In the United States Court of Federal Claims

No. 11-701C
Filed: April 4, 2012
Reissued: May 7, 2012*

TEREX CORPORATION, Plaintiff, v. THE UNITED STATES, Defendant, and KALMAR RT CENTER, LLC, Defendant-Intervenor.	Post-Award Bid Protest: In reviewing whether an agency's award decision is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, the court is charged with ensuring that the challenged decision is based on a reasoned evaluation of the relevant factors and not with replacing the agency's technical judgment with its own.

E. Sanderson Hoe, McKenna Long & Aldridge LLP, Washington, DC, counsel for plaintiff. Jason N. Workmaster and Marques O. Peterson, of counsel.

Joseph D. Keller, with whom were Acting Assistant Attorney General Stuart F. Delery, Director Jeanne E. Davidson, and Assistant Director Deborah A. Bynum, Department of Justice, Civil Division, Commercial Litigation Branch, Washington, DC, counsel for defendant. Wade L. Brown, United States Army Materiel Command, Tara Yaldou, United States Army TACOM Life Cycle Management Command, and Barbara Thomas, Department of Justice, of counsel.

David F. Barton, Gardner Law, San Antonio, TX, counsel for defendant-intervenor. Elizabeth H. Connally, of counsel.

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* The court originally issued this opinion under seal on April 4, 2012, and gave the parties an opportunity to propose redactions. Plaintiff and defendant did not propose any redactions; defendant-intervenor proposed extensive redactions. After review of defendant-intervenor's proposed redactions, the court has determined that no redactions are appropriate for lack of any demonstrated potential for injury to competitive status or other economic harm. Accordingly, the court is reissuing this opinion without redactions in conformance with the E-Government Act of 2002.

OPINION

Wiese, Senior Judge.

Plaintiff, Terex Corporation, is an unsuccessful bidder in a "best value" procurement conducted by the United States Army Contracting Command ("TACOM") for the award of a contract involving the manufacture and supply of a specialized transport vehicle—the Light Capability Rough Terrain Forklift ("LCRTF"). Plaintiff seeks declaratory and injunctive relief: (i) declaring unlawful the award of the contract to Kalmar RT Center, LLC (the successful offeror and intervenor here) because Kalmar's proposal allegedly failed to meet a minimum mandatory requirement set forth in the solicitation, (ii) requiring TACOM to suspend Kalmar's performance of the contract, and (iii) directing TACOM to conduct a new best value determination. The parties have filed cross-motions for judgment on the administrative record and the court heard oral argument on March 21, 2012. For the reasons set forth below, plaintiff's motion for judgment is denied and defendant's and defendant-intervenor's cross-motions are granted.

BACKGROUND

On July 7, 2010, TACOM issued a solicitation requesting proposals for the design and manufacture of the LCRTF, an advanced forklift that allows the transfer of heavy loads to and from areas not reachable by a standard forklift. The solicitation contemplated the award of a firm, fixed-price, five-year requirements contract for vehicle production, field support services, and related technical data.

The solicitation directed offerors to submit proposals for the design and configuration of the LCRTF and to provide information substantiating that their proposed vehicles would in fact meet the solicitation's technical requirements. The solicitation did not, however, require that an offeror construct a prototype of its LCRTF at the proposal stage, but permitted offerors instead to propose modifications to already existing commercial equipment.

Under the terms of the solicitation, the evaluation of offers was to be carried out by a team of technically qualified individuals, referred to as the source selection evaluation board ("SSEB"), with the final award decision to be made by a single individual, the source selection authority ("SSA"). The solicitation indicated that the SSA would award the contract to the offeror whose proposal was judged to represent the best value to the government based on three evaluation criteria: technical, price, and small business participation, with the technical factor being the most important of the three and price being significantly more important than small business

participation.

The technical factor was in turn divided into three approximately equally weighted subfactors—beach operations, helicopter lift, and pallet handling operations. Each of these subfactors included specific performance and design requirements outlined in the purchase description, including the requirement at issue here: longitudinal gradeability. Under the technical subfactor beach operations, the purchase description directed as follows:

> 3.3.10 Longitudinal gradeability. The LCRTF shall be capable of ascending a 45% grade in forward gear range at a speed of not less than 1.5 miles per hour (mi/hr), on a dry concrete surface free from loose material, with the air conditioning at full cool setting, and all lights on, with and without the rated capacity load.

Section M.5.1 of the solicitation specified that these performance and design requirements "represent the Government's minimum requirements that must be met by the offeror's proposed LCRTF."

Section L.4.1.1 of the solicitation directed each offeror to "detail the proposed approach and provide substantiating information to meet the requirements of the Purchase Description paragraphs in each subfactor specified above." Anticipating that an offeror could satisfy these requirements either by designing and building an LCRTF to the purchase description specifications or by submitting a concept based on existing commercial equipment (without building the proposed LCRTF), Section L.4.1.1(a) of the solicitation additionally provided:

> The substantiating information may include, but is not limited to, commercial literature, test data, historical information, analytical support, supporting rationale and/or design documentation, pictures, videos, supporting conformance of the proposed LCRTF to the specified paragraphs of the Purchase Description. . . .
>
> (i) The offeror should address whether its proposed vehicle is a modification to an existing product or a newly designed product.
> (ii) For those products that are modified from an existing product, the offeror shall address whether the modifications have been credibly demonstrated on an integrated system level basis.
> (iii) For those products that are modified from an existing product based on a proven integrated system design, the offeror shall address the impact that those modifications have on the baseline design and the test/performance data that the offeror has from the proven integrated system design.

> (iv) For newly designed products, the offeror shall address whether the new design, or any of its components, have been previously integrated. The offeror shall also address whether any test/performance data exists.

The solicitation further specified that "validated test and inspection data, which establishes conformance of the offered configuration to [the] required performance levels, represents the most credible form of substantiating data." Section L.4.1.1(b).

In addition, Section M.5.1.1 of the solicitation advised that the government would evaluate the risk of each offeror's proposed approach as follows:

> The Government will assess the risk of the offeror not being able to meet the requirements as proposed. Failure to provide a detailed analysis, rationale and supporting documentation that satisfies the requirements of Section L and incorporates assumptions, will be reflected in the government's risk assessment. Incomplete and unclear proposals will add risk. Test reports, detailed calculations, schematics, engineering analysis and evidence of performance generally mitigate risk. The claimed level of performance should be supported with calculation or test analysis, failure to provide this detail will result in a higher risk. Analysis and test data on similar systems can be provided to help mitigate risk; assuming a valid correlation is prepared and submitted.

Finally, with respect to the individual performance requirements associated with each technical subfactor, Section M.5.2 of the solicitation repeated the following evaluation standard: "The offeror's approach will be assessed, and a rating level assigned based on the Government's evaluation of the probability that the offeror will not meet [the purchase description] requirements identified in [Section L]."

The solicitation closed on August 26, 2010. Plaintiff submitted a bid proposing the modification of an existing forklift that plaintiff produces commercially; Kalmar based its proposal instead on a newly designed vehicle it had built specifically in response to the solicitation. TACOM determined that all four proposals it had received were in the competitive range and conducted discussions with the offerors from October 13, 2010, to January 18, 2011.

Following these discussions, TACOM's source selection evaluation board gave Terex and Kalmar equal ratings with respect to risk and merit on the two non-price factors (technical and small business participation), with Kalmar's proposed price exceeding plaintiff's by almost $6.3 million (a difference of approximately 4

percent).[1] The source selection authority, however, concluded that Kalmar's substantiating data was more credible because it was based on a vehicle that Kalmar had actually built and tested rather than on 44 proposed modifications to a commercially available vehicle. On that basis, the SSA found that Kalmar's proposal was worth the price premium and on March 17, 2011, awarded the contract to Kalmar.

TACOM conducted a post-award debriefing with plaintiff the same day. Following the conference, plaintiff joined another offeror in a protest before the Government Accountability Office ("GAO") alleging various deficiencies in the evaluation and award process. In response to the protest, TACOM agreed to take corrective action and to make a new best value determination. On that ground, the GAO dismissed the protest.

Following the reevaluation of proposals, TACOM notified plaintiff on May 19, 2011, that the agency had again selected Kalmar for contract award. In his corrective action decision, the SSA concluded that Kalmar's proposal was the most advantageous and best value to the government because Kalmar had provided the most credible substantiating data for its proposed solution. Specifically, the SSA stated:

> Kalmar designed a new configuration in lieu of modifying a commercial forklift. As a result, their substantiating data is solely based upon this build, namely the proposed LCRTF. Section L.4.1.1(b) expressly stated that "[r]egarding substantiating information, validated test and inspection data, which established conformance of the offered configuration to required performance levels, represents the most credible form of substantiating data." The Offeror shall provide test data for only the configuration being offered. Kalmar repeatedly provides the most credible data. This data is clear, concise, relevant and accurate because it was developed directly from the proposed configuration and confirms the offered configuration's design and capabilities. In my judgment, there is less risk in Kalmar's forklift meeting the [purchase description]

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[1] Terex and Kalmar ultimately received the same technical and risk ratings from the SSEB at both the factor and subfactor levels: a rating of "Excellent" for Factor 1 (Technical), a rating of "Good" for Factor 3 (Small Business Participation), a rating of "Good/Low Risk" for Subfactor 1 (Beach Operations), a rating of "Excellent/Very Low Risk" for Subfactor 2 (Helicopter Lift), and a rating of "Excellent/Very Low Risk" for Subfactor 3 (Pallet Handling Operations). These determinations were later adopted by the SSA.

requirements than all other Offerors.

The SSA went on to note that although the ratings assigned to Terex and Kalmar for the technical and small business factors were identical, there were "meaningful distinctions between Kalmar and Terex in the Technical Factor," and "[t]he most meaningful distinction [was] based on the fact . . . that Kalmar built a forklift specifically for the [purchase description] contained in the [request for proposal] and was therefore able to provide the most credible substantiating data based on that configuration."

Plaintiff requested and received a debriefing on May 25, 2011. Thereafter, on May 31, 2011, Terex filed a second protest with the GAO, again challenging the award to Kalmar. The GAO denied the protest. In a decision issued on September 7, 2011, the GAO concluded that the evaluation process had been properly conducted and that the award decision was well documented and fully justified in fact. In re Terex Government Programs, B-404946.3, 2011 CPD ¶ 176 (Comp. Gen. Sept. 7, 2011). Plaintiff commenced its action in this court on October 24, 2011.

DISCUSSION

This court's authority to grant declaratory and injunctive relief in cases challenging government procurement actions is set forth at 28 U.S.C. § 1491(b) (2006). Under the provisions of this statute, the court is charged with reviewing an agency's action "pursuant to the standards set forth in [the Administrative Procedure Act]." 28 U.S.C. § 1491(b)(4) (2006). To prevail on its claim here, plaintiff must therefore demonstrate that TACOM's award decision was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A) (2006).

The sole issue now before the court is whether TACOM's award to Kalmar was rational given what plaintiff asserts is clear evidence that Kalmar's LCRTF did not satisfy the longitudinal gradeability subfactor of the solicitation's technical requirements.[2] In particular, plaintiff points to a graph in Kalmar's proposal (attached to this decision as Exhibit 1) intended to demonstrate, as required by

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[2] In the first count of its complaint, Terex alleged that TACOM's award decision was improper because it was based on an arbitrary assessment of risk, i.e., it was based on the allegedly mistaken assumption by the SSA that Kalmar's test data was materially different from and superior to Terex's test data because it was derived from a prototype rather than from a proposed modification to a commercially available vehicle. The parties did not ultimately brief this issue, however, so we decline to address it here.

Section 3.3.10 of the purchase description, that Kalmar's vehicle is capable "of ascending a 45% grade in forward gear range at a speed of not less than 1.5 miles per hour" under specified circumstances. Plaintiff's position is essentially that the data presented is not consistent—and indeed cannot be reconciled—with the assertion that Kalmar's vehicle came to a deliberate, controlled stop, but rather indicates that the vehicle stopped because it was incapable of maintaining a forward speed of 1.5 miles per hour at a 45% grade. Engineers for both Kalmar and the government tell us otherwise.

The graph in question depicts the results of a drawbar pull test—an industry-accepted method for determining a vehicle's capability of ascending a specified grade at a given speed that relies, in lieu of testing conducted on an actual grade, on the gradually increased braking force supplied by a towed vehicle (operated on level ground) to measure the pulling power of the test vehicle. (The drawbar pull test, in other words, simulates the downward pull that a vehicle would encounter when operating on a grade.)[3] The graph has two sets of values printed vertically along its left and right margins. The left margin reads "Drawbar [lbs]/RPM" with values from 0 to 10,000 listed in ascending order in 1,000 lbs/RPM increments. The right margin reads "Velocity (mph)" with values from 0.00 to 10.00 listed in ascending order in 1 mile per hour increments.

The graph itself tracks three variables: the drawbar pull on Kalmar's LCRTF (shown in red), the revolutions per minute (RPM) of the LCRTF's engine (shown in green), and the speed of the LCRTF (shown in blue). Initially, all three lines are flat, with the drawbar pull (the red line) and the RPMs (the green line) holding steady below 1,000 lbs/RPM and the LCRTF's velocity (the blue line) at zero. When the test commences, the LCRTF's velocity (the blue line) ascends rapidly (i.e., with a steep slope) to over 6.00 miles per hour. At the same time, the RPMs (the green line) ascend at a more gradual, seemingly steady rate to above 2,000 RPMs and the drawbar pull (the red line) fluctuates dramatically between 1,000 and 2,000 lbs. After the LCRTF's velocity (the blue line) hits its peak, it descends rapidly to zero. While the velocity is decreasing, the RPMs (the green line) appear to remain steady

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[3] As the government explained during the course of these proceedings, the LCRTF is intended for use on a beach and therefore must be able to travel across loose sand. Because of the difficulties of conducting reliable, repeatable tests on sand, however, the military has developed the longitudinal gradeability requirement, with its required speed of 1.5 miles per hour on a 45% grade, as a substitute test to simulate the rim pull performance (torque rating) necessary for a vehicle crossing loose sand. The government further explained that compliance with the longitudinal gradeability requirement may be shown either by testing the vehicle on an actual slope or, where the desired grade is not available, by using the drawbar pull method. Both Terex and Kalmar relied on the drawbar pull method in their proposals.

at 2,000 RPMs while the drawbar pull (the red line) increases, still fluctuating, to more than 8,000 lbs (the equivalent of the 45% grade). At the point the LCRTF's velocity (the blue line) hits zero, the RPMs (the green line) have a relatively constant value slightly in excess of 2,000 RPMs and the drawbar pull (the red line) is fluctuating just above 8,000 lbs.

Plaintiff focuses on that portion of the graph where the velocity of the LCRTF (the blue line) drops to zero. According to plaintiff, the test vehicle initially reaches a velocity of 6.00 miles per hour, but once a 45% grade is achieved (through the application of 8,000 lbs in drawbar pull) the velocity of the LCRTF (the blue line) falls rapidly to zero. Plaintiff notes, however, that this rapid decline in the vehicle's speed is not accompanied either by a decrease in the engine's RPMs (which appear to remain at 2,000) or by an increase in the drag pull. Plaintiff therefore posits that rather than evidencing the test vehicle's ability to maintain a speed of 1.5 miles per hour at a 45% grade as required by the purchase description, the graph instead demonstrates that the vehicle stalled when confronted by such a slope.

In support of its position, plaintiff submitted an affidavit from Mr. Raymond McDonald, a retired Terex employee who spent his career first as an electronics technician for the United States Navy and later as a mechanical engineer for various private companies.[4] In his November 10, 2011, affidavit, Mr. McDonald explained his interpretation of the graph as follows:

> The blue line of the graph showing velocity (speed) of the LCRTF . . . shows no "holding 1.5 mph for [any] length of time." Instead, it shows the LCRTF's travel speed (blue line) dropping linearly through the 1.5 mph value on its way to zero. The only point during the test where Kalmar actually held a speed for a length of time at a constant drawbar pull was early in the test . . . . The graph shows there the drawbar pull (redline) slightly in excess of 4000 lbs for a period and the speed (blue line) just under 5 mph for that same period. No similar mirroring of results appears anywhere else in the graph, including in the area . . . where Kalmar's LCRTF allegedly met the 1.5 mph at 45% grade [purchase description] requirement. . . . [T]he

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[4] Pursuant to the authority recognized by the Federal Circuit in Axiom Resource Management, Inc. v. United States, 564 F.3d 1374, 1379–81 (Fed. Cir. 2009) (allowing the court to require supplementation of the administrative record when necessary to permit meaningful judicial review), the court permitted plaintiff to submit an affidavit explaining its position and further directed defendant to provide affidavits from the TACOM engineers responsible for evaluating Kalmar's longitudinal gradeability test data. Plaintiff was permitted to file an affidavit of comparable substance and scope in the proceeding before the GAO.

> Kalmar LCRTF merely passes through 1.5 mph as its speed drops to zero while the 45% grade (red line) remains constant. The graph shows that as the drawbar pull reached its upper plateau limit at slightly in excess of 8000 lbs and remained constant (red line), Kalmar's LCRTF speed (blue line) dropped on a linear slope to zero, never plateauing even briefly to show that it could hold 1.5 mph at the 45% grade.

Given this evidence, plaintiff argues that TACOM could not reasonably have determined that Kalmar had demonstrated that its LCRTF was capable of ascending a 45% grade in forward range at a speed of not less than 1.5 miles per hour. Had the SSA correctly analyzed the data, plaintiff maintains, he would have rated Kalmar's proposal technically lower than Terex's proposal (whose LCRTF, plaintiff contends, fully met this requirement). Plaintiff argues that this higher technical score, combined with its $6.3 million price advantage, would have made its proposal the best value offer and made plaintiff the successful offeror. Plaintiff thus requests that we find the SSA's decision to award the contract to Kalmar—a decision based on the SSA's determination that Kalmar's proposal presented less risk—irrational.

Central to plaintiff's case, then, is the contention that the graph necessarily indicates that Kalmar's vehicle stalled.[5] Both the intervenor and the government, however, challenge this assertion. In his November 4, 2011, affidavit, Mr. Brad Burkholder, Kalmar's director of new product development and the individual responsible for performing Kalmar's longitudinal gradeability testing, advised the court, based both on his presence at the testing and on his reading of the contested data, that the "LCRTF never stalled throughout the duration of the test." Mr. Burkholder further explained that the linear drop in the test vehicle's speed from 1.5 miles per hour down to zero resulted from the deliberate and repeated application of the drag vehicle's brake "to bring the LCRTF to a gradual stop." Similarly, Mr. Vincent Nestico, the SSEB's lead technical evaluator and the author of the solicitation's longitudinal gradeability requirement (himself a mechanical engineer with 31 years' experience), maintained in a November 1, 2011, affidavit that the graph "does not indicate that Kalmar's LCRTF stalled during the longitudinal gradeability testing" but rather "indicates that after the LCRTF had met the requirements of [purchase description] 3.3.10 the vehicle came to a gradual stop." Mr. Nestico additionally observed that "the graph . . . clearly shows that there was no stall in the active phase of the test required by [purchase description] 3.3.10" and that "Kalmar's LCRTF did not stop until the test was fully complete and the vehicle

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[5] Plaintiff does not use the word "stall" as a term of art but rather to connote the fact that Kalmar's test vehicle, after exhibiting the required grade and speed for a period of fewer than two seconds, experienced an immediate drop in velocity to zero without a corresponding reduction in engine RPM or increase in drawbar pull.

was slowed to shut down safely." In a second affidavit filed on December 8, 2011, Mr. Nestico further interpreted the graph as follows:

> The test data shows that the vehicle achieved the speed and load before being brought to a controlled stop. At this point, the graph showed that the engine was still running, engine RPM was maintained, and the drawbar pull increased slightly as the vehicle was brought to a complete controlled stop. The increase in drawbar pull was a clear indication that the LCRTF was still actively pulling on the trailing vehicle. This is a clear indication that there was no LCRTF stall in the active phase of the test, and thus the LCRTF achieved the necessary speed and drawbar pull to successfully validate their claims of their vehicle's capability to meet the 1.5 miles per hour at 45% Longitudinal Gradeability requirements of [purchase description] paragraph 3.3.10.

Despite extensive discussion with the parties on this issue, however, the court can discern nothing in the record that would allow us to resolve this conflict. Whether the data indicates that Kalmar's test vehicle stalled or came to a controlled stop is a technical issue—one that falls outside this court's area of expertise and outside our province to decide in a bid protest action. As the Supreme Court recognized in Kleppe v. Sierra Club, 427 U.S. 390, 412 (1976), where the resolution of an issue "requires a high level of technical expertise," it is "properly left to the informed discretion of the responsible federal agencies." See also Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 378 (1989) (citing Kleppe and concluding that "[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive."); Blackwater Lodge & Training Center v. United States, 86 Fed. Cl. 488, 502–03 (2009) (recognizing that "[a]gency technical evaluations, in particular, should be afforded a greater deference by the reviewing court." (quoting Benchmade Knife Co. v. United States, 79 Fed. Cl. 731, 735 (2007)). Indeed, as the Supreme Court observed in Marsh, 490 U.S. at 378, a court's role in reviewing an agency's action under the APA standard is not to determine independently whether the agency's expertise has produced the correct result but is to "ensure that agency decisions are founded on a reasoned evaluation 'of the relevant factors.'" That is clearly the case here.

There is every indication in the administrative record that TACOM thoroughly considered Kalmar's longitudinal gradeability test data, and indeed nothing to indicate that the evaluators misunderstood or failed to consider any aspect of Kalmar's test data other than plaintiff's assertion that their professional judgment was wrong. In a "Final Proposal Evaluation Worksheet" completed in January 2011, for instance, the SSEB considered Kalmar's longitudinal gradeability testing at

length, discussing its analysis as follows:

> Kalmar presents reliable documentation demonstrating a clear understanding of the gradeability requirement. The test results, charts, figures and tables provide confidence that Kalmar is conducting comprehensive testing and providing accurate reports. . . .
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> The proposed forklift testing was conducted using all the main drive train components as planned for the production LCRTF. . . .
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> [T]he offeror conducted 3 iterations of drawbar pull testing on the proposed configuration. The 3rd test produced satisfactory results: 1.48 mph at 45.27% calculated grade. The .02 mph difference is offset by the test results yielding this speed at a slightly steeper grade; the Government takes no exception to this differential.[6]

The SSEB went on to summarize its findings as follows:

> Kalmar has demonstrated a clear understanding of the beach operations requirement. The proposed approach is sound and includes strong characteristics. The approach is expected to result in satisfactory performance of the requirement. The Government is assured that the proposed forklift will undoubtedly meet the longitudinal gradeability requirements.

Similarly, in his corrective action decision, under the section titled "Beach Operations," the SSA included the following observations:

> In the case of Kalmar's proposal, there is a low risk that the Beach Operations requirements will not be met for both Longitudinal Gradeability and Fording. Kalmar used a rated load capacity of 5,000 lbs. The Kalmar proposed forklift was tested using the drawbar pull method and measured 1.48 mph at 8,196 lbs of drawbar pull, which equates to 50.30% grade while using diesel fuel. The Kalmar strategy was to implement a 10% energy loss reduction factor to account for JP-8 fuel, as they used diesel fuel in testing. Therefore, in applying the 10% energy loss reduction factor results in a calculated grade of 45.27% at a speed of 1.48 mph. From an engineering point of view

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[6] TACOM requested the additional testing in light of the fact that Kalmar had used diesel fuel rather than the JP-8 fuel identified in the solicitation and had not used government-approved axle lubricant. The agency ultimately concluded that those concerns were satisfactorily addressed in the third round of testing.

> and practice, the 1.5 mph speed specified in the [purchase description] represents accuracy to one significant figure after the decimal point. So considering 1.48, it is representing accuracy to two significant figures. Standard practice is to consider only the smaller significant figure which is one. Therefore 1.48, to me, is equivalent to 1.5 because to get to one significant figure I round up. My assessment of Kalmar's gradeability numbers were further substantiated through analysis of the raw data from test report BADG2392-23. Utilizing this data, an equation was developed defining a best fit curve for the data. By using this equation, it allowed me to input the speed of 1.5 mph which determined a grade slope of 50%. This 50% grade value is then subjected to the 10% energy loss reduction factor resulting in the 45% value. This is supporting that the Kalmar proposed forklift is expected to achieve 1.5 mph on a slope of 45% and reduces the risk of not meeting the requirement and is based on the most credible substantiating data from the actual testing of the fully-integrated vehicle. In addition, I believe when Kalmar uses JP-8 fuel, the results will be better than those stated above due to the fact they were very conservative in applying the 10% energy loss reduction factor in the calculations for grade in the proposal. Further, if during testing Kalmar's forklift is unable to meet the speed and/or grade requirements, the 5,000 lb rated load capacity could be reduced in order to meet the speed and/or grade requirement without requiring other changes to the forklift.

In addition, the SSA specifically addressed the advantages Kalmar's proposal held over Terex's proposal with respect to the longitudinal gradeability requirement:

> Terex used a rated load capacity of 4,000 lbs. In order to conduct Longitudinal Gradeability testing, Terex needed to simulate the additional load on the system due to air conditioning and other electrical components. Testing was done on their commercial vehicle which did not include all proposed component changes for their proposed LCRTF. If during testing Terex's forklift is unable to meet the speed and/or grade requirements, unlike Kalmar, Terex would not be able to further reduce load capacity because it is already at the minimum required load capacity of 4,000 lbs. Therefore, the risk is higher with Terex's proposal.

The government's comprehensive review of Kalmar's longitudinal gradeability data (including its request that Kalmar reconduct the test on two occasions) convinces the court that the agency founded its decision on "a reasoned evaluation 'of the relevant factors.'" Marsh, 490 U.S. at 378. That showing is

sufficient to establish the SSA's decision as rational.

Even if it were correct to say that Kalmar's test vehicle stalled, however, plaintiff could not prevail. Plaintiff's argument assumes that the SSA, faced with confirmation that Kalmar's LCRTF had stalled during longitudinal gradeability testing, would have increased Kalmar's risk rating and, in light of the $6.3 million disparity in bid prices, would have found plaintiff's proposal the best value for contract award. We have two difficulties with this argument. First, we are unconvinced that the SSA would have downgraded Kalmar's longitudinal gradeability risk rating even in the event of a demonstrated stall. As indicated above, offerors were not in fact required to build and test a forklift at the proposal stage of the procurement but were permitted—as Terex and two of the other offerors in fact did—to submit "[a]nalysis and test data on similar systems," showing that the forklift they would ultimately provide—but had not yet manufactured—would be capable of meeting the solicitation's requirements. Given this procurement structure, confirmation of a vehicle's actual performance capability would necessarily have to wait until post-award government testing. The initial evaluation, in other words, looked at the test data only as a predictor of the likelihood of future successful performance.[7]

We base this conclusion on both the language and the structure of the

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[7] Our observations on this point are confirmed by Mr. Nestico's second affidavit, dated December 8, 2011, in which Mr. Nestico advised:

> It is expected and accepted that if the vehicle could achieve the speed and slope requirement then the LCRTF would be expected to achieve the [purchase description] requirements for extended periods without affecting performance at very low risk during Government testing. If the vehicle could not achieve the speed and slope requirement, then it would be expected that the LCRTF would not be able to achieve the [purchase description] requirement during Government testing. Successfully demonstrating the vehicle's capability does not mean it meets the requirement; rather, it reduces the risk of the vehicle not meeting the requirement during Government testing. Therefore, attaining the required parameters is all that was required for the proposal evaluation.

While it is true that little weight is generally accorded to judgments "prepared in the heat of the adversarial process," see, e.g., Boeing Sikorsky Aircraft Support, B-277263 et al. 97-2 CPD ¶ 91 (Comp. Gen. Sept. 29, 1997), we do not construe Mr. Nestico's affidavit as a post-hoc rationalization, but rather as a coherent synthesis of the process clearly set forth in the solicitation.

solicitation itself. Section M.5.2 of the solicitation advised that an offeror's approach would be assessed and a risk level assigned "based on the Government's evaluation of the probability that the offeror will not meet [the purchase description] requirements identified in [Section L]" (emphasis added). We take this language to mean that the government would assess the risk of non-compliance with the requirements once test vehicles had been provided, i.e., during "first article/product verification" testing. Section 4.3.10 of the purchase description in fact indicated that it would not be until the product verification stage that the agency would test for "engine stalling, hesitation, [or] loss of mobility or stability." Because Kalmar's test data indicated that its LCRTF traveled at the required speed and at the required grade (however briefly), the agency judged Kalmar as having a very low risk of ultimately not meeting the purchase description requirement. We cannot say that this approach is irrational or inconsistent with the terms of the solicitation.

Second, and more importantly, there is nothing in the record to indicate that an adjustment to Kalmar's longitudinal gradeability risk rating would have had any effect on the SSA's ultimate conclusion that Kalmar's proposal presented a lower risk to the government overall. The SSA based his determination on the finding that Kalmar's substantiating data was the most credible because its test results were derived from the actual performance of an integrated vehicle rather than from simulated data. As the SSA observed in his corrective action decision, data that is based on the testing of a fully integrated forklift (i.e., one that, in the SSA's words, "had actually been assembled and all components and modifications were integrated into a working platform" and is "focused specifically on meeting the US Army's [purchase description] requirements") is "the most credible substantiating form of data because it reduces the possibility of an adverse impact to schedule, cost and performance." Further, the SSA observed, "when design changes [to a commercial product] are introduced, there is increased risk associated with meeting the [purchase description] requirements." The SSA's decision thus makes clear that it was the credibility of Kalmar's test data in all aspects of the vehicle—and not simply on the longitudinal gradeability subfactor—that drove the award decision.

Indeed, the SSA repeatedly emphasized that although Terex and Kalmar had received equal ratings for the technical and small business factors, he believed that Kalmar's approach was more advantageous because Kalmar's substantiating data was based on the actual configuration of its proposed forklift and that there was consequently less risk that Kalmar's proposal would not successfully meet the government's requirements. Under the technical subfactor helicopter lift, for example, the SSA concluded that "Kalmar provided the most credible substantiating data by conducting actual testing of the fully-integrated configuration" and that "[w]hile there is little doubt that all four Offerors can successfully meet this requirement, the quality of Kalmar's data again gives it an edge over the other Offerors." Similarly, under the technical subfactor pallet handling operations, the

SSA observed that while both Kalmar and Terex received a rating of "Excellent," Kalmar provided a load chart that was "verified using the actual proposed LCRTF configuration" and that "[c]lear and precise substantiating data was provided." Under the small business participation factor, the SSA likewise noted that "[t]hroughout the proposal, Kalmar provides the most credible substantiating data on the proposed configuration while Terex provides analogous data and equivalency testing based on their commercial forklift." Finally, under the price factor, the SSA explained that "when considering a best value selection as the SSA, I have determined that Kalmar provides a more advantageous forklift primarily because the proposed forklift is supported by credible test data on the actual forklift that is proposed." Accordingly, even if TACOM had identified a higher level of risk in Kalmar's longitudinal gradeability test data, the evidence indicates that the agency nevertheless would have concluded that Kalmar's overall approach presented less risk to the government.

Because we have no reason to conclude that TACOM failed to consider Kalmar's test data, misunderstood that data, or was irrational in concluding that Kalmar had a low risk of being unable to deliver a vehicle that would meet the longitudinal gradeability requirement in post-award testing, the award must stand.

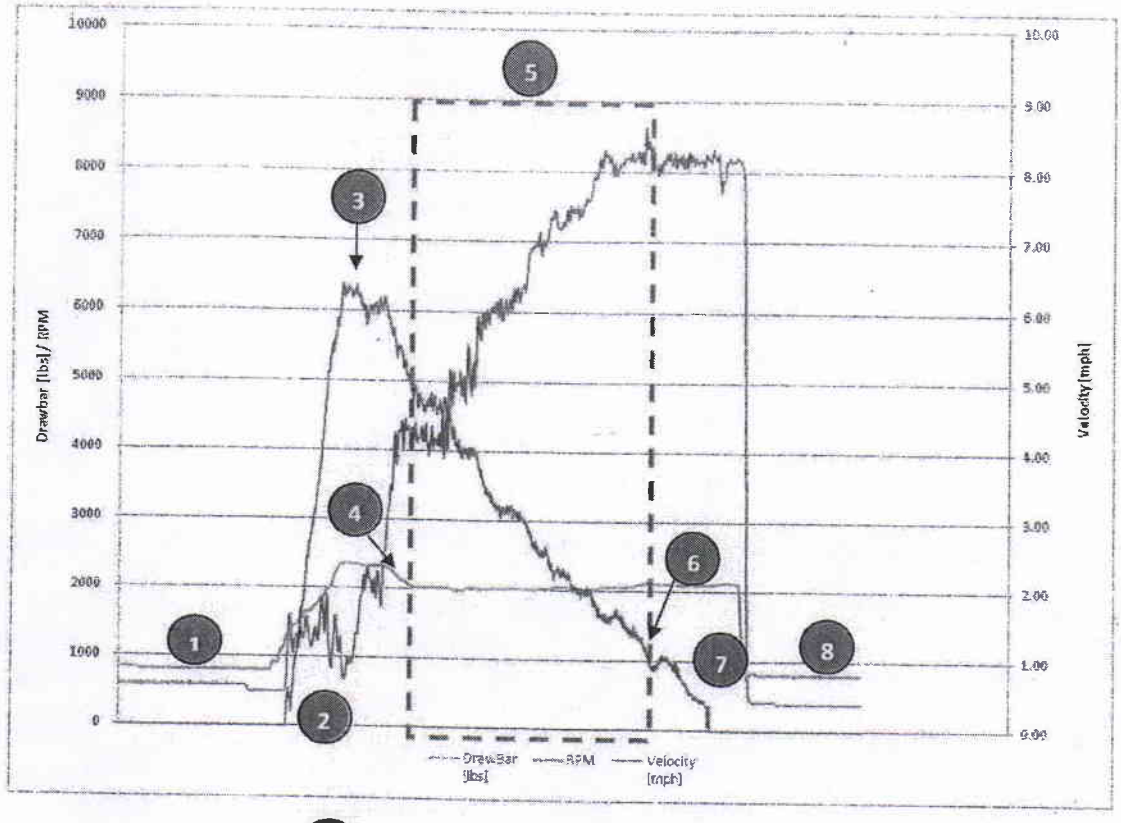
CONCLUSION

For the reasons set forth above, the court concludes that TACOM's favorable evaluation of the test data submitted by Kalmar with respect to the requirements of Section 3.3.10 of the purchase description reflects an informed judgment properly determined in accordance with the solicitation's specified procedures. Plaintiff's motion for judgment on the administrative record is therefore denied and defendant's and defendant-intervenor's cross-motions are granted. The Clerk is directed to enter judgment accordingly.

s/John P. Wiese
John P. Wiese
Senior Judge

EXHIBIT 1

EXPLANATION OF GRAPH - TEST REPORT NO. BADG2392-23



Actual Test Events - Balloon #

1. Initial Condition
    a. Drag truck and LCRTF ready for test, data acquisition recorder started
    b. Drag truck and LCRTF stationary
    c. Drag truck is holding LCRTF with light tension in tow line for the tow line to remain parallel to ground. Tow line includes tension type load cell.
    d. LCRTF transmission in forward gear, accelerator pedal fully released
2. Test Start Condition
    a. LCRTF applies pressure to the accelerator pedal and begins to tow the drag truck
    b. Engine RPM, Drag (tow) force, and drag and LCRTF velocity each increase
3. Drag Start Condition
    a. Drag truck allows the LCRTF to reach a velocity higher than 6 mph.
    b. LCRTF driver signals the drag truck when the accelerator pedal is fully depressed and the LCRTF is producing maximum power at that speed (note the green graph line at 2350 engine RPM, this is the maximum engine RPM of the Kalmar LCRTF)
4. Drag Truck Start applying brake condition

EXPLANATION OF GRAPH - TEST REPORT NO. BADG2392-23

a. Drag truck starts to apply service brakes on the drag truck to slow the LCRTF down.
b. Velocity begins to lower
c. Drawbar pull force begins to rise

5. Documented Test Results Condition
   a. Drag truck depresses brake pedal to a brake pedal force that holds the LCRTF at maintained velocity for a length of time
      i. The length of time is used to gather enough data for drawbar pull force at a specific velocity
   b. Government's LCRTF requirement is to ascend 45% grade at 1.5 mph (ATPD2392 Section 3.3.1.0).
   c. No Government requirement to maintain 45% grade at 1.5 mph for a set time period. Test was conducted by holding 1.5 mph for length of time to make the data readable and establish a constant drawbar pull force (lbf) to evaluate grade ability. The LCRTF can maintain the 1.5 mph 45% grade performance for an indefinite time period or until LCRTF runs out of fuel.
   d. The test results for this test exceeded the Government's requirements
      i. 1.5 mph : LCRTF performed at 8,196 lbf
      ii. % Grade = 50.3% : Government Requirement = 45% EXCEEDED by 5.3%
6. Test Stop Condition
   a. After meeting the Government Requirement to ascend a 45% slope at 1.5 mph, TEST CONCLUDED,
      LCRTF driver signaled drag truck driver to stop the LCRTF with depressing the drag truck service brake pedal further to stop the two vehicles.
7. Controlled and Safe Stop Condition
   a. LCRTF maintains tension on the tow line so there is not an abrupt change to the drag truck.
      i. This allows the drag truck to apply more brake force to safely slow the LCRTF down to a stationary (0.0 mph) state.
      ii. As shown in the graph, the data bounces up and down as the driver of the drag truck repeatedly applies the brake, to bring the LCRTF to a gradual stop.
8. Post-test/Stop Condition
   a. Drag truck fully stopped the LCRTF (Blue Line at 0.0 mph)
      then....
   b. LCRTF fully releases accelerator pedal (Green Line—RPMs to idle)
      then....
   c. Drag truck fully releases brake pedal (Red Line—tension on tow line reduced)
   d. Data acquisition recorder is stopped.
9. Notes
   a. LCRTF never stalled throughout the duration of the test.