ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of --	)	
	)	
Raytheon Company	)	ASBCA Nos. 60448, 60785
	)	
Under Contract Nos. FA8675-11-C-0030	)	
FA8675-12-C-0011	)	
FA8675-13-C-0003	)	

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OPINION BY ADMINISTRATIVE JUDGE SWEET

These appeals involve contracts FA8675-11-C-0030 (Lot 25), FA8675-12-C-0011 (Lot 26), and FA8675-13-C-0003 (Lot 27) (collectively Disputed Lots)—three in a series of annual contracts between the United States Air Force and appellant Raytheon Company (Raytheon) to produce and deliver Advanced Medium Range Air-to-Air Missiles (AMRAAM or missiles). The Disputed Lots' Statements of Content (SOCs)[1]—like the prior SOCs—contained two relevant paragraphs. First SOCs 2.a required Raytheon to produce a certain number of missiles (Disputed Lots missiles) over an approximate three-year period of performance (PoP). Second, SOCs 2.b required Raytheon to provide Systems Engineering/Program Management (SEPM) over an approximate one-year PoP.

These appeals turn upon whether SOCs 2.a or SOCs 2.b covered what became known as production SEPM—*i.e.*, SEPM that supports missile production—because the Disputed Lots would have required Raytheon to provide production SEPM to

[1] As discussed in greater detail below, an SOC is similar to a statement of work, but is more collaborative and contains less detail.

support the Disputed Lots missiles for about three years each if SOCs 2.a covered production SEPM, but only for about one year each if SOCs 2.b covered production SEPM. Under the contracting officer (CO)s' interpretation, SOCs 2.a covered production SEPM, such that the Disputed Lots required Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots SOCs 2.a three-year PoP. Raytheon argues that SOCs 2.b covered production SEPM, such that the Disputed Lots only required Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOCs 2.b one-year PoP. As a result, Raytheon argues, the government constructively changed the Disputed Lots when the COs incorrectly interpreted SOCs 2.a as covering production SEPM because that interpretation compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOCs 2.a three-year PoP instead of during the SOCs 2.b one-year PoP that the Disputed Lots actually required.[2]

After holding a hearing on entitlement and quantum, we conclude that the Disputed Lots are ambiguous as to whether SOCs 2.a or SOCs 2.b covered production SEPM. However, the parties' prior course of dealing established a common basis of understanding that SOCs 2.b covered production SEPM. Thus, the government constructively changed the Disputed Lots when the COs incorrectly interpreted SOCs 2.a as covering production SEPM because that interpretation compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOCs 2.a three-year PoP, instead of during the SOCs 2.b one-year PoP that the Disputed Lots actually required. As a result, Raytheon is entitled to an equitable adjustment of $48,363,983, which Raytheon has shown with reasonable certainty were the actual costs of the production SEPM to support the Disputed Lots missiles that Raytheon provided after the expiration of the Disputed Lots' SOCs 2.b one-year PoP, plus a reasonable profit.

FINDINGS OF FACT

I. Background

1. The AMRAAM program began in 1975.[3] Raytheon and Hughes Missile Systems were the contractors for production through approximately 1997, when the

[2] In the alternative, Raytheon argues that there was a mutual mistake or a unilateral mistake (app. br. at 217-34). Because we agree with Raytheon that there was a constructive change, we do not reach its alternative arguments.

[3] The AMRAAM program involves AMRAAM development, production, and sustainment contracts (tr. 1/78-79, 1/128-29). Because these appeals only involve the production contracts, we do not address the development or the sustainment contracts.

two companies merged. Since then, Raytheon has been the sole AMRAAM producer. (Tr. 1/77-78)

2. Following the merger, the government and Raytheon would enter into a contract each year or exercise an annual option—both called a Lot—for missile production (tr. 1/78-79, 1/118, 1/129, 1/148; app. ex. A-5 at 12). Beginning with Lot 12—the first Lot after the Raytheon/Hughes merger—the Lots switched from using statements of work to SOCs. The purpose of the shift was to move from a detailed statement dictated by the government to collaboratively developed, broader guidelines. (App. ex. A-78 at 1)

3. The SOCs contained two relevant paragraphs. First, SOCs 2.a required Raytheon to produce a certain number of missiles for each Lot (R4, tab 10 at 2-3; app. ex. A-2 at 51, ex. A-16 at 48, ex. A-78 at 1). Second, SOCs 2.b required other tasks, including SEPM and its predecessors (R4, tab 10 at 3-5; app. ex. A-2 at 52-53, ex. A-16 at 48-49, ex. A-78 at 1; tr. 1/144-45).[4] While Lot 27 does not define the term "SEPM," the prior Lots defined it as "the acceptance of responsibility to do what is necessary and sufficient to deliver, warrant, and support missiles that are affordable, combat capable, and readily available" (R4, tab 20 at 2, tab 24 at 2, tab 25 at 2).

4. SOCs 2.a had an approximate three-year PoP (tr. 1/130; 1/143-44). However, under the parties' course of dealing, SOCs 2.b only had about a one-year PoP for SEPM (tr. 1/100, 1/144-45, 1/152, 1/167, 1/174; app. ex. A-19, ex. A-47 at 1, ex. A-78, ex. A-79 at 2, ex. A-114 at 4, ex. A-127 at 2; R4, tabs 91-92). Thus, Raytheon typically would be producing three different Lots' missiles under SOCs 2.a during any particular Lot's SOC 2.b SEPM PoP (tr. 1/130, 1/144-45; *see also* app. ex. A-78 at 1). For example, "the Lot 20 contract [SEPM] . . . would be covering . . . the second year of Lot 19, and then third year of Lot 18" in addition to the first year of Lot 20 (tr. 1/130-31).

5. Some SEPM supported missile production (production SEPM) (tr. 1/179). In a practice known as block charging, Raytheon charged all production SEPM for a given year to the current Lot, regardless of which Lots' missiles that SEPM supported. Thus, to continue the above example, Raytheon would charge all SEPM provided in

[4] The terminology for SEPM changed over time. Lot 12 through Lot 19 used the term "Total Systems Performance Responsibility" (TSPR) (app. ex. A-2 at 51). Lot 20 changed the term to "Systems Engineering & Performance Responsibility" (SEPR) (app. ex. A-16 at 48). Finally, Lot 24 changed the term to SEPM (R4, tab 91 at 4). While the terminology changed, the definition remained substantively the same (R4, tab 20 at 2, tab 24 at 2, tab 25 at 2; app. ex. A-2 at 51, ex. A-16 at 48; *see also* tr. 1/145-46). Therefore, for ease of reference, we refer to TSPR, SEPR, and SEPM collectively as SEPM.

the first year of Lot 20 to Lot 20, regardless of whether that SEPM supported the Lot 18 missiles, the Lot 19 missiles, or the Lot 20 missiles. (Tr. 1/130, 1/144-45, 3/128-29)

6. The government became concerned about a potential SEPM gap—that is, a period at the end of the AMRAAM program when there would be no SEPM to support missile production because of the difference between the SOC 2.a missile production PoP and the SOC 2.b SEPM PoP (app. ex. A-28 at 2-3, ex. A-32 at 1-2). To address that potential SEPM gap, during the Lot 22 negotiations, the parties attempted to identify all production SEPM under SOC 2.b, and move those tasks to SOC 2.a (R4, tabs 8-9; app. ex. A-24 at 2, ex. A-31 at 3, 6-8, ex. A-57 at 2-48). However, moving production SEPM from SOC 2.b to SOC 2.a would have increased costs—and therefore reduced the number of missiles—because of SOC 2.a's longer PoP. Thus, the government abandoned its attempt to move production SEPM from SOC 2.b to SOC 2.a, and left production SEPM under SOC 2.b (app. exs. A-58, A-59, A-74; tr. 1/179-80, 2/91-93).

7. Beginning with Lot 22, the government altered SOC 2.a's language to state that Raytheon "shall manufacture, test, integrate and deliver the [missiles] specified in the CLINS. The effort below includes all the activities necessary to produce these end items." (App. ex. A-47 at 4) The government also altered the language of SOC 2.b to state that Raytheon "shall support future missile production and sustainment of fielded missiles" (*id*. at 5).

II. Course of Dealing

8. After Lot 22, the parties continued to engage in a collaborative process to identify specific SEPM tasks because the SOC only provided general guidance (tr. 1/138-41). Beginning with Lot 22, the government and Raytheon held SEPM reviews, during which Raytheon walked the government through all of the SEPM activities that had occurred over the prior period (tr. 1/244-45; app. exs. A-76, A-91, A-95, A-102, A-104, A-125, A-131, A-173, A-184, A-213). In addition, the government monitored SEPM tasks by embedding personnel at Raytheon, and through weekly video conferences on SEPM progress (tr. 1/245-46).

9. Based upon that close cooperation, the parties' course of conduct established a common basis of understanding that SOC 2.b covered production SEPM, even after Lot 22. Indeed, the government repeatedly expressed its understanding, based upon the parties' course of conduct, that SOC 2.b SEPM included production SEPM—*i.e.*, SEPM that supported missile production. (R4, tab 42 at 9-10, tab 66 at 1-2, tab 68 at 1; app. ex. A-28 at 2-3, ex. A-83 at 1, ex. A-148 at 2-4, ex. A-157 at 1-2, ex. A-159 at 2, ex. A-175 at 13, ex. A-179 at 1, ex. A-207 at 84, ex. A-243 at 5)

10. First, the COs repeatedly expressed an understanding that, based upon the parties' course of conduct, SOC 2.b SEPM included production SEPM. For example, in a September 29, 2014 slide presentation, Melissa St. Vincent—an AMRAAM CO—recognized that "[e]lements awarded [prior to Lot 28] as part of [SOC] 2.b were necessary for missile production" (app. ex. A-207 at 84). Similarly, in a May 29, 2013 email, Benjamin Collins—another AMRAAM CO—acknowledged that:

> Rather than tying to a particular lot, Raytheon's proposal[s] tie to a particular time span. Thus, the Lot 26 SEPM "PoP" was perceived by Raytheon as covering 1 Apr 2012 to 31 Mar 2013. Accordingly, Raytheon bills all SEPM costs during that timeframe to the Lot 26 SEPM charge number—regardless if it was an issue that pertained to Lot 23, 24, 25, or 26. This was, apparently, a conscious decision made by the respective parties going into Lot 12 in order to handle the pricing of such overarching activities post-merger (Raytheon/Hughes) . . . . Currently, the Government believes approximately 2/3 of the costs incurred each year under [SOC 2.b] SEPM go to the lot in production (e.g.—Lot 26 SEPM covers mostly work on Lot 24 production line). . . . [A]bout 75% of the heads on "SEPM" [under SOC 2.b] are doing work related to the current production of missiles . . . yet probably 2/3 of that labor goes to the "current" lot. Meaning, the majority of the activities being charged to Lot 26 SEPM is really Lot 24 production support.

(App. ex. A-148 at 2-4)

11. Second, Paul Garvey—the program manager—repeatedly expressed an understanding that, based upon the parties' course of conduct, SOC 2.b SEPM included production SEPM. For example, in a November 19, 2008 e-mail, Mr. Garvey acknowledged that "not all support tasks fit neatly into a [SOC] 2a or [SOC] 2b bin. Many cut across current and future production . . . . Also, many cut across current production and sustainment of fielded missiles . . . . Our precedent has been to capture these efforts under [SOC] 2b and I'm good with that." (App. ex. A-83 at 1) In a February 24, 2009 memorandum, Mr. Garvey also acknowledged that SOC 2.b SEPM included production SEPM by stating that there was a need to "[m]ove the engineering support that is related to production out of SOC 2b and into SOC 2a" (app. ex. A-90 at 2). Likewise, in a December 11, 2015 memorandum, Mr. Garvey acknowledged that "the people involved in negotiating AMRAAM Production contract awards from Lot 12 and beyond did know about the PoP mismatch, and the fact that we had Raytheon people required to support production in the SEPM task" under SOC 2.b

(R4, tab 66 at 1). Mr. Garvey continued that "SEPM (SOC 2b) was and is required to support production" (*id*. at 2).

12. Third, Lt Col Bortle—the Lot 28 Requirements Manager—repeatedly verified the government's understanding that, based upon the parties' course of conduct, SOC 2.b SEPM included production SEPM. For example, in a June 25, 2013 memorandum, Lt Col Bortle recognized that:

> [O]ver time, [Raytheon] has adopted a practice of augmenting missile delivery CLINs with a growing portion of this SEPM activity. Estimates are as high as 75% of all SEPM activity. This is somewhat of a gray area because when a manufacturing, reliability, or design issue affects current[] lots, it arguably affects future lots.

(App. ex. A-159 at 2) Similarly, in an October 28, 2013 internal presentation, Lt Col Bortle stated that, "[i]n practice, Raytheon treats SEPM [under SOC 2.b] as a pool of expertise to . . . resolve production issues that arise" (app. ex. A-175 at 13). Further, in a February 11, 2014 email, Lt Col Bortle acknowledged that a "significant portion of activity bid under the SEPM requirement [of SOC 2.b] had migrated to support instant item missile production" (app. ex. A-179 at 1).

13. Fourth, other government employees involved in the AMRAAM program verified the government's understanding that, based upon the parties' course of conduct, SOC 2.b SEPM included production SEPM. For example, in a July 24, 2007 email, Lee Anderson—the government's Chief of AMRAAM Production—acknowledged that "[e]ngineering support and configuration management is needed to produce missiles" (app. ex. A-28 at 3). Similarly, in a December 15, 2015 email, Gregg Thomas—the government's chief engineer from 2009 through 2012—acknowledged that "my understanding of joint Government/Raytheon expectations were [sic] that every production contract award would include SEPM [under SOC 2.b], which would then be used to address all ongoing missile production issues" (R4, tab 68 at 1).

14. Fifth, the Lot 28 Production Support and Annual Sustainment (PSAS)[5] contract technical evaluation acknowledged that, based upon the parties' course of conduct, SOCs 2.b SEPM included production SEPM. The technical evaluation stated that "multiple segments of the SEPM function [under SOC 2.b] were responsible for

[5] As discussed below, the government separated production SEPM and non-production SEPM into separate contracts for Lot 28, with the PSAS contract covering non-production SEPM.

addressing reoccurring impediments to ongoing missile production that require senior engineering support to resolve." (R4, tab 42 at 9)

III. The Disputed Lots

15. The government awarded the Disputed Lots to Raytheon on August 31, 2011, March 30, 2012, and June 17, 2013 respectively (R4, tab 31 at 1; app. ex. A-113 at 1, ex. A-116 at 1). The Disputed Lots were firm fixed price contracts to provide the missiles identified in the CLINs "in accordance with (IAW) . . . the Statement of Content (SOC) paragraphs 2.a, 2.b" (R4, tab 31 at 2; app. ex. A-113 at 2, ex. A-116 at 2). The Lot 25 CLINs 0001 through 0011, Lot 26 CLINs 0001 through 0009, and Lot 27 CLINs 0001 through 0010 were for specified numbers of missiles (collectively Disputed Lots missiles) (R4, tab 31 at 3-7; app. ex. A-113 at 3-11, ex. A-116 at 4-8). The PoPs for those CLINs were about three years (R4, tab 3 at 48-49; app. ex. A-113 at 50-52, ex. A-116 at 48-49). Lot 27 contained a separate CLIN—CLIN 0011—which stated that "[t]he contractor shall accomplish the systems engineering and program management (SEPM) objectives outlined in paragraph [] 2(b) of Attachment 1 – Statement of Content (SOC) Production." (R4, tab 31 at 8) CLIN 0011 had a completion date of March 31, 2014 (*i.e.*, about a one-year PoP), and its funding was included in the missile CLINs (*id*.).

16. While Lot 25 and Lot 26 did not have separate CLINs for SEPM, the Requests for Proposals (RFPs) made clear that there was about a one-year PoP for SEPM under Lot 25 and Lot 26 (app. ex. A-101 at 3, ex. A-114 at 4). Moreover, as CO Collins recognized, Raytheon "bid[] SEPM on an annual/12-month basis," and that "the Gov't used/didn't challenge" those bids (app. ex. A-156 at 35, 38). Therefore, as with Lot 27, the Lot 25 and Lot 26 SEPM PoPs were about one year.

17. As with the prior Lots, the Disputed Lots' SOC 2.a were entitled "AMRAAM—Production of Lot [25, 26, or 27] Missiles," and required Raytheon to "manufacture, test, integrate, and deliver the items specified in the CLINs. The effort includes all the activities necessary to produce" the missiles. The Disputed Lots' SOC 2.a did not refer to SEPM or production SEPM. As with the prior Lots, the Disputed Lots SOC 2.b were entitled "AMRAAM—Systems Engineering/Program Management (SEPM)," and required Raytheon to "support future missile production and sustainment of fielded missiles as follows[.]" The Disputed Lots' SOC 2.b then listed numerous general tasks. The Disputed Lots' SOC 2.b did not distinguish between production SEPM and non-production SEPM. Nor did they define "future missile production." (R4, tab 31 at 129-32; app. ex. A-113 at 126-28, ex. A-116 at 114-16)

18. The Disputed Lots incorporated by reference the Changes Clause in Federal Acquisition Regulation (FAR) 52.243-01, CHANGES-FIXED PRICE (AUG.

1987) (R4, tab 31 at 98; app. ex. A-113 at 92, ex. A-116 at 88). Under the Changes Clause, Raytheon would be entitled to an equitable adjustment for any increase in the cost of performance that resulted from any written changes by the CO to any specifications. FAR 52.243-01(b).

IV. Lot 28 and Program Support and Annual Sustainment Contract

19. While negotiating Lot 27, the government began to consider placing production SEPM to support the Lot 28 missiles in the Lot 28 SOC 2.a, and moving non-production SEPM into a separate contract (app. ex. A-140 at 1, ex. A-141 at 5, ex. A-149 at 1, ex. A-157 at 1).

20. Raytheon expressed a concern to the government that its plan would create a two-year production SEPM gap, during which there would be no production SEPM coverage to support the Disputed Lots missiles. According to Raytheon, that was because the Disputed Lots' SOC 2.a three-year PoP to produce missiles would expire after the Disputed Lots' SOC 2.b one-year PoP for production SEPM to support those missiles. Moreover, after the Disputed Lots' SOC 2.b one-year PoP expired, Lot 28 SOC 2.a would not cover the Disputed Lots missiles, and the non-production SEPM contract would not cover production SEPM. (App. ex. A-157 at 1)

21. In a June 24, 2013 email, CO Collins responded by calling into question Raytheon's assumption that production SEPM fell under the Disputed Lots' SOC 2.b one-year PoP. Instead, he interpreted production SEPM as falling under the Disputed Lots' SOC 2.a three-year PoP, such that there would be no production SEPM gap for the Disputed Lots missiles. He stated:

> What is a bit unclear is how [Raytheon's assumption that SOC 2.b covers production SEPM] reconciles with the SOC "2a" requirement for the inclusion of all the activities to produce missiles . . . . Likewise, the SOC "2b" activities was [sic] listed as support required for "future missile production and sustainment of fielded missiles."
> Accordingly, if I were to contract for SEPM separately, or even not at all, it would appear to have no bearing on the delivery of missiles already on contract. Please advise on your understanding of the nature of SEPM as well as your opinion on the immediate preceding statement.

(App. ex. A-157 at 1)

22. Raytheon responded by asking, "[a]re you saying that you do not agree that Raytheon has a two year problem with regard to SEPM if the Gov't changes the way it has been looked at and bid for the last decade or so" (app. ex. A-161 at 3)?

23. CO Collins responded on July 18, 2013. He reiterated his interpretation of SOC 2.b as covering production SEPM by stating that:

> To a certain degree—yes, I am saying I have challenges with acknowledging the concept of a contingent liability on previously let production contracts without further data. . . . If that migration [of production SEPM to SOC 2.b] did occur . . . I just want that data. With that data and with more specific data re: the perceived 'shortfall' associated with the last lot or two...then I think I can craft a requirement and path-forward that could satisfy all parties.

(App. ex. A-161 at 1-2)

24. On July 10, 2013, the government issued the Lot 28 RFP, which it amended on August 15, 2013. The RFP indicated that the government would issue a separate solicitation for an annual PSAS contract for non-production SEPM. (App. ex. A-160 at 3, ex. A-166 at 3-4)

25. In August and September 2013, representatives of the government, including CO Collins, and Raytheon met several times (tr. 3/17-18). At those meetings, the parties discussed how SEPM had been funded in the past across active production Lots, that changing the way Raytheon charged for SEPM in Lot 28 would create a production SEPM gap for the Disputed Lots missiles, and how Raytheon could recover for that SEPM gap (*id*. at 3/18-19). At the meetings, CO Collins stated that he would work with Raytheon to address recovery for the production SEPM gap (*id*. at 3/19). In particular, the government told Raytheon to propose recovery for the production SEPM gap in its PSAS proposal (*id*. at 3/32-33).

26. However, on October 9, 2013, the government issued the PSAS RFP for non-production SEPM only (R4, tab 35 at 1, 6).

27. On October 14, 2013, Raytheon emailed the government about the PSAS RFP, inquiring:

> What is the plan for the recovery of the Lot 26 and 27 SEPM? There is no CLIN on here, nor any words/direction regarding this.

> I want to make certain we are all on the same page. Right now, it seems as though the meeting we had a little over a month ago was not really applied to this RFP.

(R4, tab 36 at 2)

28. Jeffrey Mixson—the PSAS contract specialist—responded to Raytheon that "I don't think we fully know the answer yet, but I can tell you that our intention is to pay for some/all of this on this contract" (R4, tab 36 at 1).

29. In its PSAS proposal, Raytheon proposed recovery for the production SEPM gap (R4, tab 37 at 9-10, tab 38 at 3).

30. Lt. Col. Bortle circulated a responsive presentation internally recommending funding the production SEPM gap because it was the "[r]ight thing to do based on government's position on prior proposal evaluations" (app. ex. A-223 at 40).

31. Despite his understanding that the parties treated SOC 2.b as covering production SEPM in the past, and his noting that it was "slightly 'unfair'" to not pay Raytheon for the production SEPM gap, CO Collins concluded that the plain language of the SOCs compelled the conclusion that SOC 2.a covered production SEPM (app. ex. A-157 at 1, ex. A-178 at 2).

32. Therefore, the government's March 2014 technical evaluation of Raytheon's PSAS proposal rejected Raytheon's production SEPM gap recovery proposal (R4, tab 42 at 15-16).

33. On June 27, 2014, the government awarded the PSAS contract for non-production SEPM to Raytheon, with an effective date of June 12, 2014 (R4, tab 45 at 3, 100). The government awarded the Lot 28 contract, effective December 22, 2014. The Lot 28 SOC 2.a covered missile production and production SEPM to support the Lot 28 missiles (R4, tab 52 at 101).[6]

V. Notice of Change, Request for Equitable Adjustment, and Claims

34. On April 30, 2014, Raytheon submitted a notice of change (R4, tab 41 at 1).

[6] Because the parties did not finish negotiating Lot 28 by the time the Lot 27 SOC 2.b PoP was set to expire, the parties entered into two modifications of the Lot 27 contract on April 2, 2014, and August 19, 2014, for non-production SEPM in the interim (R4, tabs 39, 48).

35. By memorandum to Raytheon dated May 20, 2014, CO St. Vincent sought more information concerning the notice of change (R4, tab 44 at 1).

36. On September 25, 2014, Raytheon submitted a Request for Equitable Adjustment (REA). The REA asserted that there was a constructive change when the COs interpreted SOC 2.a as covering production SEPM, which compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoP, instead of during the SOC 2.b one-year PoP that the Disputed Lots actually required (R4, tab 50 at 10, 12-13).

37. On December 3, 2014, CO St. Vincent denied Raytheon's REA. CO St.-Vincent reasoned that SOC 2.a covered production SEPM, such that Raytheon had to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoP. (R4, tab 51 at 1-2)

38. On July 6, 2015, Raytheon submitted a certified claim to CO Patricia Chisolm for $48,195,181 for its costs of providing production SEPM to support the Disputed Lots missiles after the last Disputed Lot (Lot 27)'s SOC 2.b PoP expired on March 31, 2014 (R4, tabs 57-58). She received the claim on July 14, 2015 (R4, tab 57 at 1). The claim included actual production SEPM Costs to support the Disputed Lots missiles incurred from April 2014 through June 2015, and estimated costs between July 2015 and May 2016. Raytheon then added a 12.6% profit. Raytheon calculated its actual costs based upon its accounting book of records. Raytheon based labor charges on time charging for personnel supporting production SEPM. Raytheon based material and other direct cost charges on material purchased by engineers and travel expenditures as recorded through expense reports (R4, tab 58).

39. On February 16, 2016, CO Chisolm issued a decision denying Raytheon's claim (R4, tab 78).

40. On February 17, 2016, Raytheon filed a notice of appeal, which the Board docketed as ASBCA No. 60448 (R4, tab 79).

41. On June 30, 2016, Raytheon filed a supplemental claim, which added new facts and legal theories. The supplemental claim also amended the claim amount to $48,311,385, based upon actual costs for the entire period. (R4, tab 99)

42. On August 22, 2016, CO Chisolm denied Raytheon's supplemental claim (R4, tab 100).

43. On September 9, 2016, Raytheon filed a notice of appeal, which the Board docketed as ASBCA No. 60785 and consolidated with ASBCA No. 60448.

VI. Facts Regarding Quantum

44. In the Lot 27 Final Price Negotiation Memorandum (FPNM), the parties agreed to a profit rate of about 12.9 percent (app. ex. A-154 at 1).

45. Brian Hammer—Raytheon's government contracts accounting expert—reviewed Raytheon's cost reports, and made minor adjustments to Raytheon's supplemental claim, which increased the claimed amount to $48,363,983 (app. ex. A-240 at 13, 16). Subject to that change, Mr. Hammer opined that the claims' cost calculations were well-accepted in the industry, were reasonable, captured Raytheon's actual costs for production SEPM to support the Disputed Lots missiles, and were supported by accounting reports and other program records (app. ex. A-240 at 12-13; tr. 3/189-90). Mr. Hammer calculated the $48,363,983 amount as follows:

	Lot 25 Missiles	**Lot 26 Missiles**	**Lot 27 Missiles**	**Total**
Total Cost	$3,576,541	$4,088,783	$35,286,703	$42,952,027
Profit (12.6%)				$5,411,955
Total				$48,363,983

(App. ex. A-240, at 17)

46. The government did not present any witnesses or evidence regarding costs or profits.

DECISION

The dispositive issue in these appeals is whether the Disputed Lots' SOC 2.a or SOC 2.b covered production SEPM because SOC 2.a had about a three-year PoP, while SOC2.b only had about a one-year PoP (findings 4, 15-16). As discussed in greater detail below, the parties' prior course of dealing established that SOC 2.b covered production SEPM, such that the Disputed Lots only required Raytheon to provide production SEPM to support the Disputed Lots missiles for about one year under Disputed Lots' SOC 2.b. Thus, the government constructively changed the Disputed Lots when the COs interpreted SOC 2.a as covering production SEPM because that interpretation compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoP, instead of during the SOC 2.b one-year PoP that the Disputed Lots actually required. Moreover, Raytheon has demonstrated with reasonable certainty that its actual costs—plus a reasonable profit—for providing production SEPM to support the Disputed Lots missiles after the Disputed Lots' SOC 2.b one-year PoP expired were $48,363,983.

I. On the Merits, the Government Constructively Changed the Disputed Lots

The government constructively changed the Disputed Lots when the COs interpreted SOC 2.a as covering production SEPM because that interpretation compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoP instead of during the SOC 2.b one-year PoP that the Disputed Lots actually required.

> [I]f a contracting officer compels the contractor to perform work not required under the terms of the contract, his order to perform, albeit oral, constitutes an authorized but unilateral change in the work called for by the contract and entitles the contractor to an equitable adjustment in accordance with the 'Changes' provision.

Len Co. & Assocs. v. United States, 385 F.2d 438, 443 (Ct. Cl. 1967). In order to establish a constructive change, a contractor must show that: (1) there was a change (*i.e.*, performance not required by the contract); (2) the person directing the change had contractual authority unilaterally to alter the contractor's duties under the contract; (3) the contractor's performance requirements were enlarged; and (4) an order (*i.e.*, the additional work was not volunteered, but was directed by a government officer). *MC II Generator & Elec.*, ASBCA No. 53389, 04-1 BCA ¶ 32,569 at 161,169. Here, the dispositive issues are whether there was a change and an order. As discussed in greater detail below, Raytheon has established both elements.

A. There was a Change

There was a change because the parties' prior course of dealings established that the Disputed Lots only required Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.b one-year PoPs, but Raytheon provided such production SEPM after those PoPs expired. A "course of dealing is a sequence of previous conduct between the parties to an agreement which is fairly to be regarded as establishing a common basis of understanding for interpreting their expressions and other conduct." *T&M Distribs., Inc.*, ASBCA No. 51405, 00-1 BCA ¶ 30,677 at 151,509 (quoting RESTATEMENT (SECOND) CONTRACTS § 223 (1979)). We may use course of dealing evidence in two different ways: as (1) extrinsic evidence to interpret the ambiguous contract terms; or (2) evidence of a waiver of unambiguous contract terms. *Id*. A prerequisite for the first use is that the contract be ambiguous. *City of Tacoma, Dept. of Pub. Util. v. United States*, 31 F.3d 1130, 1134 (Fed. Cir. 1994). "An ambiguity exists when a contract is susceptible to more than one reasonable interpretation." *E.L. Hamm & Assocs., Inc. v. England*, 379 F.3d 1334, 1341 (Fed. Cir. 2004) (citing *Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 751 (Fed. Cir. 1999)).

However, the second use of prior course of dealing evidence does not require that the contract be ambiguous. As we have held:

> [A] prior course of dealing between contractual parties can extinguish an otherwise explicit contract requirement [if there is] actual knowledge by both parties of consistent conduct by one party in its contractual dealings with the other over an extended period of time regarding a particular contract provision upon which the other is reasonably entitled to rely.

Comptech Corp., ASBCA No. 55526, 08-2 BCA ¶ 33,982 at 168,085-86; *see also W. Avionics, Inc.*, ASBCA No. 33158, 88-2 BCA ¶ 20,662 at 104,421. Thus, a "course of dealing can supply an enforceable term to a contract (or may even supplement or qualify that contract) provided the conduct which identifies that course of dealing can reasonably be construed as indicative of the parties intentions—a reflection of the joint or common understanding." *T&M Distribs.*, 00-1 BCA ¶ 30,677 at 151,509 (quoting *Sperry Flight Sys. Div. of Sperry Rand Corp. v. United States*, 548 F.2d 915, 923 (Ct. Cl. 1977)) (emphasis omitted); *see also W. Avionics*, 88-2 BCA ¶ 20,662, at 104,421. In order to show waiver through a prior course of dealing, a contractor must show that the current contract and prior course of dealing involved the same contracting agency, the same contractor, and essentially the same contract provision. *T&M Distrib.*, 00-1 BCA ¶ 30,677 at 151,509 (citing *L.W. Foster Sportswear Co. v. United States*, 405 F.2d 1285 (Ct. Cl. 1969)).

Here, the Disputed Lots' SOCs are ambiguous as to whether SOC 2.a or SOC 2.b covered production SEPM. On the one hand, it is reasonable to interpret SOC 2.a as covering production SEPM because SOC 2.a covers "all the activities necessary to produce" the missiles, while SOC 2.b only covers work to "support future missile production and sustainment of fielded missiles" (finding 17). On the other hand, it also is reasonable to interpret SOC 2.b as covering production SEPM. The Disputed Lots do not define the term "future missile production" (finding 17). Moreover, SOC 2.a does not mention SEPM—let alone production SEPM—while SOC 2.b covers "AMRAAM—Systems Engineering/Program Management (SEPM)"—without limitation to non-production SEPM (finding 17). Because there are two reasonable interpretations, the Disputed Lots' SOCs are ambiguous.

Turning to the prior course of dealing evidence,[7] the parties' conduct on the earlier Lots is fairly to be regarded as establishing a common basis of understanding

[7] Even if the SOC were not ambiguous, we would turn to prior course of dealing evidence to determine whether the parties waived any unambiguous contract terms. *Comptech Corp.*, 08-2 BCA ¶ 33,982 at 168,085-86. There would have

that SOC 2.b covered production SEPM (finding 9). CO St. Vincent, CO Collins, Mr. Garvey, Lt Col Bortle, Mr. Anderson, Mr. Thomas, and the PSAS technical evaluation all expressed an understanding, based upon the parties' course of conduct, that SOC 2.b's SEPM included production SEPM (findings 10-14). Indeed, the facts that the parties unsuccessfully attempted to identify and move production SEPM from SOC 2.b to SOC 2.a during the Lot 22 negotiations support the conclusion that the parties understood that SOC 2.b covered production SEPM (finding 6). Thus, the parties' prior course of conduct is fairly to be regarded as establishing a common basis of understanding that SOC 2.b covered production SEPM, such that the Disputed Lots' SOC 2.b required Raytheon to provide production SEPM to support the Disputed Lots missiles only for the Disputed Lots SOC 2.b's one-year PoP. As a result, there was a change when Raytheon was required to provide production SEPM to support the Disputed Lots missiles after the Disputed Lots' SOC 2.b PoPs expired.

B. There was an Order

There was an order because the government compelled the change when the COs interpreted SOC 2.a as covering production SEPM. To show that there was an order, it is not enough for a contractor to show that the authorized government official offered advice, comments, suggestions, or opinion. Rather, the contractor must show some force, coercion, or compulsion. *MC II Generator & Elec.*, 04-1 BCA ¶ 32,569 at 161,169. A government interpretation that requires more services than actually required by the contract constitutes a compelled change. *Dale Constr. Co.*, ASBCA No. 1202, 58-1 BCA ¶ 1768; *Fields Corner Brass Foundry, Inc.*, ASBCA No. 2226, 56-2 BCA ¶ 1101.

Here, the COs interpreted SOC 2.a as covering production SEPM. In his June 24, 2013 and July 18, 2013 emails, CO Collins communicated to Raytheon his interpretation that SOC 2.a covered production SEPM. In particular, CO Collins challenged Raytheon's conclusion that there was a production SEPM gap by questioning that conclusion's assumption that production SEPM fell under the SOC 2.b's one-year PoP, instead of under the SOC 2.a's three-year PoP. (Findings 21, 23) It appears CO Collins contemplated retreating from that interpretation when he suggested at the September and August 2013 meetings that there was a production SEPM gap (finding 25). Nevertheless, CO Collins ultimately reverted to his interpretation that SOC 2.a covered production SEPM by concluding that there was no production SEPM gap (finding 31).

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been such a waiver here because Raytheon reasonably relied upon that prior course of dealing under *T&M Distribs.*, 00-1 BCA ¶ 30,677 at 151,509. First, it is undisputed that the prior lots involved the same contracting agency—namely the Air Force—and the same contractor—namely Raytheon (findings 1, 15). Moreover, since Lot 22, the Lots have involved essentially the same contract provisions (findings 7, 17).

Moreover, the government communicated that interpretation to Raytheon when its PSAS technical evaluation denied Raytheon's proposal for a production SEPM gap recovery (finding 32). CO St. Vincent confirmed the government's interpretation that SOC 2.a covered production SEPM in her denial of Raytheon's REA (finding 37).

By interpreting the Disputed Lots' SOCs 2.a as covering production SEPM, the COs compelled Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a's three-year PoPs. *See Dale Constr.*, 58-1 BCA ¶ 1768; *Fields Corner Brass Foundry*, 56-2 BCA ¶ 1101. That constituted a constructive change because, as discussed above, the Disputed Lots' SOC 2.b actually covered production SEPM, such that the Disputed Lots only required Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOCs 2.b one-year PoPs.

II. The Government's Arguments Are Unavailing

In its post-hearing brief, the government abandons any attempt to show that the Disputed Lots' SOC required Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoPs, instead of during the Disputed Lots SOC 2.b one-year PoPs (gov't br. at 11-18). Rather, the government argues that Raytheon's purported interpretation of the Disputed Lot's SOCs as requiring the government to pay additional future costs for production SEPM after the Disputed Lots' SOC 2.b's PoPs expired is unreasonable, and would create an unfunded side deal in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341 (*id.* at 11-13).

That argument demonstrates a fundamental misunderstanding of Raytheon's constructive change claim. Raytheon is not arguing that the *Disputed Lots* required the government to pay for production SEPM after the Disputed Lots' SOC 2.b PoPs had expired. On the contrary, Raytheon argues that the Disputed Lots' SOC 2.b only required the government to pay for—and Raytheon to provide—production SEPM until the SOC 2.b's PoPs expired. Instead, it was *the COs' interpretation* of SOC 2.a as covering production SEPM that compelled Raytheon to provide production SEPM after the SOC 2.b's PoPs expired. (App. br. at 4-5, 147-49) Under the constructive change doctrine, the government must provide an equitable adjustment to pay for those additional services.

III. Quantum

Raytheon has shown that it is entitled to an equitable adjustment for the additional services the government compelled Raytheon to perform. However, now Raytheon bears the burden to show that its costs incurred ($48,363,983) were reasonable. There is no presumption of reasonableness. *Kellogg Brown & Root*

Services, Inc., ASBCA No. 58175, 18-1 BCA ¶ 37,006 at ¶ 180,233. "A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business" *id*., citing FAR 31.201-3(a).

A contractor need only establish quantum with reasonable certainty. *Shell Oil Co. v. United States*, 896 F.3d 1299, 1312 (Fed. Cir. 2018); *Sw. Marine, Inc.*, ASBCA No. 54550, 11-2 BCA ¶ 34,871, at 171,525. The measure of an equitable adjustment is the difference between the reasonable cost of performing the contract as awarded absent the change, and the reasonable cost of performing with the change. *Nager Elec. Co. v. United States*, 442 F.2d 936, 946 (Ct. Cl. 1971); *Keco Indus., Inc. v. United States*, 364 F.2d 838, 850 (Ct. Cl. 1966). A contractor usually demonstrates that amount with evidence of the costs actually incurred. *Leopold Constr. Co., Inc.*, ASBCA No. 23705, 81-2 BCA ¶ 15,277 (citing *Bruce Constr. Corp. v. United States*, 324 F.2d 516 (Ct. Cl. 1963); *Globe Constr. Co.*, ASBCA No. 21069, 78-2 BCA ¶ 13,337). Moreover, an equitable adjustment may include a reasonable profit. *Hi-Shear Tech. Corp. v. United States*, 356 F.3d 1372, 1380 (Fed. Cir. 2004) (quoting *Rumsfeld v. Applied Cos.*, 325 F.3d 1328 (Fed. Cir. 2003)); *Bennett v. United States*, 371 F.2d 859, 864 (Ct. Cl. 1967); *Mo. Dep't of Social Servs.*, ASBCA No. 61121, 19-1 BCA ¶ 37,240 at 181,279.

Here, as discussed above, the constructive change was the government's compelling Raytheon to provide production SEPM to support the Disputed Lots missiles during the Disputed Lots' SOC 2.a three-year PoPs, instead of during the Disputed Lots' SOC 2.b one-year PoPs. Therefore, the proper measure of the equitable adjustment to which Raytheon is entitled is the difference between the reasonable cost of production SEPM to support the Disputed Lots missiles, plus a reasonable profit during the Disputed Lots' SOC 2.a three-year PoPs, and during the Disputed Lots SOC 2.b one-year PoPs. That equals the reasonable cost of providing production SEPM to support the Disputed Lots missiles after the expiration of the last Disputed Lot (Lot 27) SOC 2.b one-year PoP on March 31, 2014, plus a reasonable profit (finding 15).

We conclude that Raytheon has demonstrated with reasonable certainty that its actual costs to provide production SEPM to support the Disputed Lots missiles after March 31, 2014 were $42,952,027. In particular, Raytheon presented a government contracts accounting expert, who testified based upon his review of Raytheon's detailed cost reports, that Raytheon's actual costs to perform production SEPM to support the Disputed Lots missiles after March 31, 2014 were $42,952,027, and that those costs were reasonable (finding 45). The government did not present a cost expert—or any other evidence—contradicting that testimony (finding 46). Therefore, we conclude that Raytheon's actual costs to perform production SEPM on the

Disputed Lots missiles after March 31, 2014 were $42,952,027, and that those actual costs were reasonable.

Moreover, Raytheon is entitled to a 12.6 percent reasonable profit. That profit is consistent with the profit percentage that the parties negotiated in the Lot 27 FPNM (finding 44). Further, Raytheon's expert testified that those profits were reasonable (finding 45). The government has not presented any evidence that those profits are unreasonable (finding 46). Therefore, we conclude that a 12.6 percent profit is reasonable. As a result, Raytheon has shown with reasonable certainty that it is entitled to an equitable adjustment of $48,363,983 (finding 45).

CONCLUSION

For the foregoing reasons, the appeal is sustained in the amount of $48,363,983, with interest to run from July 14, 2015, under the Contract Disputes Act, 41 U.S.C. § 7109.

Dated: June 24, 2020

James R. Sweet

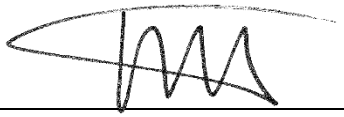
JAMES R. SWEET
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

CHERYL L. SCOTT
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

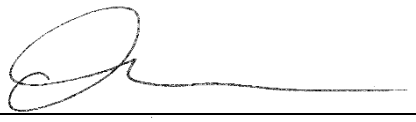
(Signatures continued)

I concur



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

I concur



OWEN C. WILSON
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA Nos. 60448, 60785, Appeals of Raytheon Company, rendered in conformance with the Board's Charter.

Dated: June 25, 2020

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