ARMED SERVICES BOARD OF CONTRACT APPEALS

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Kostmayer Construction, LLC) Under Contract No. W912P8-04-C-0001)	ASBCA No. 55053
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New Orleans

OPINION BY ADMINISTRATIVE JUDGE PEACOCK

This timely appeal was taken from a contracting officer's decision terminating appellant's right to proceed for failure to make progress under the referenced construction contract. Only the propriety of the default termination is for decision. We conclude that the termination was improper.

FINDINGS OF FACT

A. The Contract

Appeal of --

1. The referenced contract for hurricane protection and enlargement of an existing levee at Lake Cataouatche, Louisiana was awarded on 16 October 2003 by the New Orleans District of the United States Army Corps of Engineers (Corps or government) to Kostmayer Construction LLC (KC or appellant). The West Jefferson Levee District (WJLD), a local government entity, was the government's cost sharing "client" and was responsible for maintenance of the portion of the levee involved in this appeal. The length of the levee within the project limits was approximately four miles, extending from sta. 309+00 from the Lake's pumping station operated by the WJLD on the western

end of the project to sta. 518+50 on the eastern end. (Ex. B-1 at 1; app. supp. R4, tabs 1, 132; tr. 1/37, 3/102, 288)

2. The contract was awarded in the total amount of \$9,721,758, consisting of a combination of lump sum and estimated quantity/unit-priced bid items (app. supp. R4, tabs 2 at 3, 6). The pertinent and highest-dollar-value bid items representing 79% of the price were as follows (app. supp. R4, tab 2 at 3):

Item	Description	Estimated	Unit	Unit	Estimated
		Quantity		Price	Amount
0003	Embankment, Compacted Fill	314,000	CY	4.25	1,334,500
0004	Embankment, Uncompacted Fill	998,000	CY	4.00	3,992,000
0018	Excess Material	590,000	CY	4.00	2,360,000

The remaining items were such items as mobilization and demobilization and cleaning and grubbing (*id.*).

- 3. As awarded, appellant was required to complete the project within 720 days, beginning ten days after its receipt of the Notice to Proceed (NTP). KC received the NTP on 29 October 2003, establishing the original completion date as 18 October 2005. (Ex. B-1 at 1; R4, tab C-2)
- 4. During performance, the completion date was extended a total of 65 days, to 22 December 2005, pursuant to five bilateral modifications. The time extensions were granted for delays attributable to adverse weather experienced during performance through 28 February 2005. (Exs. B-1 at 5, G-14 at 4, -15 at 1, 46, 48, 50)
- 5. The contract required KC to excavate a new drainage canal parallel to the levee, fill in the old or existing canal and place uncompacted and compacted fill to enlarge and strengthen the levee (app. supp. R4, tab 107A). Drawing sheet 5 of 40 set forth the following notes relating to Construction Phasing (*id.*):

PHASES OF CONSTRUCTION:

PHASE I. CONTRACTOR SHALL EXCAVATE REQUIRED DRAINAGE CANAL, . . . FLOODING NEW DRAINAGE CANAL SHALL AVOID LOWERING OF THE EXISTING DRAINAGE CANAL SYSTEM BELOW EL. -10.4.

- PHASE 2. CONTRACTOR SHALL FILL THE EXISTING DRAINAGE CANAL TO AT LEAST EL. -9.0 AND SLOPE TO DRAIN AWAY FROM THE LEVEE FOOTPRINT AS NECESSARY. CONTRACTOR MAY PLACE UNCOMPACTED [FLOODSIDE] AND/OR [PROTECTED SIDE] BERM FILL, AS AN OPTION BELOW, TO FULL HEIGHT WITH A IV ON 3H SLOPE AS SHOWN, OUTSIDE OF THE PROPOSED FLOODSIDE AND PROTECTED SIDE TOES OF THE COMPACTED FILL FOOTPRINT. CONTRACTOR SHALL NOT PLACE UNCOMPACTED FILL WITHIN THE COMPACTED FILL FOOTPRINT. (SUBPARAGRAPHS DO NOT DENOTE SEQUENCING).
- a. PHASES DESIGNATED AS OPTIONAL PHASE 2 AND 3 PROTECTED SIDE BERM CONFIGURATION MAY BE PLACED AFTER COMPLETION OF ALL PHASE 2.
- b. PHASES DESIGNATED AS OPTIONAL PHASE 1, 2 OR 3 FLOODSIDE CONFIGURATION CONSTRUCTION, OTHERWISE TO BE CONSTRUCTED AS PHASE 3.
- PHASE 3. CONTRACTOR SHALL CONSTRUCT UNCOMPACTED AND/OR COMPACTED FILL
- PHASE 4. COMPLETE COMPACTED FILL EMBANKMENT.
- 6. Sheet 2 of 40 of the contract's drawings contained the following pertinent General Notes (app. supp. R4, tab 107A):
 - 1. COMPLETE ALL MANDATORY EXCAVATION OF THE NEW DRAINAGE CANAL PRIOR TO THE FILL OF THE EXISTING CANAL.

. . . .

14. THE MINIMUM POOL ELEVATION IN THE BORROW PIT FOR DRY EXCAVATION IS -19.0 AND POOL ELEVATIONS FOR WET EXCAVATION VARIES

FROM EL. -19.0 TO -10.4. THE NORMAL MINIMUM DAILY OPERATIONAL POOL ELEVATION IN THE DRAINAGE CANAL EL. -10.4. . . . THE DRAINAGE CANAL WATER SURFACE SHALL NOT BE LOWERED BELOW EL. – 11.0 AT ANY TIME.

- 7. The Construction Phasing detail on sheet 5 of 40 of the contract's drawings gave the contractor the option to begin placing uncompacted fill on the flood side of the levee during phases 1, 2, or 3. Placement of compacted fill was not to begin until after completion of Phase 2. (App. supp. R4, tab 107A)
- 8. Drawing sheet 5 of 40 at Typical Section 2A contained one arrow pointing to a line in the existing drainage canal with the notation "Pool Water Min. Pool El. -10.4" and a second arrow (just above the first) pointing to a line at the top of the uncompacted fill to be placed in the existing canal indicating that line to be "El. -9.0." Similarly, sheet 8 of 40 at Typical Section C depicted pools in both the existing and new drainage canals with indications that the pool elevations were to be at a minimum elevation of -10.4 (app. supp. R4, tab 107A).
 - 9. Drawing sheet 8 of 40 set forth the following Notes (app. supp. R4, tab 107A):
 - 5. MINIMUM POOL ELEVATION IN CANALS (EL. 10.4.)

. . . .

- 9. DRAINAGE FOR THE NEW OR EXISTING CANAL SHALL NOT BE INTERRUPTED FOR THE DURATION OF THE CONTRACT.
- 10. Section 02318-Excavation of the contract's specifications included the following pertinent provisions (R4, tab D):

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for excavation in borrow areas (including excess materials), degrading of existing levees, excavation for the storm drainage culvert pipe (access/haul road), excavation of the new drainage canal, and all other excavation incidental to the construction of embankments as specified herein or as shown on the drawings.

1.2 MEASUREMENT

1.2.1 Excavation

Excavation for degrading of existing levees, excavation for the storm drainage (for the access/haul road), and excavation of the new drainage canal required by this section will not be measured for payment.

. . .

1.3 PAYMENT

1.3.1 Excavation

No separate payment will be made for . . . excavation of the new drainage canal. . . . Payment shall be included in the contract prices for the items of which the work is incidental.

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PART 3 EXECUTION

3.1 EXCAVATION IN BORROW AREAS

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3.1.2.1 Criteria

Borrow areas shall conform to the requirements prescribed herein and as shown on the drawings. Excess material excavation, *see* paragraph 3.2.2. When the material necessary for the construction of the embankment and berms cannot be obtained from opposite stations, it shall be procured from borrow areas provided opposite other stations or elsewhere, by haulage or otherwise, and the applicable contract unit price for embankment and berms shall include the cost of such additional work. . . . The borrow areas used for compacted

fill under this contract shall be drained and kept dry during excavation, where possible. If excavation of compacted fill from or through water is necessary, the excavated material shall be stockpiled, allowed to drain and moisture control techniques implemented prior to placement within the levee design section in compliance with the moisture content limitations specified. . . . Drainage of borrow areas shall be accomplished by ditching, sump pumping or other approved methods, except as shown on the drawings. The borrow areas used under this contract which are flooded from storm rains shall be drained and allowed to dry as quickly as practicable after the storm has passed. . . . To conserve arable land and to make optimum use of available material, excavation shall begin at one end of the borrow pit, B/L station 313+62, and be made continuous across the width of the area to the required borrow depths. The final excavated configuration of the borrow pit shall be continuous and long enough to provide the required quantity of material, and shall be accomplished in such manner that all available material within the required width to full depth within this length, will be utilized. . . . The borrow pit operations must not interfere with the drainage canal function. Minimum daily operating pool elevations in the drainage canals is [sic] EL. -10.4. . . .

3.1.2.2 Borrow Area Access

... Access may require crossing an existing and/or new drainage canals, *see* paragraph 2.1.3.2. Access will be accomplished by temporary measures such as fixed bridging, culverts or floatation. The Contractor shall maintain the minimum equivalent cross section required for drainage at the crossing location at all points along the section for either crossing method used considering obstructions created by the floation draft or fixed support elements. Design and maintenance is required to provide a minimum channel cross section at the point of crossing and a continuous transverse distance of 100ft. upstream and downstream from the crossing point. Construction of the crossing method must not interfere with the canal function.

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3.1.3 Professional Services

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3.1.3.2 Hydraulics Services

The Contractor shall employ the services of a Registered Professional Engineer with expertise in hydrologic engineering to ensure the Contractor's crossing designs, related to any drainage canal crossings, do not impede flow and maintain existing cross sectional area.

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3.2. DISPOSITION OF MATERIALS

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3.2.2 Excess Materials

3.2.2.1 Excavation

Excess material excavation operations shall follow the clearing and grubbing operations. Excavate and remove excess materials to the lines and grades as indicated. . . . The final excess material excavation area shall conform with the Contractor's borrow pit operations and not exceed the borrow pit footprint.

3.2.2.2 Stockpiling

Excessed materials are required to be stockpiled within existing project ROW at a height not to exceed EL 0.0. . . .

3.2.2.4 Location of Excess Materials Elevation

The Contractor shall excavate all excess materials above "excess material elevation"

3.2.2.5 Uses

The Contractor, at its option, may use excessed material as future uncompacted fill, providing a 2 foot minimum cover composed of uncompacted fill taken from below the excess material line. . . .

3.3 EXCAVATION IN OTHER AREAS

3.3.1 General

Excavation from other areas shall consist of removal of material in preparing the embankment and berm foundations to the lines and grades shown on the drawings, removal of materials for the access/haul road ditches, the new drainage canal, and the access/haul road storm drainage. . . . All materials removed during excavation of the new drainage canal shall be used in filling the existing drainage canal and or levee embankment construction. Filling of the existing drainage canal shall be in such a manner as to not impede the canal flow. The minimum pool elevation in the existing and new drainage canal is EL – 10.4.

3.3.1.1 New Drainage Canal

The new drainage canal must be excavated to full cross section and length, as shown on the drawings, connected to the pump station and fully functional, prior to filling the existing canal. The normal minimum daily operational pool elevation in the drainage canal is EL - 10.4.

11. Section 02332-Embankment of the contract's specifications contained the following pertinent provisions (R4, tab D):

PART 1 GENERAL

. . . .

1.3 MEASUREMENT

. . . .

1.3.2 Settlement

Measurement of additional fill material placed in each settlement measurement range shown on the drawings by reason of foundation settlement, will be based on measurements on the respective settlement gage installed. . . .

. . . .

1.4 PAYMENT

1.4.1 Embankment and Berms

Payment for all compacted and uncompacted material placed as required in embankments, and berms, and including additional material placed by reason of foundation settlement during construction, will be made at the applicable contract unit price per cubic yard for "Embankment, Compacted Fill" or "Embankment, Uncompacted Fill"....

. . . .

1.7 EMBANKMENT AND BERM MATERIALS

1.7.1 General

The embankment and berms shall be constructed of earth obtained from the borrow areas, degrading of the existing levee, excess material stockpile and the construction of the new drainage canal. . . .

1.7.2 Materials

Embankment materials shall consist of earth materials naturally occurring or Contractor-blended. Embankment materials shall be free from: roots greater than 4 square inches in cross section and greater than one foot in length; masses of peat, humus, rock or gravel; combination from hazardous, toxic, or radiological substances; and trash, debris, or frozen matter. . . .

1.7.3 Moisture Control

1.7.3.1 Compacted Fill

The Contractor shall control the moisture content of the compacted embankment material. . . . The Contractor shall perform the necessary work in moisture control to bring the material within the moisture content range specified. . . . If the material is too wet, it shall either be stockpiled and allowed to drain and/or the wet material shall be processed by disking and harrowing, if necessary, until the moisture content is reduced sufficiently. Borrow material is considered too wet to be placed directly upon the levee compacted fill footprint, if it has a moisture content either greater than plus 10 percent or less than minus 10 percentage points less than [specified]. The material must be processed to within 10 percent of optimum moisture content in the borrow area, existing berms or processing areas for final processing before it may be placed upon the levee compacted fill footprint. . . .

1.7.3.2 Moisture Control-Uncompacted Fill

There are no moisture control requirements for uncompacted fill. Uncompacted fill shall be placed at its natural water content.

1.7.4 Compaction

1.7.4.1 Levee Embankment

The first and each successive layer of compacted fill material shall be compacted to at least 90 percent of maximum dry density [as determined by the pertinent specified test] at a moisture content within the limits of plus 5 to minus 3 percent of optimum moisture content [as determined by the same test].

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PART 3 EXECUTION

. . . .

3.2 EMBANKMENT AND BERM CONSTRUCTION

3.2.1 Compacted Fill

... The materials for compacted fill shall be placed or spread in layers, the first or bottom layer and the last two layers not more than 6 inches in thickness and all layers between the first and the last two layers not more than 12 inches in thickness prior to compaction. . . .

3.2.2 Uncompacted Fill

... Uncompacted fill shall be placed in approximately horizontal layers not exceeding 3 feet in thickness. . . . Where material must be placed in water, it shall be dumped therein until it reaches an elevation 1.0 foot above the water surface, or until a stable fill surface is obtained before layer construction will be required. The material deposited under water shall be placed in such a manner as to ensure that any soft material will be forced progressively outward from the section and not be trapped within the base of the embankment. . . .

. . . .

3.8 SETTLEMENT OF FOUNDATION

3.8.1 Additional Fill

Should the Contractor desire payment for placing additional fill due to foundation settlement during construction, it shall furnish and install settlement gages for determination of such settlement.

- 12. Section 01352-Environmental Protection of the specifications at ¶ 3.2.3 stated, "[s]tream crossings by fording with equipment shall be limited to control turbidity and in areas of frequent crossings temporary culverts or bridges shall be installed" (app. supp. R4, tab 1 at MW05230).
- 13. A borrow area located between the existing and new canals between stas. 309 on the west to 476 on the east was to be excavated during the course of the project to provide both compacted and uncompacted fill. Appellant was to stockpile or could use excess materials excavated as uncompacted fill. As described in the specifications,

excess materials consisted of the top layer (after clearing and grubbing) of areas to be excavated between stas. 313+62 and 436+00 over the borrow pit, but also extended over some areas where the new canal was to be dug. Appellant was to be paid for stockpiled excess materials under bid item 0018 or, if placed as uncompacted fill, under bid item 0004. (App. supp. R4, tab 1 at MW05384-85; tr. 1/43-44, 54, 211-12)

- 14. The contract incorporated, *inter alia*, FAR 52.243-4 CHANGES (AUG 1987), FAR 52.233-1 DISPUTES (JUL 2002), FAR 52.249-10, DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984), FAR 52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP1996) ALTERNATE I (SEP 1996) and FAR 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984) (R4, tab D). The latter clause stated in part:
 - (a) The Contractor shall . . . prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. . . .
 - (b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer. . . .

B. Phase 1

15. To briefly summarize the pertinent primary features of the phases of construction, Phase 1 involved the excavation of the new canal on the protected side of the levee several hundred yards north of the old or existing canal and making the new canal fully operational before the Phase 2 filling of the old canal primarily with the uncompacted materials excavated in Phase 1. In Phase 3, KC was required to place uncompacted fill material from the north side of the backfilled old canal to the toe of the

protected side of the levee to create an embankment or berm up to five feet deep to strengthen the existing levee. Uncompacted fill to strengthen the flood side of the levee could be placed during any of the first three phases. Placement of compacted fill also was to commence in Phase 3. Phase 4 involved completing the placement of compacted fill on the crown of the levee. (Finding 5, *supra*; tr. 1/42-45; app. supp. R4, tab 131)

- 16. On 27 January 2004, KC advised the government that it planned to begin Phase 1 excavation of the new canal at sta. 310+76 on the western end of the project and excavate eastward to sta. 518+50 (app. supp. R4, tab 10).
- 17. The initial Construction Progress Chart or baseline schedule (February Schedule) was submitted on 2 February 2004 and approved by the Corps on 20 February 2004 (app. supp. R4, tab 14; ex. B-1 at 1). The February Schedule was in bar graph format with projected beginning and ending dates adjacent to each of the 18 pay items on the bid schedule, including the following (with respective approximate start and end dates and percentages of the total contract price) (app. supp. R4, tab 14):

Clearing & Grubbing—10 December 2003/31 August 2004—3.6%
Embankment Compacted Fill—1 June 2004/30 June 2005—13.7%
Embankment Uncompacted Fill—1 June 2004/31 July 2005—41.1%
Borrow Pit Development—1 March 2004/30 April 2005—2.2%
Excess Materials—1 March 2004/31 July 2005—24.3%

18. Excavation of the new drainage canal during Phase 1 was not a separate bid/pay item. To the limited extent that top layers of material were excavated in "excess materials" areas, appellant could be paid pursuant to bid item 18. Also, if the excavated materials could be placed as uncompacted fill on the flood side of the levy, KC could receive payment under bid item 4. (Tr 1/43-44, 54). There were other minor pay items such as mobilization. However, there was no bar or progress/pay percentage associated with the work of excavating the new canal in the schedule because that work was not a pay item. Nevertheless, the Phase 1 excavation effort involved approximately 25% of the actual work and was projected by appellant to take approximately five to six months to complete. Appellant planned during the Phase 1 new canal excavation effort to begin placing fill on the flood side of the levee as permitted by the construction phasing requirements. The plan was to excavate, transport materials usable as fill across the old canal and deposit the loads on the flood side receiving payment for uncompacted fill. (App. supp. R4, tabs 2, 14; tr. 1/43-44, 54-55, 101, 171, 223-24, 241)

- 19. Excavation of the new canal began on 8 March 2004 (ex. B-1; app. supp. R4, tab 125 at 233, 234).
- 20. To reach the flood side of the levee to place fill during Phase 1, KC needed to cross the existing canal. Three means of crossing the canal were permitted by the specifications: fixed bridging, temporary bridging over culverts placed in the canal, or using flotation/barge equipment to bridge the canal. Restrictions were set forth in the above specifications on the use of these crossing options. The crossing was required to: 1. not impede the flow or interfere with the canal function, 2. maintain the "minimum equivalent cross sectional area required for drainage", and 3. be approved by a licensed professional engineer with expertise in hydraulic or hydrologic engineering. The crossing plan was not required to be submitted to the Corps for approval. Appellant elected to install temporary bridging over culverts placed in the old canal. It considered that fixed bridging was too costly and difficult for the necessary equipment to access the site. Appellant also considered that flotation equipment or a barge would have settled into the water and violated the specification requirement to maintain the minimum cross sectional area. (Tr. 1/43-44, 54-55, 227-29)
- 21. By letter of 28 April 2004, appellant advised the Corps, *inter alia*, of its election to install a culvert crossing. KC enclosed an informational copy of drawings prepared by Hartman Engineering, Inc. (HEI) depicting three 48-inch in diameter, in excess of 30 foot long, metal culverts placed in the canal through which the canal water could flow (app. supp. R4, tab 19).
- 22. The determination to use the three 48-inch culverts was based in part on the presence of a similarly-designed and sized three culvert crossing running perpendicular (north/south) to the east/west old canal to be filled in. The north/south canal with the previously constructed culvert crossing ran adjacent to the WJLD pump station involved in this project. (Tr. 2/104, 3/258-59; app. supp. R4, tab 130 at 1, 2, 6)
- 23. Appellant's 28 April 2004 letter also sought Corps approval of a plan to excavate a temporary (north/south) canal at approximately sta. 390 that would connect the existing with the newly excavated canal. This plan requested the Corps' permission to reroute and backfill part of the existing canal prior to completion of the new canal. KC thus requested a change to the specification requirements that the "new drainage canal must be excavated to full cross section length . . . connected to the pump station and fully functional prior to filling the existing canal." (*Id.*)
- 24. On 6 May 2004, Gulf Coast Pipe invoiced appellant, *inter alia*, for the culverts with the invoice indicating that the culverts were to be shipped the same date (app. supp. R4, tab 20).

- 25. As of 27 May 2004, appellant had not received a response to its 28 April 2004 letter and its subcontractor, MW Clearing and Grading, Inc. (MW) began to fill in the existing canal at approximately sta. 387. The Corps' project engineer at the site directed appellant to stop placing materials in the existing canal and remove materials previously placed therein until KC's plan was approved by the contracting officer. (App. supp. R4, tabs 23, 24, 25)
- 26. On 28 May 2004, the Corps rejected appellant's plans to fill in part of the existing canal and excavate a north/south canal connecting the existing canal with the new work. The Corps also denied KC's canal crossing plan using the three 48-inch culverts. The stated reason for rejection of the culvert plan was that the three culverts failed to "maintain the existing cross sectional area" citing paragraph 3.1.3.2 of specification section 02318, *supra*. (App. supp. R4, tab 24)
- 27. On 15 June 2004, KC submitted Transmittal Nos. 10 and 11 to the Corps. Transmittal 10 requested a "Change/Modification" to ¶ 3.3.1.1 of specification § 02318 to permit appellant to build the north/south connector canal and fill in (and reroute) part of the existing canal prior to completely excavating the new canal. Transmittal 11, submitted to the Corps for "information," again described the three culvert canal crossing plan but added HEI's flow capacity calculations which HEI claimed established that flow was not impeded by the crossing and the existing cross sectional area was maintained. (App. supp. R4, tabs 27, 30) At approximately the same time, appellant also submitted Transmittal No. 12 containing the resume of HEI's president, Janet Evans, a Registered Professional Engineer in Louisiana. Ms. Evans' resume failed to detail her expertise in hydrologic engineering. (App. supp. R4, tab 28) Additional flow capacity calculations, details and drawings were forwarded to the Corps by HEI on 23 June 2004 (app. supp. R4, tab 34).
- 28. On 24 June 2004, representatives of the Corps, appellant and HEI met to discuss the transmittals. The Corps requested that appellant provide more details and information concerning the roads, slopes, pipe lengths and flow calculations associated with the culvert crossings along with the hydrologic experience of Ms. Evans. (App. supp. R4, tabs 27, 35; tr. 2/109)
- 29. The Corps contemporaneously did not supply appellant with design parameters, assumptions or criteria relevant to flow capacity that the government considered should be used in designing the culvert crossings (tr. 1/259, 2/86, 91-94, 141-42, 3/202). However, in their internal deliberations prior to the 24 June 2004 meeting, a Corps engineering intern opined that appellant's proposed design had "only one tenth of the existing cross sectional area and will cause a major backwater profile that may cause flooding of upstream property" primarily because appellant allegedly made a significant error in its assumptions (app. supp. R4, tab 134 at 1; tr. 3/239-40). The

Corps' Administrative Contracting Officer (ACO) in response estimated that appellant would need to put as many as eight pipes in "and widen the channel at the crossing to accommodate it and then do the hydraulics and extend the channel widening up and down stream to make it work, it will probably be cost prohibitive to do it" (app. supp. R4, tab 134 at 1).

- 30. Pursuant to Transmittal Nos. 15 and 16, appellant provided additional information responsive to the Corps requests on 28 June 2004. Transmittal 15, *inter alia*, added a fourth culvert to the original design and provided revised and more extensive flow capacity computations. Transmittal 16 provided the Corps with Ms. Evans' revised resume highlighting her hydraulic engineering experience. (App. supp. R4, tabs 36, 37)
- 31. On 1 July 2004, appellant resubmitted its change/modification request regarding the north/south connector canal and early filling of the existing canal as reflected in Transmittal 10 (app. supp. R4, tab 40). On 20 July 2004, the Corps denied the request (app. supp. R4, tab 41).
- 32. On 28 July 2004, the Corps responded to appellant's culvert crossing Transmittals 15 and 16. The response found the transmittals insufficient because HEI had allegedly failed to address "the effect on the Catatoauatche [sic] Pump Station during operation of the pumps." (App. supp. R4, tab 42)
- 33. Excavation of the new canal was completed and backfilling of the old canal commenced on 6 August 2004 making installation of the canal crossing unnecessary (ex. B-1; app. supp. R4, tab 125 at 233).
- 34. Appellant planned to use its subcontractor MW to place fill on the floodside of the levee during Phase I. MW performed some of the excavation work on the new canal but was unable to place the fill as a result of the denial of KC's change request and rejection of its culvert crossing design. MW demobilized from the job in July 2004. (Tr. 1/64-66, 188)

C. Phase 2

- 35. During Phase 2, appellant planned to "decommission the old canal, to plug both ends and to pump the water out, and to let the sun and wind dry the muck that was in the canal, which in a lot of places was six to eight feet deep" (tr. 1/77).
- 36. In a meeting between the parties on 2 August 2004 preparatory to Phase 2, the Corps rejected appellant's plan (app. supp. R4, tabs 46, 48). The government cited provisions of the contract specifications and drawings, *supra*, that required the contractor to maintain the water level elevation at a minimum of -10.4 feet during the Phase 2

process of backfilling the old canal. The government interpreted the provisions as requiring that minimum water elevation to be maintained in both canals to the extent possible as backfilling operations progressed along the old canal. The government considered that the elevation needed to be maintained in the old canal because the water helped support the structural integrity of the levee pending completion of all backfilling. (App. supp. R4, tab 65; tr. 4/200, 228, 231-33)

- 37. KC interpreted the minimum water level requirement as being applicable during Phase 2 only to the newly-commissioned canal not to the old canal. KC considered that once the old canal was decommissioned it was no longer an operational canal; its filling would necessarily impede canal flow and make maintenance of any minimum elevation impossible. (Tr. 1/82-84, 172-73) It also considered that failure to pre-drain the canal would greatly increase the problem of providing a stable base for placing the uncompacted fill berm required above the filled in canal (tr. 2/15-16, 18-19, 185-86).
- 38. By letters of 9 and 25 August 2004, appellant notified the Corps that it considered that the requirement to maintain the water level in the old canal at elevation 10.4 to be a contract change (app. supp. R4, tabs 46, 48). The 9 August 2004 letter also stated that placing the materials in water would present problems in installing settlement plates to assist in measuring the amount of fill placed (app. supp. R4, tab 46).
- 39. On 25 August 2004, appellant notified the Corps that the need to process the muck was hindering its progress (app. supp. R4, tab 48).
- 40. On 7 September 2004, the government formally rejected appellant's request to dewater the old canal prior to filling. The government pointed to sections of the plans and specifications that in its opinion required the filling to occur while the canal remained at the -10.4 minimum elevation. The Corps, as support for its rejection of appellant's plan, also cited § 02332, ¶ 3.2.2 of the specifications, which states "[w]here material must be placed in water, it shall be dumped therein until it reaches an elevation 1.0 foot above the water surface, or until a stable fill surface is obtained before layer construction will be required." (App. supp. R4, tab 50)
- 41. As a consequence of the government's rejection of its plan to drain the existing canal before filling, appellant proceeded to push and spread materials, including excess materials, into and across the canal with dozers while the canal was filled with water. KC found that this caused large balls/chunks/walls of muck and muck "holes" to form every few hundred feet which it was "forced" to remove by backhoes, spread, process and dry before placing the material back into the canal. The filling of the canal with dozers continued from approximately the start of Phase 2 to late January 2005. (Tr.

1/77-79, 80-81, 87-88, 2/12-14, 19-20, 185-86, 4/130-32; app. supp. R4, tabs 46, 47, 126 at 385, 394, 395, 399)

- 42. On 7 September 2004, appellant submitted its detailed plan for excavation and maintenance of the borrow pit (ex. B-1 at 3; app. supp. R4, tab 51).
- 43. On 29 September 2004, the ACO notified appellant that it was only 22% complete, whereas its February Schedule projected 33% completion of the pay items, taking into consideration time extensions granted to that date for weather-related delays. The ACO requested that appellant prepare a revised schedule and stated that a 10% retainage might be withheld from future progress payments. (App. supp. R4, tab 53)
- 44. Appellant responded on 4 October 2004, stating that it considered that it was 21.5% complete as of 30 September as compared with 30% completion estimated in the February schedule. It requested that all appropriate time extensions for weather be granted as acknowledged by the ACO. Appellant also stated that a new progress schedule previously had been submitted to the Corps and was undergoing review. (App. supp. R4, tab 54)
- 45. The Corps rejected appellant's analysis of the degree of completion on 12 October 2004 and on 25 October 2004 withheld 10% from the amount otherwise payable pursuant to KC's Pay Estimate 11 for unsatisfactory progress (app. supp. R4, tabs 55, 112 at tab 11).
- 46. On 8 November 2004, appellant submitted a revised Construction Progress Chart (the November Schedule) to the Corps in the same format as the February Schedule (finding 17). The November Schedule was approved by the ACO on 9 November 2004. It was the second and last approved schedule for the project, incorporated all time extensions to date and reflected a revised completion date of 19 November 2005. (Ex. B-1 at 3; App. supp. R4, tab 62) The November Schedule projected that the percentages of completion for all pay items at the end of each of the following months of the contract would be as follows:

November 2004—24.7% December 2004—27.5% January 2005—32.2% February 2005—38.7% March 2005—46.2% April 2005—53.4% May 2005—65.9% June 2005—74.7% July 2005—83.4% August 2005—91% September 2005—95.2%

(App. supp. R4, tab 62)

- 47. The November Schedule projected that only 28.7% of the total amount payable for all contract pay items would be earned during the six month period from November 2004 through April 2005 but that 37.6% would be earned during the four month summer construction period from May through August 2005 (*id.*).
- 48. The periods reflected in the November Schedule for performance of the following principal pay items were (*id.*):

Embankment Compacted Fill—1 November 2004 to 30 September 2005 (with 40% completion achieved by the end of April 2005)

Embankment Uncompacted Fill—5 August 2004 to 30 September 2005 (with 60% completion achieved by the end of April 2005)

Borrow Pit Development—1 September 2004 to 31 October 2005 (with 55% completion achieved by the end of April 2005)

Excess Materials—1 March 2004 to 31 August 2005 (with 60% completed by the end of April 2005)

- 49. In a letter of 1 December 2004, appellant continued to press its interpretation that no minimum water elevation applied to the old canal during the Phase 2 filling operation and requested that the Corps reconsider its rejection of appellant's plan to drain the canal. The Corps denied appellant's request by letter dated 25 January 2005. (App. supp. R4, tab 65)
- 50. In late January 2005 after slower than anticipated progress filling in the old canal because of the muck-related problems, the government directed appellant to use a crane to drop fill into the canal until it was one foot above the water level or a stable foundation was obtained to receive the uncompacted fill embankment layers. Use of the crane rather than bulldozers proved faster in completing the actual filling of the canal but was much less effective in developing a stable foundation. The prior bulldozer method compressed the materials and increased the amount of settlement. (App. supp. R4, tabs 130 at 12, 14, 16, 17, 62-65; tr. 1/93-95, 2/18-20, 185-87, 4/310-11)
- 51. The fill placed in the canal and on the flood side of the levee during Phase 2 settled at a substantially higher rate than either KC or the Corps anticipated (tr. 1/92,

- 2/26, 179-80, 4/66-67). Pursuant to § 02332, ¶¶ 1.3.2, 1.4, and 3.8 of the specifications (finding 11) appellant sought to be paid for measured settlement quantities at the applicable contract unit price for either compacted or uncompacted fill.
- 52. Measurements taken by appellant's surveyor (and witnessed by the Corps) based on settlement plates installed by KC reflect that appellant experienced settlement of 120,034 cys and 40,469 cys of uncompacted fill placed in the canal and on the flood side of the levee, respectively (app. supp. R4, tab 104; tr. 2/22, 4/103). There is no evidence that these quantities (totaling 160,503 cys) measured by appellant and witnessed by the Corps are inaccurate (tr. 4/103).
- 53. Through Pay Estimate 18 (the last pay estimate prior to the termination), the Corps recognized that KC had placed 341,453 cys of uncompacted fill through 30 April 2005. However, the Corps has not paid appellant for additional settlement quantities. (App. supp. R4, tab 112 at tab 18; tr. 1/120, 122)
- 54. The parties held a progress meeting on 2 February 2005. Appellant indicated that it was mobilizing additional resources, equipment and subcontractors to the site and planned to work in parallel simultaneously with the new subcontractors to increase productivity and timely complete the job weather permitting. (App. supp. R4, tab 67)
- 55. After adoption of the November Schedule reflecting the 19 November 2005 completion date, appellant was granted an additional 33 days for weather delays through February 2005 extending the time for completion to 22 December 2005 (ex B-1 at 5). No further time extensions were granted by the Corps for severe weather during the post-February 2005 performance period. During performance after the November Schedule through the date of termination, the placement of fill was critical to timely completion. There is no basis in the record to conclude that the placement solely of compacted fill as opposed to uncompacted fill was critical at any time. (Tr. 3/155-156)
- 56. Both parties agree that adverse weather conditions prevented appellant from placing compacted fill in February 2005 (tr. 2/201, 3/151, 4/62, 66, 72).
- 57. At least as early as 25 February 2005, the Corps was criticizing appellant for lack of progress by comparing the time elapsed on the contract with its estimated percentages of completion of the pay items. By letter of that date, the Corps asserted that KC was "approximately 34% complete, however 60% of the contract time has passed." (App. supp. R4, tab 68) The letter also expressed concern that no compacted fill had been placed, although KC's November Schedule (as adjusted for informally conceded weather delays) reflected that the work would commence in December 2004 (*id.*).

- 58. The parties met to discuss progress on 16 March 2005. In preparation for the meeting, the Corps prepared a "fact sheet" (or FS) detailing appellant's progress through February 2005. The FS took into consideration weather delays through February and a revised completion date of 22 December 2005. It noted that the overall project completion percentage was 32.9% complete as compared with a completion percentage of 31.4% anticipated in the November Schedule and contract time elapsed of 62.2%. The FS noted that none of the bid quantity (314,000 cys) of compacted material had been placed, whereas 13% was scheduled. With respect to uncompacted material, the FS indicated that 288,400 cys (of the total bid quantity of 998,000 cys) or 28.9% had been placed (without considering settlement quantities) versus the scheduled percentage of 28%. As for excess materials, the FS indicated that the actual quantity would "be around 410,000 to 490,000" cys rather than the estimated bid quantity of 590,000 cys. Given the lesser quantity of excess materials, the FS indicated that appellant had completed 59% to 70% of this work in comparison to the 34% estimated for completion in the November Schedule, as adjusted for additional weather delays. (App. supp. R4, tab 76; tr. 4/65-66)
- 59. Also on 16 March 2005, the Corps withheld an additional \$7,541.50 from appellant's February progress payment request for unsatisfactory progress, thereby increasing the amount withheld to \$38,699.95 (ex. B-1 at 3; app. supp. R4, tab 112 at tab 16).
- 60. On 25 March 2005, the Corps issued an Interim Unsatisfactory Construction Contractor Performance Evaluation to appellant (ex. B-1 at 4; app. supp. R4, tab 80).
- 61. On 1 April 2005, the Corps issued a "show cause" letter to appellant referring to concerns expressed by the government in its 25 February 2005 letter, *supra* (ex. B-1 at 4; app. supp. R4, tab 81).
- 62. On 18 April 2005, the government executed Pay Estimate 17 (for the month of March 2005) deducting \$6,777 or 10% from the amount earned by and payable to the contractor for March. The deduction was based on appellant's alleged "unsatisfactory progress," noting in particular "66% time elapsed with no compacted fill placed to date." (App. supp. R4, tab112 at tab 17)
- 63. Rain and wet conditions prevented appellant from placing compacted fill from March through early May 2005 or made placement operations materially less efficient. The time required to process and dry wet materials (to comply with the moisture requirements for compacted fill in ¶ 1.7.4.1 of Section 02332 of the specifications) materially exceeded the normal and reasonably-to-be-expected period. Compaction of fill placed in the requisite small six-inch lifts is also considerably more difficult in wet conditions. However, KC continued to haul and place uncompacted material, dewater the site and borrow pit and complete the filling of the existing canal. In April 2005,

appellant also increased its work week from six to seven days a week. Appellant also placed 5,000 to 11,000 cys of compacted fill "out of phase" to permit access along the levee. (Tr. 2/44, 201-04, 208, 211-17, 234, 300-01, 3/41-42, 45-46, 100-02, 151, 170-72, 234, 290-91, 4/62; app. supp. R4, tabs 89, 129 at 2-19, 23-128, 154-168, 172, 176-197, 240, 252, 271)

- 64. By letter of 18 April 2005, appellant responded to the Corps' "show cause" notice. KC cited various causes excusing delays, including disapproval of its Phase I canal crossing plans and its Phase 2 plan to backfill the old canal, as well as continuing adverse weather that affected mobilization of additional equipment to the site as well as the ongoing work. The letter also noted that to meet the scheduled completion date approximately 5,000 cys of material per day would have to be placed. Appellant asserted that its crew, or either of the crews of its two mobilizing subcontractors, individually was capable of placing that amount of fill per day weather permitting. (App. supp. R4, tab 83)
- 65. Appellant's 18 April 2005 letter also alluded to an alleged 20-day delay caused by excessive settlement of sand backfill placed in mid-2004 on a site access road, the Corps refusal to allow installation of settlement plates at that location, and subsequent disagreements between the parties concerning the measurement of the settlement quantities based on truckload counts (*id.*; app. supp. R4, tabs 32, 58, 84). The Corps ACO conceded at the hearing that appellant was entitled to payment for additional sand without discussion of the merits of the time extension request (tr. 4/152).
- 66. Appellant completed the backfilling of the existing canal on 29 April 2005 (app. supp. R4, tab 126 at 304; tr. 2/178).
- 67. In May 2005, the weather improved and appellant placed compacted fill on the levee, as well as continued to place uncompacted fill. However, placement and compaction efforts for the compacted fill were adversely impacted by the high organic and moisture content of materials in the existing levee. (Tr. 2/217-19, 289-91, 294, 300-01, 3/289-90, 4/223-24, 236, 257-58; app. supp. R4, tabs 49, 102, 103, 124 at 284-375)
- 68. Pay Estimate 18 for work accomplished in April 2005, was executed (but not paid) by the Corps on 20 May 2005 and withheld \$14,310 or 10% of the amount due appellant for the period, bringing the total withheld for unsatisfactory progress to date to \$59,787 (app. supp. R4, tab 112 at tab 18).
- 69. No time extensions were granted for adverse weather for the period of performance after February 2005 (ex. B-1 at 5). However, Pay Estimates 17 and 18 reflect that the government considered that appellant might be entitled to a total of an

additional six day extension of the completion schedule for the period 1 March through 30 April 2005 (app. supp. R4, tab 112 at tabs 17 and 18).

70. On 5 May 2005, the contracting officer issued what is referred to by the parties as the "cure" letter. The contracting officer stated that she had considered the issues in appellant's 18 April 2005 letter that appellant claimed were excusable causes of delay and found them all to be without merit. The contracting officer acknowledged that appellant was entitled to an additional two day time extension for adverse weather through 30 April extending the required completion date to 24 December 2005. (App. supp. R4, tab 87) In addition the contracting officer stated (*id.*):

As I am uncertain that the possibility remains today that you can complete timely, I demand immediate corrective measures. I will terminate for default your right to proceed under this contract if you fail to meet any of the following:

- 1. Within 14 calendar days of receipt of this letter, you are to satisfactorily place no less than 30,000 cubic yards of compacted fill on the levee. This standard of performance is derived directly from your April 18th letter in which you stated your intention to have 30,000 cubic yards in place 12 calendar days (10 work days) later.
- 2. Within 5 calendar days of receipt of this letter, you are to provide to me a new acceptable plan for regaining schedule and completing the work timely. Your plan shall include the number of days you anticipate available for placing compacted fill, and the rate of placement necessary to complete the work by the required contract completion date. Any revisions to your plan required by the Government prior to approval must be incorporated by the 14th calendar day.
- 3. After 14 calendar days of receipt of this letter, you are to achieve and sustain the production rate of placement of compacted fill contained in your approved plan.
- 71. On 10 May 2005, appellant provided the Corps, *inter alia*, with its anticipated production rate for compacted fill of 5,000 cys per day and noted its difficulties and efforts drying out the fill prior to placement. It also described its plan for timely executing the remaining work, outstanding claim items and the status of mobilizing additional remaining equipment to the site. (App. supp. R4, tab 89)

- 72. In May 2005, appellant placed about 30,000 cys of compacted fill during the approximate two week period after receipt of the Corps' 5 May 2005 letter prior to termination (tr. 2/44, 47, 215-16, 262-63). There are no test results verifying compliance (or noncompliance) with contract requirements for compacted fill.
- 73. On 20 May 2005, the contracting officer issued Modification No. P00011 terminating appellant's right to proceed under the contract for "[f]ailure to make adequate progress so as to endanger timely completion of the contract" and for "[f]ailure to demonstrate, upon demand of the Contracting Officer, the ability to plan and prosecute the work in a manner necessary to complete by the required contract completion date." The modification notified appellant that it represented the final decision of the contracting officer and advised appellant of its appeal rights. (App. supp. R4, tab 93) No detailed rationale or analysis was stated by the contracting officer for her decision to terminate. However, that decision continued to be based in very substantial part on a comparison of the time elapsed on the project with the percentages of completion of the pay items and the lack of progress in placing compacted fill. (Tr. 3/292, 312-13, 315) The government's expert report did not address whether the appellant could have timely completed the work (tr. 3/146; ex. G-1).
- 74. No pay estimate was prepared for work performed in May 2005. At the time of termination, appellant had not been paid for: work performed in April (Pay Estimate 18 *supra*) of \$128,785 (as reduced by the Corps) as well as May, settlement of uncompacted fill in the old canal and flood side of the levee, and settlement of sand on the haul road (as discussed above).
- 75. Appellant timely appealed the CO's final decision by letter to the Board dated 9 June 2005 (R4, tab A).
- 76. RM Contractors (RM), one of appellant's subcontractors, alone could have hauled and placed the remaining quantity of uncompacted fill (approximately 650,000 cys), weather permitting, in the more than seven months remaining until the scheduled contract completion date. The weather improved significantly following the termination at the end of May and through July 2005 the site was dry. RM remained on the project following the termination and was employed by the WJLD to help WJLD finish the job. RM was employed to haul the fill and averaged 6,000 to 10,000 cys per day. If RM had both loaded and hauled the fill, it could have increased that average. (Tr. 2/55-57, 63)
- 77. After termination, the WJLD completed portions of the project. However, it did not adhere to the specified lift requirements in placing compacted fill, did not conduct specified tests establishing that the requisite moisture requirements were met and did not

comply with borrow pit requirements in the contract. (App. supp. R4, tabs 15, 97, 99; tr.1/215-17)

DECISION

Termination for default is a drastic sanction with the government bearing the burden of proving, based on sound evidence and analysis, that it was justified. Lisbon Contractors, Inc. v. United States, 828 F.2d 759, 765-66 (Fed. Cir. 1987); J.D. Hedin Construction Co. v. United States, 408 F.2d 424, 431 (Ct. Cl. 1969); Michigan Joint Sealing, Inc., ASBCA No. 41477, 93-3 BCA ¶ 26,011, aff'd, 22 F.3d 1104 (Fed. Cir. 1994) (table). Where the government terminates a construction contractor's right to proceed for failure to make progress, the contracting officer must have a reasonable belief that "there was 'no reasonable likelihood that the [contractor] could perform the entire contract effort within the time remaining for contract performance." Lisbon, supra, 828 F.2d at 765. Before exercising its discretion to terminate under the Default clause, the government should consider all relevant circumstances. Ryan Co., ASBCA No. 48151, 00-2 BCA ¶ 31,094 at 153,544, aff'd on recon., 01-1 BCA ¶ 31,151; Walsky Construction Co., ASBCA No. 41541, 94-1 BCA ¶ 26,264 at 130,625, aff'd on recon., 94-2 BCA ¶ 26,698 at 132,784. It is improper to base the decision to terminate for default on materially erroneous information or analysis. L&H Construction Co., ASBCA No. 43833, 97-1 BCA ¶ 28,766 at 143,556. If the government satisfies its burden of proving that the termination for default was justified, appellant must prove that its default was excusable in order to overturn the termination. DCX, Inc. v. Perry, 79 F.3d 132, 134 (Fed. Cir. 1996).

We consider that the government has failed to sustain its burden of proving that the termination was justified. The decision to terminate here was unreasonable and an abuse of the contracting officer's discretion because it was based on a materially inaccurate, misleading analysis by the contracting officer of the percentage of contract completion and a flawed assessment of appellant's capabilities to complete the work in the more than seven months remaining for performance. The government unreasonably underestimated appellant's ability to timely complete the project. Most significantly, the government underestimated and misanalyzed the degree of completion at the time of termination, appellant's commitment of additional resources to timely complete, and the results of the government's own test when it direct appellant to "cure" performance deficiencies.

Because we conclude that the termination was unjustified and improper, we need not reach many issues that have been extensively argued by the parties concerning the excusability of various alleged causes of delay to the project and the parties' respective responsibility for those delays. As we discuss below, appellant was not sufficiently behind schedule to warrant termination regardless of whether it was further excusably

delayed. Accordingly, we need not determine, *inter alia*, the excusability or extent of any delay attributable to: rejection of appellant's canal crossing plans during Phase 1, rejection of appellant's plan to dewater the old canal prior to its filling in Phase 2, the alleged inadequacy of WJLD's pumping efforts in contributing to wet conditions, whether soil/materials in the existing levee constituted a differing site condition or adverse weather after February 2005.¹

Similarly, we need not address in detail government contentions regarding alleged causes of delay for which appellant was responsible, including appellant's alleged general ineptness and inexperience, the inadequacy of its compaction efforts/equipment, and/or the insufficiency of its borrow pit design, dikes and dewatering efforts. We have considered these general government contentions in our assessment below of the likelihood of timely completion. Regardless of whether appellant was entitled to more time or contributed to pre-termination delays, we consider that it was capable of completing the project within the remaining available time of more than seven months. The contracting officer's determination to the contrary was unreasonable.

Degree of Completion

Measurement of the degree of completion and timeliness of performance in this case is made more difficult by several factors. None of the phases of construction had definite completion dates and there were no other objective "milestone" type dates against which performance could be measured. Similarly, there was no required critical path schedule, although both parties agree that placement of uncompacted and compacted fill was vital to timely completion. Instead, progress on the job was measured by a rudimentary, bar graph schedule tied to the pay items of the contract.

A principal flaw in the government's decision to terminate is its misanalysis of that schedule in evaluating the degree of completion. Percentage of completion estimates and time comparisons may provide useful general guides and perspective in evaluating the likelihood of timely completion. However, they must be logically developed and accurately reflect the underlying facts on which the projections are based. They are not a short cut or substitute for careful and considered analysis of all relevant facts. In this case, the contracting officer's reliance on, and comparison of, the percentage of completion in appellant's bar chart schedule with the time elapsed on the contract (*see also*, *e.g.*, gov't brief at 52), her failure to consider extensive settlement in evaluating the amount of work performed, her focus on compacted fill in evaluating progress, and her

¹ In this case, we also note that only the propriety of the termination is before us.

Appellant has not filed separate affirmative claims concerning the alleged delaying events.

failure to give sufficient weight to the government's own internal estimates of the degree of completion were unreasonable and flawed.²

Most fundamentally, the contracting officer here failed to sufficiently consider the Phase I work of excavating the new canal. Appellant's bar chart schedule tracked only the percentage of completion of pay items. Excavation of the new canal was not a separate pay item. Nevertheless, Phase I took five to six months to complete and involved approximately 25% of the work (finding 18). In these circumstances, failure to sufficiently weight the Phase I excavation effort in comparing the work performed with the time elapsed on the contract materially understated the percentage of completion. Once time expired and remaining on the contract was used as a yardstick for evaluating the degree of completion, all work performed (including the substantial work not covered by a pay item) was required to be included in any fair comparison. In this case, the principal pay items were to be performed primarily in Phases 2 through 4, after completion of the excavation of the new canal. We consider that the degree of completion was materially greater than was assumed in the government's simple comparison of the elapsed time and percentage of completion of the pay items.

In addition, the government unreasonably failed to give proper weight to the exceptionally high settlement quantities in estimating the amount of uncompacted fill placed and the degree of completion of that pay item. In this case, the parties agree that the quantities were excessively high. Whether or not final computation/reconciliation of settlement quantities for payment purposes was properly reserved for final close out of the contract, the government was fully apprised of the exceptionally high settlement rate during performance. The Corps should have considered the extensive additional uncompacted fill work performed for which appellant never received proper credit in the Corps' analysis and determination to terminate KC's right to proceed. We need not resolve the dispute between the parties regarding the precise quantity of settlement yardage properly payable under the uncompacted fill bid item. In any event, the settlement quantity was substantial and material.

Moreover, the contracting officer's primary focus on appellant's lack of progress placing compacted fill was particularly unreasonable. Compacted fill was not required to be placed until the end of the job during Phases 3 and 4, after the Phase 2 filling of the old canal (finding 7). Phase 2 was not completed until the end of April 2005. It is clear that the parties waived the timing and sequencing of the compacted fill work and

² Because we determine that the termination was improper for other reasons, we also need not address the additional related issue of whether the government's withholdings of progress payments during performance, based on a similar flawed analysis of the degree of progress, materially breached the Corps' payment obligations under the contract.

appellant began placing compacted fill before the end of Phase 2 because of government concerns about lack of progress. Nevertheless the government's criticism of appellant's progress relative to compacted fill placement and its comparison of fill placed to time elapsed on the contract was unreasonable. Although there was no requirement to prepare a critical path schedule, we have determined that the placement of fill was critical to timely completion during the post-November 2004 period to the time of termination. There is no basis in the record to conclude that only compacted fill placement was critical. (Finding 55) In these circumstances, the government's narrow focus solely on compacted fill was unnecessarily restrictive. Its criticisms of appellant's placement operations misanalyzed the criticality of compacted fill to timely completion. As a consequence appellant also lost the option to place fill in what it deemed the most efficient time, manner, and sequence.

Placement of compacted fill was also weather/moisture sensitive and it was less efficient to install the compacted fill during the very wet winter and early spring of 2005. The Corps readily agrees that it was not possible to place compacted fill for the entire month of February because of the wet conditions. We have also determined that this work continued to be made substantially less efficient in March and April 2005. When the weather permitted more efficient placement, appellant placed 30,000 cys in the two week period prior to expiration of the contracting officer's "cure" notice deadline. Appellant was not afforded adequate opportunity to place the fill in sequence and under these more favorable conditions, particularly with the additional resources and equipment mobilized to the site.

There is also no indication that the contracting officer gave sufficient weight to appellant's forecast of a material productivity increase during the summer months. According to its November Schedule, appellant estimated that it intended to accomplish 37.6% of the pay items during the period from May through August 2005, even without mobilization of the two additional subcontractors. Appellant was not afforded the opportunity to demonstrate its ability to meet or exceed those productivity projections.

In addition, the government's own analysis of the degree of completion demonstrated as late as the March meeting (finding 58) found that appellant was ahead of schedule despite all of the problems on this project and without consideration of the additional settlement quantities. The government-prepared fact sheet for the meeting found that the overall project completion percentage through February 2005 was 32.9% as compared with the 31.4% anticipated in the November Schedule despite the fact that 62.2% of the contract time had elapsed. While noting that none of the compacted fill had been placed, the fact sheet indicated that 28.9% of the uncompacted fill had been placed, without consideration of the roughly 160,000 cys settlement quantity, while 28% had been scheduled. Moreover, given the reduced estimate of the quantity of excess materials, the fact sheet indicated that appellant had completed 59% to 70% of the excess

materials work whereas only 34% was scheduled to be completed. The termination occurred approximately two months after the March meeting. We have not attempted to perfect a precise updated estimate of the degree of completion in the intervening two months because we consider that appellant had not fallen so substantially behind schedule that its ability to timely complete the contract was materially impaired. The government's decision to terminate appellant was precipitate and premature given the degree of completion of work other than compacted fill placement, most significantly uncompacted fill placement, and the time remaining on the contract schedule.

Commitment of Additional Resources

In addition to misanalyzing the degree of completion, the contracting officer's decision to terminate was unreasonable and an abuse of her discretion because the decision failed to adequately assess appellant's commitment of additional resources to complete the work in the more than seven months remaining for performance.

To the extent appellant was behind schedule on compacted fill placement, it had taken measures and expended substantial additional resources to increase productivity and insure timely completion. Not only did KC express its willingness and intent to finish on time, it was in the process of augmenting its work force by mobilizing two additional subcontractors as well as its own supplementary equipment to the site. Appellant was not afforded the opportunity to prove that, with the assistance of these new subcontractors, it was capable of moving and placing the remaining fill quantities in the time remaining for performance. RM alone hauled 6,000 to 10,000 cys of uncompacted fill per day for WJLD in dry conditions after the termination. It would have met or exceeded this level of productivity if it both loaded and placed the fill. (Finding 76) The government has not challenged RM's expertise, experience or competence. Appellant also increased its work week to seven days. The contracting officer either failed to consider, or gave insufficient weight to, these mobilization efforts and expenditures in reaching the decision to terminate.

Results of the "Cure" Notice Tests

Appellant also demonstrated its capability by substantially satisfying the criteria set by the contracting officer in her May 2005 "cure" letter. Most significantly, the most persuasive evidence is that appellant placed 30,000 cys of compacted fill prior to expiration of the two week deadline established in the letter. (Findings 70, 72) Regardless of whether the placement of that quantity was a valid test of appellant's ability to complete placement of compacted fill in the more than seven months remaining in the contract, appellant passed the test. There are no compaction test results for the 30,000 cys placed. However, to the extent that the government considers that KC failed to meet specified compacted fill requirements, it should have produced evidence

contradicting appellant's assertions that the quantity was properly placed. As the record stands, appellant met the requirements of the "cure" letter but was terminated nevertheless. We consider that its actions in response to the "cure" letter gave the government adequate assurances of timely completion.

CONCLUSION

We conclude that the default termination was improper and must be converted to one for the convenience of the government. The appeal is sustained.

one for the convenience of the government. The	e appear is sustained.
Dated: 30 May 2008	
	ROBERT T. PEACOCK Administrative Judge Armed Services Board of Contract Appeals
I concur	I concur
MARK N. STEMPLER Administrative Judge Acting Chairman Armed Services Board of Contract Appeals	EUNICE W. THOMAS 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 No. 55053, Appeal of Kostmayer Construction, LLC, rendered in conformance with the Board's Charter.

Dated:

CATHERINE A. STANTON Recorder, Armed Services Board of Contract Appeals