

PRACTICAL ASPECTS OF THE CHANGED CONDITIONS CLAUSE UNDER GOVERN- MENT CONSTRUCTION CONTRACTS

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The purpose of the changed conditions clause¹ in government *construction* contracts, is to induce bidders to eliminate from their proposals an allowance factor covering losses from unforeseen conditions, and to cause instead their reliance upon a promise from the government that an equitable adjustment would be made in the contract price if some unforeseen condition was encountered during the performance of the work.² This article will touch briefly upon some of the basic legal requirements that must be satisfied in order to qualify for relief under the changed conditions clause, will pass to the practical application of the clause and will offer suggestions concerning the nature of the oral and documentary evidence that might best be employed to substantiate such a claim.

The fourth paragraph of the General Provisions³ recognizes two types of changed conditions, generally referred to as Clauses 1 and 2. Clause 1 covers "subsurface or latent physical conditions at the site differing materially from those indicated in this contract." Clause 2 covers "unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally

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¹ See Standard Form 23, Government Construction Contract, General Provisions, ¶ 4. *Infra* note 3.

² *Meltzer, Inc. of New Jersey v. United States*, 111 Ct. Cl. 389, 77 F. Supp. 1018 (1948); *Ruff v. United States*, 96 Ct. Cl. 148 (1942); *Erhardt Dahl Andersen, I.B.C.A. Nos. 223, 229, 61-1 B.C.A. ¶ 3082* (1961).

³ CHANGED CONDITIONS. The Contractor shall promptly, and before such conditions are disturbed, notify the Contracting Officer in writing of:

(a) subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (b) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract. The Contracting Officer shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause increase or decrease in the Contractor's cost of, or the time required for, performance of this contract, an equitable adjustment shall be made and the contract modified in writing accordingly. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given notice as above required; or unless the Contracting Officer grants a further period of time before the date of final payment under the contract. If the parties fail to agree upon the adjustment to be made, the dispute shall be determined as provided in Clause 6 of these General Provisions.

recognized as inhering in work of the character provided for in this contract."

With respect to Clause 1, the most obvious feature is that it makes relief dependent upon encountering a condition which materially differs from that which was indicated by the contract documents. The situation which usually falls within this clause is the presence of rock or other substances which can be excavated only with difficulty and which was not indicated by the borings.⁴

The question has not infrequently arisen as to whether relief can be obtained under Clause 1 where the contract documents had made no representation regarding the existence or non-existence of the physical condition causing the difficulty. A recent decision by the Armed Services Board of Contract Appeals relates to this question.⁵ Appellant, in the construction of concrete piers as part of a foundation, encountered unforeseen soil and water conditions which resulted in the undermining and caving in of the sides of certain excavated areas. The contract had contained the usual requirement for pre-bid site investigation but mentioned nothing concerning the character or nature of the subsurface materials present. Similarly, the boring logs set forth no information with respect to underground water tables. The Board, in weighing the claim under Clause 1, denied relief because the contract documents had not advised bidders that underground water would not be experienced and, in fact, had made no representations regarding subsurface conditions. Relief was also denied under Clause 2 upon the ground that it was reasonable to expect the presence of water in the alluvial deposits which existed in the area at the depths to which appellant had been required to excavate.

Another application of this principle by the Armed Services Board of Contract Appeals recently arose in a case in which the contractor had conducted a pre-bid inspection of the site and had concluded that certain types of material could be re-used for the job. When his conclusion proved to be erroneous, a changed condition claim was presented. The Board found that where the contract was silent on the subject at issue, the conclusion drawn by the contractor was necessarily at his own risk.⁶

The Court of Claims has also adopted the view that where the contract is silent as to subsoil conditions, the contractor, under Clause

⁴ *Fehlhaber Corp. v. United States*, 138 Ct. Cl. 571, 151 F. Supp. 817, cert. denied, 355 U.S. 877 (1957); *Groves & Sons Co. v. United States*, 106 Ct. Cl. 93, 64 F. Supp. 472 (1946); *Five Boro Constr. Corp., Eng.* B.C.A. No. 1439 (1958); *Morrison-Knudsen Co., Eng.* C.&A. No. 1061 (1958); *MacDonald Constr. Co., A.S.B.C.A.* No. 98, 4 C.C.F. ¶ 60,943 (1950).

⁵ *Donovan Constr. Co., A.S.B.C.A.* No. 6439, 63-1 B.C.A. ¶ 3753 (1963).

⁶ *Burke Eng'r & Constr. Co., A.S.B.C.A.* No. 8182, 63-1 B.C.A. ¶ 3713 (1963). See also *Koeneke, A.S.B.C.A.* No. 3163, 57-1 B.C.A. ¶ 1313 (1957).

1, cannot be said to have encountered a subsurface condition which was different from something that had been shown on the drawings or indicated in the specifications.⁷

It is interesting to observe that in Clause 1 the disjunctive "or" has been placed between the words "subsurface" and "latent" physical conditions, thus clearly implying that something other than a subsurface condition may qualify for relief as a changed condition under Clause 1. Assuming that the word "latent" possesses its ordinary meaning and is intended to indicate a hidden or concealed physical condition which, by contract definition, would not be beneath the surface of the ground, the researcher will find very little in the adjudicated cases to assist him in applying this term. Presumably it might arise out of the requirement to perform work within the confines of a river which, unbeknownst to either party, was undergoing continuous radioactive contamination; however, speculations of this nature appear remote indeed when faced with such a dearth of precedent.

With respect to Clause 2, as stated earlier, relief does not depend upon whether the condition encountered was materially different from that which had been shown on the contract drawings, but rather whether the physical condition was unknown and unusual in the sense that it would not normally inhere in the character of the work provided for in the contract. A condition does not meet the requirement of being either unknown or unusual if the contractor reasonably should have anticipated encountering it.⁸ This concept has been carried to the extreme of holding that a contractor bidding on unclassified excavation should have legally presumed the possibility of encountering difficulty from some indeterminate quantity of difficult material.⁹ Such a construction, of course, tends to defeat the basic purpose of the clause to serve as an inducement to contractors to eliminate allowances for contingencies from their bids.

A better reasoned application of Clause 2 is found in a comparatively recent case of the Armed Services Board of Contract Appeals¹⁰ where relief was granted to a contractor who encountered water flowing from the sides of a ditch excavation under hydrostatic pressure from wellsprings. It was held that since such water pressure was not discoverable by ordinary inspection, it was an unusual condition. At

⁷ *Ragonese v. United States*, 128 Ct. Cl. 156, 120 F. Supp. 768 (1954); *S.T.G. Constr. Co. v. United States*, Ct. Cl. No. 514-58 (May 9, 1962).

⁸ *Leal v. United States*, 149 Ct. Cl. 451, 276 F.2d 378 (1960); *General Cas. Co. v. United States*, 130 Ct. Cl. 520, 127 F. Supp. 805, cert. denied, 349 U.S. 938 (1955); *Shepherd v. United States*, 125 Ct. Cl. 724, 113 F. Supp. 648 (1953); *City Elec. of Anchorage, Inc., A.S.B.C.A. No. 6505*, 62 B.C.A. ¶ 3512 (1962).

⁹ *Armstrong Co., I.B.C.A. No. 40*, 56 B.C.A. ¶ 1043 (1956); *Shilling Co., I.B.C.A. No. 23 (Supp.)*, 63 I.D. No. 105, 6 C.C.F. ¶ 61,862 (1956).

¹⁰ *Hall Constr. Co., A.S.B.C.A. No. 7627*, 62 B.C.A. ¶ 3590 (1962); cf., *Conn Structures, Eng. C.&A. No. 911* (1958).

the same time, water percolating from a natural water table was held not to be a changed condition because from the nature of the terrain and from the design of the ditch paving of the structure to be built, the contractor had been put on notice that such a condition might be encountered.

Another example of an unknown and unusual condition, as determined by the Armed Services Board of Contract Appeals, related to the encountering of Shimajuri clay in Okinawa. The clay, known to exist in the area, was admittedly difficult to handle. The Board observed that while it was known that an open cut in Shimajuri clay would slough off until the angle of repose was reached, appellant's difficulty with the material stemmed from subterranean streams which percolated into sand layers beneath the strata of the clay and made it slick and plastic, thereby causing it to slide down the slopes of the excavation. The appeal was sustained on the ground that this additional water condition was unknown and unusual.¹¹

Of general application to both Clauses 1 and 2 are the many cases which hold that caveatory and exculpatory language in the form of general disclaimers in the contract documents may not be availed of to set aside or to otherwise limit the effectiveness of the changed conditions clause.¹² In this connection, however, it is important to observe that where the contract calls for a pre-bid site investigation, the duty to make such an examination is clear, if a reasonable opportunity exists to do so.¹³

Prudence also requires compliance with the provisions of the changed conditions article which calls for written notice, upon encountering a changed condition, to be given before the condition is disturbed. It has been held, however, that this requirement will not be insisted upon if the government in fact possessed knowledge of the physical conditions that were being met.¹⁴ Nor is it necessary that the notice be repeated if the same physical factors which were made the basis of the first notice continue to recur at the site of the work.¹⁵

The circumstances in which a substantial overrun or underrun of

¹¹ Paccon, Inc., A.S.B.C.A. No. 7643, 62 B.C.A. ¶ 3546 (1962).

¹² Fehlhaber Corp. v. United States, *supra* note 4; Loftis v. United States, 110 Ct. Cl. 551, 76 F. Supp. 816 (1948); Kiewit Sons Co. v. United States, 109 Ct. Cl. 517, 74 F. Supp. 165 (1947); Ruff v. United States, 96 Ct. Cl. 148 (1942); Hirsch v. United States, 94 Ct. Cl. 602 (1941); Great Lakes Dredge & Dock Co., Eng. C.&A. No. 501 (1954); Derby Constr. Co., and Perkins Constr. Co., Eng. C.&A. No. 543 (1954).

¹³ Puget Sound Bridge & Dredging Co. v. United States, 131 Ct. Cl. 490, 130 F. Supp. 368 (1955); Erhardt Dahl Andersen, I.B.C.A. Nos. 223, 229, 61-1 B.C.A. ¶ 3082 (1961); Terteling & Sons, Inc., I.B.C.A. No. 27, 64 I.D. 466, 57-2 B.C.A. ¶ 1539 (1957).

¹⁴ Kiewit Sons Co., A.S.B.C.A. No. 5600, 60-1 B.C.A. ¶ 2580 (1960); Eisen-Magers Constr. Co., A.S.B.C.A. No. 5174, 59-1 B.C.A. ¶ 2234 (1959).

¹⁵ Hughes Constr. Co., Eng. C.&A. No. 684 (1955); American Dredging Co., Eng. B.C.A. No. 1437 (1958); Allied Contractors, Inc. v. United States, 149 Ct. Cl. 671, 277 F.2d 464 (1960).

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estimated quantities will be regarded as a changed condition is presently at an interesting stage of development as far as the administrative appeal boards are concerned. The law was rather clearly defined by the Court of Claims in a case in which it held that a large overrun in quantities would qualify a contractor for relief under the changed conditions clause only if the parties had labored under a mutual mistake of fact.¹⁶

The Interior Board of Contract Appeals appears to have followed this concept in principle, for it has ruled that an overrun will not be regarded as a changed condition if the contract drawings and boring logs contained information indicative of the presence of a greater amount than was set forth in the estimate of quantities made available to bidders.¹⁷ The Corps of Engineers Board of Contract Appeals, on the other hand, on the theory that there can be nothing but mutuality under a contract, has reached the conclusion that a substantial deviation between estimated and actual quantities is alone sufficient to constitute a changed condition.¹⁸ On the basis of the decisions of the Court of Claims, it would appear that a variation in quantities is not alone sufficient to create a changed condition if the physical conditions actually encountered had been indicated to exist by the contract documents.

As the changed conditions clause is found in government contracts, lawyers engaged in the prosecution of claims arising under it will most likely be opposed by the Corps of Engineers of the Department of the Army, the agency of the government that handles the major volume of construction work. If such claims arise under contracts involving the expenditure of civil appropriations, they will, when denied by the contracting officer, be heard by the Corps of Engineers Board of Contract Appeals. On the other hand, if the claims involve expenditures of military appropriations, they will, after denial by the contracting officer, first be heard by the Corps of Engineers Board of Contract Appeals, and upon appeal, by the Armed Services Board of Contract Appeals. While claims under the changed conditions article can arise out of the performance of work for any executive department or agency which uses the standard form, it is important to pay particular attention to the procedures adopted by the Corps of Engineers, since it is that body which is involved in the most contract controversies.

The practitioner prosecuting a claim for changed conditions against the Corps of Engineers should understand from the outset that he is being opposed by experts in this field, who not only command the

¹⁶ *Chernus v. United States*, 110 Ct. Cl. 264, 75 F. Supp. 1018 (1948).

¹⁷ *Erhardt Dahl Andersen*, I.B.C.A. Nos. 223, 229, 61-1 B.C.A. ¶ 3082 (1961).

¹⁸ *Perini, Walsh, Mills & Blythe Bros.*, Eng. C.&A. No. 865 (1957). See also *United Constr. Co.*, Eng. B.C.A. No. 1532 (1959).

services of a great variety of specialized talent, but who also have at their disposal some of the most extensive experimental and testing devices that exist today.

The most common type of changed condition arises where the contractor finds rock that had not been shown to exist in the logs of the contract borings. When this occurs, a variety of questions may be presented, including whether the contract borings actually indicated the presence of rock, and if so, the extent to which it should have reasonably been inferred that such rock existed in the area of construction. With respect to the actual performance of the work, questions of classification may arise as to what constitutes rock, as well as the extent of the difficulty caused by such rock over and above the problems that would normally have been presented if the rock had not been present.

As these questions are principally in the field of geology, the need for the services of a qualified geologist is apparent. If the job is an important one, as, for example, the construction of a dam involving several millions of dollars, the Corps of Engineers will have a full-time geologist assigned to the project. He will collect evidence pertinent to the government's defense against any claim for changed conditions asserted by the contractor. It is probable that he will make plane table surveys of open faces of excavated areas in order to indicate the location or degree of stratification of such material as he may regard to be rock. In most instances, these faces are subsequently covered up by the advancement of the project, and if the contractor has not engaged a geologist to make a similar survey while they are visible, he may find himself at a very real disadvantage when confronted with the plane table survey made by the government geologist. In addition, it is customary to use photographs and physical samples as proof or disproof of the existence of a changed condition. Photographs can be taken only while the foundation areas are available for examination, and it is of the highest importance to contractors who intend to present claims for changed conditions to collect this type of evidence while the opportunity to do so remains. Similarly, physical samples are best obtained when the excavated area is open, since it is at this time that the government's geologist selects the material which he believes will establish the validity of the contention that no changed condition exists.

At the time of bidding, the contractor is expected to prognosticate what soil conditions will prevail over the entire site. This he must do both on the basis of charts of borings, which appear on the contract drawings, and also as a result of his inspection of the physical cores retained by the Corps of Engineers for his examination. These borings may be relatively close or far apart, depending upon the care exercised

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in the laying out and programming of the subsurface exploration upon which bidders are asked to rely in submitting their proposals. As the areas of the borings themselves represent only infinitesimal sections of the space which is to be excavated, the interpretation given to this small amount of evidence is of the highest importance.

In order to compare the subsurface condition which the contractor reasonably should have anticipated with the strata actually encountered, a complex procedure is sometimes followed by which the geologist extrapolates from one contract boring to another, taking into account the varying elevations at which comparable material was found in adjacent borings. With this information drawings are made showing position by elevation, stratification, cavitation and other features of the rock. These drawings are then transposed to transparent overlays, prepared to the same scale as photographs of open excavated faces. When this is done, it is easily possible for the hearing officer to compare what the geologist believes should have been anticipated, on the basis of the contract borings, with the conditions that were actually met.

In addition, government geologists sometimes completely reconstruct, in the form of a plastic model, the entire subsurface condition as it appeared to exist according to a projection of the information derived from the contract borings. The cost of performing this work is usually prohibitive from a contractor's standpoint, but it is not so regarded by the Corps of Engineers. This writer has been engaged in a case in which two such models were prepared and presented, the second one apparently having been considered an improvement over the first. Notwithstanding the mechanical genius which goes into the construction of these models, they are still no better than the geological opinions upon which they are based, which in turn are predicated upon the extrapolation of adjacent borings. For this reason, a qualified geologist is quite capable of informing a contractor whether the assumptions that have been made in this regard are reasonable.

Changed condition claims are also frequently advanced where the character of the soils upon which the structure was to be founded are such as not to possess the supportive strength the designer anticipated at the time the work was let. This situation sometimes results in contention between the parties as to whether the methods pursued by the contractor in driving piles, or in placing the foundation, caused the difficulties encountered, or whether such difficulties were inherent in the character of the subsurface material itself.

When controversies of this nature arise, the government often makes use of engineers who are soil mechanics experts. After extensive sampling of soils at the site, the engineers subject the samples to numerous laboratory tests and apply the results to various formulae.

The final result establishes the bearing qualities and strength of the soils in their natural state.

It is important that the practitioner facing this type of expert have some knowledge of the subject, because the manner in which a sample is taken from its natural position may greatly influence the results of subsequent laboratory tests. The strength and behavior of soil sample material, following removal from its natural condition, depends greatly upon the particular method used to obtain it. Testing procedures are far from uniform and groups of experts in this field will testify with obvious conviction that the methods used by other experts in the same field are either unsound or susceptible to such a high degree of error as to render the results unreliable. In addition, the mathematical formulae that are used often differ and experts vary widely as to whether a particular set of criteria should be applied to a given condition. The extent to which persons in this field are capable of disagreeing when the refinements of their subject are tested in litigation clearly emphasizes the importance of engaging the services of an expert in a contest where the behavior of soils may be determinative of the outcome.

Hydrologists have also recently made their appearance in changed conditions contests. As has been mentioned earlier, water is not always just water when the changed conditions article is involved. Where water is part of a ground water table, it may not constitute a changed condition, whereas when it is placed under pressure by an artesian aquifer, it may well be regarded as a changed condition. Where structures are performed in protected areas adjacent to, or within a river bed, it is sometimes very difficult to determine whether the water being encountered is artesian flow acting under hydrostatic pressure, or is ground water being constantly recharged from the river. Hydrologists can render a valuable service by making this determination and can also, by means of pumping tests in experimental wells and chemical injections, determine the sources and direction of water infiltrating the site. This knowledge can be of value in determining whether the water condition was unusual; *i.e.*, one that normally would not inhere in work of the character provided for in the contract.

The types of assistance that are available to the contractor's attorney are both extensive and expensive, and the problem of determining whether the cost is disproportionate to the probabilities of success on the claim is not an easy one to resolve. The question is all the more difficult when the contractor's advocate understands that the cost involved in making such a presentation appears to be of little concern to the government whenever the issue involved is sufficiently important for an all-out effort to be made in defending against the contractor's claim.

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Contractors do not regularly retain experts possessing the knowledge and skills referred to above. Also, the full significance of the difficulty may not become apparent until after the work has advanced to a point where it is no longer possible to make the photographs and comparisons referred to previously. The course which the contractor should follow would appear to be one based upon the reasonable precaution of calling upon an expert at the time the condition is encountered in order to enable him to make a preliminary inspection and report of the condition. Such preliminary reports are usually not expensive, and they form a basis from which the expert may later work with the problem in the light of knowledge gained through actual inspection. This opportunity to observe the condition as it actually existed is not only calculated to bring forth a larger variety of ideas, but will also serve to give greater weight to the opinions expressed by the expert on the witness stand. Because of the technical nature of the controversy, many changed conditions claims stand or fall upon the degree of effectiveness of expert testimony offered in their support. The importance of being prepared to present or to meet such evidence cannot be minimized.