ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
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King Aerospace, Inc.	)	ASBCA No. 60933
	)	
Under Contract No. W58RGZ-05-C-0302	)	

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OPINION BY ADMINISTRATIVE JUDGE MCILMAIL

In 2016 the Board held a hearing and found entitlement for appellant, King Aerospace, Inc. (King), in this case involving a contract for aircraft maintenance and repair, and remanded to the parties for negotiation of quantum. *King Aerospace, Inc.*, ASBCA No. 57057, 16-1 BCA ¶ 36,451 at 177,653. Familiarity with that decision is assumed. After another hearing, quantum is the issue. In accordance with the Board's internal operating procedures, neither this opinion nor the concurrence in result has precedential value except for those portions of the opinion in which we all explicitly agree.[1]

FINDINGS OF FACT

King started performing the contract on September 1, 2005. *King Aerospace,* 16-1 BCA ¶ 36,451 at 177,647. King knew then, or at the latest very soon after, that aircraft were in inferior condition and that the inventory was inadequate (*see* 2016 tr. 2/118-19, 160-61).[2] *Id.* at 177,647-48. King could have tracked the actual cost of dealing with those conditions: its controller explained that King's accounting system "has the capability to set up a job cost

[1] Chairman's note: Our internal procedures regarding the precedential value of concurrences in result have changed since the issuance of *Lulus Ostrich Ranch*, ASBCA No. 59252, 2019 WL 989650.

[2] References to the transcript of the 2016 entitlement hearing are denoted "2016 tr."; all others are references to the transcript of the 2017 quantum hearing.

code of additional work of some type or another" (*see* tr. 2/132, 160). The aircraft records are available, in boxes in El Paso, Texas (tr. 3/15-16; ex. 9R3). There are still "work cards" for these aircraft that describe maintenance or repair actions and how much time it took to perform those actions, from which it is possible to determine that work done was to correct a problem that the government caused (*see* tr. 2/221, 226-27).

King's executive vice-president and (in 2005) controller confirmed that right from the start, King could have assigned people with clipboards to track the effect of those problems on King's costs; it just would have been complex (*see* 2016 tr. 2/118-20). Just before it started performance, King took "hundreds" of photographs of aircraft maintenance issues while looking over the shoulders of its predecessor-contractor (2016 tr. 3/86-87, 100, 200, tr. 5/73). King also separately tracked the cost of contract work (not at issue in this appeal) that was "over and above" routine contract work (2016 tr. 2/120); it just chose not to do so with respect to the work at issue here (tr. 2/161). Rather, to demonstrate damage, King offers a "measured mile" approach that does not measure productivity (*see* tr. 1/201-02).

For its part, the government put on an expert in "evaluating causation and damages in the context of commercial and government aerospace and defense programs" who said that he "[wasn't] sure if there is another way to actually calculate the damages instead of [what he called King's] total cost method," but that under *his* measured mile approach (which compared the affected "El Paso Columbia" site with King's other, unaffected sites), King was owed, at most, $3,640,794 for the aircraft condition issue and nothing for the inventory issue, a total *over $2.5 million more* than he thought before he heard the other hearing witnesses testify (tr. 3/60, 67, 74-83, 90-91, 110-13; ex. 10-11).

The contracting officer received King's certified, $22.6 million claim on August 10, 2009. *King Aerospace,* 16-1 BCA ¶ 36,451 at 177,647.

DECISION

The issue now is what King can recover "related to the contract's misrepresentation of the condition of the aircraft and to issues with government-furnished property" (that is, a deficient government-furnished inventory of aircraft parts, drawings, and records). *King Aerospace,* 16-1 BCA ¶ 36,451 at 177,653. King must demonstrate that the government caused its increased costs. *See Servidone Construction Corp. v. United States*, 931 F.2d 860, 861 (Fed. Cir. 1991).

There is no dispute that King is owed $191,574 for request for equitable adjustment preparation costs (app. br., appendix; *see* gov't br. at 21, ¶ 70), so that issue is out of the way.

King says that it is owed $6,418,176 for having to deal with the condition of the aircraft, and $2,054,297 for having to deal with the condition of the government-furnished

parts inventory (app. br., appendix). However, King does not demonstrate that the aircraft and inventory conditions increased its costs by those amounts. King wants us to infer from fluctuations in labor hours over time compared to a "measured mile" that it spent more than it should have because of the inferior condition of the aircraft and the deficient inventory (app. br. at 1, 10). But in our entitlement decision we warned that although "King was left holding a bag of maintenance and repair issues that were inconsistent with the aircraft condition represented in the contract" (we listed the handful of specific issues that King identified, like a "bent fuel tank high pressure ejector pump tube") "there is no evidence of a comprehensive inspection of the fleet contemporaneous with King taking over maintenance, *so we do not know whether all the aircraft were in substandard condition when King took over, and to what extent.*" 16-1 BCA ¶ 36,451 at 177,651 (emphasis added). That is still the case. We also found that "[a]t a minimum, problems with government-furnished property *at times* required King to 'redo' maintenance or repair work that it would have had to perform only once if all the listed items had been available and serviceable when King first attempted to perform the work," and that "when King took over...the aircraft drawings and historical records were incomplete, and King spent time attempting to acquire drawings and other information required to assure the airworthiness of the aircraft." *Id.* at 177,651-52 (emphasis added). But what, specifically, had to be redone, what drawings and other information did King spend time attempting to acquire, and what time was actually spent on those efforts?

This is the problem with King's quantum case: it paints with too broad a brush. By contrast, King could have tracked the actual costs of dealing with the *specific* maintenance and inventory problems that the government dumped on it. Given the facts stated above, it is not the case that King "could not have contemporaneously identified and quantified every discrete impact of each of the many thousands of deficient aircraft conditions and parts through change order accounting" or could not have "after the fact, waded through the hundreds of thousands of aircraft records" (app. br. at 30). First of all, how does King know that there were "many thousands of deficient aircraft conditions and parts" without having engaged in some sort of contemporaneous tracking or after-the-fact records examination; does it want us to infer all that from a handful of discrete issues and its labor hour fluctuations? If so, that would be quite the inference, and such broad generalities and inferences are not enough. *See Wunderlich Contracting Co. v. United States*, 351 F.2d 956, 969 (Ct. Cl. 1965). By contrast, why didn't someone go through the work cards and other aircraft records in El Paso and at least summarize them to demonstrate causation? Moreover, just as King took hundreds of photographs of aircraft maintenance issues just before taking over performance, it presumably could have continued to do so while its own mechanics were working on the aircraft. And with respect to the parts inventory problems, the claim is that King had to "redo" maintenance work – that is, when it opened an airplane panel and saw that it needed a part, it would find the part unusable or missing from inventory, close the panel, and go through the whole process again when a suitable part showed up (*see* app. br. at 2, 18). Surely someone could have contemporaneously tracked that scenario; it sounds pretty unusual and discrete. Indeed, although King

separately tracked the cost of "over and above" work, it chose not to contemporaneously track the work at issue here.

Of course, as we have noted already, King did identify a handful of specific aircraft deficiencies; presumably, then, it could have identified others. Was the purpose showing the handful to show only (in the words of one King witness (2016 tr. 5/86)) "the tip of the iceberg," and expect us to infer from that the size of that iceberg? No aircraft maintenance and repair expert testified that the handful of issues shown to us implied a problem of the scope that King says cost it $8 million. Of course, King is not interested in recovering for only the tip of the iceberg; it has not identified the specific cost of dealing with the handful of issues, not even as an alternative basis for recovery.

Rather than identify specific deficiencies and cost them directly, King estimates that the aircraft and inventory conditions are responsible for most of its El Paso labor costs above its average labor costs during a "measured mile" that was unaffected by those conditions (*see* app. br. at 1, 10). That estimate is unconvincing. The '"measured mile' approach compares the productivity of an impacted period of the project with the productivity of an unimpacted period," *Advanced Engineering & Planning Corp.*, ASBCA Nos. 53366, 54044, 05-1 BCA ¶ 32,806 at 162,325, and King's "measured mile" does not measure productivity. However, based upon the testimony of the government's expert, it is reasonable to conclude that King spent $3,640,794 dealing with aircraft and inventory conditions that the government left it with in September 2005. Therefore the appeal is sustained in the amount of $3,832,368 ($3,640,794 plus $191,574), plus interest, under 41 U.S.C. § 7109, from August 10, 2009, until the date of payment.

Dated: April 15, 2019

TIMOTHY P. MCILMAIL
Administrative Judge
Armed Services Board
of Contract Appeals

I concur in result (see separate opinion)

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

I concur in result (see separate opinion)

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

OPINION BY JUDGES PROUTY AND SHACKLEFORD
CONCURRING IN RESULT

We concur in the result in this appeal because we agree with the ultimate monetary outcome, but not in the brief analysis which leads to that outcome with respect to the requirements for a "measured mile," which we find inconsistent with the law. We also make factual findings that we find to be a necessary predicate to the decision's adoption of the government's expert's results.

I. The Approach Taken by King's Expert, Mr. Lochabay

Judge McIlmail's opinion rejects the work of King's expert, Mr. Donald Lochabay, by concluding that his measured mile approach did not measure productivity. Slip op. at 2, 4. That characterization is not the entire picture.

In simplified terms, Mr. Lochabay used what was described as a modified version of the measured mile approach (app. supp. R4, tab 321 at 15-18; tr. 1/73-74). Mr. Lochabay's "measured mile" compared King's performance costs during times that King was struggling with the consequences of the poorer-than-expected condition of the aircraft to the time after the aircraft had been brought up to the expected standard (the years 2012 and 2013 were the baseline of "good years" for labor costs; the years 2009-2012 were used as the baseline of "good years" for the parts and materials costs) (app. supp. R4, tab 321 at 16-18, 24-25; tr. 1/76-78 (labor), 1/115-16 (parts and materials)). Of course, the demands on the aircraft were not the same every contract year and Mr. Lochabay's analysis understood this and used a metric in which he compared the annual amount of maintenance hours required per annual aircraft flight hours[3] between the "good" and the "bad" time periods (tr. 1/76-77). The comparison, Mr. Lochabay conceded, was not strictly of "productivity" as defined in the dictionary because productivity is "level of an input to the level of an output" and what was being measured in his measured mile was labor hours per earlier flight hours[4] (tr. 1/201-03). This approach did not appear to garner any criticism from the government's expert who, as discussed more below, adopted some of Mr. Lochabay's bottom-line numbers for certain contract years.

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[3] This comparison included a one-year "lag" from flight hours to maintenance hours. Thus, the metric was the number of maintenance hours in each year divided by the number of flight hours in the year immediately preceding it. (App. supp. R4, tab 321 at 16 n.16; tr. 1/79)

[4] Frankly, if Mr. Lochabay had intended to be pedantic about it, he could have re-arranged his metric and argued that he was measuring productivity in the sense that the output was something like "aircraft fit to fly per earlier flight hour" with the input being labor hours. That would have been a needlessly complicated and artificial construct, and it was unnecessary.

Mr. Lochabay capped his measured mile damages calculations for labor by what the total cost figures would have been for each year, i.e., when the measured mile-derived damages were higher than the damages that would have been calculated by a total cost damages method, he reduced the damages to the amount that King would have been entitled to under the total cost method (app. supp. R4, tab 321 at 19-20; tr. 3/70-72). The reason for this reduction was that he and King felt it would be difficult to prove that King would have been able to perform better than its contract baseline (tr. 1/82-83). Though this was a non-trivial aspect of Mr. Lochabay's methodology, reducing the amount of the claim substantially (*see* app. supp. R4, tab 321 at 18-19; tr. 1/82-83), it was not a basis for Judge McIlmail's rejection of it and, it turns out, plays no role in the damages that we accept below since King does not argue that it should have been paid more than its expert requested (tr. 1/83 (King management agreed with damages caps)).

II. Mr. Lochabay's Methodology was Consistent with the Legally-Accepted Measured Mile Approach

The analytic kernel of the measured mile approach, as set forth in the law, is to compare "the costs of performing work" on a contract during two different time periods: one being when all is well in contract performance; the other being a period when contract performance is hindered by some problem, presumably caused by the government. *See U.S. Industries, Inc. v. Blake Construction Co.*, 671 F.2d 539, 547 (D.C. Cir. 1982) (leading case); *see also Bay West, Inc.*, ASBCA No. 54166, 07-1 BCA ¶ 33,569 at 166,302 ("The measured mile approach provides a comparison of a production period that is impacted by a disruption with a production period that is not impacted" (citing cases)); *W.G. Yates & Sons Construction Co.*, ASBCA Nos. 49398, 49399, 01-2 BCA ¶ 31,428 at 155,210 (comparison of good period versus bad period). We followed *U.S. Industries* in our first opinion directly adopting the measured mile methodology, *DANAC, Inc.*, ASBCA No. 33394, 97-2 BCA ¶ 29,184 at 145,153, and in our recent leading case on the subject, *Optimum Services, Inc.*, ASBCA No. 59952, 16-1 BCA ¶ 36,490 at 177,822. Although we did reference "productivity" in *Optimum Services*, we did so because that was what was being measured in the expert's analysis in that appeal, not because rigidly-defined "productivity" is the only thing that may be subjected to measured mile analysis. *See* 16-1 BCA ¶ 36,490 at 177,822-23. The reference to productivity in the case cited by Judge McIlmail's opinion, *Advanced Engineering & Planning Corp.*, ASBCA Nos. 53366, 54044, 05-1 BCA ¶ 32,806 at 162,325 (*see* slip op. at 5), did not constitute a requirement that any use of the measured mile be strictly limited to something tightly defined as "productivity," but merely described the typical operation of the measured mile. Indeed, although productivity is certainly a matter for many measured mile applications, the word is entirely absent in *W.G. Yates & Sons*, cited above, and was not the focus of *U.S. Industries*. We, in fact, discern no opinion in which we or our reviewing court ever engaged in a deep examination of the meaning of the word, "productivity" for purposes of applying the measured mile; instead, a review of the cases cited above show that

productivity is more or less a proxy for measuring how much more difficult or costly contract performance has become as the consequence of a contract breach.

Thus, the approach running through all of the measured mile opinions, i.e., comparing the costs of performance during affected periods to unaffected periods, is precisely the one taken by Mr. Lochabay here. Neither the government's arguments in its brief nor Judge McIlmail's opinion give us any reason to use the semantic difference between dictionary-defined "productivity" and the analytic approach taken by Mr. Lochabay as a basis for rejecting his methodology. Accordingly, we conclude that Mr. Lochabay utilized an acceptable measured mile methodology. That does not mean, however, that King will get all that it seeks.

III. We Accept the Government's Substantive Critiques of Mr. Lochabay's Analysis

The government's expert witness, Mr. Timothy Overman, did not disagree with the use of a measured mile, but did explain that the data did not support a finding that King was adversely impacted for parts and materials or that the labor impacts extended as far as King alleged. With respect to parts and materials, Mr. Overman testified that he saw no basis for awarding King damages because the data showed only one year where the parts and materials costs were above King's pre-bid estimates,[5] and because the parts and materials trends were "all over the place," thus they did not support a finding of particular costs being caused by the contract breach[6] (tr. 3/76-77, 3/81).

Mr. Overman also opined that the data provided by King and Mr. Lochabay only supported a finding that the substandard condition of the aircraft affected labor costs for three years of contract performance. Those three years were 2009, 2010, and 2011, because those were the years that King had increased its parts inventory and incorporated them into the aircraft to bring them up to standard. (Tr. 3/79-80) After hearing the testimony from King's witnesses at the hearing, Mr. Overman was inclined to agree with the increased labor costs set forth in Mr. Lochabay's expert report (the measured mile

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[5] To be clear, no legal barrier prevents a contractor from recovering expenses from the government when its costs are lower than it once anticipated, so long as the government's actions demonstrably caused the costs to be higher than they would have otherwise been. Nevertheless, comparison of expected costs to actuals certainly may inform our consideration of the analysis. Indeed, this appears to have been King's motivation for capping its labor costs by the total cost method, which it apparently did not do for the materials and parts costs.

[6] This critique fits with the inconsistency of the years that Mr. Lochabay chooses for his base years for the parts and materials costs (2009-2012, *see* tr. 1/115-16) with those he chose for labor cost base years (the years 2012 and 2013, *see* tr. 1/76-78). Although we recognize that they need not exactly match, in these circumstances, something is amiss.

analysis[7]) for those years as the maximum damages to which King should be entitled (*id.*). The amount of increased labor costs asserted in Mr. Lochabay's report for those three years sums to $3,640,794 (as marked up with overhead costs by Mr. Lochabay) (ex. 11). Under examination by Judge McIlmail during the hearing, Mr. Overman agreed with the proposition that the $3,640,794 for the three years as set forth in Exhibit 11 constituted his "bottom line conclusions" for the damages (tr. 3/85).

We agree with Mr. Overman's analysis. Although we do not join Judge McIlmail's critique of King for its failure to track each and every extra hour of work or expense that its employees attribute to the bad condition of the aircraft (*see* slip op. at 3),[8] the measured mile analysis, like any damages model, must be grounded upon reality. *Cf. Optimum Services*, 16-1 BCA ¶ 36,490 at 177,824-26 (adjusting measured mile to take into account circumstances in the field); *Bay West*, 07-1 BCA ¶ 33,569 at 166,302-03 (same). Moreover, the burden of proof is on King to prove its damages. *See Wunderlich Contracting Co. v. United States*, 351 F.2d 956, 968 (Ct. Cl. 1965) (citing cases). Since, as explained by Mr. Overman, the data is inconclusive with respect to the parts and materials costs as well as for labor costs for the years beyond 2009-2011, we hold that King has not met its burden of proof for damages beyond the $3,640,794 for labor costs and the $191,574 in costs for REA preparation accepted by Judge McIlmail with which we do not quibble.

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[7] The parties discussed Mr. Overman's analysis, adopting Mr. Lochabay's approach for base years, as a "measured mile" analysis (*see colloquy* tr. 3/94-95). Judge McIlmail's opinion adopts Mr. Overman's measured mile analysis (*see* slip op. at 4), but does not reconcile this adoption with the fact that it rests on *precisely* the methodology (for the covered years) that Mr. Lochabay used and that Judge McIlmail summarily rejects earlier in his opinion.

[8] It is a "well-established principle" that damages need not be proved to a mathematical certainty so long as we are provided a reasonable basis for their calculation. *Optimum Services*, 16-1 BCA ¶ 36,490 at 177,823 (citations omitted).

CONCLUSION

Although we disagree with much of his analysis as discussed above, we concur with the bottom-line conclusion by Judge McIlmail that the appeal should be sustained in the amount of $3,832,368 plus interest in accordance with 41 U.S.C. § 7109 from August 10, 2009 until the date of payment.

Dated: April 15, 2019

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

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 No. 60933, Appeal of King Aerospace, Inc., rendered in conformance with the Board's Charter.

Dated:

JEFFREY D. GARDIN
Recorder, Armed Services
Board of Contract Appeals