**Board of Contract Appeals**
General Services Administration
Washington, D.C. 20405

GRANTED IN PART: December 5, 2001

GSBCA 15401

WHITING-TURNER/A. L. JOHNSON JOINT VENTURE,

Appellant,

v.

GENERAL SERVICES ADMINISTRATION,

Respondent.

Wm. Garth Snider and F. Barry McCabe of Griffin Cochrane & Marshall, Atlanta, GA; and Donald E. Hemke of Carlton Fields, P.A., Tampa, FL, counsel for Appellant.

M. Leah Wright, Office of Regional Counsel, General Services Administration, Atlanta, GA, counsel for Respondent.

Before Board Judges **DANIELS** (Chairman), **HYATT**, and **DeGRAFF**.

**DANIELS**, Board Judge.

We consider here a claim under the differing site conditions clause of a construction contract for an equitable adjustment to the contract price. We determine that the contractor is entitled to recover the additional costs which were imposed on its caisson subcontractor because large amounts of groundwater were encountered throughout the site, not merely on one side as shown by the soil borings for which the Government was responsible. The contractor's having been a "construction manager as constructor," rather than the usual kind of general contractor, does not preclude recovery of the costs.

## Findings of Fact

### Contract between GSA and Whiting-Turner

1. On May 29, 1997, the General Services Administration (GSA) awarded to Whiting-Turner/A. L. Johnson Joint Venture (Whiting-Turner) a letter contract for the provision of construction manager as constructor (CMc) services. The services were to be

provided for Building 17 of the Centers for Disease Control and Prevention (CDC) (also known as the National Centers for Infectious Disease Laboratory) in Atlanta, Georgia. Appeal File, Exhibits 1, 3; Stipulation 1.[1] The contract required Whiting-Turner to "[act] as 'Construction Manager' during the design period, [and] also construct a New Building 17." Appeal File, Exhibits 1 at 2, 3 at 5; see also Respondent's Exhibit 7 at 1-3.

2. A paragraph of the contract entitled "Contract Price" recites:

> The price for this entire effort shall not exceed $40,434,800.00 inclusive of the hereby obligated amount of **$2,389,000.00** which is the aggregate total of the Pre-Construction Services Fee and the General Conditions-Construction Fee as proposed on May 10, 1997. The contractor shall not perform work exceeding $2,389,000.00 unless notified in writing by the Contracting Officer or the Contracting Officer's Representative (COR).

Appeal File, Exhibit 1 at 5. The contract limited the Government's liability, in the event of termination, to $2,389,000. Id. It additionally provided, "Firm-Fixed Price definitive contract is contemplated" and said that negotiations of such a contract would begin promptly and be completed at a later date. Id. at 6.

3. Under the terms of the contract, Whiting-Turner was to perform "in accordance with the scope of services outlined in the Solicitation For Offerors (SFO) package dated December 23, 1996." Appeal File, Exhibit 1 at 4. The SFO package provided that "[t]he cost difference, if any, between the negotiated GMP [guaranteed maximum price] and the final actual project construction cost shall be shared between the CMc and the Government at the conclusion of the project," with Whiting-Turner's share of the cost difference to be thirty percent. Actual project construction cost was to include "all non-government initiated change orders." Respondent's Exhibit 7 at 1-15 to -16.

4. The contract made GSA responsible for providing "[c]omplete Geotechnical and Soils information." Respondent's Exhibit 7 at 1-5. Whiting-Turner, however, was –

> responsible for verifying all site investigation data supplied by the Government. The Government does not warrant the accuracy, validity, completeness or relevance of anything contained in this report which is not factual in nature. The Government shall not be liable for any cost incurred by the Contractor as a result of its election to rely upon non-factual elements of the Site Information, such as recommendations and engineering judgments.

Id. at 1-18. In addition, Whiting-Turner was to be "primarily responsible for conducting the constructability review at the mid-point & 90% Contract Document stages." Id. at 1-10. Further, "[p]rior to the Midpoint Construction Documents submission, the Contractor is

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[1]GSA proposed thirty-three stipulations of fact. Under the terms of the Board's prehearing order in the case, Whiting-Turner's failure to object to these proposed stipulations constituted acceptance of them. Transcript at 5.

responsible for obtaining a subsurface investigation/report of site conditions. Tests shall be as required to assure that the final design will be responsive to actual site conditions." Id. at 1-18.

5. The contract additionally provided that when work had to be subcontracted, Whiting-Turner "shall obtain competitive pricing from a minimum of three (3) independent sources. The results of competitive pricing shall be made available to the government, and the government shall participate in the selection of sub-contractors." Respondent's Exhibit 7 at 1-15.

6. The contract included a differing site conditions clause, which states in pertinent part:

> (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
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> (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.
>
> (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

Appeal File, Exhibit 3 at 26.

7. The contract also contains a clause entitled "Site Investigation and Conditions Affecting the Work." This clause states:

> (a) The contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon the transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The

> Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.
>
> (b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

Appeal File, Exhibit 3 at 26.

BECC soil borings and reports

8. Between June 26 and July 10, 1997, Birmingham Engineering & Construction Consultants, Inc. (BECC) performed soil borings at the site. Stipulation 3. The locations of the borings were selected by the project's architect, CRSS Architects, Inc. (CRSS), which was under separate contract to GSA. Appeal File, Exhibit 2 at 78; see also Respondent's Exhibit 7 at 1-9. All borings were advanced until impenetrable rock was encountered. Appeal File, Exhibit 2 at 80, 81.

9. BECC took seven borings within the footprint for Building 17 – B-11, B-12, and B-13 along the western edge of the footprint, B-1 in the central portion, and B-8, B-9, and B-10 along the eastern edge. Appeal File, Exhibit 2 at 117-50; Appellant's Exhibit 77.[2] The borings on the west side found groundwater at 10.97 to 12.2 meters below the surface. Appeal File, Exhibit 2 at 82, 131-38. The central boring found some moist soil and "possible" groundwater at the time of drilling at a depth of about eleven meters, but "[g]roundwater was not encountered 24 hours after drilling operations." Id. at 117-18. The borings on the east side encountered no groundwater. Id. at 127-30.

10. On September 15, 1997, BECC sent to CRSS a final report on its subsurface exploration. Appeal File, Exhibit 2 at 73. The BECC report was intended to "descri[be] the subsurface conditions at the test boring locations including groundwater" and to address

[2]BECC actually attempted twelve borings and completed eleven. Appeal File, Exhibit 2 at 78. Only seven of them, however, were considered to be within the footprint. Id. at 72; Appellant's Exhibits 77-80.

"[a]nticipation and management of groundwater during foundation construction." Appeal File, Exhibit 2 at 76. The report includes logs of the borings described above. Id. at 79, 117-50. It cautions, however, "Conditions represented by these test borings should be considered applicable only at the test boring locations on the dates shown, and it should be assumed that these conditions may be different at other locations or at other times." Id. at 79.

11. The report also contains further cautions about groundwater:

> The presence or absence of water in the boreholes at the time of drilling does not necessarily mean that groundwater will or will not be present at other times. Groundwater levels fluctuate seasonally and are related to the amount of rainfall received in months prior to observations. We note that "perched water" is often encountered at the contact between existing fills, residual soils and bedrock, because of the varying percolation rates of the different materials.

Appeal File, Exhibit 2 at 80, 82.

12. With regard to dewatering, BECC's report states:

> The findings from this exploration indicate that dewatering will not be a significant factor in drilled pier installation. However, due to the stratified nature of the geologic formation and the depths to which some of the shafts must penetrate, routine dewatering of the piers should be anticipated.

Appeal File, Exhibit 2 at 92.[3] James G. LaBastie, a highly experienced professional engineer and geologist, testified at hearing as an expert witness on behalf of Whiting-Turner. Transcript at 281-89, 293-94. Mr. LaBastie agreed that based on the boring logs in the report, dewatering should not have been a significant factor in drilled pier installation. Id. at 313.

13. Another paragraph of the BECC report, "Casing and Concrete Placement," states:

> The procedures used in installing drilled piers and the nature of the materials penetrated in this area are such that concrete quantities can be underestimated if the "neat" volume of the design drilled pier diameter is used. The drilled pier is typically started one or more sizes larger than design to facilitate "telescoping" as the drilled pier is extended. Since the depth of the suitable rock is never a certainty, the contractor must be conservative in terms of being able to be at or above the design diameter when suitable rock is reached. The neat volume could be exceeded by as much as 50 percent.

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[3]The terms "drilled shaft," "drilled pier," and "caisson" are used interchangeably, as they have the same meaning in the contexts in which they are employed in the situation at issue in this case. Transcript at 325, 359.

Appeal File, Exhibit 2 at 93.

Initial foundation bid package

14. The Government prepared a foundation bid package to be part of the project manual for Building 17. Stipulations 2, 8. The package was published on November 3, 1997. Appellant's Exhibit 11. It required that in excavating shafts for drilled piers, the contractor "[e]xcavate bottom of drilled piers to level plane" and "[r]emove loose material and water from bottom of excavation." Id. at 2466-5 to -6. "The actual length and shaft diameter, if applicable, may vary to coincide with elevations where satisfactory bearing strata are encountered." Id. at 2466-1. Under "execution," the specifications provided, "Temporary Casings: Install watertight steel casings of sufficient length and thickness to prevent water seepage into shaft; . . . and to maintain stability of shaft walls." Id. at 2466-6.[4] As part of the work, the contractor would have to engage in dewatering: "Prevent surface and ground water from entering excavated shafts. Dewater excavated shafts before concreting. Conduct water to site drainage facilities." Id. at 2466-5; see also Appeal File, Exhibit 2 at 70.

15. The bid package for the foundation work included BECC's report on subsurface exploration. Appellant's Exhibit 10 at 3; Stipulations 2, 8. The package cautioned, however:

> A geotechnical report has been prepared for this Project and is available for information only. The report is not part of the Contract Documents. Opinions expressed in this report are those of the geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by the geotechnical engineer. Government will not be responsible for interpretations or conclusions drawn from this data by Contractor.
>
> 1. Make additional test borings and conduct other exploratory operations as necessary.
> 2. The geotechnical report is included elsewhere in the Project Manual.

Appellant's Exhibit 11 at 2466-3.

16. Whiting-Turner released the foundation bid package to prospective bidders on November 3. Appellant's Exhibit 12. It required bids for caisson work to be submitted by November 25, with the work to take place from December 17, 1997, to February 4, 1998. Id. at CC4, CC21.

17. Shortly after the bid package was released, CRSS noted that in light of new information, using caissons for foundation construction appeared to be more expensive than originally thought. CRSS said that it was exploring alternatives to caissons and that Whiting-Turner would value engineer any suggestions. Appellant's Exhibit 13 at 1. On November

[4] The primary function of a temporary casing is to protect the shaft from caving in while work is progressing. Transcript at 325.

18, due to possible foundation redesign, Whiting-Turner postponed bidding on this work. Appellant's Exhibit 16.

18. On December 2, Schnabel Engineering Associates, Inc. (Schnabel) submitted to Whiting-Turner a geotechnical and value engineering report for the building's foundation. The report concludes that drilled piers (caissons) were the most feasible foundation system. It also recommended that because so few of BECC's test borings had been taken within the building's footprint, at least five additional borings should be taken within that area. Supplemental Appeal File, Exhibit 10.

Schnabel soil borings and report

19. On December 9, 1997, representatives from Whiting-Turner, CRSS, CDC, and GSA gathered in an owner/architect/constructor meeting to discuss building matters. Appellant's Exhibit 18. "Working as a team," they agreed that more borings should be taken by Schnabel for ultimate release to bidders on foundation work. Id. at 2; Transcript at 215. The Government representatives decided that Whiting-Turner should pay for the borings and that GSA would, under the contract between it and Whiting-Turner, reimburse Whiting-Turner for the expense. Transcript at 215-16, 257-59.

20. Whiting-Turner then hired Schnabel to provide additional test borings and analysis of the subsurface conditions as indicated in the foundation bid package. On December 22, Schnabel provided Whiting-Turner with its results and with a review of the subsurface data provided by BECC. Schnabel's report includes boring logs for the seven borings this firm made – five (B101, B101A, B103, B105, and B105A) in the central portion of the building's footprint and two (B102 and B104) on the eastern edge. The logs show no groundwater observations in the section delineated for those observations. Stipulations 9, 10; Supplemental Appeal File, Exhibit 11. The Schnabel principal who was responsible for the report testified that if groundwater had been encountered, it would have been noted, and that "I do know that we did not encounter any water."[5] Transcript at 504, 522. Like the

[5]GSA notes that in each hole, Schnabel's subcontractor, Richard Simmons Drilling, switched its drilling technique, once auger refusal was encountered, from hollow stem auger to the wash casing method. Because the wash casing method involves the use of water in the drilling process, and Simmons backfilled each hole after completing the drilling, GSA suggests that the borings could not possibly show the presence or absence of groundwater below the point of auger refusal. Respondent's Brief at 14; see Supplemental Appeal File, Exhibit 11 at 6-17; Transcript at 504-06. This theory does not survive either the cited unequivocal testimony of Schnabel's principal or the testimony of Whiting-Turner's expert witness, Mr. LaBastie, on the matter. Mr. LaBastie opined that because the Schnabel boring report (a) was for the purpose of addressing subsurface conditions which might influence foundation construction, (b) said that it included all findings of groundwater (in conformance with standard industry practice to include groundwater findings in subsurface reports), and (c) indicated that no groundwater was observed, a reasonable reading of the report is that no groundwater was present in the holes Schnabel dug. Transcript at 314-18, 320-21, 332, 366.
(continued...)

BECC report, the Schnabel boring report contains general cautions, including these: "the passage of time may result in a change in the subsurface soil and groundwater conditions at these boring locations," and "water level observations . . . have been made with reasonable care and accuracy and must be considered only as an approximate representation of subsurface conditions to be encountered at the particular location." Supplemental Appeal File, Exhibit 11 at 5. On December 24, the Schnabel boring report was added to the foundation bid package. Appeal File, Exhibit 2 at 2.

21. One boring per one-quarter acre is generally considered sufficient to provide information about subsurface conditions at a site for construction of an office building. Building 17 occupies about three-quarters of an acre. Thus, between the seven BECC borings and the seven Schnabel borings taken within the building's footprint, the information provided to prospective caisson contractors was a sufficient basis for formulating a bid on the work. Transcript at 356, 365-67, 477, 484.

22. On December 24, 1997, the bid package showed that the caissons were scheduled to be installed from February 17 to April 8, 1998. Appeal File, Exhibit 2 at 7. On January 15, 1998, the package was amended to show caisson installation to be scheduled for February 26 through April 16. Id. at 20.

Coastal's bid

23. Coastal Caisson Corp. (Coastal) was one of the recipients of the bid package. Since 1976, Coastal has been in the business of drilling shafts and installing caissons for the foundations of buildings and other large structures. It averages two hundred to two hundred fifty projects per year and grosses from twelve to fifteen million dollars from those projects. Coastal performs most of its work in the southeastern United States. In the Atlanta area, Coastal has installed caissons for a major sports stadium, a county jail, a university center, and power plants. Several of these projects were larger than the one at issue here. Coastal has extensive experience in working in underground water. Transcript at 32-39. Coastal also knows, however, from having drilled many foundations in the Atlanta area (including the jail and university center), that it is certainly possible to do caisson work in the area without encountering groundwater. Id. at 149-50.

24. Coastal reviewed the entire bid package, including both sets of borings, in preparing its bid to Whiting-Turner for the caisson work. In preparing the bid, the borings were "absolutely critical" to Coastal because key factors in pricing are the material to be drilled into and the presence of water. Transcript at 44-46. Coastal estimated that it could complete work on the seventy-seven required caissons in twenty-five days and would spend $669,421 on the job. Coastal's price included a thirty percent overrun in concrete, compared to the volume that would be required if all the caissons were built and formed neatly. Id. at 82-86; Appellant's Exhibit 25.

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(...continued)

25. In preparing his firm's bid, Coastal Vice President Charles Puccini gave consideration to BECC's caution that "[g]roundwater levels fluctuate seasonally." He believed that the fluctuations would be no more than a foot. Transcript at 48-49, 149. Mr. LaBastie thought that a fair reading of the caution was that the water levels might fluctuate by as much as a few feet. Id. at 320. Both he and the author of BECC's report agreed that a significant rainfall would probably not make much difference in the water levels. Id. at 333-36, 448-49. Mr. Puccini expected that "routine dewatering," as mentioned in the BECC report, would involve pumping water out of each shaft in a matter of minutes. Id. at 52.

26. On January 22, 1998, Coastal submitted to Whiting-Turner a bid in the amount of $741,400 to perform the caisson work.[6] The bid states that it is based on subsurface information provided by BECC and Schnabel. "Should actual conditions vary from those represented," the proposal says, "Coastal Caisson reserves the right to make a claim for additional compensation and/or extension of time." Supplemental Appeal File, Exhibit 12 at 1, 3; see also Transcript at 90. Whiting-Turner accepted this bid and entered into a contract with Coastal for the caisson work.[7] The contract was in the amount of $719,408 – the total was reduced after Whiting-Turner relaxed one requirement. Appellant's Exhibits 28, 30; Transcript at 91.

Coastal's work on the project

27. On February 3, 1998, Whiting-Turner provided Coastal a schedule for the caisson work, with the work to proceed from February 20 to April 8. Appellant's Exhibit 29; Transcript at 93. Coastal considered that schedule acceptable, assuming that subsurface conditions were as represented in the BECC and Schnabel boring reports. Transcript at 94.

28. Coastal's Mr. Puccini planned to begin work on the eastern side of the building site, where the borings indicated that groundwater would be absent and the length of the caissons to rock would be relatively short. Transcript at 94-95. On February 21, when Coastal began work, however, its on-site superintendent, in conjunction with the Whiting-Turner superintendent, decided to start at the northwestern and northeastern corners of the site. Supplemental Appeal File, Exhibit 37 at 2; Transcript at 104. Coastal encountered significant groundwater at the northwestern corner. Mr. Puccini, not realizing that the hole

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[6]Coastal's bid of $741,400 is 10.75 percent more than its estimate of the costs it would incur to perform the job, $669,421. See Appellant's Exhibit 25 at 2; Transcript at 86. The difference between the two figures was to cover Coastal's overhead and profit. Transcript at 86. Whiting-Turner, in its posthearing brief, says that Coastal's proposal entailed overhead and profit of 12.4 percent. Appellant's Posthearing Brief at 14. This figure is based on the belief that Coastal's estimated costs were $659,655. Id. The document which Whiting-Turner cites as support for this belief uses the figure $669,421, however. Appellant's Exhibit 25 at 2. We consequently find that Coastal's bid includes a markup of 10.75 percent for overhead and profit.

[7]If the parties acted in accordance with their contract, GSA participated in the selection of Coastal as the caisson subcontractor. See Finding 5.

had been drilled in a location different from one he had planned – a location where the borings indicated the presence of groundwater – directed that a letter regarding the presence of groundwater be sent to Whiting-Turner. Transcript at 104-06.

29. Consequently, on February 26, Coastal's project manager notified Whiting-Turner that while excavating two drilled shafts on the western side of the site, approximately 4 to 4.5 meters of groundwater had been encountered. The manager asserted:

> Attempting to pump this large amount of unanticipated groundwater out of the inspection casing is both costly and unsafe for the down hole cleaning and inspection. In the interest of safety, Coastal Caisson proposes that if there is more than 0.6m of groundwater in the drilled shaft, the shaft shall be concreted by utilizing the "wet method." The "wet method" entails the use of full-length tremie pipe, which delivers the concrete to the bottom of the shaft, and the concrete displaces the groundwater as it enters the shaft.

Supplemental Appeal File, Exhibit 14 at 1. On the following day, February 27, Coastal's project manager repeated the request for permission to use the wet method of concrete placement and provided further information about that method. Id., Exhibit 15.

30. Whiting-Turner sent Coastal two letters on February 27. In one of them, Whiting-Turner's project manager asserted that Coastal should not have expected minimal groundwater at the site because BECC's report "indicates significant amounts of groundwater in their boring logs." Supplemental Appeal File, Exhibit 16. In the other letter, a Whiting-Turner project engineer noted that "the information at boring numbers B-11, B-12, and B-13 indicate[s] that significant levels of groundwater would be encountered while excavating shafts in those areas." In particular, he said, approximately 4.26 meters of water should have been encountered in the vicinity of boring B-11. Id., Exhibit 17.

31. On March 9, the project's architect, CRSS, disapproved Coastal's request to use the "wet method" of concrete placement and directed that the shafts be dewatered and inspected at the bottom per contract specifications. Stipulation 20; Supplemental Appeal File, Exhibit 18; see also Stipulation 26.

32. Whiting-Turner was not satisfied with Coastal's performance on the project. On February 27, Whiting-Turner's project manager said that his firm "remain[s] greatly disappointed at the performance of your forces on the . . . project. They have been drilling since Monday, February 23, 1998, yet they have not placed any concrete in the ground." Supplemental Appeal File, Exhibit 16. On April 3, Fred Recktenwald, Whiting-Turner's senior project manager, "voiced our growing concerns with regards to your current production rate and the resulting critical path implications. To date, Coastal Caisson has been on the job for 39 days . . . . Much to the dismay of Whiting-Turner/Johnson, only 28 of 77 shafts (36%) have been poured during this period." According to Mr. Recktenwald, this was "paltry production" and none of Coastal's commitments had been met. He threatened that if Coastal could not demonstrate that it would complete the entire caisson installation operation by May 8, Whiting-Turner might terminate for default its contract with Coastal. Id., Exhibit 21.

33. Coastal responded immediately to Mr. Recktenwald's letter. Its response, also dated April 3, contended that the caisson subcontractor was behind schedule because, though only four of the nineteen relevant BECC and Schnabel borings – twenty-one percent – indicated the presence of groundwater, groundwater was actually encountered at twenty-six of the twenty-eight locations drilled – ninety-three percent. Supplemental Appeal File, Exhibit 20; see also Transcript at 100 ("we ran into water virtually everywhere"). Coastal stated, "This increase in shaft locations with groundwater present is resulting in extra work requiring additional time and money." Supplemental Appeal File, Exhibit 20 at 3. The caisson subcontractor had to use a more expensive and time-consuming drilling technique, drill wider holes, seat and remove casings differently, and pump out groundwater in far more shafts than anticipated. Id. at 4-6; Transcript at 115-25. Coastal asked Whiting-Turner to inform the Government of these difficulties. Supplemental Appeal File, Exhibit 20 at 7.

34. A project meeting held on April 10, 1998, was the first occasion on which Whiting-Turner or Coastal notified the Government about the alleged differing site condition. Stipulation 24; see also Stipulation 23. At the meeting, Coastal Vice President Puccini maintained that the boring data indicated groundwater only on the west side of the site, and that the need to deal with water throughout the site hampered his firm's production rate significantly. Supplemental Appeal File, Exhibit 22 at 1; Transcript at 131.

35. After the April 10 meeting, neither GSA nor CDC changed its actions in monitoring Coastal's work regarding the pumping of water, cleaning the bottom of shafts, or checking the amount of personnel and equipment the caisson subcontractor was using. Neither agency made any directions or suggestions for modifications in Coastal's work. Nor did either agency alter its monitoring of water levels in the shafts. Transcript at 138-39, 417, 606-07. The Government's only prompt response was the insertion by GSA, no later than April 21, of $50,000 in Whiting-Turner's budget as a groundwater allowance. Appellant's Exhibit 48 at 2; Transcript at 232-33, 423.

36. On April 28, Coastal's project manager asked Whiting-Turner to consider as extra costs the expenses Coastal was incurring to install caissons in the holes which were expected to be dry, but turned out to contain groundwater. He estimated that these costs would total $182,910. Supplemental Appeal File, Exhibit 24.

37. The project's architect reviewed Coastal's letters of April 3 and 28 and provided opinions about them on May 15. The architect concluded "that the seasonal fluctuation of groundwater levels is evident in the soil boring logs and that the majority of caisson[] contractors with knowledge of the Atlanta area (Piedmont soil area) would be well-prepared for drilled shaft installation in the February/March/April time frame." The architect asserted that only nine of the borings "were drilled deep enough to provide relevant foundation design information for [the site] (i.e., allowable bearing pressure, foundation groundwater, etc.)." As for five of these borings, they were drilled in December 1997 –

> to better evaluate the depths and quality of the load bearing materials. Given that water was used in the drilling process and neither short term nor long term groundwater readings, or monitoring wells were installed in the boreholes,

> insufficient data is available to draw conclusions regarding the absence/ presence of groundwater at the time of drilling.

Supplemental Appeal File, Exhibit 28.

38. Coastal completed its work on June 14, 1998. Supplemental Appeal File, Exhibit 37 at 114. On June 24, Schnabel, which had been hired to inspect and test the caissons, reported to Whiting-Turner that "the caissons . . . were installed in accordance with the intent of the design." Appellant's Exhibit 50; Transcript at 208-09.

Impact of groundwater on the work

39. The vast majority of the shafts drilled by the firm contained groundwater. According to Mr. Puccini, sixty-nine of the seventy-seven shafts contained groundwater. Transcript at 162, 167-73; Appellant's Exhibits 78-80. Of the reports prepared by Coastal's on-site superintendents which are in the record, those for forty-nine of fifty-nine shafts show groundwater. The amounts of water are between nine inches and thirty-five feet, and they average sixteen feet per shaft. Appellant's Exhibit 31. Schnabel's inspection reports show that "continuous pumping" was required to dewater sixty-one of the seventy-seven shafts. Appellant's Exhibit 32. Mr. Puccini testified that the water was often "coming in like a rolling boil[;] . . . it is under . . . tremendous pressure." Transcript at 81. Generally, he said, the wettest holes were on the eastern side of the site, where the borings showed no groundwater. Id. at 147-48. Coastal used pumps capable of removing 400 gallons of water per minute from the shafts, and it removed on average about 38,000 gallons of water per shaft – about thirty times the amount of water a shaft was capable of holding. Id. at 52. In the thirteen years that Mr. Puccini has been with Coastal, this job required "by far the most" unexpected dewatering. Id. at 155-56.

40. According to Whiting-Turner's expert witness, Mr. LaBastie, identification of groundwater is an extremely important issue in subsurface investigation; it has a major impact on construction of caissons. Transcript at 367. The borings performed by BECC and Schnabel indicate that groundwater on the site sloped down from west to east, and was sufficiently deep that caissons could have been expected to be installed above the groundwater level everywhere on the site except on the western edge. The cautions about groundwater in the boring reports were nothing more than "industry standard caveats." Thus, groundwater should have posed minor problems for the caisson subcontractor. In reality, however, the groundwater sloped up from west to east. There were "huge" (or "material") differences in groundwater conditions between what was reported in the boring logs and what Coastal actually encountered. Id. at 292, 297-98, 313, 323-24, 329-31, 337; Appellant's Exhibit 83.

41. Mr. LaBastie has particular experience in caisson construction. Transcript at 286-88. In his opinion, Coastal's logs show a strong correlation between groundwater levels and time required to drill and install shafts, and the amount of time Coastal spent in dealing with underground water was reasonable. Id. at 339-40, 367.

42. In response to a suggestion that notations on boring logs of "possible groundwater encountered at the time of drilling" or "moist" soil should have alerted the caisson contractor to expect groundwater at boring locations, Messrs. Puccini and LaBastie both testified that a contractor relies instead on statements about groundwater presence twenty-four hours after borings are made. Mr. Puccini explained that because water seeks its lowest point, "if you were looking 24 hours after it was drilled and there was no water, not a drop[,] then there is no groundwater at that location." Transcript at 64. Mr. LaBastie similarly stated that "even with the wet method [of drilling], the 24-hour reading is relatively reliable in that the drilling pools will still tend to stabilize near the groundwater level. Id. at 302. He further stated, "'Moist' . . . is in no way a definitive description and it varies [depending on] where your are. . . . The description 'moist' doesn't do much for you." Id. at 303.

43. In response to a suggestion that the site might have been dewatered efficiently by a well point system, Mr. Puccini noted that no one from GSA, CDC, or Whiting-Turner ever suggested, at the time of construction, that such a system should have been implemented. Transcript at 142. He further testified that a well point system would not have been practical, given the time constraints presented. Coastal would have had to hire experts to design the system, and even the experts would not have known how to make a proper design because they would have had to rely on the same borings that proved so problematical for the caisson contractor. The design would have taken weeks to develop and several days to install. Id. at 140-42. Mr. LaBastie testified that well points are difficult to drill in rock. "[Y]ou would spend as much installing the well points as you would the caisson." Dewatering on an area basis, he explained, requires changing the watertable elevation, so it is rarely used in caisson installation. Thus, he concluded, "the wells may or may not have been a reasonable approach to trying to dewater the sockets." Id. at 341-42.

Claims by Coastal and Whiting-Turner

44. On July 28, 1998, the contracting officer definitized the letter contract with Whiting-Turner and established a guaranteed maximum price of $54,922,735. Appeal File, Exhibit 3 at 1. The contract price included $50,000 for dewatering over and above Coastal's contract price with Whiting-Turner. Stipulation 27. According to the CDC official who served as the contracting officer's representative for this project, this money was included at Whiting-Turner's request to provide that firm with funds to settle Coastal's claim, and the Government expected Whiting-Turner to keep it informed as to whether the money was actually paid to Coastal. Transcript at 552-53, 575-76. To date, Whiting-Turner has not paid Coastal any of the $50,000 included in the contract for dewatering. Stipulation 27.

45. At an owner/architect/constructor meeting on August 25, it was understood that "[t]he Coastal Caisson possible claim is still outstanding." Whiting-Turner's Mr. Recktenwald noted that a Coastal vice-president had told him that Coastal would be pursuing a claim. Appellant's Exhibit 61 at 2.

46. On December 21, Coastal submitted a claim to Whiting-Turner. The claim was based on the premise that "[t]he groundwater on the above referenced project was much higher than the bid documents had indicated. Therefore, there was more water than planned

and the method of excavation [for] the drilled shafts had to be radically changed." Coastal contended that the additional work required due to the unanticipated groundwater had increased costs by $386,276.54. Coastal's claim was not certified. Appeal File, Exhibit 4.

47. On January 6, 1999, in a letter signed by Mr. Recktenwald, Whiting-Turner transmitted Coastal's claim to GSA. In doing so, Whiting-Turner expressed its opinion "that the seasonal fluctuation of the groundwater levels is evident in the soil boring logs and that any caisson contractor possessing knowledge of the Piedmont Area, in which Atlanta is a part, would be prepared to drill shafts during the late winter-early spring months." Whiting-Turner noted its agreement in this regard with the architect's statement of May 15, 1998. See Finding 37. Whiting-Turner did not ask that the claim be granted, and it did not include a certification with its letter. Whiting-Turner concluded by stating its opinion –

> that groundwater played a role in the reduced production rate[;] however, the increased groundwater levels should have been anticipated due to the aforementioned factors. Coastal Caisson had a distinct "learning curve" on this project, as it overcame problems installing the reinforcing cages, navigating the site due to mud (a problem caused largely because of their failure to remove all spoils in a timely manner), and ordering and obtaining concrete when needed. The smaller rig sat idle for a large portion of the time that Coastal was on site, which caused nearly all of the drilling to be done with the larger drill rig. Despite concerns from Whiting-Turner/Johnson to improve the situation, a comparable large rig was never mobilized. These factors figured largely into the tremendous delays and adverse impact to the project schedule.

Supplemental Appeal File, Exhibit 31.

48. The Whiting-Turner personnel who were involved with this project had very limited experience concerning caissons. Mr. Recktenwald, the senior project manager, had been involved in only four or five projects in which caissons were installed. He had never put together a bid for caisson work, installed caissons, or inspected caissons. Transcript at 202-04. James Mills, another Whiting-Turner project manager on this job, had never before dealt with caissons. Id. at 267. Mr. Mills agreed that he was not qualified to determine whether Coastal's falling behind schedule in installing caissons was due to excessive, unexpected groundwater on the site or any fault of Coastal. Id. at 273.

49. On the other hand, Coastal not only was highly experienced in caisson work, see Finding 23, but was also very different from caisson contractors who usually ply their trade in the Atlanta area. Mr. LaBastie explained that Coastal operates more like an international caisson company than those firms. It uses – and used at the site in question – bigger, more sophisticated equipment than its competitors. "This guy can make holes like crazy" and did it well. "He has got equipment that can make holes and so the local experience was that we have never seen this before. You know, this is unusual[,] quite frankly." Transcript at 368-70.

50. The difference in comprehension of caisson construction between Whiting-Turner and Coastal is shown, for example, by the firms' distinct interpretations of the fact that Coastal used only one of its two rigs to drill the shafts. As noted in Finding 47, Mr. Recktenwald of Whiting-Turner was convinced that Coastal's decision to use only one rig delayed progress. Coastal's Mr. Puccini explained, however, that because of the large amount of unexpected groundwater, a second rig became unnecessary for drilling shafts. Pumping water out of the shafts, and then cleaning the bottom of the hole and inspecting it, took so long that one rig was sufficient to keep pace with associated tasks. Further, the smaller rig could not drill holes with as large a diameter as became necessary, so that rig was selected for deactivation. Transcript at 101-02.

51. On March 3, 1999, a GSA contracting officer denied the claim Whiting-Turner had forwarded from Coastal. Appeal File, Exhibit 5. The contracting officer concluded that in light of the BECC report's cautions about perched water and routine dewatering, Coastal had "failed to take into consideration all of the information contained in the report. Thus, your approximation of the expected groundwater is unfounded." Id. at 1-2. She also noted that the claim had not been certified. Id. at 2-4. The contracting officer said not a word about her payment of $50,000 to Whiting-Turner, for dewatering over and above Coastal's contract price with Whiting-Turner, in the definitization of the letter contract between GSA and Whiting-Turner. See Finding 44.

52. On November 16, 1999, GSA and Whiting-Turner agreed to modification PS19 to the contract between these parties. Supplemental Appeal File, Exhibit 33. The modification concluded: "The completion date for Phase I shall be extended to March 13, 1999. This ten (10) day time extension shall cover any and all schedule impact(s) caused by, relating to or arising from the owner, architect, weather conditions, revisions, claims, demands and rights, as of the date of this contract modification." Id. at 3. Mr. Recktenwald, who signed the modification on behalf of Whiting-Turner, testified that Whiting-Turner did not intend to release Coastal's claim in agreeing to the modification. He also testified that after the date on which the modification was signed, no one from GSA has suggested that the quoted sentences amounted to a release of the claim. Transcript at 231.

53. On February 16, 2000, Coastal sent to Whiting-Turner "the final draft of our claim for additional compensation for costs incurred while working on the Center for Disease Control Building # 17." The claim was certified by Coastal Vice President Puccini and was in the amount of $533,745. Appeal File, Exhibit 6 at 8-47. The claim had three components: extra hours, $496,061.28 (497.16 hours at $997.79 per hour); extra concrete, $24,683.30 (354.9 cubic yards at $69.55 per cubic yard); and lost casings, $13,000.50 (two casings, one valued at $5,296.50 and one at $7,704). Id. at 10.

54. At hearing, Mr. Puccini explained that the time claimed to have been involved in the work was based on actual times recorded contemporaneously on the site, compared to times expected in devising Coastal's bid. Transcript at 126-27; see also Appeal File, Exhibit 30. He testified that in calculating extra hours, he had included only the hours for the sixty-one shafts which were not along the western edge of the site, and had excluded 233 hours which Coastal considered to be associated with inefficiencies resulting from the firm's own equipment and personnel problems. Transcript at 123-24, 151-54. The hourly rates included

costs of equipment involved, with rented equipment priced at actual rental rates and owned equipment priced at actual cost less depreciation (which was less than rental rates). Id. at 163-64. The additional concrete was required, he said, to fill holes Coastal drilled in larger diameter than planned, at places that were supposed to be dry, to "telescope" the caissons to deal with the groundwater problems. Id. at 133-34, 165-66. He also stated that the two lost casings had been inserted to try to stem the flow of water at locations where the borings indicated no groundwater, and that those casings could not be removed. Id. at 125, 165. GSA asked Mr. Puccini no questions about the calculation of Coastal's claim.

55. On March 2, 2000, Whiting-Turner responded to the contracting officer's denial of the Coastal claim of December 21, 1998. See Finding 51. Whiting-Turner opined that the contracting officer's letter was not a binding decision because the claim on which it was based was not certified. Whiting-Turner said that after further consideration, it believed that "[Coastal's] request for additional compensation has some merit as I believe that there has been a fundamental change in the scope of their work originally contemplated by their contract." Appeal File, Exhibit 6 at 1. Whiting-Turner "supports Coastal's argument that the soils reports did not adequately measure the presence of ground water" and "can certify that the effort required to drill caissons in areas of high ground water is significantly greater than that with dry holes." However, the contractor continued, "Our general feeling about their request is that Coastal has inflated (or overstated) the number of hours, and the unit cost per hour." Id. at 2. Whiting-Turner certified the claim in the amount of $164,057, with subdivisions as follows:

| | |
|---|---|
| Sealing casings into bedrock to prevent water infiltration: 166 hours at $419.70 per hour | $ 69,670 |
| Pumping water: 67 hours at $196.84 per hour | 13,188 |
| Re-cleaning shaft bottoms from mud and debris due to water infiltration: 59 hours at $196.84 per hour | 11,614 |
| Removing casing from bedrock: 56 hours at $419.70 per hour | 23,503 |
| Additional materials: concrete over and above 20 percent waste | 24,683 |
| Subtotal | $142,658 |
| Markup for overhead and profit, 15 percent | 21,399 |
| Total | $164,057 |

Id. at 2-4.

56. As pointed out by Mr. Puccini at the hearing, Whiting-Turner's reductions in the amounts claimed by Coastal were at least in part based on incorrect assumptions as to the number of weeks Coastal worked on the job (seventeen, not fourteen) and the number of crews Coastal employed (two, not one). Transcript at 158-61.

57. The contracting officer denied this claim on June 8, 2000. Appeal File, Exhibit 8. She first reiterated her earlier conclusion (see Finding 51) that in light of the BECC report's cautions about perched water, fluctuating groundwater levels, and the need for dewatering of the piers, "Coastal should have anticipated the ground water [sic] as well as routine dewatering." Id. at 1. "In addition," she continued, "Whiting-Turner/A.L. Johnson

contracted with Schnabel for the additional geotechnical survey that you mentioned. Thus, Coastal relied upon representations by Whiting-Turner/A.L. Johnson about the ground water [sic]. Therefore, if there were liability for unanticipated groundwater, then Whiting-Turner/A.L. Johnson should be liable." Id. As with her earlier letter regarding a claim for Coastal's extra costs, the contracting officer did not mention the $50,000 dewatering payment to Whiting-Turner. See Finding 44.

58. Whiting-Turner's complaint, dated November 9, 2000, "requests that the Board award an equitable adjustment to the Contract in the amount of $167,338.14 for damages that Whiting-Turner/A.L. Johnson and its caisson subcontractor suffered because of differing site conditions." Complaint ¶ 20. This amount is the sum of the damages claimed by Whiting-Turner to have been incurred by Coastal ($164,057) and a two percent fee on those damages ($3,281.14) for Whiting-Turner itself. Id. ¶¶ 18-19. At hearing and in briefs, no mention was made of a fee of two percent (or any other amount) for Whiting-Turner.

## Discussion

### Overview

This case involves a claim under the differing site conditions clause of a construction contract. See Finding 6. In particular, Whiting-Turner makes a "type I" differing site conditions claim -- an assertion that subsurface conditions at the site differed materially from those indicated in the contract, and that the contractor is consequently entitled to an increase in payments to cover the higher costs it incurred as a consequence of the difference.

As explained by the Court of Claims, a differing site conditions clause is placed in a solicitation (and then incorporated into the resulting contract) for a purpose – "to take at least some of the gamble on subsurface conditions out of bidding." Foster Construction C. A. v. United States, 435 F.2d 873, 887 (Ct. Cl. 1970). The Government provides prospective contractors with specific information about subsurface conditions and receives in exchange bids which rely on that information. Bidders need not engage in extensive site investigation or include in their prices a contingency factor to cover the risk that conditions will prove more troublesome than expected. Instead, they know in advance that if subsurface work becomes more difficult than was indicated by or reasonably anticipated from the Government's data, the contractor will be paid for the additional costs which unexpectedly occur. SAE/Americon-Mid Atlantic, Inc. v. General Services Administration, GSBCA 12294, et al., 98-2 BCA ¶ 30,084, at 148,907-08; Cherry Hill Construction, Inc. v. General Services Administration, GSBCA 11217, 92-3 BCA ¶ 25,179, at 125,476. As long ago as 1970, the Court of Claims stated: "All this is long-standing, deliberately adopted procurement policy, expressed in the standard mandatory [differing site] conditions clause and enforced by the courts and the administrative authorities on many occasions." Foster Construction, 435 F.2d at 887.

To prevail on a type I differing site conditions claim, the contractor must show six elements:

> (i) the contract documents must have affirmatively indicated or represented the subsurface conditions which form the basis of the [contractor's] claim;
>
> (ii) the contractor must have acted as a reasonably prudent contractor in interpreting the contract documents;
>
> (iii) the contractor must have *reasonably* relied on the indications of subsurface conditions in the contract;
>
> (iv) the subsurface conditions actually encountered, within the contract site area, must have differed *materially* from the subsurface conditions indicated in the same contract area;
>
> (v) the actual subsurface conditions encountered must have been reasonably unforeseeable; and
>
> (vi) the contractor's claimed excess cost must be shown to be solely attributable to the materially different subsurface conditions *within the contract site*.

SAE/Americon, 98-2 BCA at 148,921-22 n.19 (quoting Weeks Dredging & Construction, Inc. v. United States, 13 Ct. Cl. 193, 218 (1987), aff'd, 861 F.2d 728 (Fed. Cir. 1988) (Table)); P.J. Dick Inc. v. General Services Administration, GSBCA 12036, et al., 94-3 BCA ¶ 27,073, at 134,927-28 (same).

In attempting to persuade the Board that all these elements have been satisfied, Whiting-Turner briefs the case as if Coastal were the contractor. As GSA points out, this is a false premise; Whiting-Turner itself was the contractor, and Coastal was its subcontractor. We will nevertheless first analyze the six elements as to Coastal and then consider, in the context of GSA's defenses to the claim, whether the Government is correct in maintaining that because of the provisions and nature of GSA's contract with Whiting-Turner, even if we find that Coastal incurred extra costs because of differing site conditions, GSA is not liable for those costs.

Differing site conditions

First, the package of information prepared by the Government for presentation to Coastal and other prospective bidders on the caisson work affirmatively represented that groundwater would be encountered only on the western edge of the building site. The package included soil boring logs and reports by two different firms, BECC and Schnabel. Findings 14, 15, 20. The BECC logs and report showed groundwater on the western edge and not in the central portion or on the eastern edge of the site. Findings 9-10. The Schnabel logs and report confirmed an absence of groundwater in the center and along the eastern edge of the site. Finding 20. The results of soil test borings are "considered the most reliable reflection of subsurface conditions." SAE/Americon, 98-2 BCA at 148,910 (quoting United Contractors v. United States, 368 F.2d 585, 597 (1966)); Cherry Hill, 92-3 BCA at 125,476

(same). Further, "[a] pattern of test holes across the site, such as was found here, is considered to be reasonably representative of the site as an entirety." Cherry Hill, 92-3 BCA at 125,476 (citing Alps Construction Corp., ASBCA 16966, 73-2 BCA ¶ 10,309, at 48,667).

Second and third, Coastal, a highly experienced caisson contractor, acted as a reasonably prudent contractor in interpreting the contract documents and relying on the boring logs and reports in formulating its bid. Findings 23, 24. It sensibly gave far less importance to the various disclaimers contained in the bid package. These disclaimers included the following. The bid package said that the BECC report was "available for information only. The report is not part of the Contract Documents." Finding 15. The package also cautioned each prospective bidder to "[m]ake additional test borings and conduct other exploratory operations as necessary." Id. The BECC report itself stated, "Conditions represented by these test borings should be considered applicable only at the test boring locations on the dates shown, and it should be assumed that these conditions may be different at other locations or at other times." Finding 10. It also warned that "[g]roundwater levels fluctuate seasonally and are related to the amount of rainfall received in months prior to observations," and that "perched water" might be encountered. Finding 11. The report also noted "possible" groundwater at the time of drilling in some places, but no groundwater twenty-four hours in those locations after drilling. Finding 9. Similarly, the Schnabel report contained cautions about changes in groundwater conditions over time and the mere "approximate representation" of subsurface conditions. Finding 20.

The statements that the BECC report was for "information only," "not part of the Contract Documents," and that a bidder should make its own borings are not controlling. We have already held that "exculpatory clauses which are inconsistent with the purpose of other provisions of contracts 'cannot be given their full literal reach.'" Clark Concrete Contractors, Inc. v. General Services Administration, GSBCA 14340, 99-1 BCA ¶ 30,280, at 149,757 (quoting Cherry Hill, 92-3 BCA at 125,476). In particular, "[c]lauses to whittle down or cut back the [Differing Site] Conditions clause, which is prescribed for Government contracts, are not broadly or sympathetically interpreted." Stock & Grove, Inc. v. United States, 493 F.2d 629, 632 (Ct. Cl. 1974). Consequently –

> [B]road exculpatory clauses, like the ones included in this Contract, "cannot be given their full literal reach and 'do not relieve the defendant of liability for changed conditions as the broad language thereof would seem to indicate.'" United Contractors, 368 F.2d at 598 (quoting Fehlhaber Corp. v. United States, 138 Ct. Cl. 571,584, 151 F. Supp. 817, 825, cert. denied, 355 U.S. 877 (1957)). In other words, the Government cannot provide boring logs, so that bids can be based on them, and at the same time disclaim the validity of those logs. To do so would be to render the differing site conditions clause meaningless, as to "type I" claims, by eliminating the standard from which conditions may be found to be at variance. The reading given by the Court of Claims to the exculpatory clauses, when placed in the same contract with boring logs and a differing site conditions clause, is the only one which gives meaning to all of these provisions.

SAE-Americon, 98-2 BCA at 148,910 (quoting Cherry Hill, 92-3 BCA at 125,476); see also Jack Crawford Construction Corp., GSBCA 4089, et al., 75-2 BCA ¶ 11,387, at 54,214 ("If the Government did not want the information to be used and relied upon then it should not have taken borings, prepared boring logs and given them to the contractor for use as an aid in preparing its offer. The Government may not by means of a broad disclaimer leave without remedy an otherwise valid contractor grievance under the Differing Site Conditions clause.").[8]

Coastal reasonably gave little weight to the disclaimers in the BECC and Schnabel reports, as well as those found elsewhere in the Government's bid package. The idea that the boring logs' representations were confined to the limits of the holes would "render[] the boring data and related provisions of the Differing Site Conditions clause meaningless insofar as pricing the work is concerned, and frustrate[] the purpose of the clause[,] which is to reduce contingencies in bids." C & L Construction Co., ASBCA 22993, et al., 81-1 BCA ¶ 14,943, at 73,962. Similarly, the fact that the borings were taken in different times of year from the one in which the caisson work would be done does not mean that reliance on the borings should not have been expected. Lamb Engineering & Construction Co., EBCA C-9304172, 97-2 BCA ¶ 29,207, at 145,341-42. Warnings vaguely suggesting the presence of water cannot negate the impact of the "most reliable and most specific indicator – the borings." United Contractors, 368 F.2d at 598. Seasonal fluctuations of groundwater should have been of no particular significance. Finding 25. The presence of "perched water" – "unconfined ground water separate from an underlying main body of ground water by an unsaturated zone" – would not result in major dewatering efforts. Guy F. Atkinson Construction Co., ENG BCA 5911, et al., 95-1 BCA ¶ 27,483, at 136,936; see also Ilbau Construction, Inc., ENG BCA 5465, et al., 92-1 BCA ¶ 24,476, at 122,159 (1991) (perched water "would have been relieved and stopped flowing"; it would not "[come] in from below and flow[] continuously through the excavation up through the soil and/or tieback holes under pressure"). Nor should the "possible" presence of groundwater at the time of drilling have had importance, when no groundwater was found twenty-four hours after drilling occurred. Finding 42.

Fourth, the subsurface conditions Coastal actually encountered, within the building site, differed materially from the subsurface conditions indicated by the soil borings. Instead of being found merely along the western edge of the site, groundwater was prevalent throughout the area. Finding 39. As a result, instead of having to perform "routine" dewatering, "not . . . a significant factor," as the BECC report told prospective bidders to anticipate, Finding 12, Coastal had to engage in a massive dewatering effort. Finding 39. The caisson subcontractor had to use a more expensive and time-consuming drilling

[8]GSA points out that Cruz Construction Co. v. Lancaster Area Sewer Authority, 439 F. Supp. 1202 (E.D. Pa. 1977) comes to a contrary conclusion: exculpatory provisions trump soil borings where the correctness of the borings is not guaranteed by the owner. The holding in Cruz Construction is not applicable to this case, however. It was premised on Pennsylvania law, not the law of the Court of Claims (and now the Court of Appeals for the Federal Circuit), on which we rely, id. at 1206, 1207 n.1, and the contract there did not include a differing site conditions clause, id. at 1209.

technique, drill wider holes, and seat and remove casings differently, as well as pump out groundwater in far more shafts than anticipated. Finding 33; see Wall Street Roofing, VACAB 1373, 81-2 BCA ¶ 15,417, at 76,392 (need for use of unexpected construction techniques to perform work demonstrates existence of differing site condition); Bick-Com Corp., VACAB 1320, 80-1 BCA ¶ 14,285, at 70,345 (same).

Fifth, the actual subsurface conditions encountered were not reasonably foreseeable. As explained previously, the presence of the differing site conditions clause and the soil borings restrict application of the site investigation clause, Finding 7, to a limited investigation. Subsurface conditions in the Atlanta area are extremely variable, making the need to rely on soil borings especially acute there. Finding 23. There is no evidence that with minimal investigation of the site, Coastal could have determined that the soil borings were incorrect representations of subsurface conditions.

Sixth, Coastal's claimed excess cost was for the most part solely attributable to the materially different subsurface conditions at the site. Coastal claims that it incurred additional costs in the amount of $533,745 as a result of the differing site conditions. Finding 53. The firm's vice-president explained how this amount was calculated, and GSA asked no questions about the calculations. Finding 54. GSA did not submit any independent evidence as to the costs, either.

In its posthearing brief, the agency challenges two portions of the claim. GSA maintains first that recovery should be denied for the costs associated with sealing casings into the bedrock and subsequently removing the casings. According to the agency, because the bid package required the caisson subcontractor to "[i]nstall watertight steel casings of sufficient length and thickness to prevent seepage into shaft," Finding 14, Coastal had to seal and remove casings at all holes in whatever way proved necessary. Respondent's Posthearing Brief at 37. We do not agree with this contention. As Coastal's Vice President Puccini observed, "Water seepage is a very minor amount of water that comes in around the bottom [and sides] of the casing." Transcript at 75. Mere seepage of water could have been prevented by the construction technique Coastal intended for dry shafts; the use of the far more elaborate, expensive technique needed to make shafts watertight against the groundwater unexpectedly encountered resulted from the differing site conditions. See Findings 33, 39, 40.

GSA also maintains that the portion of the claim relating to additional concrete costs should be rejected. The BECC report told prospective bidders that "[t]he neat volume [of concrete] could be exceeded by as much as 50 percent." Finding 13. Coastal's bid, however, was based in part on an estimate that the overrun in concrete would be only thirty percent. Finding 24. Whiting-Turner does not tell us the extent of Coastal's actual overrun in concrete, but GSA calculates it as "a tad more than 45%, still less than the 50% overrun warned of in the BECC report." Respondent's Posthearing Brief at 39. Thus, according to the agency, "Coastal simply underbid the amount of concrete necessary for the job, despite information provided to the contrary." Id. In reply, Whiting-Turner argues that Coastal is entitled to the cost of additional concrete because that material was needed not for the reason cited in the BECC report – "the depth of suitable rock is never a certainty," Finding 13 – but rather, due to a change in construction methods resulting from the unexpected amount of

groundwater. Appellant's Reply Brief at 45. We find this rejoinder unconvincing. There is no proof that Coastal required more concrete than it was cautioned to expect, and even if there were, there is no proof as to what percentage of the additional material was needed because of the differing site condition. We agree with GSA that the portion of the claim relating to additional concrete costs should be rejected.

After eliminating the concrete cost portion of the claim, the remainder is the amount of $509,061.78. Coastal has included in this amount a markup of fifteen percent to cover overhead and profit. Appellant's Posthearing Brief at 78. The record is bereft of any evidence which might support a fifteen percent markup. We have found, however, that Coastal's bid was premised on a markup of 10.75 percent for overhead and profit. Finding 26 n.6. This is the only evidence on which we might base an appropriate markup. Applying a 10.75 percent markup to the direct costs included in the portion of the claim we have found valid, we conclude that Coastal has proved that it incurred $490,248.63 in direct costs, overhead, and profit as a result of the differing site conditions on this job.

We recognize that this last figure is considerably more than the amount Whiting-Turner believes to have been Coastal's costs resulting from the differing site conditions ($164,057). See Finding 55. Frankly, in our judgment, the Whiting-Turner personnel who have been involved in this project have never understood the magnitude of the difficulties the subcontractor faced in dealing with the problems created by the inaccurate soil borings. These individuals had very limited experience with caisson construction and were consequently unqualified to evaluate Coastal's predicament. Finding 48. Even if they had been more knowledgeable about caisson work in the Atlanta area generally, they might not have appreciated the difficulties imposed on this particular caisson company, since Coastal was unique in having the capability of digging holes quickly. See Finding 49. From the very beginning of Coastal's work, Whiting-Turner personnel misunderstood the quandary into which the subcontractor had been placed by the large amounts of unanticipated groundwater. Findings 32, 33. The project architect's understanding was no better, see Finding 37, and following the architect led Whiting-Turner further astray. See Finding 47. The Whiting-Turner personnel made clear errors in recognizing why Coastal used only one drilling rig, Finding 50, and the time and number of crews the subcontractor used on the job, Finding 56. We find no basis for accepting the amount proposed by Whiting-Turner as Coastal's costs resulting from the differing site conditions.[9]

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[9]A suggestion has been made that Whiting-Turner had a motive for first dismissing, and then downplaying, Coastal's contentions that its costs were greatly increased as a result of encountering groundwater which was not disclosed in the soil borings and reports. Appellant's Reply Brief at 18. On this job, Whiting-Turner was not a general contractor in the usual sense. Instead, it was a "construction manager as constructor." Finding 1. The Armed Services Board of Contract Appeals has described the differences between the two varieties of contractor:

> When a dispute arises on a project, the function of the construction manager is to consult with the owner and the architect as required and to take

(continued...)

GSA's defenses

In addition to contesting the existence of differing site conditions and two portions of the sum claimed on Coastal's behalf at hearing, GSA has mounted four other defenses to the claim. The first is that construction manager as constructor Whiting-Turner, rather than GSA, is liable for whatever costs (if any) Coastal may have incurred because of differing site conditions. This argument has two subparts: (a) The contract between Whiting-Turner and GSA made the CMc, rather than the Government, responsible for the accuracy of the subsurface information which was provided to Coastal. Respondent's Posthearing Brief at 22-23. (b) Whiting-Turner has presented no evidence that it relied on "pre award contract indications as to subsurface conditions at the site," so any claim against GSA must fail for lack of proof of reliance. Id. at 1. Second, GSA maintains that by paying Whiting-Turner $50,000 to cover the Coastal claim, at the time the contract price was definitized, the Government discharged any financial liability it may have had under the differing site conditions clause. Id. at 2, 24. Third, GSA says that it was prejudiced by Whiting-Turner's failure to provide notice of the alleged differing site condition in sufficient time for the Government to mitigate costs of dewatering. Id. at 40. Fourth, "[w]ithout an affirmative statement by the prime contractor (Whiting-Turner) increasing the claimed amount, the claim is limited to the amount certified and presented to the contracting officer." Id. at 25. We discuss each of these positions.

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(...continued)

> the position which the owner directs. . . . The construction manager's role is to act as an adviser to the owner, to represent the owner, and to carry out the directions given to it by the owner.
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> When a subcontractor submits a request for an extra, a lump sum general contractor tends to side with the subcontractor and go after the owner to get the extra approved. However, in a construction management arrangement, the construction manager is on the side of the owner and the tendency is to resist extra costs sought by the trade contractor. Unlike a general contractor, the construction manager has no incentive in a project price increase since it receives a fixed fee so that any cost savings revert to the owner rather than to the construction manager.

Turner Construction Co., ASBCA 25447, et al., 90-2 BCA ¶ 22,649, at 113,765-66 (transcript citations omitted). Here the construction manager's position might have been tilted even further toward the Government's side, the suggestion continues, because the contract promised Whiting-Turner thirty percent of cost savings from a negotiated price. Appellant's Reply Brief at 18; see Finding 3.

We need not assess whether motive played a part in Whiting-Turner's reaction to Coastal's complaints and claim. Our findings and analysis stand, regardless of motive.

The contract between Whiting-Turner and GSA did not make the CMc, rather than the Government, responsible for the accuracy of the subsurface information which was provided to Coastal. The most important contract provision relevant to this matter is the one which makes GSA responsible for providing "[c]omplete Geotechnical and Soils information." Finding 4. Another provision says that the Government "warrant[s] the accuracy, validity, completeness [and] relevance" of anything contained in a geotechnical report which is factual in nature, and that the Government "shall . . . be liable for any cost incurred by the Contractor" when it relies on factual elements of such a report. Id. Other contract provisions involve Whiting-Turner in a review of geotechnical information. The CMc is "responsible for verifying all site investigation data supplied by the Government," for conducting two constructability reviews, and for obtaining, at a certain time, "a subsurface investigation/report of site conditions." Id. Although these provisions lend some credence to GSA's position, we think that reading the contract as a whole, a contrary conclusion must be reached. The key provisions recited at the beginning of this paragraph, combined with the differing site conditions clause – which makes the Government liable for costs resulting from "subsurface or latent physical conditions at the site which differ materially from those indicated in [the] contract," Finding 6 – make GSA, not Whiting-Turner, the responsible party.

The requirement that the CMc obtain a "subsurface investigation/report of site conditions," for example, is clearly subsidiary in that it could have been fulfilled, as it was here, simply by having Whiting-Turner be the entity that formally contracted with Schnabel for the second set of soil borings. The actions of the parties, in jointly deciding to have that set of borings made, and then having GSA pay for them, Findings 19, 20, is consistent with the conclusion we reach that the Government had responsibility for geotechnical and soil information, with Whiting-Turner having merely ministerial duties of assistance. That the Government prepared the foundation bid package, which included the BECC soil borings and report, Findings 14, 15, and ultimately paid for the Schnabel soil borings and report, which were added to the package, Findings 19, 20, is also consistent with our conclusion.

In arguing that Whiting-Turner did not prove that it relied on "pre award contract indications as to subsurface conditions at the site," GSA directs our attention to cases in which a general contractor did not use the subsurface conditions report provided by the Government in preparing its bid. See Peter Kiewit Sons' Co./J. F. Shea Co. (Joint Venture), ENG BCA 4861, et al., 85-2 BCA ¶ 18,082, at 90,775-77; George Hyman Construction Co., ENG BCA 4358, 81-1 BCA ¶ 15,110, at 74,752; Dravo Corp., ENG BCA 3901, 80-2 BCA ¶ 14,757, at 72,849-50. The first two of these cases are said to be particularly similar to this one in that the subcontractor relied on the report in pricing its bid, but the general contractor did not take that bid into consideration in pricing its own bid.

We reject GSA's argument as being misfocused on the original contract between the agency and Whiting-Turner, rather than the definitized, firm-fixed-price contract between those parties. As pointed out in Turner Construction Co., 90-2 BCA at 113,765-66, the relationship between the Government and its contractor is different when the contractor is a CMc (as Whiting-Turner was on this job), rather than a general contractor. When the Government hires a general contractor, as it did in each of the cases cited by GSA, it generally does so after receiving bids which are responsive to a complete set of construction

plans. If a subsurface conditions report is included in the solicitation, bidders are expected to take the report into consideration. If conditions indicated in the contract documents differ materially from those actually encountered, the contractor can, under the differing site conditions clause, recover for a type I differing site condition if it relied on the indications contained in the contract documents when it bid. Here, the original contract between Whiting-Turner and GSA limited Whiting-Turner to performing $2,389,000 of work and contemplated that the parties would negotiate a definitive, firm-fixed-price contract for the remainder of the work. Finding 2. GSA then provided Whiting-Turner with a foundation bid package that contained BECC's report regarding its soil borings. Finding 15. GSA later added Schnabel's boring report to the foundation bid package. Finding 20. Whiting-Turner subsequently entered into its subcontract with Coastal, which relied on the information contained in the foundation bid package when it prepared its bid for the caisson work. Findings 24, 26. Thereafter, Whiting-Turner and GSA agreed on a definitive, firm-fixed-price contract that included the caisson work. Finding 44. Whiting-Turner could not have relied on the foundation bid package when it entered into the original contract, because GSA had not yet prepared that package. Whiting-Turner's subcontractor, however, relied on the foundation bid package when it prepared its bid for the caisson work, which was part of the work included in the firm-fixed-price contract that Whiting-Turner and GSA subsequently negotiated. It is the latter contract that is relevant when evaluating the reliance of this CMc contractor on the information provided by GSA.

It is true, as GSA observes, that the contract was definitized with the establishment of a guaranteed maximum price after Coastal had completed all the caisson work. Compare Finding 38 with Finding 44. Thus, it is fair to say, as the Government does, that by the time that price was negotiated, actual subsurface conditions were well known to Whiting-Turner. We cannot conclude from this sequence of events, however, that the negotiated price included payment for whatever differing site conditions costs had been incurred by Whiting-Turner and its caisson subcontractor.

Contrary to GSA's assertions, we find that in negotiating a contract price, the parties based the guaranteed maximum on the cost of the Coastal subcontract exclusive of additional costs incurred due to the unexpected volumes of groundwater. The price included a separate amount for differing site conditions costs, and it was understood that Whiting-Turner would keep GSA informed as to whether Whiting-Turner had actually paid the money to Coastal. Finding 44. After negotiations were complete, both Whiting-Turner and GSA understood that a Coastal claim was still outstanding. Finding 45. When the claim was finally forthcoming, the contracting officer considered it on its merits, rather than rejecting it as having been paid in full earlier. Finding 51. When the claim was resubmitted later, with necessary certification by the contractor, the contracting officer again considered it on its merits. Finding 57. We conclude that by agreeing to pay Whiting-Turner a separate amount to cover differing site conditions costs, with an understanding that GSA would be kept informed as to the use of the money, GSA acknowledged that it was responsible for such costs and definitized a price which did not include them. Further, by continuing to decide on the merits the claims for those costs, the agency confirmed that it had such responsibility. The making of the payment did not end GSA's liability. See Ilbau Construction, 92-1 BCA at 122,151 ("The conduct of the parties in continuing to consider a claim after execution of a contract modification makes clear that the modification contemporaneously, and at least

through issuance of the decision, was never construed by the parties to be an accord of the claim.").[10]

The only reasonable way to read the CMc contract as applying to the situation presented to us is that the contract made the Government responsible for whatever costs might arise as a result of differing site conditions, using as a baseline the costs which would have been incurred if the subsurface conditions were as represented in whatever reports the Government would provide for bids by prospective subcontractors. Cf. Turner Construction Co., 90-2 BCA at 113,806 (subcontractor entitled to recover under CMc contract differing site conditions clause).

We also disagree with GSA's contention that the agency was prejudiced by Whiting-Turner's failure to provide notice of the alleged differing site conditions in sufficient time for the Government to mitigate costs of dewatering. Whiting-Turner did not give GSA actual notice of the problems caused by the unexpected amounts of groundwater until April 10, 1998. Finding 34. (Earlier notice was given, but was misguided. Findings 28-30.) After the meeting, the Government made no directions or suggestions for modifications in Coastal's work, and it did not alter its monitoring of water levels in the shafts. Finding 35. Government witnesses suggested at our hearing that the site might have been dewatered efficiently by a well point system. Even if that suggestion had been made in a timely fashion, however, there is no reason to believe that it could have saved either time or money in caisson construction. Finding 43. Because there is no evidence that provision of earlier notice would have had any impact on the subsurface conditions or the means of dealing with them, we find no prejudice here. Cherry Hill, 92-3 BCA at 125,477.

Finally, we reject GSA's position that "[w]ithout an affirmative statement by the prime contractor (Whiting-Turner) increasing the claimed amount, the claim is limited to the amount certified and presented to the contracting officer." The Court of Appeals for the Federal Circuit has held, "On appeal to the Board [of Contract Appeals] . . . , a contractor may increase the amount of his claim, Tecom [, Inc. v. United States], 732 F.2d [935,] 937-38 [(Fed. Cir. 1984)], but may not raise any *new* claims not presented and certified to the contracting officer." Santa Fe Engineers, Inc. v. United States, 818 F.2d 856, 858 (Fed. Cir. 1987). Courts and boards have consistently followed this rule. See, e.g., Youngdale & Sons Construction Co. v. United States, 27 Fed. Cl. 516, 540 (1993) ("the contractor is not precluded from modifying the amount of the claim or from proffering additional evidence in support of increased damages where the increased amount thereof does not constitute a *new* claim which was not previously submitted to the CO for decision"); American Consulting Services, Inc., ASBCA 52923, 00-2 BCA ¶ 31,084, at 153,485 ("so long as the essential nature and operative facts of the claim remain unchanged, the Board has jurisdiction

[10]We additionally hold that modification PS19 to the contract between Whiting-Turner and GSA had no impact on this claim. The modification extended a completion date by ten days and said that it covered "any and all schedule impact(s) caused by, relating to or arising from" claims and other occurrences "as of the date of [the] [m]odification." Finding 52. The claim now before us does not involve a schedule impact. Therefore, the modification does not preclude it.

to consider . . . increased/modified amounts of damages first raised in pleadings, assuming any applicable certification requirements have been satisfied"); McDonnell Douglas Services, Inc., ASBCA 45556, 94-3 BCA ¶ 27,234, at 135,706-07 ("Appellant's subsequent revisions to the claim did not change the nature of the claim, its basic underlying facts, or the theory of recovery, but made adjustments to the amount of the claim based on actual cost data that became available to it . . . . Appellant was merely updating the claim to reflect the actual costs incurred.").

"A new claim is one that does not arise from the same set of operative facts as the claim submitted to the contracting officer." Hawkins & Powers Aviation, Inc. v. United States, 46 Fed. Cl. 238, 243 (2000). The claim we discuss today arises from the exact same set of operative facts as the ones buttressing the claim which was submitted to the contracting officer. Whiting-Turner has simply made adjustments to the amount of the claim, based on better cost data from Coastal.[11] Our award will be for the amount that has been proved, rather than the amount that was certified. Cf. Fed. R. Civ. Pro. 54(c): "Except as to a party against whom a judgment is entered by default, every final judgment shall grant the relief to which the party in whose favor it is rendered is entitled, even if the party has not demanded such relief in the party's pleadings."

## Decision

The appeal is **GRANTED IN PART**. We conclude that GSA is obligated to pay to Whiting-Turner the amount of costs proven to have been incurred by Coastal as a result of differing site conditions, $490,248.63. GSA has already paid Whiting-Turner $50,000 to cover Coastal's differing site conditions costs. Finding 44. The remaining portion of GSA's obligation is $440,248.63. We direct GSA to pay this last amount to Whiting-Turner. In accordance with 41 U.S.C. ¶ 611 (1994), GSA must also pay to Whiting-Turner interest on the amount from the date on which the contracting officer received the claim dated March 2, 2000 (Finding 55), until the date of payment.

Whiting-Turner has presented neither evidence nor argument as to the two percent fee requested in the complaint to be added to the award covering Coastal's costs. See Finding 58. We consequently have no basis on which to add such a fee to the award and do not do so.

_____
STEPHEN M. DANIELS
Board Judge

[11] We note that this appeal has been prosecuted in the name of Whiting-Turner. The sum requested at hearing and in briefs, $533,745, is sought in the name of Whiting-Turner. The fact that no employee of Whiting-Turner testified in support of this figure does not mean that Whiting-Turner, as appellant, does not advance the claim in the amount now sought.

We concur:

_____
CATHERINE B. HYATT
Board Judge

_____
MARTHA H. DeGRAFF
Board Judge