levee site (JSF ¶ 45; app. supp. R4, tabs 183, 184). On or about February 2, 2012, the Corps issued a task purchase order to FFEB JV, L.L.C., to perform laboratory tests on two soil borings obtained from three different locations within the limits of the Reach 1A Levee site (JSF ¶ 46; app. supp. R4, tab 186). The soil borings were taken for levee certification purposes (tr. 1/157). The Corps apparently took no action with regard to these soil borings (tr. 1/149-50).

On February 9, 2012, the Corps (ACO Falati) sent letter no. C-0091 to Buck Town (JSF ¶ 47; R4, tab 63). Since the contractor had not provided a corrective action plan, the ACO directed the contractor to degrade approximately 1,400 feet of levee to four feet and install geotextile consistent with the specifications, and for the remaining approximately 1,500 feet of levee where additional right-of-way was available, Buck Town was directed to construct a protected side berm (JSF ¶ 47). The letter also included the following statement: "If your company formulates a corrective action plan that you would like to pursue, please forward it to the Government for review" (*id*; R4, tab 63 at GOV828).

On February 17, 2012, EIT issued a letter to Circle, with a proposed corrective action to degrade the levee and install a third layer of geotextile fabric at elevation +5.0'

(JSF ¶ 48; R4, tab 65). Via emails addressed to Ms. Kathryn Chaisson, dated February 23 and 24 and March 1 and 5, 2012, FFEB JV, L.L.C, delivered to the Corps the results of its analysis of the soil borings taken within the limits of the Reach 1A Levee (JSF ¶ 49; app. supp. R4, tabs 198-203).

On February 23, 2012, EIT sent a letter to Circle to further clarify EIT's technical position that the strength of the two layers of geotextile fabric, when averaged together, exceeded the contract requirements (JSF ¶ 50). EIT's letter includes the following language: "EIT's analysis ensures that the USA-CoE's slope stability safety factor requirements are met by the two installed geotextile layers regardless of where or how the MD overlap connections were made. Consequently, there is no practical reason why, technical merit for, or engineering justification to require any corrective action in Levee Reach 1A, especially installation of a THIRD geotextile layer" (JSF ¶ 50; R4, tab 66 at GOV854).

On February 23, 2012, Buck Town sent a letter to the Corps, which was received by the Corps on March 9, 2012 (JSF ¶ 51; R4, tab 67). This letter included EIT's report and requested that the Corps rescind letter no. C-0091 and the order that the contractor perform additional corrective action (JSF ¶ 51.). Buck Town also requested that the Corps accept the project as complete and issue final payment (*id.*). On March 1, 2012, Buck Town sent a letter to the Corps (JSF ¶ 52; R4, tab 68). This letter was a notice of a claim for constructive change related to the additional corrective action that the Corps directed Buck Town to perform in letter no. C-0077 and letter no. C-0091 (JSF ¶ 52.).

On March 1, 2012, Buck Town began work on the reconstruction of the Reach 1A Levee (JSF ¶ 53). The first task performed by Buck Town was clearing and grubbing, that is, stripping away the vegetation from the surface of the site (JSF ¶ 53; app. supp. R4, tabs 189-90). On March 14, 2012, as part of the process of reconstructing the Reach 1A Levee, Circle first began the task of degrading the existing levee in order to install the additional layer of reinforcement geotextile ordered by the Corps (JSF ¶ 54; app. supp. R4, tabs 191-92).

On March 16, 2012, the Corps (ACO Falati) sent letter C-0093 to Buck Town stating that its recommendation to install geotextile at elevation +5 between stations 263+00 and 277+00 was approved (JSF ¶ 55; R4, tab 69 at GOV862). The Corps directed Buck Town to construct the levee between these stations in accordance with the attached drawings C-101b and C-304c (JSF ¶ 55). The Corps also stated that all costs shall be borne by the contractor and at no cost to the government (*id.*).

On March 29, 2012, Buck Town sent a proposal for an equitable adjustment to the Corps for the following constructive changes: the directive to obtain an in-place geotextile sample directed in letter no. C-0077 and the instructions included in letter no. C-0091 (JSF ¶ 56; R4, tab 70 at GOV906).

On April 27, 2012, the Corps (ACO Falati) sent letter no. C-0098 in response to Buck Town's "Notice of Claim for Constructive Change" dated March 1, 2012 and Buck Town's "Proposal for Equitable Adjustment for Constructive Change" dated March 29, 2012 (JSF ¶ 57; R4, tab 72). The letter stated, in part, as follows: "I reject your assertion that the two items listed in your letter are constructive changes and find that an equitable adjustment to the contract is not warranted. Your request for an increase in the contract price in the amount of $1,297,197.00 and an increase in the contract time of 99 calendar days is denied." (JSF ¶ 57; R4, tab 72)

IV. Buck Town's Claim and Subsequent Events

On March 22, 2016, Buck Town submitted a claim to the contracting officer in the amount of $2,996,746.62 (JSF ¶ 58; R4, tab 3). Buck Town's claim document alleged that Corps employees observed the installation of the geotextile fabric, the manner of installation of the geotextile material was disclosed in its daily reports, that Corps employees did not raise any objections, and that the Corps rated Buck Town's work as acceptable (R4, tab 3 at GOV49-53). Buck Town alleged three legal theories in its claim: constructive change; latent ambiguity; and economic waste (*id.* at GOV71-94). On September 20, 2016, the Contracting Officer issued a Final Decision denying Buck Town's claim (JSF ¶ 59; R4, tab 2). The contracting officer noted that, although not expressly set forth in the claim,

> [I]t appears Buck Town, in making this argument, is actually arguing that the government, by failing to object to the placement of the geotextile fabric at the time of installation, *waived* the requirement in the specifications that all overlaps must be installed perpendicular to the centerline of the levee. However, Buck Town has pointed to no evidence indicating that the government ever intentionally waived the right to strictly enforce this specification requirement.

(R4, tab 2 at GOV24) (emphasis in original) Buck Town timely appealed from the final decision to the Board. The Board interpreted the contract as prohibiting Buck Town's use of overlapping partial-length pieces of geotextile fabric in a decision on cross-motions for partial summary judgment. *Buck Town Contractors & Co.*, 18-1 BCA ¶ 36,951.

The Board held a two-day hearing in New Orleans, Louisiana, in November 2018. At the hearing, Buck Town presented the expert testimony of William W. Gwyn, P.E. of Eustis Engineering. Mr. Gwyn was admitted as an expert in geotechnical engineering (tr.1/19). Mr. Gwyn presented his opinion that the levee met the requirements of the contract following the first levee rebuild (after the second layer of geotextile was added) (app. supp. R4, tab 215; ex. A-5). According to Mr. Gwyn's analysis, the levee, as constructed, meets the Corps' required factors of safety, without consideration of the improperly installed first layer of geotextile, at the constructed height of +16.5 feet (app.

supp. R4, tab 215 at EES11). Mr. Gwyn's analysis relies upon the 2012 soil samples, which demonstrate strengthening (compaction) of the soil, compared to the 2006 soil samples used in designing the levee. Mr. Gwyn additionally provided his opinion that the levee met the requirements for an anticipated levee lift that would raise the levee to +17.25 feet (ex. A-5 at 2). However, the Corps designed the levee to be adequate for future levee lifts up to +18.5 feet (R4, tab 26). Mr. Gwyn testified that the levee, as built, would meet the required factors of safety for a levee lift to +18.5 feet (ex. A-5 at 2-3). However, in addition to assuming soil consolidation based on the 2012 soil borings, to reach +18.5 feet, Mr. Gwyn's analysis also assumed that the improperly installed first layer of geotextile contributed 40% of its strength to the levee, or alternatively assumed an expansion of the berm of the levee to the edge of the levee right-of-way and an additional 15% in soil strength consolidation beyond the 2012 soil borings (*id.*).

The Corps presented two expert witnesses: A.E. (Eddie) Templeton, P.E. of Burns Cooley Dennis, Inc. and Brad Arcement, the Corps' Levee Safety Branch Chief. The Corps acknowledged Mr. Gwyn's expertise in geotextile engineering (gov't resp. br. at 44) and, in general, limited its disputes with Mr. Gwyn's analysis to challenging certain of his assumptions. First, as noted above, Mr. Gwyn assumed soil strength gains based upon 2012 soil samples. While acknowledging that soil gains were probable, Mr. Templeton challenged the use of the 2012 soil samples because there were a limited number of widely-spaced samples that would not be sufficient to characterize the soil strength of the entire levee (tr. 2/72-73, 78). According to Mr. Templeton, the 2012 soil borings were spaced roughly 1,000 feet apart, or more than 3 football fields apart. In his opinion, this was inadequate to determine that the levee as constructed would meet the required factors of safety (*id.*).

Second, Mr. Templeton challenged Mr. Gwyn's assumption that the first layer of geotextile would contribute 40% of its strength to the levee. Mr. Templeton explained that the computer program used by himself and Mr. Gwyn to estimate the levee strength and factors of safety performed a two-dimensional analysis rather than a three-dimensional analysis. That is, the computer model analyzes a "slice" of the levee that is a cross-section of the levee taken perpendicular to the center line, rather than the entire length of the levee. Mr. Templeton opined that averaging might be acceptable for small gaps in a layer of geotextile, but that it was not acceptable where the gaps could be 15 or 30 feet. As Mr. Templeton noted, there was no information regarding the exact placement of the rows formed with overlapping partial-length pieces of geotextile in the first layer and adjacent rows with seams in the geotextile would create large areas where no additional strength was provided by the first layer. As Mr. Templeton noted, the "average strength" is irrelevant in a levee failure analysis (tr. 2/62-64). Just as a chain is only as strong as its weakest link, a levee system is only as strong as its weakest point. For this reason, Mr. Templeton was of the opinion that the levee did not meet the required factor of safety for a planned levee lift to +18.5 feet.

Third, Mr. Arcemont challenged Mr. Gwyn's assumption that the berm of the levee could be expanded into the levee right-of-way (tr. 2/129-30). According to Mr. Arcemont, Mr. Gwyn assumed that the berm of the levee could be expanded to the property line of the levee. However, Mr. Arcemont testified that the Corps requires a 15 foot right-of-way for its levees, in order to control vegetation and to provide access for equipment to maintain and repair the levee. If the levee were expanded into the 15 foot clear area, the Corps would be required to use its eminent domain power to acquire an additional 15 foot strip of land adjacent to the levee (tr. 2/130).

The factors of safety calculated by Mr. Gwyn and Mr. Templeton are presented in the table below. In the table, the construction grade, +18.5 feet, represents the theoretical top of the levee after future levee lifts, the project grade, +16.5 feet, is the current top of the levee, the still water level, +14.0 feet is the estimated level during a hurricane, while the low water level, -1.0 foot, is a design condition for a failure toward the flood side (that is, failing toward Lake Pontchartrain, rather than failing toward the area being protected by the levee) (tr. 1/43; ex. A-4). The required factor of safety is the Corps' minimum design criteria for the levee.

The column "single layer at contract strength" represents the factor of safety if the levee had been constructed according to the specifications. The column "Gwyn Calculation" represents the factors of safety calculated by Buck Town's expert, first assuming soil consolidation according to the 2012 soil samples combined with 40% of the strength from the first layer of geotextile and the second layer of geotextile at its tested strength; and second assuming an additional 15% gain in soil strength beyond the 2012 soil samples combined with expanding the levee berm to the edge of the right-of-way. The column "Templeton Calculation" depicts the factors of safety calculated by the Corps' expert using the 2006 soil strength used in the original analysis, and without a strength contribution from the first layer of geotextile and without expanding the levee berm. Although not calculated by the experts, we note that the factors of safety in the column "Single Layer at contract strength" were calculated using the 2006 soil strengths and would be higher if the calculation were to consider soil consolidation.

Water Level Condition and water elevation in feet	Required Factor of Safety	Single Layer at contract strength	Gwyn Calculations		Templeton Calculation
			40% strength 1st layer	15% soil gain & berm	
Construction Grade (+18.5)	1.2	1.41	1.34	1.44	1.25
Project Grade (+16.5)	1.4	1.48	1.41	1.49	1.32
Still Water (+14)	1.5	1.51	1.50	1.52	1.34
Low Water (-1.0)	1.3	1.52	1.46	1.51	1.33

(R4, tab 132 at GOV39291; ex. A-4 at 2, A-5 at 2-3)

The Board finds that Buck Town has not established, by a preponderance of the evidence that the levee, after the first levee reconstruction, substantially complied with the terms of the contract. Specifically, we find that Mr. Gwyn's analysis fails to establish the soil strength gains because the 2012 soil borings were too widely spaced to adequately characterize the soil condition of the levee. In addition, we find that Mr. Gwyn's analysis fails to establish that the levee complied with terms of the contract, or was adequate for its intended use because his analysis that the levee could be raised to the designed level of +18.5 feet would require either expansion of the footprint of the levee or an "average strength" of the first layer of geotextile that cannot be established. Moreover, we note that even if we accept Mr. Gwyn's assumptions regarding soil consolidation, and the strength contributed by the first layer of geotextile, the levee is still weaker than it would have been had it been constructed according to the specifications.

DECISION

I. Buck Town Has Established A Constructive Waiver of Specifications, And Its Claim I is Sustained

Buck Town's first claim asserts entitlement to a contractual adjustment based upon the Corps' constructive waiver of the specification prohibiting parallel overlaps of the geotextile material, because of the Corps' possession of superior knowledge, or because the contract permitted the use of parallel overlaps. The Board rejected Buck Town's arguments that the contract permitted the use of parallel overlaps in our decision on the parties' cross motions for partial summary judgment, and Buck Town presents no new evidence that would cause us to revisit our prior decision. The Corps has moved to dismiss Buck Town's waiver and superior knowledge arguments because these legal theories were not presented in Buck Town's claim (gov't mot. at 1). The Board has recognized that suits are the same claim when they are based on substantially the same operative facts. *Macro Z Technology*, ASBCA No. 60592, 19-1 BCA ¶ 37,358 at 181,659. Moreover, "[t]he test for what constitutes a 'new' claim is whether 'claims are based on a common or related set of operative facts.'" *Unconventional Concepts, Inc.*, ASBCA No. 56065 *et al.*, 10-1 BCA ¶ 34,340 at 169,591 (quoting *Placeway Constr. Corp. v. United States*, 920 F.2d 903, 907 (Fed. Cir. 1990)). "The introduction of additional facts which do not alter the nature of the original claim . . . or the assertion of a new legal theory of recovery, when based upon the same operative facts as included in the original claim, do not constitute new claims." *Trepte Constr. Co.*, ASBCA No. 38555, 90-1 BCA No. 22,595 at 113,385-86. A claim is new when it "present[s] a materially different factual or legal theory" of relief. *Lee's Ford Dock, Inc. v. Sec'y of the Army*, 865 F.3d 1361, 1369 (Fed. Cir. 2017) quoting *K-Con Bldg. Sys., Inc. v. United States*, 778 F.3d 1000, 1006 (Fed. Cir. 2015)). "Materially different claims 'will necessitate a focus on a different or unrelated set of operative facts.'" *Id.* (quoting *Placeway Constr.*, 920 F.2d at 907).

We find that Buck Town's waiver argument is a new legal theory based upon the same operative facts contained in its certified claim, and thus, is the same claim for jurisdictional purposes. Buck Town's waiver argument alleges that the Corps was aware of Buck Town's placement of overlapped partial-length pieces of geotextile material and did not object to Buck Town's placement of the material (app. br. at 23-39). Buck Town's claim similarly asserted that the Corps was aware of Buck Town's placement of overlapped partial-length pieces of geotextile material and did not object to Buck Town's placement of the material (R4, tab 3 at GOV46-59).

The Corps asserts that Buck Town's waiver argument relies upon different facts because, in its claim, Buck Town asserted that the Corps' failure to object to Buck Town's placement was evidence that the Corps shared in Buck Town's interpretation of the contractual provision as permitting parallel overlaps, rather than evidence that the Corps waived the contractual requirement (gov't mot. to stk. at 14-21). Admittedly, Buck Town's amended complaint does allege facts regarding the specific knowledge and intent of certain Corps employees, such as the contracting officer; however, these alleged facts are not necessary to support Buck Town's waiver argument based upon knowledge imputed to the contacting officer.

Here, as discussed below, we find that there was an implied waiver of contractual requirements based upon the imputed knowledge of the contracting officer, and based on the actual knowledge of the Corps' quality assurance employees. Moreover, the Corps' contracting officer actually interpreted Buck Town's claim as presenting a waiver argument (R4, tab 2 at GOV24). The Corps correctly notes that the contracting officer's findings are not binding upon the Board; but here, we agree with the contracting officer's interpretation of the claim. We deny the Corps' motion to dismiss with regard to Buck Town's waiver argument. As we find in favor of Buck Town on its waiver argument, we need not reach the Corps' motion to dismiss with regard to Buck Town's superior knowledge claim.

Constructive waiver occurs when:

> (1) the contracting officer possessed knowledge of the work outside the scope of the contract, (2) action or inaction by the contracting officer indicated the acceptance of nonspecification performance, (3) reliance ensued by the contractor on the action or inactions of the contracting officer, and (4) an inequity would result from a retraction of acceptance by the contracting officer.

Miller Elevator Co. v. United States, 30 Fed. Cl. 662, 688 (1994) (citing John Cibinic, Jr., *Constructive Waiver of Specifications: Coat of Many Colors*, 6 NASH & CIBINIC REP. ¶ 43 at 107 (1992)); *see also American West Constr.*, ASBCA No. 61094, 18-1 BCA ¶ 36,935 at 179,948; *Walskey Constr. Co.*, ASBCA No. 36940, 90-2 BCA ¶ 22,934 at 115,125

Here, the first element, establishing that the contracting officer possessed knowledge of work outside the scope of the contract, is the key hurdle for Buck Town to recover. The Corps relies upon the fact that the contracting officer has disclaimed knowledge that Buck Town had installed the geotextile material with overlaps parallel to the centerline, despite having visited the job site while Circle was installing the geotextile (gov't resp. br. at 4). The Corps' argument is based upon the fact that the Corps officials with authority to modify the contract lacked *actual* knowledge of the improper geotextile installation (gov't resp. br. at 4-5), and that the government inspectors with knowledge of Buck Town's placement lacked *express* or *implied* authority to modify the contract (gov't resp. br. at 8-10). However, the Board and Court of Federal Claims have, under appropriate circumstances, found constructive waiver based upon the constructive knowledge of the contracting officer. *See, e.g., Miller Elevator*, 30 Fed. Cl. at 688 (quoting *Gresham & Co. v. United States*, 200 Ct. Cl. 97, 120 (1972)); *Davis Decorating Service*, ASBCA No. 17342, 73-2 BCA ¶ 10,107. As the *Gresham* court explained:

> The waiver of a contract provision requires a decision by a responsible officer assigned the function of overseeing the essentials of contract performance, not just any Federal employee or officer whose work happens to be connected with the contract. Such a waiver by one with such authority will estop the Government. Assuming arguendo that the QAR representatives lacked the necessary authority, we think only one finding is possible: that the contracting officer knew or should have known of the situation, and that the authority was in his hands. If he did not know, he ought to have known, and knowledge is imputed to him.

Gresham, 200 Ct. Cl. at 120 (internal citations omitted) *see also Western Avionics, Inc.*, ASBCA No. 33158, 88-2 BCA ¶ 20,662 at 104,421; *Astro Dynamics Inc.*, ASBCA No. 28381, 88-3 BCA ¶ 20,832 at 105,365; *Southwestern Sheet Metal Woks, Inc.*, ASBCA No. 22748, 79-1 BCA ¶ 13,744 at 67,364. Admittedly, this is an extraordinary remedy, but one we believe to be appropriate based on the facts before us. Here, the government's quality assurance plan only provided that the inspectors should ensure a minimum of 2 feet of overlap (app. supp. R4, tab 113 at GOV7082). Buck Town noted in each of its daily quality control reports that it was installing geotextile with an overlap at the start of each new roll (JSF ¶¶ 14-15, 18; R4 tabs 9, 11, 13, 21, 23, 25, 27, 29, 31, 33, 35). None of the government-produced quality assurance reports noted any defects in Buck Town's installation of the geotextile (JSF ¶ 17; R4, tabs 10, 12, 14, 22, 24, 26, 28, 30, 32, 34, 36). Additionally, Corps representatives three times visited the job site and took photographs evidencing the fact that Circle was installing overlapping partial-length pieces of geotextile material (JSF ¶¶ 19, 21, 22; app. supp. R4, tabs 18-19, 37-38, 166). The project engineer visited the site and observed the geotextile installation on two occasions without noting a deficiency and authorized Circle to begin placing fill on the

geotextile to begin building the levee (app. supp. R4, tabs 9, 33 at FOIA1773). Moreover, the contracting officer visited the job site on a day when Circle was installing overlapping partial-length pieces of geotextile (JSF ¶ 20; app. supp. R4, tab 11 at FOIA1725).

The Corps also recognized that Circle's work was "acceptable" in the Initial Phase Checklist Form (JSF ¶ 23; R4, tab 10 at GOV128). We note that Buck Town and Circle discussed with a Corps engineer for Reach 2A installing geotextile with overlapping seams parallel to the levee centerline without objection (app. supp. R4, tab 47 at CI803). Based on the totality of the evidence, we find that the contracting officer knew, or should have known, that Circle was installing overlapping partial-length pieces of geotextile material with seams parallel to the centerline of the levee.

Here, we find that the second element of constructive waiver (action or inaction by the CO indicated acceptance of the non-specification performance) was satisfied because the inaction of the contracting officer, and in fact the entire quality assurance team, indicated to Buck Town the acceptance of geotextile installed with parallel overlaps. The Corps' project engineer also authorized Buck Town to build-up the levee on top of the geotextile material, burying it under at least 7 feet of fill (app. supp. R4, tab 33 at FOIA1773). The Corps sole argument that the condition was not met is that the contracting officer was unaware of the improper geotextile installation, and therefore could not knowingly waive the requirement (gov't resp. br. at 5-6). Since we have rejected that premise, we find that Buck Town has satisfied the second element of the test.

The third element of constructive waiver (reliance by the contractor) is satisfied as Buck Town and Circle obviously relied upon the Corps' acceptance of the overlapping geotextile in building-up the levee on top of the geotextile. The Corps argues that this element was not satisfied because Buck Town did not establish that it relied upon the contracting officer's knowledge of the improper installation and failure to object. (Gov't resp. br. at 6-7) However, we find that Buck Town relied on the Corps' acceptance of the geotextile installation in adding at least 7 feet of fill on top of the geotextile (app. supp. R4, tab 126).

Finally, we find that it would be inequitable to force Buck Town to bear the costs of the Corps' failure to enforce the contractual provision against overlapping geotextile parallel to the levee centerline. Had the Corps caught its error before the contractor built up the levee, it would likely not be inequitable for the Corps to require Buck Town to comply with the contractual provisions. However, here, the Corps' failure to timely note Circle's failure to comply with the contractual terms caused the cost to remedy the deficiency to be inequitable.

Having found a constructive waiver of specifications, we need not reach Buck Town's argument that the quality assurance representatives possessed inherent authority to

modify the contract (app. br. at 27-29 (citing the Board's holding in *Sigma Constr. Co.*, ASBCA No. 37040 *et al.*, 91-2 BCA ¶ 23,926 (that quality assurance inspectors possessed inherent authority to make determinations of contract compliance)). Additionally, we need not reach Buck Town's superior knowledge argument, or the Corps' motion to strike the superior knowledge claim.

Additionally, the Corps' assertion of liquidated damages is not sustained. The Corps asserts entitlement to 80 days of liquidated damages based on a notice to proceed of October 7, 2009, a contact performance period of 420 calendar days, 84 days of extension and a substantial completion date of May 16, 2011 (gov't resp. br. at 24). Here, Buck Town and the Corps held the initial phase meeting on January 26, 2010 (JSF ¶ 23). Following the Corps' constructive waiver of the no parallel overlap requirement, the Corps directed Buck Town to degrade the levee and install a second layer of geotextile, and this constituted a constructive change to the contract. Following the first levee repair, Buck Town and the Corps held a second initial phase meeting on March 2, 2011, or over 13 months later (JSF ¶ 38). The Corps has not alleged that Buck Town was responsible for any concurrent delays during this period. We hold that Buck Town was delayed by at least 80 days by the Corps' constructive change.[4] Thus, we find that since appellant would have finished before the scheduled completion date of February 25, 2011, but for the constructive change, the assessment of liquidated damages is improper and is set aside. *Darwin Constr. Co.*, ASBCA No. 32500, 86-3 BCA ¶ 19,295.

I. Buck Town Has Abandoned Claim II

In Buck Town's first amended complaint, it abandoned its Claim II.

Accordingly, Claim II is dismissed.

II. Buck Town Has Not Established Economic Waste In The Second Levee Reconstruction, So Its Claim III Is Denied

Buck Town's third claim seeks compensation for the second levee reconstruction. Buck Town asserts that the Corps' direction to rebuild the levee because the second layer of geotextile material failed the strength test constituted economic waste. According to Buck Town and its expert, the Corps failed to properly consider the existence of soil strength consolidation and the first layer of geotextile material (with overlapping partial-length of pieces geotextile material), and alleges that the levee, as built, met the required standard of safety. (App. br. at 11-18) The Corps disputes Buck Town's analysis, objecting to assumptions used by Buck Town's expert, the fact that Buck Town's analysis was not presented as an alternative at the time of the levee reconstruction, and noting that even if Buck Town's levee would meet the required

[4] For unknown reasons, Buck Town did not address the computation of liquidated damages in either of its post-hearing briefs.

standard of safety it would not meet the contractual requirement, and arguing that the theory of economic waste is inapplicable where, as here, there is a risk to human life and safety (gov't resp. br. at 25-68).

Although the government normally has the right to insist upon performance in strict compliance with the specifications of a contract, the Federal Circuit has recognized that there are cases where it would be economically wasteful to require strict compliance if the work is acceptable for its intended purpose. *Granite Constr. Co. v. United States*, 962 F.2d 998, 1006-07 (Fed. Cir. 1992). To establish the existence of economic waste: (1) the work performed must substantially comply with the specifications; (2) the work must be adequate for the intended purpose; and (3) the cost of correction must be economically wasteful. *M.A. DeAtley Constr., Inc. v. United States*, 75 Fed. Cl. 575, 582 (2007); *see also*, FAR 52.246-12(f).

In these appeals, the parties dispute each of the elements. Key to the analysis are the expert opinions supporting the positions of Buck Town and the Corps. Buck Town's expert, Mr. William W. Gwyn, P.E., testified that the levee, as constructed, met the Corps' design factor of safety, based upon three significant assumptions: first, that the soil had consolidated and strengthened between the Corps' survey in 2006 and 2012; second, that the first geotextile layer, including overlapping partial-length pieces of geotextile, contributed 40 percent of its strength to the levee; or alternatively, that there was an additional 15% increase in soil strength and that the levee berm could be expanded to the edge of the levee right-of-way to support a levee lift to +18.5 feet (ex. A-5). As noted in the findings of fact, we find that Buck Town has not established by a preponderance of evidence that the levee, following the first levee repair, substantially complied with the terms of the contract. Additionally, we find that Buck Town has not established that the levee was adequate for its intended purpose because it would not meet the factors of safety after being lifted to +18.5 feet.

Here, we note that the Board has previously found persuasive testimony that the strength of a steel pilings for a canal bulkhead should be "determined not by the average condition over the entire length but by the condition at its weakest points." *Mumford & Miller Concrete, Inc.*, ASBCA Nos. 53652, 53653, 07-2 BCA ¶ 33,586 at 166,373, *aff'd without opinion*, 269 Fed. Appx. 977 (Fed. Cir. 2008). The Board in *Mumford & Miller* found that the bulkhead was not adequate for its intended purpose even though it had a factor of safety of no less than 144 to no more than 154 percent, because the bulkhead, if constructed to the contract specifications, would have had a factor of safety of over 180 percent. *Id.* at 166,373. Similarly, here, we find that the proper analysis of the safety of the levee must consider the first layer of geotextile at its weakest point, rather than the average strength of the textile. Notably, Mr. Templeton calculated that the levee, as built, has a lower factor of safety than would be the case if built to the contractual specifications (R4, tab 132 at GOV39291). Even assuming the accuracy of Mr. Gwyn's estimated soil strength consolidation, and that the levee would meet the minimum required factors of safety, the levee would still be weaker than if built according to the

contractual specifications and subject to the same soil strength consolidation. Accordingly, we find that Buck Town has not demonstrated that it was economic waste for the Corps to have required it to perform the second levee repair.

Buck Town asserts that the Corps' plans for future levee lifts are speculative and should not be considered in determining the suitability of the levee for its intended purpose (app. br. at 18-19). However, as noted in the factual findings, the Corps presented uncontroverted evidence that the levees were designed to be capable of being raised to +18.5 feet (R4, tab 26; tr. 1/54-55, 167, 2/71).

Additionally, we note that the Board has held that the economic waste theory does not apply when public safety is at issue. *Mumford & Miller Concrete, Inc.*, 07-2 BCA ¶ 33,586 at 166,373 ("Where a matter of safety is concerned, the government is particularly entitled to err on the side of caution in design and execution and to require strict compliance with the specified design."). As noted in the facts, the levee at issue in this appeal is part of a "high risk system" and a breach of the levee system could result in the inundation of 191,000 structures, property damage of $47 billion and a substantial loss of life similar to that during Hurricane Katrina (tr. 2/122-25; R4, tab 134 at GOV57178).

Buck Town contends that *Mumford & Miller* does not support a public safety exception to the economic waste doctrine because the contractor in that appeal failed to establish that the bulkhead substantially complied with the contract (app. reply br. at 8). However, to the extent *Mumford & Miller* stands for the proposition that the contractor failed to establish that the bulkhead substantially complied with the contract, the same would be true here. In *Mumford & Miller*, the Board noted that the bulkhead, if constructed according to the contract specifications, would have had a safety factor of 181, but, instead had a safety factor ranging from no less than 144 to no more than 154. *Mumford & Miller*, 07-2 BCA ¶ 33,586 at 66,373. Here, the levee, if constructed according to the specifications, and without considering soil strength gains, would have a factor of safety of 1.48 at the project grade, but as constructed, and without considering soil strength gains, the first layer of geotextile, and the hypothetical construction of a berm in right-of-way, the factor of safety would be just 1.32 (R4, tab 132 at GOV39291).

Buck Town asserts that the Corps' direction requiring it to perform the second levee reconstruction was arbitrary and capricious because the Corps failed to first perform an economic waste analysis (app. br. at 17-18). According to Buck Town, paragraph (f) of the Inspection of Construction clause, FAR 52.246-12, provides that the contractor is required to replace or correct non-conforming work "unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price." (R4, tab 77 at GOV1075) Buck Town relies upon the Engineer Board's holding in *George Ledford Constr. Inc.*, ENG BCA No. 6268 98-2 BCA ¶ 30,016 that it would be arbitrary and capricious to fail to exercise reasonable discretion in determining whether the government's required action constituted economic waste. However, as noted above, we find that Buck Town did not reasonably satisfy the contract

specifications. Additionally, Buck Town's citation to the inspection of construction clause ignores the specific geotextile inspection requirements that provide that Buck Town must replace nonconforming geotextile at its own cost (R4, tab 5 at GOV113). We note that Buck Town, unlike the contractor in *George Ledford*, did not propose an alternative plan contemporaneous with the Corps' direction to perform the second levee rebuild. Instead, Buck Town, at the time of the Corps' direction, insisted that the geotextile met the strength tests (JSF ¶¶ 47, 50-51). The engineering analysis presented to the Board at the hearing was not performed until years after the second levee was rebuilt, and was repeatedly revised until just three days before the hearing (ex. A-5). Moreover, the Corps did not require Buck Town to degrade and rebuild the entire reach of the levee. For approximately half the length, where there was sufficient right-of-way, the Corps permitted Buck Town to add a berm, rather than requiring levee reconstruction (R4, tab 63), further demonstrating that the Corps was not arbitrary and capricious in its direction to Buck Town.

CONCLUSION

For the reasons stated above, Buck Town's Appeal No. 60939 is sustained as to entitlement and returned to the parties for negotiation of quantum. Buck Town's Appeal No. 60940 is dismissed as waived. Buck Town's Appeal No. 60941 is denied.

Dated: December 17, 2019

DAVID D'ALESSANDRIS
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

RICHARD SHACKLEFORD
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

J. REID PROUTY
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA Nos. 60939, 60940, 60941, Appeals of Buck Town Contractors & Co., rendered in conformance with the Board's Charter.

Dated:

PAULLA K. GATES-LEWIS
Recorder, Armed Services
Board of Contract Appeals