ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of --	)	
	)	
CDM Constructors, Inc.	)	ASBCA Nos. 60454, 60455, 60669
	)	
Under Contract No. W912PL-12-C-0022	)	

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OPINION BY ADMINISTRATIVE JUDGE SWEET

Appellant CDM Constructors, Inc. (CDM)[1] appeals the decision of the contracting officer (CO) denying its request for an equitable adjustment (REA), and the deemed denial of an REA. All three appeals concern the design and construction of a water treatment plant (WTP).[2]

ASBCA No. 60454 addresses the WTP's evaporation ponds (EPs), alleging that CDM is entitled to an equitable adjustment and delay damages. In particular, CDM alleges that the Army Corps of Engineers (Corps) constructively changed the contract by compelling it to include one backup EP, to use a three million gallon per day (mgd) average daily flow (ADF), and to use a 0.8 pan evaporation coefficient only if the maximum water depth was three feet or less. (App. br. at 44-53)[3] The Corps argues

[1] CDM Constructors, Inc.'s parent company was CDM Smith. CDM Smith was responsible for design, and CDM Constructors, Inc. was responsible for construction (tr. 1/38). We refer to CDM Constructors, Inc. and CDM Smith collectively as "CDM."

[2] This decision only addresses entitlement.

[3] The ASBCA No. 60454 complaint also alleges that there was a cardinal change, defective specifications, and breach of a covenant of good faith and fair dealing

that the contract required those design elements (gov't br. at 22-24). For the reasons discussed below, the Corps is correct about the backup EP, but not the ADF, evaporation coefficient, and water depth. Therefore, CDM is entitled to an equitable adjustment for any increased costs incurred as a result of having to use the Corps' ADF, evaporation coefficient, and water depth, but not as a result of having to provide a backup EP.

ASBCA Nos. 60455 and 60669 address the standby generator (generator), alleging that CDM is entitled to an equitable adjustment under the Changes clause because the contract contained defective specifications.[4] In particular, CDM alleges that the Corps improperly rejected its design, which followed concept drawings in the contract. (App. br. at 53-58) The Corps responds that the contract did not require CDM to follow the concept drawings, which, in any event, were trumped by conflicting contract provisions. For the reasons discussed below, CDM is correct. Thus, CDM is entitled to an equitable adjustment for any increased costs incurred as a result of the defective specifications.

FINDINGS OF FACT

I. Facts Common to All Appeals

1. On May 24, 2012, the Corps issued Request for Proposal No. W912PL-12-R-0018 (0018 RFP), for the design and construction of a WTP at Fort Irwin, California (R4, tab 9; tr. 1/43, 4/126).

2. Under the 0018 RFP, it was CDM's responsibility to "design and construct the [WTP] as described in the Request For Proposal (RFP) Documents contained herein" (R4, tab 9 at 1,729).[5] The RFP documents:

(60454, compl. ¶¶ 53-66). However, CDM abandoned those allegations by failing to raise them in its post-hearing brief. *United Launch Services, LLC*, ASBCA No. 56850 *et al.*, 16-1 BCA ¶ 36,483 at 177,765 (failure to address allegations from pleadings in post-hearing brief equated to abandonment of the issue).

[4] The ASBCA Nos. 60455, 60669 complaint also alleges that there was a non-disclosure of superior knowledge, mutual mistake, and breach of the covenant of good faith and fair dealing (60455, 60669, compl. ¶¶ 41-63). However, CDM abandoned those allegations by failing to raise them in its post-hearing brief. *United Launch*, 16-1 BCA ¶ 36,483 at 177,765.

[5] Citations to the Rule 4 files are to the consecutively-numbered pages unless otherwise indicated.

> [D]escribe[] the design work that shall not be changed, and shall be included in the construction documents. All remaining design work shall be performed by the Contractor based on the design criteria as required by the RFP. No deviations from the criteria will be allowed unless prior approval is obtained from the Contracting Officer's Representative.

(*Id.* at 1,731-32) In particular, "General Design Requirements are contained in [section 01 10 10], with Specific Design Requirements...identified in" appendix A (*id.* at 1,729). Section 01 10 10 described "the requirements for appearance, function, materials, and types of construction in sufficient detail to enable engineering and design to be completed by the Contractor" (*id.* at 1,731). Appendix A "is intended to guide the completion of the design by establishing existing conditions, and desired character, appearance, and function of the new construction" (*id.* at 1,730). Thus, section 01 10 10 and appendix A "shall define the design and performance criteria" (*id.* at 1,732).

3. Appendix X contained for information only (FIO) concept drawings from CH2M Hill Constructors, Inc. (CH2M Hill)[6] and Southern California Edison (SCE)[7] (R4, tab 9 at 1,731, 6,679, 7,113), and stated:

> Information in appendices below [including appendix X] that are noted for information only (FIO) represent studies, analyses, and designs previously developed for this project. This information is made available to the contractor for its use without any warranty of usefulness or suitability of purpose.... Drawings and designs included in FIO appendices shall NOT be considered "Drawings of Record" or "For Construction". As the designer of record, all design requirements are the responsibility of the contractor.

(*Id.* at 1,730) Similarly, appendix A stated that:

> The concept drawings of Appendix A and this specification section indicate processes required by the DD1391 as well [as] additional requirements. These concept drawings indicate estimated relationships and approximate sizes of individual components for the treatment facility. Drawings have been provided for

[6] CH2M Hill was the privatized water operator for Fort Irwin (tr. 1/47).

[7] SCE was the electrical utility serving parts of Southern California, including Fort Irwin (tr. 2/10).

> information only (FIO) from a 2009 partial design by CH2M HILL Constructors, Inc. of the process required that was based on a Design/Build/Operate business process. See Appendix X. The design and FIO drawings provided do not meet the full requirements of this solicitation. The actual sizing of the tanks, pumps, piping, buildings, etc. shall be determined by the Contractor during his design.

(R4, tab 10 at 9,773)

4. Section 01 10 10 stated that "[t]he drawings and details provided by SCE shall be utilized for pricing of this effort" (R4, tab 9 at 1,785).

5. Section 01 10 10 also contained the following Order of Precedence clause:

> Where the various elements of the RFP are in conflict, the following priority shall be used to establish precedence, unless specifically noted otherwise:
> a. Appendices A – I and Technical Specifications, where furnished.
> b. Section 01 10 10 DESIGN REQUIREMENTS, GENERAL.
> c. Drawings.

(R4, tab 9 at 1,732)

6. On August 8, 2012, the Corps awarded Contract No. W912PL-12-C-0022 (0022 contract) to CDM based upon the 0018 RFP (R4, tab 7).

7. The 0022 contract contained the Federal Acquisition Regulation (FAR) 52.243-4, CHANGES (JUN 2007), clause under which the Corps had to provide CDM with an equitable adjustment if there was any written or oral direction, instruction, interpretation, or determination from the CO that caused a change (R4, tab 7 at 696).

II. Facts Unique to the Evaporation Ponds Appeal (ASBCA No. 60454)

A. Background

8. A WTP produces wastewater. Because of Fort Irwin's isolated location in the desert, there were limited options available for the disposal of that wastewater. (Tr. 4/127) However, due to that desert location, it was advantageous to remove the liquid component of the wastewater through natural evaporation in EPs, and then to haul the remaining solid waste to a landfill. Therefore, the Corps decided to use EPs

to deal with the wastewater at Fort Irwin. (App. supp. R4, tab 134 at 173; tr. 1/61-62, 86-87)

9. The sizing of the EPs must take account of the fact that the net evaporation rate—i.e., the rate at which water evaporates from the EPs minus the rate at which water enters the EPs as precipitation—must equal or exceed the rate at which wastewater flows into the EPs (inflow) over time (tr. 1/92-93, 2/183, 204, 4/129-30).

10. The measurement of the EPs' likely evaporation rate starts with a determination of the pan evaporation rate. The pan evaporation rate measures the rate at which water in a standardized test pan evaporates. That rate accounts for climatic factors at that particular location. However, different bodies of water will experience different evaporation rates at the same climatic location based upon their size, depth, salinity, and water temperature. To account for those characteristics, the pan evaporation rate is multiplied by an evaporation coefficient. (R4, tab 4 at 32-33; tr. 1/89-91)

11. On the other side of the equation, two factors—the ADF and the recovery rate—determine the likely inflow. The ADF is the likely average rate per day at which water enters the WTP, which is determined by user demand. That ADF is multiplied by the remainder of the recovery rate—which is the percentage of the water entering the WTP that leaves the WTP as treated water—to determine the likely inflow rate. (R4, tab 4 at 31; tr. 1/91-92)

12. EPs require very little maintenance (tr. 1/85). While EPs can leak, such leaks are rare and usually only take a few days to repair. Moreover, it is highly unlikely that the EPs will fail completely during the life of the WTP. (Tr. 2/184, 3/30-34) However, if the EPs fail or cannot be used for an extended period of time, the result would be catastrophic for the WTP and Fort Irwin. Because net evaporation must equal or exceed inflows over time, the WTP would have to be shut-down in order to avoid an overflow if the EPs did not adequately function over an extended period of time. That, in turn, would require Fort Irwin to close. To compound the problem, it would be difficult for the Corps to obtain funding for any major repairs. (Tr. 2/204, 4/129-30)

B. The Contract Documents

1. Evaporation Pond Sizing and a Standby Evaporation Pond

13. The contract documents required CDM to design and build EPs (R4, tab 9 at 2,107). "Actual plant configuration shall be determined by the Contractor" (*id.* at 2,113).

14. However, the Corps provided concept design requirements. The contract documents stated that:

> Table 8 provides the Government's conceptual design unit requirements. The Government's concept may be incomplete and the Contractor shall provide a complete system. What is identified in Table 8 is the Government's expected minimum unit operations necessary. The Contractor shall meet the quantities in Table 8 as a minimum but additional units, if required to meet the criteria herein, shall be provided.

(R4, tab 9 at 2, 113) Table 8 indicated "NUMBER OF PONDS...2 + 1 STANDBY." It did not mention standby capacity. (*Id.* at 2,116)[8]

15. The contract documents also indicated that "[a] total of approximately 11 acres is allowed for the evaporation ponds as shown in the current layout, without prior approval from the [contracting officer representative (COR)]. Any requirement above this area will require Government approval and likely revision to the Environmental Assessment (EA) before design approval is granted." (R4, tab 9 at 2107)[9] Obtaining a revision to an EA was a bureaucratic hurdle that could delay the project (tr. 1/116, 4/139).

16. The CH2M Hill drawings showed three EPs covering a total area of 10.8 acres (R4, tab 9 at 6,681, 6,688, 7,077-80, 9,602; app. supp. R4, tab 175).

17. Reviewing the CH2M Hill drawings in conjunction with Table 8—which was derived from the CH2M Hill drawings—a reasonable contractor would have realized that one of the three EPs shown in the CH2M Hill drawing was not to be used in day-to-day operations. Table 8 showed an overall recovery rate of 99.6 or 99.7 percent. (App. supp. R4, tab 101 at 8-9; tr. 4/116, 141)[10] At that recovery rate, at most, only two of the three

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[8] The WTP also generates a sludge of lime, which is siphoned off, and pumped to lime sludge lagoons. In the lagoons, the water evaporates from the sludge, and the Corps hauls the solids to a landfill (tr. 1/137-38). Wastewater also is pumped from the lime sludge lagoons to the EPs (tr. 3/92). Table 8 required 1 + 1 standby lagoon. It also required standby units for other items, such as cartridge filters, electro dialysis reversal (EDR) membrane treatments, treated water pump stations, lime softening contact clarifiers, lime softening filtrations, reverse osmosis (RO) feed water storage and pump stations, RO cartridge filters, RO systems, and concentrate equalization basins. (R4, tab 9 at 2,114-17)

[9] The EA is state approval to build on a certain area of land (tr. 1/115, 2/175).

[10] To achieve that recovery rate—which was very high (tr. 1/44)—the Corps contemplated using several consecutive processes to extract usable water. Table 8 delineated the recovery rate for each process. Table 8 shows that the EDR provided a 92 percent recovery rate. Wastewater then went to RO stage 1, which provided an additional 58.8 percent recovery rate. Wastewater then went

EPs shown on the CH2M Hill drawings would be needed to ensure that inflows equaled net evaporation (supp. R4, tab 101 at 8-9; tr. 4/127, 170).[11]

18. The 0018 RFP initially required two assessments to evaluate the actual daily demand performance and the maximum daily demand performance. Reflecting the 99.6 or 99.7 percent recovery rate, the 0018 RFP stated that:

> [T]he Contractor shall demonstrate that the design of the WTP material/mass balance achieves a minimum of 99.6% recovery efficiency at 6.0 MGD at the given requirements for raw water quality range and treated water quality requirements. For the range of design flows (2.0 to 2.5 MGD annual average daily flow; 0.8 MGD minimum daily flow; and 5.4 maximum daily flow), the WTP material/mass balance design shall be designed to exceed a minimum of 99% recovery efficiency.

(R4, tab 9 at 2,082; tr. 4/178)

19. However, the problems arose in this case from the fact that the Corps decided to reduce the recovery rate during the solicitation phase, as reflected in Amendment 8 (tr. 4/159). Amendment 8 amended the above paragraph to read that:

> [T]he Contractor shall demonstrate that the design of the WTP material/mass balance achieves a minimum of 99~~.6~~% recovery efficiency at 6.0 MGD at the given requirements for raw water quality range and treated water quality requirements. ~~For the range of design flows (2.0 to 2.5 MGD annual average daily flow; 0.8 MGD minimum daily flow; and 5.4 maximum daily flow), the WTP~~

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to the RO stage 2, which provided an additional 39.5 percent recovery rate. Wastewater then went to a mechanical evaporator, which provided an additional 85 percent recovery rate. Taken together, that provided a recovery rate of about 99.7 percent. (Supp. R4, tab 71 at 2,114-16, tab 101 at 8-9; tr. 4/176, 181)

[11] Dr. Beth Gross—CDM's EP expert—opined that the CH2M Hill drawings could not be based upon a 99.6 or 99.7 percent recovery rate because, at that recovery rate, only one of the three EPs would be needed to balance inflows and net evaporation (app. supp. R4, tab 180 at 539, tab 187 at 579; tr. 3/18, 72-74). However, that merely shows that CH2M Hill may have conservatively designed the EPs with excess capacity.

~~material/mass balance design shall be designed to exceed a minimum of 99% recovery efficiency.~~

(R4, tab 10 at 10,353) (Strikeout in original) On the one hand, reducing the recovery rate benefitted contractors by reducing the risk and cost of designing such an efficient WTP. On the other hand, reducing the recovery rate increased the amount of wastewater flowing into the EPs. That meant that the contractor had to modify another EP parameter—such as increasing the EP surface area—in order to maintain a balance between inflows and net evaporation. (App. supp. R4, tab 153 at 236, tr. 1/44, 4/178-79, 211)

2. Average Daily Flow

20. The contract documents did not require CDM to use any particular ADF (R4, tab 9).

21. The contract documents stated that the CH2M Hill drawings were based upon a 3.0 mgd ADF. However, the contract documents stated that "[a]s designer's collect data and develop the actual system, all numerical data used to support the design shall be from the Contractor's inquiries and research." (R4, tab 9 at 2,107)

22. The contract documents stated that the current ADF was 2.44 mgd, and that the ADF in 2010 was 2.26 mgd (R4, tab 9 at 1,727, 4,332). Dr. Beth Gross—CDM's EP expert—opined that it was industry standard to use historic flow data to develop the ADF (app. supp. R4, tab 180 at 540, tab 187 at 576; tr. 3/40, 43-44, 67-68). We find this uncontested testimony credible.

23. As noted above, Amendment 8 eliminated one reference to the 2.0 to 2.5 mgd ADF. However, it continued to provide that, in measuring actual daily demand performance, "the flowrates ranges include: Average flow in the range of 2.0 to 2.5 MGD for well production rates; minimum flows at 0.8 MGD[;] and maximum flowrates near 5.4 MGD." (R4, tab 10 at 10,354)

3. Evaporation Coefficient and Water Depth

24. The contract documents did not require CDM to use any particular evaporation coefficient for any particular water depth (tr. 4/192).

C. Performance

25. After award, CDM submitted several EP designs, including a 10 percent design, a 65 percent design, and a 100 percent design (R4, tab 4 at 109). CDM used the CH2M Hill drawings to create its EP design, assuming that none of the EPs were backup EPs (tr. 2/168).

26. Dr. Gross opined that it was standard industry practice to construct WTPs without a backup EP. Dr. Gross testified that she was unaware of any other WTPs that have used a backup EP. (App. supp. R4, tab 180 at 537; tr. 3/25-26) However, Dr. Gross conceded that she "could not find any reference in the technical literature to a standby pond" (app. supp. R4, tab 180 at 541). Nor had she ever seen another contract that has used the term standby EP (tr. 3/116). We find that this term as used within the trade does not differ from the standard dictionary definition found in the New Oxford American Dictionary, 1699 (3rd ed. 2010), discussed in greater detail below.

27. The 65 percent and 100 percent designs used a 3.0 mgd ADF, a five-foot maximum water depth, a three-foot average water depth, and a 0.8 evaporation coefficient (R4, tab 4 at 109).

28. On March 6, 2013, CDM submitted a technical memorandum explaining its design. Regarding the evaporation coefficient and water depth, the March 6, 2013 memorandum explained that:

> In general, a conservative factor of 0.7 is typically used to convert pan data to freshwater "*lake*" evaporation rates, whereas greater coefficients are used for smaller, shallower ponds. This coefficient generally ranges from 0.7 to 0.95, depending on the size of the pond or lake (see attached [pages] from "Design Characteristics for Evaporation Ponds in Wyoming"). For purposes of sizing the evaporation ponds, a conservative pan evaporation coefficient of 0.8 was applied by CDM Smith to account for the smaller pond size, shallow depths (generally less than 3 feet) and warm water temperatures (including average discharge temperature to the EPs of 90 [degrees Fahrenheit].

(R4, tab 47 at 14,891) The *Design Characteristics for Evaporation Ponds in Wyoming* report referenced above indicated that a reasonable coefficient for EPs in semi-arid conditions was 0.7 to 0.95, depending upon EP size (*id.* at 14,902). The March 6, 2013

memorandum proposed using a five-foot maximum water depth and a three-foot average water depth (*id.* at 14,890-93).

29. The Corps rejected the 10 percent design, the 65 percent design, the 100 percent design, and the March 6, 2013 technical memorandum (supp. R4, tab 105 at 73; tr. 4/123, 133-34). In particular, the Corps rejected the evaporation coefficient. Moreover, the Corps rejected the designs and memorandum because they lacked a backup EP—meaning an EP that was operational, but not in use unless or until there was an emergency.[12] (R4, tab 40; supp. R4, tab 105 at 73, tr. 1/112-13, 118, 2/194)

30. Converting one of the three EPs to a backup EP, while maintaining three equally-sized EPs, would have required CDM to increase the surface area to 17.2 acres, which would have exceeded the EA (app. supp. R4, tab 175; tr. 1/113-15).

31. After several discussions, CDM submitted a revised 100 percent design in a May 17, 2013 memorandum (R4, tab 37; tr. 1/117-21).

32. The May 17, 2013 memorandum proposed three EPs—with one being rotated out of service every year—on 11 acres. To achieve those parameters, CDM reduced the ADF from 3.0 mgd to 2.25 mgd. The justification the May 17, 2013 memorandum offered for using the 2.25 mgd ADF was that it was "mid '2.0 to 2.5 MGD' from Appendix A." (R4, tab 36 at 14,503-07; tr. 1/121-24) Dr. Gross opined that it was reasonable for CDM to decrease the ADF from 3.0 mgd to 2.25 mgd because of the multiple measures of conservativism that the Corps added to the contract (app. supp. R4, tab 180 at 540, tab 187 at 576; tr. 3/40, 43-44, 67-68). The proposed evaporation coefficient was 0.8. While the proposed maximum water depth was five feet, the May 17, 2013 memorandum indicated that the water depth never actually would exceed three feet (R4, tab 35 at 14,503-07).

33. The Corps responded to the May 17, 2013 memorandum in two letters dated May 20, 2013, and May 22, 2013. Those letters questioned the lack of a standby EP, the ADF, and the evaporation coefficient relative to the water depth. (R4, tabs 33, 35) Regarding the ADF in particular, the letters explained that:

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[12] CDM often refers to an operational, but not in use, EP as a "spare" EP (*see, e.g.*, app. br. at 3). However, as CDM correctly recognizes, the term "spare" is interchangeable with the term "backup" (*id.* at 31, 50; *see also* ROGET'S INT'L THESAURUS, 822, 1222 (4th ed. 1977) (identifying both the term backup and spare as being synonymous with the term substitute)). For ease of reference and consistency, we use the term backup EP—instead of spare EP—to describe the required EP that is operational, but not in use except in an emergency.

> The contract states that the current average daily flow is 2.44 mgd and the average daily flow range of well production is 2.0 to 2.5 mgd. This is based on historical data for the Water Treatment Plant (WTP) and not listed as the design capacity to support future demands. WTP design manuals and regulatory permits...indicate that new treatment systems be sized based on future demands.

(R4, tab 35 at 14,498-99) Regarding the evaporation coefficient and water depth in particular, the letters explained that "[s]ince the 0.8 coefficient is assumed based on shallow depths (generally less than 3 feet) being maintained [in the] ponds, and the design actually reaches 5 foot depth without precipitating solids, it is questionable that the 0.8 coefficient would still be appropriate" (R4, tab 33 at 14,494). Dr. Gross opined that CDM's use of a 0.8 evaporation coefficient for EPs whose water depth generally was less than three feet—but occasionally was up to five feet—was appropriate, and that the Corps' directive that an evaporation coefficient of 0.8 could be used only for water depths of three feet or less was not supported by technical data or scientific evidence (app. supp. R4, tab 180 at 539; tr. 3/38-40). We find this testimony credible.

34. On May 22, 2013, CDM sent the Corps a notification of change. In the notification of change, CDM stated that:

> The essential issues center on the insistence by the Government that the appropriate design parameters are: 3 MGD Average Daily Flow (ADF) and that the Government's definition of "standby" does not allow for use of the "standby" pond during routine maintenance and cleaning of a pond. This is inconsistent with the accepted engineering definition of 2 + 1 Standby. Also, the Government is not accepting our evaporation rate design factors that are based upon site specific data and literature describing standard industry practices.

(R4, tab 34 at 14,496)

35. The Corps responded by letter dated May 29, 2013. The May 29, 2013 letter "constitutes formal direction" to meet three relevant design elements. First, the Corp directed CDM to include one backup EP. Second, the Corps directed CDM to use a 3 mgd ADF. Third, the Corps directed CMD to use:

> Evaporation pond factors of 0.8 for pan evaporation coefficient, if operated with smaller pond size and shallow depth of 3' or less, and actual calculated salinity correction

> factor (both as stated in 17 May Evaporation Ponds Design Analysis memo). If design size or operation varies, please vary factors as necessary.

(R4, tab 32 at 14,492)

36. CDM responded by submitting a final design package. CDM reduced the surface area required for the EPs from 17.2 acres to 13.5 acres by revising its design to contain 8 EPs that would be in day-to-day use and one backup EP. Doing so, CDM was able to meet the Corps' ADF, evaporation coefficient, and water depth requirements. (R4, tabs 172, 175; tr. 1/129-30) The 13.5 acres did not require an EA amendment because CDM moved other equipment to keep the entire WTP within the EA (tr. 1/133, 4/139-40).[13]

37. The Corps accepted the final design package (tr. 1/136).

38. The ADF has decreased over the last five years. The year prior to the hearing, the ADF was 1.7 mgd. (Tr. 1/142-43)

III. Facts Unique to the Generator Appeals (ASBCA Nos. 60455 and 60669)

A. The Southern California Edison Electrical Service Requirements

39. In 2006, SCE published the Electrical Service Requirements (ESR). The ESR were "issued for the guidance and assistance of electrical contractors...engaged in the installation and design of electrical service wiring and service equipment." (R4, tab 51 at 15,022) The ESR were guidelines with which SCE customers in Southern California had to comply in order to receive services. However, SCE often waived the ESR. (Tr. 2/64-65, 108-10, 4/32)

40. Paragraph 12 of the ESR stated that:

> When a customer has a standby generator to supply all of their load during an Edison system outage, the generator

[13] In the final design, there were only two lime sludge lagoons, both of which were in use. Antonia Ortiz—the Corps' technical design manager and an expert in WTPs—testified that the Corps initially complained about both lagoons being in use, but "that just kind of fell by the wayside." Because liquid waste can go from the lagoons to the EP, the lagoons—unlike the EPs—are not a critical component whose failure will cause the WTP and Fort Irwin to shut down. CDM provided a backup unit for the other items for which Table 8 required a standby unit. (Tr. 1/133, 4/152)

> shall be connected to the load by a double-throw switch or automatic relays and switches which will isolate the load from the Edison system before the generator is connected to the load. When the Edison service is re-energized, the generator will then be isolated from the load before the load is reconnected to the Edison system.

(R4, tab 51 at 15,023)

B. Contract Documents

41. The contract documents required a standby generator connected to the normal site power by an automatic transfer switch (ATS) (R4, tab 9 at 2,161). The generator connection design had to satisfy two potentially relevant requirements.

42. First, under appendix A, § 9.1.3, "[m]ultiple generators and transfer switches will be required when physical distances exceed 200 feet to load" (R4, tab 9 at 2,161).

43. Second, section 01 10 10 provided that "[a]ll work shall be designed and constructed to meet all state and federal codes, standards and law" (R4, tab 9 at 1,732). Similarly, section 01 10 10 stated that "[t]he applicable building codes and standards shall be used as the minimum criteria to develop the construction documents for areas of work not specifically defined" (*id.*). Regarding the electrical system in particular, appendix A stated that:

> All electrical equipment shall be installed in accordance with NFPA 70 (National Electrical Code), ANSI C2 (National Electrical Safety Code), California's Energy Efficiency Standards for Residential and Nonresidential Buildings Title 24, Part 6, of the California Code of Regulations, all applicable UFC's, ETL's, TM's and other DOD and national standards as applicable to the system under consideration.

(*Id.* at 2,159)

44. The RFP initially contained the CH2M Hill drawings, but not the SCE drawings (tr. 1/146-47). The CH2M Hill drawings showed a primary 12 kilovolt (kv) network and a secondary 480 volt (v) network (tr. 1/160-61, 236, 2/22). According to the CH2M Hill drawings, electricity would come into the WTP from an SCE substation on the primary network during normal operations. After the electricity passed through an ATS and traveled along the primary network, transformers would step the voltage down

to 480v, so that the electricity could travel on the secondary network to where it was needed. If the ATS sensed that the power from SCE was interrupted, it would send a signal to the 480v generator to start. The generator was connected to a transformer, which increased the voltage to 12kv. The transformer then connected to the ATS, through which the electricity would flow to the primary network. The ATS ensured that electricity only came from one source at a time, and did not back feed from the generator onto the SCE system. (R4, tabs 136, 145; tr. 1/147-50, 218)

45. There was a pre-bid request for information (RFI) regarding the CH2M Hill drawings from another offeror besides CDM. The RFI indicated that appendix A of the RFP "states 'Multiple generators and transfer switches will be required when physical distance exceed 200 feet to load.' The initial concept drawings by CH2M (90-E-501) indicate one generator which connected into the SCE distribution system. Please confirm that Appendix A takes precedence over the CH2M design." The RFI did not indicate that there was an actual conflict because it did not state that the physical distance from the generator to the load on the CH2M Hill drawing exceeded 200 feet. The Corps' response did not acknowledge a conflict either. Rather, the Corps merely responded, "[p]lease see Section 01 10 10 paragraph 2.8 Conflicts in RFP Criteria for precedence required." (App. supp. R4, tab 148 at 220; tr. 2/54-55)

46. Nor may it be inferred from the Corps' response to the RFI that it read the RFI as establishing that there was a conflict because, the same day that the Corps responded to the RFI, it amended the RFP to add the SCE drawings, which were substantially similar to the CH2M Hill drawings. By issuing drawings showing a single generator using a single ATS and primary network to distribute electricity after the RFI quoting appendix A, § 9.1.3, the Corps demonstrated that it did not read the RFI as establishing that such a design conflicted with appendix A, § 9.1.3. (App. supp. R4, tab 152; tr. 1/146-47, 153-55, 2/16-19)

47. That conclusion was correct. The SCE drawings were consistent with appendix A, § 9.1.3 because the distance to the load was not an issue when using the primary network (tr. 4/47-48). Moreover, while the SCE drawings only showed one generator and one ATS, the distance from the generator to the ATS—which was the load—was only about 100 feet (app. supp. R4, tab 152; tr. 1/153-56, 2/16-20, 89-90).

C. Performance

48. After award, CDM submitted a 10 percent electrical design. The design followed the concept drawings. In particular, the design—like the drawings—showed one generator connected to the primary network by one ATS. (R4, tab 6 at 294; app. supp. R4, tab 162; tr. 1/157-58, 2/95) However, the design did not contain any distance measurements. In particular, it did not include any measurement of the distance from the generator to the load (R4, tab 6 at 294; tr. 2/32, 4/54).

49. The fact that the concept drawings and 10 percent design showed the generator connected to the primary network did not conflict with ESR ¶ 12 because the drawings and the design showed the generator connected to the load with an ATS that isolated the load from the SCE system before the generator was connected to the load (tr. 1/227-28, 2/30, 71-72, 144, 146).[14] Indeed, it was reasonable to interpret the ESR in light of the SCE drawings because the SCE drawings constituted SCE applying its guidelines to this particular electrical system (tr. 1/232, 2/60, 127, 130).

50. Representatives from CDM, the Corps, and SCE attended a meeting to discuss the 10 percent design. As the Corps subsequently documented, the SCE representative indicated at the meeting that:

> The emergency generator will not be able to be installed as originally shown. At the time of the original drawing years ago it was not necessary to submit the information through the generation group. Per SCE's new standards this installation would have to be submitted to the generation group and this type of installation will not be accepted.

The Corps did not mention ESR ¶ 12 or appendix A, § 9.1.3. (R4, tab 6 at 295)

51. In response, CDM recommended using the secondary network to feed electricity from the generator to two locations, each with an ATS. Using the secondary network raised concerns about the distance to the load. (Tr. 4/47-48) Moreover, the proposed design violated appendix A, § 9.1.3 because one of the two locations at which the secondary network would feed into the load was more than 200 feet from the generator. Nevertheless, the Corps approved the proposed design. (App. supp. R4, tab 166 at 398; tr. 1/162-63, 218, 2/27-29, 4/51)

IV. Procedural History

52. Abe Nejad—CDM's scheduling expert—prepared a time impact analysis on January 27, 2014, which showed that the rejection of the EP caused a 51-day delay to the WTP completion date (app. supp. R4, tab 178; tr. 3/144-45) However, Mr. Nejad conceded that, if there was a Corps-caused delay and a CDM-caused delay in the EP design, then that would constitute concurrent delay that would not be compensable (tr. 3/199, 4/10).

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[14] Derrick Collier—the Corps' electrical engineer for the project—testified that the 10 percent design violated ESR ¶ 12 because "you can't utilize the primary distribution system and be isolated from it" (tr. 4/54). That testimony is inconsistent with ESR ¶ 12, which acknowledged that the load can be isolated from the SCE system by an ATS (R4, tab 51 at 15,023).

53. CDM subsequently submitted REAs regarding the EPs (R4, tabs 4, 29) and the generator (R4, tab 6).

54. On July 22, 2015, CDM submitted a claim for changes in the EPs and the generator design (R4, tab 3).

55. On May 6, 2016, the CO issued a final decision, rejecting the generator claim (R4, tab 2). The CO did not issue a final decision on the EPs claim, and that claim is deemed denied.

56. These appeals followed.

DECISION

CDM has the burden of proving that there was a constructive change or a defective specification by a preponderance of the evidence. *Amos & Andrews Plumbing, Inc.*, ASBCA No. 29142, 86-2 BCA ¶ 18,960 at 95,738 (citing *Teledyne McCormick-Selph v. United States*, 588 F.2d 808 (Ct. Cl. 1978)). As discussed below, it has satisfied that burden in part, and has not satisfied it in part.

I. Evaporation Ponds (ASBCA No. 60454)

In particular concerning the EPs, CDM has met its burden of showing a constructive change regarding the ADF, evaporation coefficient, and water depth, but has not met its burden regarding the backup EP. In order to establish that there was a constructive change, a contractor must show that: (1) an official compelled it to perform work not required under the terms of the contract; (2) the official directing the change had contractual authority to alter the contractor's duties unilaterally; (3) the official enlarged the contractor's performance requirements; and (4) the added work was not volunteered, but resulted from the official's direction. *Alfair Dev. Co.*, ASBCA Nos. 53119, 53120, 05-2 BCA ¶ 32,990 at 163,515. "Where as a result of the Government's misinterpretation of contract provisions a contractor is required to perform more or different work, or to higher standards, not called for under its terms, the contractor is entitled to equitable adjustments pursuant to the Changes Article, including extensions of time." *Emerson-Sack-Warner Corp.*, ASBCA No. 6004, 61-2 BCA ¶ 3248 at 16,827.

In determining what work a contract requires, "clear and unambiguous [contract provisions] must be given their plain and ordinary meaning, and we may not resort to extrinsic evidence to interpret them." *Coast Fed. Bank, FSB v. United States*, 323 F.3d 1035, 1040 (Fed. Cir. 2003) (en banc) (citations omitted). "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). "To show an ambiguity it is not enough that the parties differ in their respective interpretations of a contract term. Rather, both interpretations must fall within a 'zone of reasonableness.'" *NVT Techs., Inc. v. United States*, 370 F.3d 1153, 1159 (Fed. Cir. 2004). As we have held:

> Determining whether...differing interpretations are reasonable begins with an examination of the plain language of the contract, construing the contract so as to effectuate its spirit and purpose giving reasonable meaning to all parts of the contract. In order to fall within the zone of reasonableness, a party's interpretation must be logically consistent with the contract and the parties' objectively ascertainable intentions.

ECCI-C Metag, JV, ASBCA No. 59031, 15-1 BCA ¶ 36,145 at 176,418 (citations and quotations omitted).

"[T]he language of a contract must be given that meaning that would be derived from the contract by a reasonably intelligent person acquainted with the contemporaneous circumstances." *Hol-Gar Mfg. Corp. v. United States*, 351 F.2d 972, 975 (Ct. Cl. 1965). Thus:

> We must seek to put ourselves in the position of appellant at the time he bid on the contract, i.e., we must seek the meaning that would be attached to the language by a reasonably intelligent bidder in the position of appellant, who would be expected to have the technical and trade knowledge of his industry and to know how to read and interpret technical engineering specifications and perform construction work in accordance with such specifications.

Adrian L. Roberson, d b a Roberson Construction Co., ASBCA No. 6248, 61-1 BCA ¶ 2857 at 14,915.

"Trade practice and custom illuminate the context for the parties' contract negotiations and agreements." *Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 752 (Fed. Cir. 1999). Before we can conclusively declare a contract ambiguous or unambiguous, we must consult the context—including trade practice and custom—in which the parties exchanged promises. However, a contracting party cannot invoke trade practice and custom to create an ambiguity where a contract was not reasonably susceptible to differing interpretations at the time of contracting. "Trade practice

evidence is not an avenue for a party to avoid its contractual obligations by later invoking a conflicting trade practice." *Id.*

As discussed below, the contract unambiguously required a backup pond, but did not require a particular ADF or evaporation coefficient for a particular water depth. Thus, there was no constructive change regarding the backup EP, but there was a constructive change regarding the ADF, evaporation coefficient, and water depth.

A. Backup Evaporation Pond

There was not a constructive change when the Corps compelled CDM to provide a backup EP that was operational, but not in use except in an emergency because the plain language of the contract documents required CDM to provide at least one backup EP. Table 8 required at least one "STANDBY" EP (finding 14). The dictionary definition of the word "standby" is "readiness for duty or immediate deployment....a person or thing ready to be deployed immediately, especially if needed as a backup in an emergency." NEW OXFORD AM. DICTIONARY, 1699 (3rd ed. 2010). Thus, by using the word standby to modify the word pond, Table 8 plainly required a backup EP that was operationally ready for duty, but not yet deployed unless or until needed for an emergency.

CDM correctly argues that context and the parties' intentions may be more important than dictionary definitions in determining plain meaning (app. br. at 43); *Metric Constructors*, 169 F.3d at 752. However, the context in which the parties used the term standby—namely the CH2M Hill drawings and Table 8's recovery rates—confirms that they intended the term standby to have its usual meaning as a backup. The CH2M Hill drawings showed three EPs, covering a total area of 10.8 acres (finding 16). When read in the context of the 99.6 or 99.7 percent recover rate provided for in Table 8—which was based upon the CH2M Hill drawings—a reasonably intelligent contractor would understand that at least one of the CH2M Hill drawings' three EPs was a backup EP (finding 17).

As context, CDM points to the fact that three EPs capable of balancing inflows and net evaporation would not fit within the 11 acres for which there was an EA if one of the EPs was a backup EP (app. br. at 28-29; app. reply br. at 8-9). That argument incorrectly assumes that the contract documents limited CDM to three EPs. While Table 8 indicated that the number of EPs was "2 + 1 STANDBY," the contract documents also stated that "[w]hat is identified in Table 8 is the Government's expected minimum unit operations necessary.... [A]dditional units, if required to meet the criteria herein, shall be provided." (Finding 14) Thus, nothing in the contract documents prohibited CDM from including more than three EPs in its design. And indeed, CDM ultimately was able to accommodate a backup EP within the EA by

using nine EPs (finding 36). As a result, the area available within the EA was consistent with a backup EP.

Nor did the term standby have a customary meaning within the trade that differs from the dictionary definition. On the contrary, CDM's EP expert testified that she was unaware of any reference to the term standby EP in the technical literature or its use in any other contracts. Rather, she opined that it was not standard industry practice to construct EPs with a backup EP. (Finding 26) However, "evidence that some practitioners customarily accomplish tasks differently from the manner called for by the contract will not overcome the clear language of the contract." *Metric Constructors*, 169 F.3d at 752.[15]

CDM also argues that Table 8 merely required standby capacity in the EPs (app. br. at 45). That reading of Table 8 does not fall within the zone of reasonableness. Table 8 does not even mention capacity. Rather, the word standby modifies the word pond. (Finding 14) Thus, by its plain language, Table 8 required one standby EP; not any particular standby capacity.

CDM also relies upon the Environmental Protection Agency's (EPA's) definition of the word standby as "the period of time that an impoundment is not accepting uranium byproduct material or tailings but has not yet entered final closure" (app. br. at 46; 40 C.F.R. § 61.251(k)). However, that definition is consistent with the dictionary definition of the word standby, albeit applied to modify a period of time instead of a physical structure (*id.*). The EPA definition indicates that the standby period—i.e., the period of time that an impound is ready for duty, but not yet deployed unless or until needed for an emergency—is when it is not accepting uranium by-product or tailings but has not yet entered final closure under EPA regulations. Because the word standby modifies a physical structure (i.e., an EP) instead of a period of time here, the plain meaning of the contract documents required CDM to provide a backup EP that was operationally ready for duty, but not yet deployed unless or until needed for an emergency. Thus, there was no constructive change when the Corps compelled CDM to provide a backup EP.[16]

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[15] It is not our place to second-guess the soundness of the Corps' decision to require a backup EP. *Savantage Fin. Servs., Inc. v. United States*, 595 F.3d 1282, 1286 (Fed. Cir. 2010). In any event, we note that, while the probability of an EP failure might be low, the impact of any such failure likely would be catastrophic, leading to the closure of Fort Irwin (finding 12).

[16] CDM also points to the fact that it did not provide a backup lime sludge lagoon, despite the fact that Table 8 called for a standby lagoon (app. br. at 50). However, as the Corps explains, it objected to the lack of a backup lagoon, but did not insist upon strict compliance with the contract requirements in that case because, unlike the EPs, the lagoons were not a critical component whose

B. Average Daily Flow

There was a constructive change when the Corps compelled CDM to utilize a 3.0 mgd ADF. The contract documents stated that the CH2M Hill drawings were based upon a 3.0 mgd ADF, but it did not require CDM to use that—or any particular—ADF (finding 21). On the contrary, the contract documents stated that the CH2M Hill drawings were FIO, and it was up to the contractor to determine sizing (finding 3). Because the contract documents did not require the use of any particular ADF, the Corps constructively changed the contract documents when it compelled CDM to use a 3.0 mgd ADF. Indeed, because the contract documents required CDM to use an ADF in the range of 2.0 to 2.5 mgd to measure actual daily demand, it was reasonable for CDM to conclude that it could use an ADF within that range—namely a 2.25 mgd ADF (finding 23).

The Corps argues that CDM's constructive change claim regarding the ADF must fail because it was CDM—not the Corps—that changed the ADF from the 3.0 mgd that CDM had proposed in its 65 percent and 100 percent designs to the 2.25 mgd that CDM proposed in its revised 100 percent design (gov't br. at 26; gov't reply br. at 7). That is beside the point. A constructive change occurs when the government compels a contractor to perform work not required under *the terms of the contract. Alfair Dev.*, 05-2 BCA ¶ 32,990 at 163,515. Thus, the relevant change was when the Corps required CDM to use a 3.0 mgd ADF that was not called for by the contract documents (findings 20, 35). It was not when CDM changed the ADF from an earlier design. The earlier ADFs proposed by CDM were not contract requirements. On the contrary, the Corps had rejected those earlier designs (finding 29). Absent a contract requirement or an approved design to the contrary, CDM was free to select an ADF, so long as it was sound and supported, which was the case here.[17]

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failure likely would lead to the closure of Fort Irwin. Moreover, for all the other design elements requiring a standby unit, CDM provided a backup unit. (Finding 36) CDM argues that those elements are different from EPs because they are mechanical and thus prone to failure (app. br. at 50). However, nothing in the language of the contract documents evidences a mutual intent to draw such a distinction.

[17] The Corps does not—and could not—argue that the 2.25 mgd ADF was unsupported or unsound. On the contrary, Dr. Gross testified that the 2.25 mgd ADF was reasonable, and the evidence shows that the ADF actually has been lower than 2.25 mgd (findings 33, 38). Moreover, the contract documents contained historical data showing that the ADF was below 3.0 mgd ADF. Dr. Gross testified that historical data is an industry-accepted basis for determining ADF. (Finding 22) Further, the contract documents themselves supported a 2.25 mgd

C. Evaporation Coefficient and the Water Depth

There also was a constructive change when the Corps compelled CDM to use a 0.8 evaporation coefficient only if the maximum water depth was three feet or less.[18] The contract documents did not require CDM to use any particular evaporation coefficient for any particular water depth (finding 24). Therefore, the Corps constructively changed the contract documents when it compelled CDM to use a 0.8 evaporation coefficient only if the maximum water depth was three feet or less.[19]

As with the ADF, the Corps argues that it was CDM—not the Corps—that changed the evaporation coefficient relative to the water depth from that proposed by CDM in its March 6, 2013 memorandum (gov't br. at 32). That argument is even weaker than the Corps' argument regarding the ADF. First, it suffers from the same defect discussed above regarding the ADF. Namely, it fails to recognize that the relevant change for purposes of establishing a constructive change was when the Corps compelled CDM to perform work not required by the contract documents; not when CDM purportedly changed the coefficient relative to the water depth from that CDM proposed in the rejected March 6, 2013 memorandum.

ADF by requiring CDM to use an ADF in the range of 2.0 to 2.5 mgd to measure actual daily demand (finding 23). That CDM had proposed a more conservative 3.0 mgd ADF earlier does not establish that the subsequent 2.25 mgd ADF was unsound because the revised 100 percent design increased conservativism elsewhere (findings 27, 32).

[18] The Corps improperly seeks to segregate CDM's evaporation coefficient claim from its water depth claim in an attempt to argue that CDM voluntarily used a 0.8 evaporation coefficient (gov't reply br. at 2-3, 8). The March 6, 2013 memorandum voluntarily proposed using a 0.8 evaporation coefficient for a maximum water depth of five feet (finding 28). The Corps rejected that proposal, directing CDM to use a 0.8 evaporation coefficient only if the maximum water depth was three feet or less (findings 29, 33, 35). Thus, it was not the evaporation coefficient alone that was compelled, but rather the evaporation coefficient *relative to the water depth.*

[19] The Corps does not—and could not—argue that the use of a 0.8 evaporation coefficient for EPs with a maximum water depth of five feet was unsound or unsupported. On the contrary, Dr. Gross testified that a 0.8 evaporation coefficient for EPs with a maximum water depth of five feet was reasonable (finding 33). Moreover, CDM supported its evaporation coefficient by citing the *Design Characteristics for Evaporation Ponds in Wyoming*, which indicated that a reasonable evaporation coefficient was in the range of 0.7 and 0.95 (finding 28).

Moreover, the Corps' argument regarding the evaporation coefficient and water depth is even weaker than its argument regarding the ADF because it was the Corps—not CDM—that sought to change the evaporation coefficient relative to the water depth from that proposed in CDM's rejected proposal. In the March 6, 2013 memorandum, CDM proposed using a 0.8 evaporation coefficient for EPs that had a *maximum* water depth of *five* feet and a *usual* water depth of *three* feet or less (finding 28). It was the Corps—not CDM—that changed that criteria by compelling CDM to use a 0.8 evaporation coefficient only for EPs that had a *maximum* water depth of *three* feet or less (findings 29, 33, 35). The Corps justified that requirement by stating that, "[s]ince the 0.8 coefficient is assumed based on shallow depths (generally less than 3 feet) being maintained [in the] ponds, and the design actually reaches 5 foot depth without precipitating solids, it is questionable that the 0.8 coefficient would still be appropriate" (finding 33). However, in that statement, the Corps improperly compared apples (i.e., the March 6, 2013 memorandum's proposed five foot *maximum* water depth) with oranges (i.e., the March 6, 2013 memorandum's proposed three feet or less *general* or *usual* water depth) to call into question the March 6, 2013 memorandum's evaporation coefficient by creating an illusory inconsistency. Because the Corps was compelling CDM to use an evaporation coefficient relative to the water depth that was not called for by the contract documents—or even by CDM's rejected March 6, 2013 design memorandum—there was a constructive change.

The Corps also argues that CDM failed to provide adequate notice (gov't br. at 29-32). That is incorrect. While the May 22, 2013 notice of change focused upon the standby EP and ADF issues, it stated, "[a]lso, the Government is not accepting our evaporation rate design factors" (finding 34). That provided adequate notice that CDM considered the evaporation coefficient relative to the water depth requirement to be a constructive change that CDM did not voluntarily perform.

Similarly, the Corps' argument that CDM voluntarily changed the evaporation coefficient relative to the water depth because the Corps merely provided feedback instead of direction is incorrect (gov't reply br. at 18). After the notice of change, the Corps issued the May 29, 2013 letter, which—by its own terms—"constitutes formal *direction*" to use a 0.8 evaporation coefficient only for water depths of three feet or less (finding 35) (emphasis added). Therefore, CDM did not voluntarily use a 0.8 coefficient only for water depths of three feet or less.[20]

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[20] There was no compensable delay because there was concurrent contractor-caused delay (i.e., failing to include a backup EP) that was intertwined with the government-caused delays (i.e., changes to the ADF, coefficient, and water depth requirements) (finding 52). *Sauer, Inc. v. Danzig*, 224 F.3d 1340, 1348 (Fed. Cir. 2000); *Celesco Indus., Inc.*, ASBCA No. 21928, 81-2 BCA ¶ 15,260 at 75,556. Whether CDM will be able to segregate any increased costs it

II. The Standby Generator (ASBCA Nos. 60455 and 60669)

CDM is entitled to an equitable adjustment under the Changes clause because the Corps provided defective specifications regarding the generator. "When the government provides a contractor with defective specifications, the government is deemed to have breached the implied warranty that satisfactory contract performance will result from adherence to the specifications." *Alliance Gen. Contractors, LLC*, ASBCA No. 54979, 09-1 BCA ¶ 34,030 at 168,327 (quoting *Essex Electro Engineering, Inc. v. Danzig*, 224 F.3d 1283, 1289 (Fed. Cir. 2000)). Here, by providing the concept drawings, the Corps warranted that satisfactory performance would result from adherence to those drawings (findings 44, 46). The Corps breached that warranty when it subsequently rejected a design that followed the concept drawings (finding 50).

The Corps argues that the concept drawings were not specifications because the contract documents did not require CDM to comply with those drawings (gov't br. at 38). However, we rejected that argument in *M.A. Mortenson Company*, ASBCA No. 39978, 93-3 BCA ¶ 26,189 at 130,367 (holding that concept drawings create a warranty, even if the contract does not require a contractor to follow the drawings). Indeed, the conclusion that the concept drawings created a warranty is even stronger here than it was in *Mortenson* because, unlike in that case, the contract documents required the contractor to use the drawings to price its proposal (finding 4).[21]

The Corps also argues that it was unreasonable for CDM to follow the concept drawings because appendix A, § 9.1.3 trumped the concept drawings under the Order of Precedence clause (gov't br. at 36-37). Under the Order of Precedence clause, appendix A took priority over the concept drawings only if there was an inconsistency (finding 5). That clause is not applicable here because the concept drawings are consistent with appendix A, § 9.1.3. Appendix A, § 9.1.3 stated that "[m]ultiple generators and transfer switches will be required when physical distances exceed

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incurred as a result of the ADF, evaporation coefficient, and water depth changes from any increased costs it incurred as a result of its failure to include a backup EP is an issue of damages that is not addressed in this opinion.

[21] It is true that the contract documents indicated that the concept drawings were FIO, and were made available to CDM for its use without any warranty of usefulness or suitability of purpose (finding 3). However, "[g]overnmental disclaimers of responsibility for the accuracy of specifications which it authors are viewed with disdain by the courts." *Edsall Constr. Co.*, ASBCA No. 51787, 01-2 BCA ¶ 31,425 at 155,181 (quoting *Bromley Contracting Co.*, ASBCA No. 14884 *et al.*, 72-1 BCA ¶ 9252 at 42,902); *see also Metcalf Constr. Co. v. United States*, 742 F.3d 984, 995-96 (Fed. Cir. 2014).

200 feet to load" (finding 42). The concept drawings' use of a single generator and ATS was consistent with appendix A, § 9.1.3 because the distance from the generator to the load was less than 200 feet (finding 47). Moreover, the Corps' reliance upon appendix A, § 9.1.3 is unavailing in light of the facts that the rejected 10 percent design did not even show distances, the Corps did not cite appendix A, § 9.1.3 as a basis for rejecting the 10 percent design, and the design the Corps ultimately approved violated appendix A, § 9.1.3 because it only had one generator that was over 200 feet from the load (findings 48, 50-51).

Similarly, the Corps argues that ESR ¶ 12 trumped the concept drawings under the Order of Precedence clause (gov't br. at 36-37). That argument is even weaker than its argument regarding appendix A, § 9.1.3. First, it suffers from the same defect discussed above regarding appendix A, § 9.1.3. Namely, the Order of Precedence clause does not apply because ESR ¶ 12 was consistent with the concept drawings. The Corps is unclear precisely how it claims the concept drawings conflicted with ESR ¶ 12 (*id.*). To the extent that it is claiming that the concept drawings' use of a single ATS or the primary network to distribute electricity was inconsistent with ESR ¶ 12, that argument would fail because ESR ¶ 12 did not require the use of multiple ATSs or the secondary network. ESR ¶ 12 provided that:

> When a customer has a standby generator to supply all of their load during an Edison system outage, the generator shall be connected to the load by *a* double-throw *switch* or automatic relays and switches which will isolate the load from the Edison system before the generator is connected to the load. When the Edison service is re-energized, the generator will then be isolated from the load before the load is reconnected to the Edison system.

(Finding 40) (Emphasis added) That language expressly recognized that a single double-throw switch was acceptable. Nor did that language prohibit CDM from connecting the generator to the primary network. (*Id.*) Further, SCE sometimes waived the ESR's provisions (finding 39). Therefore, the SCE drawings can be read consistently with ESR ¶ 12 as either the SCE applying ESR ¶ 12 to this project, or waiving any inconsistent provisions of ESR ¶ 12 (finding 49). Indeed, in its contemporaneous communications with CDM, the Corps did not cite ESR ¶ 12 as the basis for rejecting the 10 percent design (finding 50).

Moreover, even if ESR ¶ 12 were inconsistent with the concept drawings, it would not trump the concept drawings under the Order of Precedence clause. Under the Order of Precedence clause, appendix A and section 01 10 10 took priority over the concept drawings if there was a conflict (finding 5). However, unlike with appendix A, § 9.1.3, appendix A and section 01 10 10 did not require compliance with ESR

¶ 12. Appendix A and section 01 10 10 required compliance with "all state and federal codes, standards and law," "applicable building codes and standards," and "DOD and national standards" (finding 43). Building codes are "[l]aws, ordinances, or government regulations." BLACK'S LAW DICTIONARY, 195 (6TH ed. 1990). The ESR was not a state or a federal code, standard or law; applicable law ordinance, or government regulation; or a DoD standard because it was issued by a utility—not a government. Nor was it a national standard because it only applied to SCE's customers in Southern California. (Findings 3, 39) Further, the Corps does not even attempt to define a "building standard," or show that the ESR was a building standard (gov't br. at 37; gov't reply br. at 19-21). Therefore, appendix A and section 01 10 10 did not require compliance with ESR ¶ 12.

The Corps finally argues that its response to the RFI put CDM on notice of the Corps' belief that there was a conflict between the CH2M Hill drawings and appendix A, § 9.1.3 (gov't br. at 2, 38). However, the Corps' response to that RFI did not indicate a belief that there was a conflict. On the contrary, a reasonable contractor could infer that the Corps believed that the electrical design shown in the CH2M Hill drawings was consistent with appendix A, § 9.1.3 from the fact that the Corps responded to the RFI—which purportedly established that the CH2M Hill electrical design was inconsistent with appendix A, § 9.1.3—by amending the RFP to add the SCE drawings, which showed an electrical design that was substantially similar to that shown in the CH2M Hill drawings. (Findings 45-46) If the Corps had believed that the RFI had established that such a design was inconsistent with appendix A, § 9.1.3, a reasonable contractor could have expected that the Corps would have responded to the RFI by amending the RFP to remove the inconsistent drawings and/or to add a consistent drawing—instead of to add drawings that continued to show a purportedly inconsistent design. Any subjective understanding of a conflict that was so unclearly communicated is insufficient to establish an actual conflict. Because the concept drawings were not trumped by inconsistent requirements in appendix A or section 01 10 10, those drawings created an implied warranty that adherence to the drawings would result in satisfactory contract performance, which the Corps breached.

CONCLUSION

On entitlement under ASBCA No. 60454, the appeal is sustained as to the constructive change claim relative to the average daily flow, pan evaporation coefficient, and water depth. Otherwise, the appeal in ASBCA No. 60454 is denied. On entitlement under ASBCA Nos. 60455 and 60669, the appeals are sustained on the

defective specification claim. Otherwise, the appeals in ASBCA Nos. 60455 and 60669 are denied. Accordingly, the appeals are returned to the parties for a determination of quantum consistent with this decision.

Dated: October 24, 2018

James R. Sweet

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

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. 60454, 60455, 60669, Appeals of CDM Constructors, Inc., rendered in conformance with the Board's Charter.

Dated:

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