

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --)
)
Collazo Contractors, Inc.) ASBCA No. 53925
)
Under Contract No. N62472-98-C-4150)

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OPINION BY ADMINISTRATIVE JUDGE PARK-CONROY

Appellant, Collazo Contractors, Inc. (Collazo), seeks contract time extensions totaling 148 days and equitable adjustments totaling \$412,976.64 in eight claims arising out of a contract to clean and line water mains at the Naval Inventory Control Point (NICP), Mechanicsburg, PA. We conclude that appellant is entitled to a contract time extension of six days, together with an appropriate contract price adjustment. The appeal is sustained to that extent, and is otherwise denied.

FINDINGS OF FACT

Contract No. N62472-98-C-4150, a small business set-aside, was awarded to appellant Collazo for \$381,145.45 on 16 June 1999 by the Naval Facilities Engineering Command (NAVFAC) to clean and cement mortar line existing water lines, Phase 2, at NICP. Work was to commence that same day and be completed by 29 October 1999. (R4, tab 1 at 1188-89, tab 5 at 1190-91) On 17 June 1999, the government exercised the option for additional similar work on a branch water main, increasing the contract price to \$437,834.81 and extending the performance period to 29 November 1999 (ex. G-3).

The following relevant FAR clauses were incorporated into the contract by reference: 52.233-1, DISPUTES (OCT 1995) – ALTERNATE I (DEC 1991); 52.243-4,

CHANGES (AUG 1987); and 52.246-12, INSPECTION OF CONSTRUCTION (AUG 1996) (R4, tab 1 at 1279-81). Liquidated damages in the amount of \$250.00 a day were specified pursuant to FAR 52.211-12, LIQUIDATED DAMAGES – CONSTRUCTION (APR 1984) – ALTERNATE I (APR 1984) (*id.* at 1249). The contract also included DFARS 252.236-7001, CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS (DEC 1991), which provides in relevant part:

(c) Large scale drawings shall, in general, govern small scale drawings. Figures marked on drawings shall, in general, be followed in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work, but shall be performed as if fully and correctly set forth and described in the drawings and specifications.

(*Id.* at 1271-72)

Installation of the Temporary Bypass

Paragraph 1.1.1 of Section 01110, “SUMMARY OF WORK,” described the contract work as including the “cleaning and cement mortar lining of existing unlined 6-inch, 8-inch, and 12-inch water lines” to improve water flow characteristics within the Phase 2 geographic limits, together with replacement of existing gate valves and designated fire hydrants, pipe sections and fittings, and provision of new water services to selected buildings. Paragraph 1.1.1 also provided that: “A temporary by-pass [sic] piping system shall be provided.” (R4, tab 1 at 1283) The specifications for an above-ground, bypass piping system to supply water, including fire protection water, were set forth in paragraph 3.16, “TEMPORARY BYPASS PIPING” of Section 02662, “CEMENT MORTAR LINING OF WATER MAINS IN PLACE,” and required the contractor to furnish and install temporary bypass piping, along with temporary hydrants, service connections, and sprinkler connections to all buildings affected (R4, tab 1 at 1399; tr. 1/73-74).

The bypass is a temporary water main, carrying water throughout the system and replicating the existing water mains (tr. 1/100-01). The use of a temporary bypass is typical in projects in which the main water line is taken out of service (tr. 1/73-74).

Paragraph 3.16.2, “Plan of Operation,” further required the contractor “[to] design and prepare a bypass piping plan and sequence of operations. . . . [to] provide a temporary system capable of providing flows equal to the present flows.” Tests to determine the existing flows were to be performed in the presence of the contracting officer and a meeting with the contracting officer and the NICP Fire and Police Chiefs was to be convened to review the plan of operation to assure that local requirements were met. (R4, tab 1 at 1400)

Paragraph 3.16.9, “Temporary Hydrants,” provided for the installation of temporary fire hydrants located adjacent to or across the street from each existing hydrant taken out of service. The lines serving the temporary hydrants were to be “of a size to provide the required flows” The temporary hydrants were to be constructed with steel pipe and fittings, “including a 4-inch base tee and a 1/4 bend.” (R4, tab 1 at 1403)

The preconstruction conference was held on 15 June 1999 and conducted by Mr. Michael Paquette, the government’s engineering technician/safety manager and the officer-in-charge of construction, using a standard, pre-printed form entitled “PRECONSTRUCTION CONFERENCE MINUTES (REV 10/95)” (tr. 3/8-9). Appellant was represented by its president, Mr. Jorge Collazo, and Messrs. Tom Gurganus, quality control, and David Koger, estimator and project manager, both of whom were employed by appellant’s principal subcontractor, Spiniello Companies (tr. 1/69-70). (R4, tab 6) During the meeting, Mr. Collazo inquired about whether the government had any existing water flow data that appellant could use and Mr. Tim Knepp, the government’s assistant fire chief, called the fire department and obtained some flow rate information (tr. 3/10). Appellant was given this information, but nevertheless understood that it was still required to perform flow rate tests of the existing system (ex. G-1; tr. 1/160, 2/64-65, 3/11-12).

Mr. Collazo thought that a four-inch bypass “pretty much was dictated” by the four-inch base tee designed by the government (tr. 2/38), and appellant used four-inch pipe to estimate the cost of the bypass system (tr. 2/66-67). There was also evidence that appellant determined that a four-inch bypass would supply the required flows based upon the flow rate information provided at the preconstruction conference (tr. 1/81-84, 162). This is the size appellant typically uses and believes to be the accepted size in the industry for fire protection (tr. 2/38, 3/50).

The American Water Works Association (AWWA) Manual of Water Supply Practices M28 is entitled: “Rehabilitation of Water Mains” and describes how water systems should be bypassed with temporary systems (ex. A-29; tr. 3/48). Figure 6-1, “Bypass installation for residential and commercial water service,” shows four-inch bypass pipe for commercial applications (tr. 3/49-50, 59). Figure 6-1 contains the following notation: “Bypass piping is available in 2-, 4-, 6-, or 8- in. . . . diameters. In

special situations larger diameter bypass can be obtained to meet project requirements.” (Ex. A-29 at 52)

Note 6 on Sheet 2 of 17 of the contract drawings referred contractors to Sheet 13 of 17 for a “SUGGESTED LAYOUT OF TEMPORARY WATER SERVICE PIPING PLAN” (R4, tab 4). At the preconstruction conference, appellant proposed an alternative method of installing the piping that involved relocating and connecting the dead-end temporary water lines to form a complete loop, which would permit a continuous flow of water and isolate any break in the line. This was consistent with paragraph 3.16.6, “Installation,” of Section 02662, which provided that: “Temporary lines should be looped wherever possible” (R4, tab 1 at 1401). The government agreed to appellant’s alternative plan. (R4, tab 6 at 15; tr. 1/85-88, 2/42-44) Appellant did not request a contract price adjustment because the looping changes made the system better and it understood the government would not pay any additional cost for them (tr. 1/163-64).

Section 01330, “SUBMITTAL PROCEDURES,” of the contract specifications contained detailed information about the submittals that were to be provided to the government for approval and a printed submittal register that listed the specification section, description and paragraph of items to be submitted (R4, tab 1 at 1291-1309). With respect to the approval time, paragraph 1.3.3, “Scheduling,” provides that the contractor should allow at least 15 working days for QC approval and either 20 working days for contracting officer approval or 30 days if review was also required by the fire protection engineer. The resubmittal period is the same. (*Id.* at 1295-96)

A “Construction Schedule” submittal was required (R4, tab 1 at 1305). Appellant forwarded its Construction Schedule submittal, dated 25 June 1999, to the government on 30 June 1999 (exs. A-2 at 55-56, A-5). The schedule was not approved because it did not allow time for flow testing of the bypass; a revised schedule, dated 16 July 1999, showing two days for this testing, was resubmitted on 18 July 1999 and approved (R4, tab 7; ex. A-6; tr. 1/91-92). The approved construction schedule did not reflect any time for flow testing of the existing system because appellant planned to conduct it at the same time as the flow testing of the bypass (tr. 1/188-89, 2/67-68). Installation of the temporary bypass system was on the critical path (tr. 1/94, 111).

A “Plan and Sequence of Operations” submittal was also required (R4, tab 1 at 1307). Appellant’s “Sequence of Operations” submittal was dated 26 August 1999. The first item of work listed was the installation of the bypass. The government stamped the submittal “DISAPPROVED – RESUBMITTAL REQUIRED” on 25 October 1999 and provided handwritten notes reflecting the changes it wanted made. (Ex. A-2 at 68-69; tr. 1/96)

Neither the submittal specifications nor the submittal register reflect any requirement for governmental approval of the flow test procedures or calculations for either the existing system or the bypass system. Nevertheless, without any direction from the government, under cover of the standard form "LETTER OF TRANSMITTAL" used for submittals, Mr. Koger sent a "Bypass Statement" dated 25 August 1999 to the government. Mr. Koger identified the "Bypass Statement" as Submittal No. MCSD-1, checked the box indicating it was "For approval," and certified it for government approval using a stamp containing the language required by paragraph 1.3.6.f.(1) of Section 01330 for submittals. (R4, tab 1 at 1297; ex. A-2 at 66-67; tr. 1/107, 164-65) The "Bypass Statement" was a letter that read:

The 4" bypass as installed has been tested and certified to provide sufficient gpm to provide equal service to existing fire protection lines, and service lines, so that equal sizing of temporary bypass is not required.

(Ex. A-2 at 67) It was written by Messrs. Collazo and Gurganus (tr. 2/52) and was intended to let the government know that appellant had installed the bypass and that the system was providing the "proper gallons per minute to the service lines" (tr. 1/107).

Also attached to Submittal No. MCSD-1 was a copy of a 25 August 1999 letter addressed to appellant from Mr. James F. Conley, P.E., of Civil Dynamics, Inc. (tr. 3/16). The letter included the results of a set of five tests that had been performed by Civil Dynamics on 24 August 1999 at Hydrant Nos. 13 and 15, both at the existing water distribution system and at the four-inch diameter temporary bypass, and at the temporary hydrant off the bypass on E Street. The letter concluded that "the available water flow provided in the temporary by-pass [sic] nearly equals that of the existing distribution system for all practical purposes." (R4, tab 10 at 913-14) The test results indicate that the existing water main pipe was eight inches in diameter (R4, tab 10 at 917-27).

Mr. Paquette assumed that Submittal No. MCSD-1 required approval and, as a matter of practice, sent the submittal package to Mr. Evan Stauffer, the lead fire protection engineer at the NAVFAC Engineering Field Activity Northeast (formerly known as the Northern Division) (tr. 2/144-45, 3/16). Messrs. Stauffer and Conley discussed the Civil Dynamics report on the telephone and, in a letter dated 30 August 1999, Mr. Conley provided an addendum to his report that stated that, although water availability was more than adequate, the flow rates from the temporary hydrants were about one-third less than from the existing hydrants (R4, tab 10 at 911-12). Both Messrs. Koger and Collazo acknowledged that the test results reflect flow rates that were approximately one-third less than the flow rates for the existing system (tr. 1/183-85, 2/45-47).

Mr. Conley offered suggestions for addressing the flow deficiency. He recommended use of two temporary hydrants, side by side, for each existing hydrant and noted that appellant “planned to provide for these temporary hydrants, as it is a customary practice” (R4, tab 10 at 911-12). Witnesses for appellant, including its expert, agreed that the use of two temporary hydrants would provide about twice the water flow as one temporary hydrant and satisfy the requirement that the temporary system meet the flows from the existing system. However, appellant never used two temporary hydrants. (Tr. 2/12-16, 84-86, 3/59-61) Mr. Conley also recommended that a “minimum of six (6) connections (4” or greater in diameter) [should] be provided at selected feed points” (R4, tab 10 at 912). It appears from the record that appellant never used six feed connections.

Mr. Stauffer was concerned about the possibility that both the existing system and the temporary bypass system were open when the tests were performed, which he thought would preclude accurate test results (tr. 2/152-53). He prepared a memorandum for Mr. Paquette concluding that appellant had not demonstrated the temporary piping could provide flows equal to the existing flows and questioned appellant’s use of four-inch pipe to replace the larger existing pipe (R4, tab 11). On 7 September 1999, based upon the information provided by Mr. Stauffer, Mr. Paquette stamped Submittal No. MCSD-1: “DISAPPROVED – RESUBMITALL REQUIRED.” His hand-written note explains that the flow test procedure was inadequate and that the “exist. system should be shut down to perform flow test adequately.” (R4, tab 10 at 910, 913; tr. 3/17)

On 15 September 1999, appellant submitted a request for an equitable adjustment (REA) No. 1 in the amount of \$40,860.57 and a time extension of nine days, from 24 August through 1 September 1999, due to the delay resulting from the disapproval of the first set of flow tests (R4, tab 19 at 165-68). The contractor’s daily logs indicate that appellant continued to install the four-inch bypass on 24, 25, 26, and 31 August 1999, that it was “off could not work due to change in command” on 27 August 1999, and that it was “off” on Saturday, Sunday and Monday, 28, 29, and 30 August 1999 (app. supp. R4, vol. 6 at 905-12). In a letter dated 21 September 1999, appellant was advised that the government found insufficient justification for its request (R4, tab 19 at 158). On 12 October 2000, appellant submitted REA No. 1A, increasing the amount sought to \$52,983.90 (*id.* at 152-57).

The specifications for other phases of the water main work at NICP were subsequently changed to require submittals for flow test reports (tr. 2/172-73). Additionally, the specifications for Phase 1 of the work were amended on 2 September 1999 to change paragraph 3.16.2 of Section 02662 by specifying the test method, baseline flow testing calculated to a specified residual pressure at each hydrant, and the design and testing of the temporary bypass to meet the residual baseline flow at the specified residual pressure (ex. A-2 at 501-03). The amended specifications require that the valves remain open during baseline testing, but not during bypass testing (tr. 1/158-

60). The changes made the requirements clearer (tr. 1/148). The specifications for Phase 5 were further amended on 6 May 2003 (ex. A-16; tr. 1/153-54). The requirements to use a four-inch base tee and that the temporary bypass system be capable of providing flows at least equal to the existing flows were not changed (exs. A-2 at 502-03, A-16).

Civil Dynamics performed a second set of water flow tests on 15 September 1999. A 17 September 1999 report prepared by Mr. Conley indicates that the first four tests were performed at temporary hydrants on the four-inch diameter bypass system with the existing system shut down. The final test was performed at Hydrant No. 14 on the existing system. The system was charged by opening gate valves previously closed. (R4, tab 12 at 933) The static and residual pressures at Hydrant No. 14 were somewhat different than they had been at Hydrant No. 13 and the flow rates were higher. (R4, tab 10 at 923, tab 12 at 946) The report concluded that: "As previously determined, there is sufficient fire flow availability; however, two (2) temporary hydrants are to be provided for each existing hydrant." (R4, tab 12 at 931-32) Only four feed connections were installed from the existing system to the temporary bypass system. The test results indicate that the pipe size for the existing water main was eight inches in diameter. (*Id.* at 933-46)

A copy of the report was again provided to Mr. Paquette, who again forwarded it to Mr. Stauffer for review (tr. 3/17). In an email to Mr. Paquette, Mr. Stauffer advised that he was satisfied that a valid flow test method had been used. Among other things, he also noted that the report did not discuss whether the temporary bypass provided "flows equal to present flows," and that the NICP Fire Chief had told him in a telephone conversation that he had witnessed flows that were about two-thirds of the existing flows (R4, tab 13 at 947; tr. 2/162-64). On 28 September 1999, Mr. Paquette stamped the report "DISAPPROVED – RESUBMITALL REQUIRED" with the comment: "Does not meet Section 02662 PPH 3.16.2." He also added the following note: "Jorge, [y]ou must provide a temp. system capable of providing flows equal to present flows of our system." (R4, tab 12 at 931)

Mr. Collazo responded to Mr. Paquette's disapproval of the second set of tests on 30 September 1999, pointing out that the temporary flow rates were within the flow rates shown on the data that had been provided to him from the fire department at the preconstruction conference for "design purposes of a bypass system" (ex. A-2 at 517-19).

On 1 October 1999, appellant submitted REA No. 2 seeking a contract time extension of 15 days for delay experienced between 1 and 20 September 1999, and an equitable adjustment in the amount of \$65,200.90, "necessitated by the failure to approve bypass piping as installed in accordance with data received from Naval Fire Department Personnel on July 15, 1999" (R4, tab 19 at 186-89, 194-216). The contractor's daily logs indicate that on 1 September 1999 appellant "shut down job" while waiting for

Mr. Stauffer to say “yes” or “no” on the four-inch bypass and that no work was performed through 20 September 1999, except for the flow test performed on 15 September 1999 (R4, tab 19 at 197-216). On 3 December 1999, the government advised appellant that, after review, it found insufficient justification for its request (*id.* at 192-93). On 12 October 2000, appellant submitted REA No. 2A, increasing the amount sought to \$92,043.97 (*id.* at 180-85).

Civil Dynamics performed a third set of water flow tests on 14 October 1999. A 15 October 1999 report prepared by Mr. Conley indicates that four tests were performed at temporary hydrants on the four-inch bypass. Two modifications had been made to the temporary system. Specifically, five feed connections from the existing system had been used and the temporary hydrants had been fitted with six-inch diameter base tees instead of the four-inch base tees specified by paragraph 3.16.9 of Section 02662 of the contract specifications. The result was that the bypass system provided “an average of 90% of the existing system capacity.” (R4, tab 14 at 1167) Mr. Conley suggested using six-inch tees because he thought the four-inch tees were reducing the flow of water to the hydrants (*id.* at 1166; tr. 2/44-45). Appellant did not call Mr. Conley to testify at the hearing.

A copy of the report was again provided to Mr. Paquette, who again provided it to Mr. Stauffer (tr. 2/165, 3/18). After discussion, they concluded that the flow test results were close enough to approve (tr. 3/18). On 20 October 1999, appellant was notified that the flow tests had been accepted and that field work could proceed (R4, tab 16). The report was formally approved on 25 October 1999 (R4, tab 15).

Also on 20 October 1999, appellant submitted REA No. 3, seeking a contract time extension of 20 days for delay and an equitable adjustment in the amount of \$117,372.09 “necessitated by failure to approve bypass piping as installed” (R4, tab 19 at 232-35). On 5 November 1999, the government advised appellant that it found insufficient justification for the request (*id.* at 237). On 12 October 2000, appellant submitted REA No. 3A, increasing the number of days sought to 27, due to a “Shut down project” from 29 September through 22 October 1999, with additional man hours for 22, 25, 26, and 27 October 1999 to install six-inch tees, and increasing the amount sought \$180,412.01 (*id.* at 226-31, 265-269). The contractor’s daily logs show that some work was being performed from 21 September through 29 September 1999, but that the job remained “shut down” beginning 29 September and continuing through 21 October 1999, and that six-inch tees were installed on the dates asserted (*id.* at 242-269; app. supp. R4, vol. 6 at 940-80).

On 15 November 1999, appellant submitted REA No. 4 seeking \$5,271.01 for the costs of preparing the addendum to the first set of flow tests and for performing the second and third sets of flow tests (R4, tab 19 at 275-76). The government advised appellant on 3 December 1999 that it had not presented sufficient justification to warrant

the price adjustment requested (*id.* at 281-82). On 12 October 2000, appellant resubmitted REA No. 4, with no change to the amount requested (*id.* at 277-80).

Expert Witnesses

Both parties called expert witnesses to explain the engineering aspects of the temporary bypass system and flow test results. Mr. Joe Dioslaki, employed by Spiniello as a hydraulics engineer and estimator, was qualified by appellant, without objection from the government, to testify as an expert in hydraulics and piping systems, in particular those related to cleaning and relining projects (tr. 2/74-78). He thought that a specification requiring a four-inch tee “is telegraphing to you it’s a four-inch bypass,” which he considers to be appropriate for water main rehabilitation projects under both AWWA and Spiniello’s general practice (ex. A-28; tr. 3/51).

Mr. Dioslaki performed three different analyses calculating water losses at temporary Hydrant No. 13 using accepted formulas. He used the existing flows and residual and static pressures contained in the 25 August 1999 Civil Dynamics report of test results at existing Hydrant No. 13 (R4, tab 10 at 923; ex. A-18 at 3; tr. 2/141-42, 3/44). The first analysis used a four-inch tee and a reducing nozzle having an inside orifice diameter of 3.25 inches, the same as had initially been installed by appellant and tested on 25 August 1999. The second analysis did not use the reducing nozzle, so that the inside orifice diameter was four inches. The third analysis used a six-inch tee and a four-inch reducing nozzle, the same as was ultimately used by appellant. (Ex. A-18 at 1-2; tr. 2/79-81)

He used a residual pressure of 42 psi because it was the highest residual pressure in the existing system at Hydrant No. 13 and he believes it provided the most conservative approach to his analysis. According to Mr. Dioslaki, if a temporary hydrant with a four-inch tee assembly cannot provide flows using the residual pressure in the existing system, the hydrant will not provide the flows required by the government, regardless of the pipe size. (Ex. A-28 at 1-3; tr. 3/42-46) He assumed that the temporary bypass system had the capacity to provide adequate flows because the system had multiple feed points and was looped so that each hydrant obtained water from two bypass pipes, one from each direction (exs. A-18 at 2, A-28 at 1).

His first analysis led him to conclude that “[t]he entire setup was limiting” appellant from obtaining the necessary flow rates. The second analysis led him to conclude that the four-inch tee, together with the “entire system setup,” would not provide the required flows. The third analysis led him to conclude that the six-inch tee was able to provide the required flows. (Tr. 2/83) His reference to the “entire setup” includes the four-inch bypass pipe (tr. 2/86). His ultimate conclusion was that “the restriction of using 4 inch diameter tees for the temporary fire hydrants prevented the

system from being able to provide the required flows . . . at the temporary hydrants” (ex. A-18 at 2; tr. 2/84, 3/44). His analyses were limited to the temporary hydrant assembly (tr. 2/86-90, 3/46-47).

Mr. Robert Tabet, employed by NAVFAC as Branch Manager of Fire Protection Engineering, Atlantic Division, was qualified by the government, without objection by appellant, to testify as an expert in fire protection engineering (tr. 2/99-105). Appellant did, however, object that Mr. Tabet’s written materials did not sufficiently disclose the basis for his testimony. The presiding judge overruled the objection which was renewed in appellant’s post-hearing briefs (app. br. at 21 and reply at 3). We find no merit to the objection and affirm the presiding judge’s ruling.

Mr. Tabet agreed with Mr. Stauffer that testing the existing system with the bypass connected to it and leaving the existing system open when testing the bypass invalidated the test results (ex. G-4 at 2; tr. 2/121-22). Mr. Tabet raised and addressed two engineering questions: (1) whether the improvement in the third set of test results was due to the change to the six-inch tees, or the addition of the fifth feed; and (2) whether the second set of test results was due to the four-inch tees, or the contractor’s choice of an inadequate pipe for the temporary bypass system (ex. G-4 at 2-3).

As to the first question, he explained that he could not determine whether the six-inch tees or the addition of the fifth feed had a greater impact without evaluating the entire system (tr. 2/137). He did, however, believe that the fifth feed introduced a variable that precluded concluding that the change to the six-inch tees alone was the reason for improved flow results (ex. G-4 at 3). He also thought that the additional feed would improve the hydraulic characteristics of the overall system (tr. 2/121). Mr. Dioslaki agreed that the fifth feed would “almost certainly improve flow results,” but continued to believe, based upon his calculations, that the use of a four-inch tee would nevertheless prevent the bypass system from providing the required flows (ex. A-28 at 2; tr. 3/53).

Mr. Tabet credibly questioned whether the four-inch bypass system appellant had designed was capable of providing the required flow (tr. 2/116-21). He concluded that the poor results on the second set of tests were due to appellant’s choice of four-inch pipes for the bypass system. He based his conclusion on a number of technical references for fixed water supply systems that indicate that the use of six-inch diameter pipes at a minimum is preferable for fire protection applications, that friction in the system is the most significant factor affecting residual pressures and that friction loss is greater in smaller pipes. (Ex. G-4 at 3-4)

Although he agreed with Mr. Dioslaki’s calculations, Mr. Tabet was concerned with the assumption that the residual pressure at the hydrant assembly was the same

throughout the existing system (tr. 2/106, 120-21). It was his opinion that, depending upon the flow and the size of the pipe, the pressures at the tee and at other points in the system can vary and should have been considered (ex. G-4; tr. 2/114, 126, 128, 3/70-73).

Pressure Testing

The specifications for “WATER DISTRIBUTION” are set forth in Section 02510 of the contract (R4, tab 1 at 1376-88). Paragraph 3.2.3.1, “Initial Testing,” required the contractor to conduct an initial pressure/leakage test of the existing lines before beginning replacement or cleaning and lining work (*id.* at 1387). The intent was to have appellant perform the tests to locate any leaks in the main lines which would then be repaired by either Collazo or the government (tr. 1/133-34).

On 9 November 1999, appellant performed its first pressure test and discovered a leak on water valve W-96 (R4, tab 20 at 298). The government repaired the leak using materials provided by Collazo (tr. 1/133). The test on the eight-inch main on Zero Avenue also revealed a leak (R4, tab 20 at 298). A third test conducted on 10 November 1999 met the specification requirements (R4, tab 20 at 301). At the time, initial pressure testing was the critical path work (tr. 1/134-35). By a letter dated 10 November 1999, appellant advised the contracting officer that pressure testing approvals were delaying its work and requested direction on how to proceed (R4, tab 20 at 298). The contracting officer responded on 12 November 1999, waiving the initial pressure test requirement for the specific areas identified and directing appellant to proceed as scheduled where the pressure tests met the specification (*id.* at 301; tr. 3/23). Appellant proceeded as directed (R4, tab 20 at 304).

On 22 November 1999, the contracting officer requested that appellant submit a proposal for a credit based upon the deletion of initial pressure testing work (R4, tab 20 at 303). Appellant responded that the costs of the three tests it had performed had exceeded its bid amount and that it had been delayed while waiting for repairs (*id.* at 304). A series of letters between the parties followed. The government asserted that only a small portion of the system had been tested and continued to seek a credit for the tests that had not been performed and appellant asserted that it had been delayed and submitted REA No. 5, seeking a contract extension of two days and an adjustment of \$11,719.83. Appellant advised the government that it would not offer any credit for the deleted work. (*Id.* at 305-07, 310-13)

The contractor’s daily logs for 9 and 10 November 1999 reflect that pressure testing is being performed; the daily logs for 11 and 12 November 1999 state that appellant is “shut down” and waiting for direction from the contracting officer (*id.* at 314-17). On 12 October 2000, appellant submitted REA No. 5A increasing the adjustment sought to \$15,068.03, but making no change in the number of days requested

(*id.* at 288-93). There is no evidence that the government ever issued a final decision asserting a claim for a credit for the initial pressure testing it waived.

Installation of Pipe and Fittings in Excess of Specified Requirements

Appellant's Claim No. 6 for installation of pipe and fittings in excess of the specifications involves both pipe and gate valves. With respect to the pipe, in a letter dated 24 November 1999, appellant asserted that the scaled dimensions for replacement pipe on the drawings were ambiguous and conflicted with the larger scale standard dimensions shown on the connection details on Sheet 17 of the drawings and that the dimensions on Sheet 17 of the drawings prevailed under DFARS 252.236-7001. It then referenced paragraphs 3.2.1 and 3.3 of Section 02662, both of which referred to short sections of pipe, to support its interpretation of the contract as one that was primarily for cleaning and lining, with replacement of short pipe sections only. (R4, tab 1 at 1391-92, tab 20 at 546-47; tr. 1/207)

According to Mr. Koger, appellant had questions about the starting and stopping points for the new replacement pipe and the connection detail it was to use in the field (tr. 1/139-41). The scaled dimension requirements exceeded the stated standard requirements shown on the connection detail on Sheet 17 (tr. 1/205-06). The 24 November 1999 letter requested concurrence from the government of its interpretation of the contractual requirements (R4, tab 20 at 546-47). In a follow-up letter dated 2 December 1999, appellant asserted that it was being delayed "awaiting determinations and clarifications" by the government and that the government was insisting that it install longer lengths of pipe than were required (R4, tab 20 at 330).

The government responded on 3 December 1999. It stated that it had chosen to replace pipe as shown on Sheets 9 through 12 of the contract drawings and found no conflict with Sheet 17. It directed appellant to comply with its interpretation of the drawings, advised appellant that it would accept the work already completed and requested that appellant schedule a meeting to discuss the matter. (R4, tab 20 at 331) Appellant's reply that same day asserted (and we find) that its bid had been based upon the detail on Sheet 17 and that it reserved its right to claim for additional time and compensation for complying with the government's direction. It asked the government to reconsider its position. (*Id.* at 332) On 6 December 1999, the government acknowledged that the scaled dimensions were inaccurate, but concluded that Sheet 17 of the drawings did not have "any bearing" on the matter and that appellant's bid should have been based upon all the information contained in the specifications and drawings (*id.* at 335).

The remaining and related aspect of Claim No. 6 involves the gate valves. In another letter dated 24 November 1999 letter, appellant requested "additional information

and direction” to submit a proposal for a contract modification to install concrete pads under the gate valves. With reference to the pipe and valve placement details on Sheet 16 of the drawings, appellant advised the government that it intended to install the valves “as per AWWA specifications with sufficiently tamped trench bottom composed of 2RC,” and proposed the use of concrete pads if excavation revealed an unstable subgrade. (R4, tab 20 at 327-28) On 2 December 1999, appellant wrote to the government again, claiming that it had first been directed to install the valves on a brick in the excavation, but, two days later was directed to install concrete pads under the valves. It advised that it would reinstall the valves on concrete pads, but requested a change order because the specifications did not require the work and it was being delayed. (R4, tab 20 at 329) Mr. Koger thought that the gate valves were to be installed in accordance with the AWWA standards which require a tamped surface (tr. 1/208-16). He did not think the contract required the use of concrete pads (tr. 1/142).

The government responded on 3 December 1999, with a “design clarification on the dimensions of the concrete support blocks to satisfy the additional information” appellant needed. It also stated that Sheet 16 of the contract drawings clearly depicted use of concrete supports for the valves. (R4, tab 20 at 333) Sheet 16 contains “STANDARD GATE VALVE AND VALVE BOX” end view and elevation details. Arrows to locations just under the valve boxes direct the contractor to “SET VALVE BOX 6” OF COMPACTED SELECT GRANULAR MATERIAL (2RC).” (R4, tab 4) As identified by Mr. Paquette at the hearing, the details also show a support base under the gate valves marked with the symbol for cement (tr. 3/19-22). The elevation view contains the notation: “6” OF COMPACTED SELECT GRANULAR MATERIAL (2RC)” directly under the valve support base; the end view has no notations. (R4, tab 4)

At the time, the installation of the pipe, fittings and valves was on the critical path (tr. 1/142-43). The parties met on 10 December 1999 and the government directed appellant to use the specific dimension shown on Sheet 17 for replacement pipe and to install concrete pads. (R4, tab 20 at 336; tr. 1/143-44)

Appellant’s daily logs for Friday, 3 December 1999, and Monday, 6 December through Thursday 9 December 1999, contain comments indicating that appellant is waiting for answers on detail and concrete under the valves and many of them state that appellant is “shut down.” The report for Friday, 10 December 1999 indicates that appellant attended the meeting with the government. It appears, however, that a number of people were performing some work on both 3 and 6 December 1999. We are unable to discern whether this was critical path work. (R4, tab 20 at 340-47)

Amendment No. 1, dated 6 May 2003, to the Phase 5 specifications, added a note with an arrow pointing to the support base under the gate valves marked with the symbol for cement to the end view of the “STANDARD GATE VALVE AND VALVE BOX”

drawing. The note stated: “USE WOOD TO FORM SIDES OF CONCRETE TO PREVENT CONCRETE FROM BEING PLACED ON MECHANICAL JOINTS.” (Ex. A-16; tr. 1/152)

On 12 October 2000, appellant submitted REA No. 6 seeking a contract time extension of eight days, for the time period 3 through 10 December 1999, and \$48,330.71 associated with “delays caused by discrepancies in drawings and specifications” (R4, tab 20 at 323-24).

Removal of the Temporary Bypass

Paragraph 3.16.3, “Inclement Weather,” of contract specification Section 02662 provided that no work was to be performed during inclement weather except that which was “incidental to cleaning or lining unless otherwise directed by the Contracting Officer” and that “[n]o bypass pipe or service connections [] be installed during freezing weather and [that] such pipes already in use [] be removed or drained.” The last sentence of paragraph 3.16.3 stated: “There shall be no additional cost to the Owner to remove the temporary service due to cold weather and to reinstall same in the spring.” (R4, tab 1 at 1400)

The government directed appellant to “close up for the winter” at the 10 December 1999 meeting (app. supp. R4, vol. 6 at 1011, exs. A-14, -15). In REA No. 8, Appellant claims that the need to remove the temporary bypass for the winter was due to the delays alleged in REA Nos. 1, 2, 3, 5, and 6. It seeks a contract time extension of six days and \$28,024.58 for removal of the bypass. REA No. 8 was submitted to the contracting officer on 16 January 2001, as part of the certified claim package that included the other pending REAs. (R4, tab 19 at 1- 9, and tab 20 at 459) From the supporting documentation, it appears that the delay asserted in REA No. 8 includes 13 and 16 December 1999 and 3, 4, 6, and 7 January 2000 (R4, tab 20 at 462-72). It further appears from appellant’s “MileStone Dates” chart and its daily logs that work was suspended for good for the winter on 7 January 2000 (R4, tab 20 at 620; app. supp. R4, vol. 6 at 1038).

Remobilization and Reinstallation of the Bypass

The record copies of documents relating to remobilization and reinstallation of the bypass are largely illegible. It is not possible to pinpoint the exact date upon which appellant began remobilization, but it appears that this occurred sometime during the last few weeks of May 2000 (R4, tab 20 at 457-58; app. supp. R4, vol. 6 at 1039-40; ex. A-15). The “MileStone Dates” chart shows the date to be 22 May 2000 (R4, tab 20 at 620). It also appears that work was completed during the week ending 27 August 2000, but may have continued to 3 September 2000 (R4, tab 20 at 364, 366, 434). There is

evidence that the piping system appellant installed when it remobilized was not the same size as the one removed in December and January (R4, tab 19 at 3).

On 18 October 2000, appellant submitted REA No. 7 seeking a contract extension of 76 days and \$87,824.63 for “remobilization in 2000, and for reinstalling bypass due to delays that prevented job conclusion in 1999 as originally scheduled.” The REA does not specify the dates that constitute the 76-day contract time extension claimed. (R4, tab 20 at 360-61) However, we understand the alleged delays referred to as the basis for the claim to be those reflected in REA Nos. 1, 2, 3, 5 and 6 (*id.* at 358).

Summary of Appellant’s Claims

On 16 January 2001, appellant submitted to the contracting officer a certified claim for impact and delay associated with performing the contract that included all eight REAs, as amended. The claim seeks a contract time extension of 148 days and equitable adjustments in the amount of \$507,958.84. (R4, tabs 19 and 20; ex. A-2) By letter dated 3 June 2001, appellant requested that the contracting officer issue a final decision on its eight claims (R4, tab 22 at 838). No final decision was issued and, by letter dated 28 March 2002, appellant requested that the contracting officer notify it within 15 days of the date by which a final decision would be issued (notice of appeal (NOA) ¶ 5, ex. B). The contracting officer responded that a decision would be issued by 31 May 2002, a dated subsequently extended to 17 June 2002 (NOA ¶ 6, ex. C). Appellant renewed its request on 15 July 2002 (NOA ¶ 8, ex. D). No final decision was issued and on 3 September 2002, appellant filed an appeal from a deemed denial of its claim.

With the various changes and revisions, including those contained in appellant’s pre-hearing materials dated 3 February 2004, we understand that appellant now seeks 148 days and \$412,976.64 (app. am. pre-hearing br. at 13). The eight claims are as follows: Claim No. 1 seeking nine days of delay, from 24 August to 1 September 1999, and \$31,466.21, Claim No. 2 seeking 20 days of delay, from 1 September through 20 September 1999, and \$71,626.13, and Claim No. 3 seeking 27 days of delay, during the period 29 September through 27 October 1999, and \$153,339.07, all associated with temporary bypass approvals; Claim No. 4 seeking additional testing costs in the amount of \$5,361.68; Claim No. 5 seeking two days of delay, during the period 9 through 12 November 1999, and \$9,095.01 associated with pressure testing; Claim No. 6 seeking eight days of delay, from 3 through 10 December 1999, and \$30,716.00 for extra work associated with installation of pipe and fittings; Claim No. 7 seeking 76 days of delay and \$83,369.99 associated with the remobilization and reinstallation of the bypass following the winter shutdown as a result of the delays associated with Claim Nos. 1, 2, 3, 5 and 6; and Claim No. 8 seeking six days of delay and \$28,002.55 for removal of the bypass due to the winter shutdown, also due to the delays associated with Claim Nos. 1, 2, 3, 5 and 6.

Modification No. P00002

Bilateral contract Modification No. P00002, effective 13 February 2001, increased the contract price by \$33,506.00 for 18 different changes directed by the contracting officer and extended the contract completion date by 202 days. It contains the following release:

In consideration thereof, the contract price is increased \$33,506.00 from \$437,834.81 to \$471,340.81. The contract time for completion is extended two hundred two (202) calendar days from 19 November 1999 [sic] to 18 June 2000.

Acceptance of this modification by the contractor constitutes an accord and satisfaction and represents payment in full for both time and money and for any and all costs, impact effect, and for delays and disruptions arising out of, or incidental to, the work as herein revised.

(Ex. G-3)

None of the 18 changes listed in Modification No. P00002 are among the eight claims certified by appellant on 16 January 2001 and pending at the time the modification was executed, and the modification does not specifically address any of the eight claims (ex. G-3; tr. 2/6). Mr. Koger first testified there was no delay associated with the 18 changes, but then stated that he did not recall whether there was any delay associated with these changes (tr. 1/196-98). The next day, he testified that he had prepared Excel cost spreadsheets for each of the 18 changes and that he had his laptop computer and the electronic Excel files with him in the hearing room. The only testimony he provided relating to time extensions for these changes, however, was that relating to a request for 0.5 days for change "O." (Tr. 2/5-8)

However, appellant did present evidence that it had requested a total of 45 days for weather delays for the period August 1999 through November 2000 in conjunction with the negotiation of Modification No. P00002 (ex. A-27; tr. 2/8). The 202-day contract extension includes time for weather delays (tr. 3/23-24).

Appellant did not complete work by the new contract completion date, 18 June 2000, and the government has withheld \$33,500.00 in possible liquidated damages (tr. 3/25, 37-38). The record does not reflect any written claims asserted by either the government or appellant relating to these liquidated damages. We note that there are 76 days beginning 19 June 2000 and ending 3 September 2000, which we found may be the actual completion date. But, there is no evidence connecting these 76 days with Claim No. 7, which we further note was submitted to the contracting officer four

months before the contract completion date was extended to 18 June 2000 by Modification No. P00002.

Messrs. Collazo, Koger and Paquette participated in the negotiations for Modification No. P00002 (tr. 2/9). According to Mr. Paquette, appellant did not state during the negotiations that it was reserving any part of its delay claim when it agreed to the 202-day contract time extension (tr. 3/23-24). Mr. Koger made recommendations on the 18 change adjustments to Mr. Collazo (tr. 2/9). He considered the changes settled in Modification No. P00002 and the eight pending claims to be two separate issues (tr. 2/8). And, while he testified that the eight claims were not discussed during negotiations (tr. 2/9-10), he agreed that the time frame of Modification No. P00002 encompassed “a great deal of the time” involved in them (tr. 2/22-23). Mr. Collazo executed Modification No. P00002, but gave no testimony about its negotiation at the hearing.

DISCUSSION

The Temporary Bypass

Claim Nos. 1, 2, 3 and 4 relate to the temporary bypass. Of relevance to these claims are paragraphs 3.16.2 and 3.16.9 of Section 02662 of the contract specifications. Paragraph 3.16.2 required appellant to “design and prepare a bypass piping plan and sequence of operations. . . . [to] provide a temporary system capable of providing flows equal to the present flows.” Paragraph 3.16.9 provided that the lines serving the temporary hydrants were to be “of a size to provide the required flows” and specified the use of four-inch base tees in the temporary hydrants.

Appellant asserts that these specifications were defective because they imposed use of four-inch base tees that resulted in the use of the four-inch bypass system and made it impossible to meet the required bypass flow rates. It further asserts that the lack of necessary detail in the specifications regarding the sequence of work and level of reviews required by the government caused delay when it was required to use the submittal process (app. br. at 27).

The government asserts that appellant always planned to use a four-inch bypass, instead of taking tests to determine the existing flow to design a temporary bypass system to meet the flow test requirements (gov’t br. at 41-42). It considers the issues relating to the use of submittals to be irrelevant because it had the right to have a bypass system that could meet the flows of the existing system (*id.* at 43).

Contract Interpretation

Paragraph 3.16.2 required appellant to design a temporary bypass system that would provide flows equivalent to that of the existing system and paragraph 3.16.9 required the lines serving the temporary hydrants to be “of a size to provide the required flows.” Although the existing system had six-inch, eight-inch and twelve-inch water lines, appellant designed a system with four-inch pipes and the four-inch base tees at the temporary hydrants specified by paragraph 3.16.9. The government did not present any explanation as to why a four-inch base tee was specified for the temporary hydrants. But, according to appellant’s expert, this requirement “telegraphed” the use of four-inch pipe for the bypass system. If so, it would appear that the requirement to use the four-inch tee created a patent, obvious and glaring inconsistency in the contract specifications about which appellant was obligated to inquire inasmuch as the existing system used much larger water lines. *See Triax Pacific, Inc. v. West*, 130 F.3d 1469, 1474-75 (Fed. Cir. 1997) (patent ambiguity imposes a duty upon the contractor to inquire about true meaning of the contract work).

Appellant, however, made no inquiry about the specification. Instead, it based its estimate upon use of four-inch pipe. The evidence suggests that it did so at least as much because it typically uses a four-inch bypass and believes it is an accepted industry practice as because of the specified four-inch tee. Additionally, contrary to the representations made by appellant in its 30 September 1999 letter regarding the second set of flow tests and in its 1 October 1999 REA No. 2, the flow rate data given to appellant at the preconstruction conference was not provided either for design purposes or to be the measure against which test flow rates were to be evaluated. Indeed, it does not appear from the record that appellant actually used this flow rate data for either of these purposes.

Defective Specifications

The government impliedly warrants that design specifications it has provided to a contractor are free from defects, *United States v. Spearin*, 248 U.S. 132 (1918), and delay due to defective specifications is *per se* unreasonable. *Chaney & James Construction Co. v. United States*, 421 F.2d 728, 732 (Ct. Cl. 1970). The warranty, however, does not attach to performance specifications. *Lopez v. A.C. & S., Inc.*, 858 F.2d 712, 716 (Fed. Cir. 1988).

We are of the view that the specifications to clean and line the water mains at NICP in this case are predominately performance specifications, not design specifications. *See J. L. Simmons Co. v. United States*, 412 F.2d 1360, 1362 (Ct. Cl. 1969). Nevertheless, we are also of the view that the requirement to use four-inch tees in the temporary hydrants does reflect a design characteristic. *See Blake Construction Co.*

v. United States, 987 F.2d 743, 745 (Fed. Cir. 1993). To the extent this requirement can be characterized as a design specification warranted by the government, appellant has the burden of proving that the specification is defective. *Jacksonville Shipyards, Inc.*, ASBCA No. 45789, 95-1 BCA ¶ 27,332 at 136,226. It also must prove that it followed the specification, that it could not achieve an acceptable result, and that it was damaged as a direct result of its efforts to meet the specification. *Electrical Contracting Corp. of Guam, Inc.*, ASBCA No. 33136, 90-3 BCA ¶ 22,974 at 115,381. In this regard, appellant must show by a preponderance of the evidence that the alleged defect was the most probable cause of its failure to perform when considered with reference to other possible causes. See *Aleutian Constructors, J.V.*, ASBCA No. 49255, 01-1 BCA ¶ 31,392 at 155,091.

Applying these legal principles to the facts in this appeal, we conclude that appellant did not carry its burden of proving that the specifications were defective and the most probable cause of its failure to meet the specification requirements. We reach this conclusion for a number of reasons.

First, appellant's expert opined that the requirement in paragraph 3.16.9 to use a four-inch tee in the temporary hydrants prevented the bypass system from providing the required flows based upon three mathematical calculations of the water losses at temporary Hydrant No. 13. He used the flow rates and the residual and static pressures recorded for the existing Hydrant No. 13 in the 25 August 1999 flow test report to perform his calculations. There was, however, sound evidence of the government's reasonable concern that the data had been obtained from tests that had not been performed properly. Additionally, the flow rates and the residual and static pressures recorded for the existing Hydrant No. 14 in the 17 September 1999 flow test report are somewhat different than those recorded for existing Hydrant No. 13. We are unable to determine on this record whether the differences have any significance. However, the differences do cause us to question whether Hydrant No. 13 provides an accurate basis for the mathematical calculations. Appellant's expert further assumed that there was sufficient flow from the four-inch bypass system, an assumption the government's expert credibly questioned.

Next, appellant did not incorporate recommended changes into its overall design of the temporary bypass system that may well have made it possible to achieve the specified flows. Specifically, in its 25 August 1999 written report relating to the first set of flow tests, Civil Dynamics suggested that appellant's design include the use of two side-by-side temporary hydrants, noting that appellant planned to do this and that it was a "customary practice." The 17 September 1999 report for the second set of flow tests repeated this same recommendation. Witnesses for appellant, including its expert, agreed that this would have satisfied the requirement that the temporary system provide flows equal to the existing system flows. Inexplicably, appellant never implemented this

twice-recommended design change. Civil Dynamics also suggested that appellant's design provide a minimum of six feed connections, four inches or greater in diameter, from the existing system to the bypass system. Appellant, again, did not implement the recommendation.

Further, appellant made two changes to its bypass design for the third set of tests: it added a fifth feed connection and used a six-inch tee for the temporary hydrant. The evidence regarding the impact of these changes was inconclusive. The experts agreed that the fifth feed would improve the flows, but otherwise disagreed as to the impact of the change. The government's expert thought that the fifth feed introduced a variable which precluded the conclusion that the change to the six-inch tee was the only reason for the improvement in the third set of flow tests. Appellant's expert, however, was of the view that the four-inch tee would nevertheless have limited the flows at the hydrant. It was his opinion that the calculations he had performed at temporary Hydrant No. 13 were conclusive. The government's expert disagreed. It was his opinion that, depending upon the flow and the size of the pipe, the pressures at the tee and at other points in the system would vary and should have been considered.

Finally, we reject appellant's contention that the changes made to paragraph 3.16.2 and the addition of the requirement for a flow test submittal for subsequent phases of the work establish that the specifications were defective. The changes to paragraph 3.16.2 simply made the specifications clearer. And, significantly, no specification amendments were issued to change the specific requirements appellant claims were defective. In any event, subsequent clarifications to contract specifications have no bearing upon the entitlement issues here inasmuch as remedial measures are not evidence of liability under Fed. R. Evid. 407. *See Intram Co.*, ASBCA No. 44159, 94-1 BCA ¶ 26,375 at 131,180.

Delay Arising from Flow Test Result Reviews

With respect to appellant's allegations of delay arising from the government's review of its flow test results, appellant carries the burden of showing the extent of the delay to the overall project and the causal link between the government's wrongful actions and the resulting harm. *E.g., Essex Electro Engineers, Inc. v. Danzig*, 224 F.3d 1283, 1295 (Fed. Cir. 2000); *Cox & Palmer Construction Corp.*, ASBCA Nos. 43438 *et al.*, 93-3 BCA ¶ 26,005 at 129,274. We conclude that appellant also did not carry its burden of proof with regard to the delays alleged in the test approval process.

Section 01330, "SUBMITTAL PROCEDURES," did not require the submittal of flow test procedures or results. Paragraph 3.16.2 of Section 02662, however, did require that the bypass system meet the existing system flows. No specific test procedure was specified.

The record is clear that appellant voluntarily, albeit mistakenly, used the submittal process to provide its flow test results to the government and that the bypass flow results obtained from the first and second sets of tests did not equal the existing flows. Irrespective of how this information was presented to the government, it is settled that the government generally has the right to strict conformance with the contract specifications. *See Cascade Pacific International v. United States*, 773 F.2d 287, 291 (Fed. Cir. 1985); *C.H. Hyperbarics, Inc.* ASBCA Nos. 49375 *et al.*, 04-1 BCA ¶ 32,568 at 161,144. Moreover, testing by some reasonable method may be required to verify that the work conforms to the specifications under the Inspection clause. *See EM System, Inc.* ASBCA No. 51782, 01-2 BCA ¶ 31,586 at 156,079. The government, therefore, was within its rights when it disapproved the first and second sets of test results because they did not meet the requirement of paragraph 3.16.2 and required resubmission of data demonstrating that the requirement had been satisfied.

Moreover, irrespective of whether the approval time for submittals is applied, appellant did not establish that the government's review of the test flow data was untimely. Indeed, all three test flow reports were reviewed within reasonable periods of time which were also much shorter time periods than those specified by paragraph 1.3.3 of Section 01330. *See Idela Construction Co.* ASBCA No. 45070, 01-2 BCA ¶ 31,437 (government entitled to a reasonable time for review and approval where a time period is not specified by the contract).

Further, the delay periods claimed for the three sets of tests do not comport with the actual testing and review time periods. The delay period asserted in Claim No. 1 is 24 August to 1 September 1999. The report for the first set of tests, dated 25 August 1999, was reviewed by Mr. Stauffer and discussed with Mr. Conley within a few days after the tests were performed. The submittal was disapproved on 7 September 1999, within a week after Mr. Conley provided the addendum to his report acknowledging that the flow rates from the temporary hydrants was about one-third less than the rates from the existing system. Additionally, the contractor's daily logs indicate that appellant continued to work at least four days during the nine-day period for which it seeks to recover delay damages in Claim No. 1.

Appellant did not perform the second set of tests until 15 September 1999, almost at the end of the delay period asserted in Claim No. 2, from 1 through 20 September 1999. The results of the second set of tests were disapproved on 28 September 1999, not more than 11 days after the test report was provided to the government. Appellant then waited over two weeks, until 14 October 1999, to take the third set of tests. This was during the middle of the delay period asserted in Claim No. 3, from 29 September through 22 October 1999, with additional man hours for 22, 25, 26, and 27 October 1999. The government informally advised appellant that it would accept the flow rates reflected

in the 15 October 1999 report of the third set of tests in just five days, on 20 October 1999, after which appellant resumed work with the installation of six-inch tees.

Based upon the foregoing, we conclude that the allegations relating to Claims Nos. 1, 2, and 3 relating to the temporary bypass system are without merit. Our conclusion also disposes of Claim No. 4, which seeks the cost of preparing the addendum to the report for the first set of tests and the cost of performing the second and third sets of tests and is, therefore, wholly dependant upon Claim Nos. 1, 2, and 3.

Initial Pressure Testing

Claim No. 5 is based upon the pressure testing requirements. Of relevance is paragraph 3.2.3.1 of Section 02510 which required appellant to conduct initial pressure/leakage tests to the existing lines before beginning its replacement and cleaning and lining work. Appellant asserts that it was delayed two days and incurred \$9,095.01 in costs while it waited for the government to provide it direction on how to proceed after it discovered leaks in the existing system during pressure testing (R4, tab 20 at 286-87; app. am. pre-hearing br. at 13). The government contends that appellant had only conducted three pressure tests and that it presented no evidence that the two days of delay are more than it would have taken to perform all of the main line tests (gov't br. at 57).

The record establishes that appellant discovered leaks in the existing system during two of the three initial pressure tests it performed and immediately asked the government for direction. Pressure testing was on the critical path and appellant shut down work on 11 and 12 November 1999 while waiting for the government to provide instructions. By a letter dated 12 November 1999, the government waived the testing for identified remaining areas and shortly thereafter requested a proposal for a credit for the deleted work. Appellant made clear that it did not intend to provide such a proposal and, instead, submitted REA No. 5.

We are satisfied that appellant has met its burden of demonstrating that the government caused two days of compensable delay. *Essex Electro, supra*. Moreover, contrary to the government's contention, appellant was not required to show that two days of delay are more than it would have taken to perform all of the main line tests. The contention is based upon the government's assertion during contract performance that it was entitled to a credit for the deleted work. The contracting officer, however, never issued a final decision asserting a claim for such a credit. *See* 41 U.S.C. § 605(a). If such a claim had been asserted and appealed, the government would have the burden of proving the credit to which it asserted entitlement. *See Nager Electric Co. v. United States*, 442 F.2d 936, 946 (Ct. Cl. 1971); *Fru-Con Construction Corp.*, ASBCA Nos. 53544, 53794, 05-1 BCA ¶ 32,936 at 163,164-65. This did not occur and we have

no jurisdiction to consider the government's present contentions. *See Honeywell, Inc.*, ASBCA No. 47103, 95-2 BCA ¶ 27,835 at 138,792.

Installation of Pipe and Fittings in Excess of Specified Requirements

With respect to Claim No. 6, appellant's post-hearing brief asserts only that the government interrupted critical path work "by imposing requirements concerning access pit dimensions and the length of relays" (app. br. at 28). Based upon the evidentiary record, we understand appellant to seek a contract time extension of eight days and \$30,716.00 in costs resulting from ambiguous and conflicting contract drawings and specifications relating to the replacement pipe and the installation of concrete pads under the gate valves. As to the pipe, the government asserts that it provided direction to appellant on 3 December 1999 and that any delay associated with the matter thereafter is attributable to appellant because it continued to argue about the government's direction, instead of following it. As to the concrete pad, the government contends that it simply directed appellant to comply with the contract requirements. (Gov't br. at 55-56)

Our analysis of the record reveals that there was an ambiguity relating to the relay pipe that involved details on the contract drawings. The ambiguity surfaced on 24 November 1999, during contract performance. While some of the drawings contained scaled dimensions for the replacement pipe (which were inaccurate), appellant had relied upon the standard dimensions shown on Sheet 17 when preparing its estimate. *See Fruin-Colnon Corp. v. United States*, 912 F.2d 1426, 1430 (Fed. Cir. 1990). This was in accordance with DFARS 252.236-7001. Moreover, contractors are not obligated to undertake an inspection of the government's specifications and drawings to ascertain their accuracy and ferret out hidden ambiguities and errors such as these in the contract documents. *See Edsall Construction Co.*, ASBCA No. 51787, 01-2 BCA ¶ 31,425 at 155,180-181, *aff'd*, 296 F.3d 1081 (Fed. Cir. 2002). Thus, we are satisfied that the ambiguity was not so patent and glaring as to impose a duty to inquire about the quantity of replacement pipe the government wanted installed. *See Triax Pacific, Inc.*, *supra*. The ambiguity was latent and is to be resolved against the government under the principle of *contra proferentem*. *See United Pacific Insurance Co. v. United States*, 497 F.2d 1402, 1407 (Ct. Cl. 1974).

Moreover, when the government initially disagreed with appellant's interpretation of the drawings and specifications, appellant immediately requested that the government reevaluate its decision. The government did so and changed its view on 6 December 1999. At the meeting held on 10 December 1999, it directed appellant to use the standard dimensions shown on Sheet 17. Thus, the matter was not resolved by the government's 3 December 1999 letter and we reject the government's contention that it was.

We reach a different result with respect to that aspect of Claim No. 6 relating to the installation of concrete pads under the gate valves. The details on Sheet 16 of the contract drawings clearly and unambiguously show base support under the gate valves marked with the symbol for concrete. Thus, trade usage, as reflected in the AWWA specifications that appellant intended to use, is of no avail. *See Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 752-53 (Fed. Cir. 1999) (contracting party cannot invoke trade practice and custom to create an ambiguity where there was none). Nor are the subsequent clarifications to the drawings for Phase 5 of the project evidence of defective or ambiguous specifications. Fed. R. Evid. 407; *Intram Co., supra*, 94-1 BCA at 131,180. There was no change to the contract work. As the government contends, it simply directed appellant to perform the work specified.

The delay associated with the ambiguity for the replacement pipe is attributable to the government. Although there was no ambiguity regarding the concrete pad, this work was also delayed because it was related to the relay pipe. Appellant asserts it was delayed from Friday, 3 December 1999 through Thursday, 10 December 1999. The contractor's daily logs for Friday, 3 December, and Monday, 6 December, however, reflect that appellant was performing work and was not completely shut down while waiting for direction from the government. Absent additional evidence about the work that was being performed we conclude that appellant is entitled to a contract time extension of only four days, Tuesday, 7 December through Thursday, 10 December 1999, together with an appropriate equitable adjustment to the contract price.

The Winter Shut-Down and Remobilization

With the exercise of the option, contract performance was to have been completed by 29 November 1999. This did not occur and the government directed appellant to "close up for the winter" at the 10 December 1999 meeting pursuant to paragraph 3.16.3 of Section 02662 of the specifications, which provided that no work be performed during inclement weather.

Neither appellant nor the government specifically addressed Claim Nos. 7 and 8 in their post-hearing briefs. However, the record reflects that Claim No. 8 seeks a contract time extension of six days and \$28,002.55 to remove the temporary bypass and that Claim No. 7 seeks a contract time extension of 76 days and \$83,369.99 for remobilization and reinstallation of the temporary bypass. Both claims are based upon the delays alleged relating to the temporary bypass (Claim Nos. 1, 2, and 3), pressure testing (Claim No. 5) and the installation of relay pipe and fittings (Claim No. 6).

We concluded above that appellant did not carry its burden of proving entitlement to Claim Nos. 1, 2 and 3, that it was entitled to a two-day contract time extension with respect to Claim No. 5 and a four-day contract time extension with respect to Claim

No. 6. This is a total of six days, extending the contract completion date to 5 December 1999. Inasmuch as 5 December 1999 is earlier than 10 December 1999, the date upon which the government directed appellant to close down for the winter, we cannot say that government-caused delay was sufficient to push the work into the winter months, requiring appellant to remove the temporary bypass and remobilize in the spring. Accordingly, we find no merit to Claim Nos. 7 and 8.

Modification No. P00002

The government raised the affirmative defense of accord and satisfaction for the delay claimed by appellant based upon Modification No. P00002, which extended contract performance 202 days, to 18 June 2000 (gov't br. at 53). Appellant asserts that Modification No. P00002 does not bar its claims because they were not among the 18 changes listed in the modification and are not included in the release that covered "the work as herein revised." It also asserts that the parties' continuing consideration of claims after the modification was issued is further proof that an accord and satisfaction was not intended. (App. br. at 39-40)

The government has the burden of proving its accord and satisfaction defense. For there to be an accord and satisfaction, there must be mutual agreement between the parties with the intention clearly stated and known to both the contractor and the government. *Metric Constructors, Inc.*, ASBCA No. 46279, 94-1 BCA ¶ 26,532 at 132,058, *recon. denied*, 94-2 BCA ¶ 26,827. Proof establishing a mutual agreement or "meeting of the minds" of the parties is a critical prerequisite to finding that claims are barred. *See Brock & Blevins Co. v. United States*, 343 F.2d 951, 955 (Ct. Cl. 1965); *Precision Standard, Inc.*, ASBCA No. 54027, 03-2 BCA ¶ 32,265 at 159,600.

In this case, the government has failed to establish that a meeting of the minds occurred with regard to the delay claims at issue in this appeal. The release contained in Modification No. P00002 states that it "represents payment in full for both time and money and for any and all costs, impact effect, and for delays and disruptions arising out of, or incidental to, the work as herein revised." Messrs. Paquette, Collazo and Koger participated in the negotiation of Modification No. P00002. According to Mr. Paquette, appellant did not reserve any part of its delay claims when negotiating the modification; however, none of the eight claims at issue in this appeal are among the 18 changes included in it. Mr. Collazo gave no testimony regarding the modification and Mr. Koger considered Modification No. P00002 and the eight claims to be two separate issues and testified that the eight claims were not discussed during negotiations. He did think, however, that the modification encompassed "a great deal of the time" requested in the claims.

In short, the record evidence does not establish that there was a clearly stated intention and a meeting of the minds between the parties that “the work as herein revised” included the delay claimed by appellant, or any part of it. *Cf. Insulation Specialties, Inc.*, ASBCA No. 52090, 03-2 BCA ¶ 32,361 at 160,097, 103-104 (modification adding 212 days for extra work and stating the “adjustment . . . includes all costs for the change and all claims incidental thereto have been satisfied” did not include compensation for delay). Having reached this conclusion, we do not discuss appellant’s additional contention that the parties’ conduct following execution of a release makes plain that they never intended the release to constitute an accord and satisfaction under *John T. Jones Construction Co.*, ASBCA Nos. 48303, 48593, 98-2 BCA ¶ 29,892 at 147,975, *aff’d*, 178 F.3d 1307 (Fed. Cir. 1998) (table), record evidence of which is lacking in this case.

Liquidated Damages

Finally, while the record reflects that the government has withheld liquidated damages in the amount of \$33,500.00, it does not reflect any written claims asserted by either the government or appellant relating to these liquidated damages. Further, none of the claims asserted by appellant included in this appeal contain a challenge to the government’s assessment of liquidated damages. The government nevertheless asserts that it is entitled to the liquidated damages it has assessed from the date of the last contract extension through completion (gov’t br. at 52-53). Absent an underlying claim from which an appeal has been taken, we have no jurisdiction to consider its contention. *Honeywell, Inc.*, *supra*, 95-2 BCA at 138,792; *Pete Vicari General Contractor, Inc.*, ASBCA No. 54419, 04-2 BCA ¶ 32,665 at 161,868.

CONCLUSION

Based upon the foregoing, we conclude that appellant is entitled to a contract extension of six days, together with an appropriate contract price adjustment. The appeal is sustained to that extent, and is otherwise denied. The matter is returned to the parties with direction to negotiate an appropriate contract price adjustment.

Dated: 22 July 2005

CAROL N. PARK-CONROY
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

I concur

MARK N. STEMLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 53925, Appeal of Collazo Contractors, Inc., rendered in conformance with the Board's Charter.

Dated:

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