

L.K. COMSTOCK & COMPANY, INC., PLAINTIFF, VS. BECON CONSTRUCTION COMPANY, INC., DEFENDANT.

CIVIL ACTION NO. 89-61

UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF KENTUCKY, LEXINGTON DIVISION

932 F. Supp. 906; 1992 U.S. Dist. LEXIS 22546

July 24, 1992, Decided

July 24, 1992, FILED

SUBSEQUENT HISTORY: [**1] Reported at: 932 F. Supp. 906 at 910.

DISPOSITION: Plaintiff's Complaint entered in favor of the defendant when and as the Court deems appropriate, and this matter should proceed on the merits of the remaining claims.

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff subcontractor filed suit against defendant general contractor for additional compensation arising from labor, material, and services provided by the subcontractor to the general contractor on a construction project. The subcontractor alleged that changes in the work it performed were so extensive as to constitute an abandonment of the contract, entitling the subcontractor to restitution on a cardinal change theory.

OVERVIEW: This dispute arose out of the construction of an automotive assembly plant. The subcontractor filed suit against the general contractor for additional compensation arising from labor, material, and services provided by the subcontractor to the general contractor on the project. The subcontractor alleged that the general contractor made numerous and substantial changes to the contract that were so extensive as to constitute an abandonment of the contract or a "cardinal change," entitling the subcontractor to restitution. The trial court ruled that the subcontractor failed to prove that the subcontract was abandoned or that it was entitled to restitution on a cardinal change theory. The court reasoned that the subcontractor was aware when it entered into the contract that it was strictly limited to a specific time frame and that substantial extra work would be ordered. Moreover, the subcontractor agreed to the amendments and continued to perform without voicing any alleged breach. Thus, the court ruled that the subcontractor's action was appropriately one for breach of the "changes" clause based on the

owner's failure to make an equitable adjustment to the contract price.

OUTCOME: The court found that the subcontractor was not entitled to restitution on a cardinal change theory because it did not establish by clear and convincing proof that the contract was abandoned based on the changes made by the general contractor.

LexisNexis(R) Headnotes

*Civil Procedure > Trials > Jury Trials > Jury Instructions > General Overview
Contracts Law > Performance > Discharges & Terminations*

[HN1]A contract may be abandoned expressly or implicitly by the parties acting inconsistently with its terms.

Contracts Law > Performance > Discharges & Terminations

[HN2]A contract may be rescinded or discharged by acts or conduct or the parties inconsistent with the continued existence of the contract, and mutual assent to abandon a contract may be inferred from the attendant circumstances and conduct of the parties. While as a general rule a contract will be treated as abandoned or rescinded where the acts and conduct of one party inconsistent with its existence are acquiesced in by the other party, to be sufficient the acts and conduct must be positive and unequivocal.

Contracts Law > Performance > Discharges & Terminations

Contracts Law > Types of Contracts > Oral Agreements
[HN3]A written contract can be modified or abandoned by a subsequent oral agreement, but the proof to support such an assertion must be clear and convincing.

Contracts Law > Defenses > Ambiguity & Mistake > General Overview

Evidence > Inferences & Presumptions > General Overview

Evidence > Procedural Considerations > Burdens of Proof > Clear & Convincing Proof

[HN4]The "clear and convincing" standard of proof means that the evidence must not be vague, ambiguous, or contradictory, and must come from a credible source.

Contracts Law > Remedies > Equitable Relief > General Overview

[HN5]Where a carpenter or builder agrees to erect any building for a particular sum of money, but additions or alterations are afterward made, the tradesman is bound by contract, as far as it can be traced, and entitled to recover on a quantum meruit for the excess only.

Contracts Law > Performance > Discharges & Terminations

[HN6]If the original plan for the work in a construction project has been entirely abandoned, the contractor is entitled to recover for the whole work done, according to its value. Parties can be shown to have abandoned the contract expressly or implicitly. However, whether the evidence suggests that the parties overtly agreed to abandon the agreement, or whether a fact finder can infer abandonment from attendant circumstances and the conduct of the parties, the proof must be clear and convincing to sustain a finding that the contract has been abandoned.

Civil Procedure > Pretrial Judgments > Nonsuits > Voluntary Nonsuits

Contracts Law > Performance > Discharges & Terminations

[HN7]Abandonment may start with an intent to abandon by one or both of the contracting parties and conclude with an agreement by each that the contract is terminated and of no further force and effect. In such cases, the principle of abandonment applies even though the contractor continued with construction.

Contracts Law > Performance > Discharges & Terminations

[HN8]An abandonment may be accomplished by express mutual consent or by implied consent through the actions of the parties. Plaintiff cannot be guilty of a breach of the contract if it has been mutually abandoned. Where acts

and conduct are relied on to constitute an abandonment, they must be positive, unequivocal and inconsistent with an intent to be further bound by the contract.

Contracts Law > Breach > General Overview

Contracts Law > Contract Modifications > General Overview

[HN9]A "changes" provision does not authorize a "cardinal" change, or a drastic modification beyond the scope of the contract. Rather, a fundamental alteration of this type is a contract breach, entitling the contractor to breach damages.

Public Contracts Law > Alterations & Modifications > Cardinal Changes

Public Contracts Law > Contract Provisions > Changes Clauses

[HN10]In the public contract setting, the limits under the cardinal change doctrine to the nature and magnitude of changes the government can order under the contract prevents government agencies from circumventing the competitive procurement process by adopting drastic modifications beyond the original scope of a contract.

Contracts Law > Breach > Material Breach

Governments > Federal Government > Claims By & Against

Public Contracts Law > Alterations & Modifications > Cardinal Changes

[HN11]The power of the owner, be it a federal agency or a private developer, to order changes is subject to abuse. The theory of cardinal change allows a contractor in a losing contract, where the owner has abused its power, to bring an action for material breach of contract, alleging that the changes ordered exceed the reasonable expectations of the parties. A cardinal change is a breach. It occurs when the government effects an alteration in the work so drastic that it effectively requires the contractor to perform duties materially different from those originally bargained for. By definition, then a cardinal change is so profound that it is not redressable under the contract, and thus renders the government in breach.

Contracts Law > Contract Modifications > General Overview

Public Contracts Law > Alterations & Modifications > Cardinal Changes

[HN12]The cardinal change principle is recognized by state courts as well as federal tribunals, and in private as well as public contract settings.

Contracts Law > Contract Modifications > General Overview

[HN13]There is a point at which changes in a contract are to be considered beyond the scope of the contract and inconsistent with the "changes" section. Damages can be recovered without fulfillment of the written notice requirement where the changes are outside the scope of the contract and amount to breach.

Contracts Law > Contract Modifications > General Overview

[HN14]There is no exact formula for determining the point at which a single change or a series of changes must be considered to be beyond the scope of the contract and necessarily in breach of it. Each case must be analyzed on its own facts and in light of its own circumstances, giving just consideration to the magnitude and quality of the changes ordered and their cumulative effect on the project as a whole. The existence of a cardinal change is principally a question of fact, requiring that each case be analyzed in light of the totality of the circumstances.

Contracts Law > Contract Modifications > General Overview

[HN15]Some decisions tie the question of cardinal change to the nature and extent of physical changes in the construction project. This, however, is only part of the picture. The central consideration should be the effect on the contractor's anticipated work.

Contracts Law > Contract Modifications > General Overview

Contracts Law > Remedies > General Overview

[HN16]Where a cardinal change is concerned, it is the entire undertaking of the contractor, rather than the product, to which the court looks. In this regard, the total increase in cost to the contractor is pertinent. Evidence of damages should be presented to the fact finder, even though the court may ultimately decide there was no cardinal change. One reason for trying damages along with cardinal change is that the cost of the changed item as compared to that of the original is a factor in deciding whether the modification is or is not cardinal.

Contracts Law > Contract Modifications > General Overview

[HN17]In some circumstances a cardinal change may result from a failure to provide adequate construction drawings.

Contracts Law > Contract Modifications > General Overview

[HN18]Any departure from contractual obligations which "fundamentally alters" a contractor's undertaking may give rise to a claim of cardinal change. A general contractor's abdication of duties of coordination and cooperation may form the basis of a cardinal change.

Contracts Law > Contract Modifications > General Overview

Contracts Law > Remedies > Equitable Relief > General Overview

[HN19]A number of decisions recognize that a cardinal change claim is not barred by the fact that some or all of the changed work at issue is covered by executed change orders. The fact that a party may have sought, released, or otherwise compromised a claim under a contract's equitable adjustment clause or other remedial clauses will not necessarily operate as a bar to claims for relief outside the contract.

Contracts Law > Contract Modifications > General Overview

Public Contracts Law > Alterations & Modifications > Cardinal Changes

[HN20]Some courts conclude that continued performance does not bar a cardinal change claim. However, there is authority for the proposition that contract modifications, fairly executed, may bar a cardinal change claim.

Contracts Law > Contract Modifications > General Overview

Contracts Law > Types of Contracts > Construction Contracts

[HN21]A certain amount of delay and disruption may be anticipated in any construction contract, and a change becomes cardinal only when it exceeds the scope of predictable changes. In addition, a cardinal change claim may fail if the performing party fails to demonstrate the nexus between unanticipated changes and additional costs.

Contracts Law > Breach > General Overview

Contracts Law > Remedies > General Overview

[HN22]Recovery of damages for a breach of contract is not allowed unless acceptable evidence demonstrates that the damages claimed resulted from and were caused by

the breach. The costs must be tied in to fault on the defendant's part.

Civil Procedure > Jurisdiction > Diversity Jurisdiction > General Overview

Civil Procedure > Federal & State Interrelationships > Erie Doctrine

Governments > Courts > Dicta

[HN23]A federal court sitting in diversity must exercise its best judgment as to how a state court would hold if confronted with the facts. When a federal court is confronted with an issue undecided by state law in a diversity action, it is the court's responsibility to decide this unsettled issue of state law as a Kentucky court would with the mandate of Erie. The court must ascertain from all available data what the state law is and apply it, in the exercise of its best judgment. In its determination of a question unanswered by state law, it is appropriate for the federal court to consider analogous state cases and relevant dicta, the restatement of law, law review commentaries and decisions of other jurisdictions or the "majority rule."

Contracts Law > Breach > Material Breach

Contracts Law > Breach > Nonperformance

Contracts Law > Remedies > Rescission & Redhibition > General Overview

[HN24]A cardinal change claim is based upon the contract principle that where there is a substantial failure of a party to perform under a contract, the innocent party may treat that failure as a material breach of contract, stop performance, and sue for contract remedies. A contract may also be rescinded if the breach is material. However, the court does not look lightly at rescission, and rescission will not be permitted for a slight or inconsequential breach. Upon breach of a contract by one party, the other may elect to rescind and recover the value of any performance rendered.

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JUDGES: THOMAS J. STIPANOWICH, SPECIAL MASTER

OPINION BY: THOMAS J. STIPANOWICH

OPINION

[*910] FINDINGS OF FACT AND CONCLUSIONS OF LAW

On February 16, 1989, Plaintiff L.K. [*2] Comstock & Company, Inc. ("Comstock") commenced this action against Defendant Becon Construction Company ("Becon"). Comstock filed a seventeen-count complaint against Becon for certain claims for additional compensation arising from labor, material, and services provided by Comstock to Becon in connection with the Toyota Automotive Manufacturing Facility in Georgetown, Kentucky (the "Project"). The District Court severed Count 17 of Comstock's Complaint concerning Comstock's claims that the changes in the work to be performed by Comstock were so extensive as to constitute an abandonment of the contract or a "cardinal change." The hearing on Count 17 was referred to Thomas J. Stipanowich, Professor of Law at the University of Kentucky College of Law, as Special Master pursuant to Rule 53 of the Federal Rules of Civil Procedure. The hearing began on December [*911] 9, 1991, and continued for a total of fourteen trial days. Both parties subsequently submitted extensive trial "briefs."

For the reasons stated below, the Special Master concludes that Comstock did not sustain the burden of demonstrating an abandonment of the contract or a cardinal change.

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I. FINDINGS OF FACT

A. Project Background

1. This dispute arose out of the construction of an automotive assembly plant in Georgetown, Kentucky, for Toyota Motor Manufacturing, U.S.A., Inc. ("Toyota"). Toyota contracted with Ohbayashi Corporation ("Ohbayashi") for construction [**4] management services on the Project. Beneath Ohbayashi were nine general contractors, and beneath them over 200 subcontractors and more than 400 sub-subcontractors. Giffels Associates, Inc. ("Giffels") was the engineer for the Project.

2. Becon was the general contractor for the plant's utility area, which was designed to supply steam, electricity, and other essentials for plant operation. Becon subcontracted with L.K. Comstock to perform the electrical and mechanical work for the utility area, which comprised approximately seventy percent of Becon's work. (R9 at 136-37) ¹. Most of Comstock's work involved the utility building (Area 500), but Comstock also performed work on the trestle (Area 501), the waste water treatment building (Area 502), the water pump house building (Area 503), the electrical switch gear building (Area 504), [*912] the diesel fuel pump house building (Area 505); and the liquid tank farm area.

1 Citations to the record are by volume and page. The transcript of the hearings conducted in January, 1992 contain no volume number and the transcript of January 6, 1992 has been designated Volume 10 with the hearings for the balance of the week continuing sequentially thereafter. Plaintiff's exhibits are designated "P.E.," and defendant's exhibits are designated "D.E."

[**5] 3. Both Becon and Comstock are large, sophisticated contractors. Becon is a wholly owned operating unit of the Bechtel Company. Comstock's annual revenue since 1984 and the present ranged between \$ 300,000,000 and \$ 500,000,000. (R4 at 52). The evidence indicates that their dealings were at arm's length.

4. Although the parties' agreement included both mechanical and electrical work, their significant differences centered on mechanical work. Comstock's twin theories, contract abandonment and cardinal change, are built upon numerous incidents of a year-long course of performance.

5. Comstock claims it experienced a substantial increase in its supervisory personnel because of the significant amount of change work it performed and Becon's unwillingness to grant time extensions. (R4 at 5-6; R5 at 121-22). It also alleges that the magnitude of changes

had a substantial adverse effect on its productivity and ability to effectively plan, manage and perform the work.

6. Comstock's base subcontract amount was approximately \$ 14,700,000. It agreed to subcontract amendments with a value of approximately \$ 7,600,000. According to evidence produced at trial, its total cost of performance, including [**6] overhead and profit, was \$ 26,895,650, or \$ 5,487,241 more than the total sum received from Becon. (P.E. 1990). Comstock seeks recovery in quantum meruit for its total costs, which it claims represent the reasonable value of the labor, material, and services it provided.

B. Pre-Bid Events

7. In the spring and summer of 1986, Becon and Ohbayashi representatives met to negotiate the terms of Becon's obligations as general contractor for Area 500. Becon had prepared its initial "Guaranteed Not to Exceed" bid, based on "ideal" project engineering and procurement information, in March 1986. (P.E. 1206). Work began before a formal written agreement was executed. On October 21, 1986, Gary Bechtel, on behalf of Becon, submitted a claim assessment in response to Ohbayashi's request to Becon to quantify changes it made to its original bid. (P.E. 1212). Foreshadowing problems that Comstock would later encounter on the job, Becon set as one of the assessment objectives to evaluate the effect of: increased scope, overall project acceleration, acceleration of individual scheduled activities, late engineering, and stacking of work. (*Id.*) Ohbayashi and Becon executed an agreement for [**7] Becon's services as general contractor in Area 500, etc., on July 29, 1987. (P.E. 1245).

C. Bidding, Negotiations, and Letter of Intent

8. Becon solicited bids for the mechanical and electrical work in the utility area in late 1986. After conducting pre-bid meetings with potential mechanical and electrical bidders, Becon received bids on February 17, 1987. Comstock submitted the low bid for the mechanical work and, with a \$ 284,085 deduct which Comstock offered if it was awarded both the electrical and mechanical packages, Comstock's electrical quotation was also the low bid received on the Project. (P.E. 1224; D.E. 28).

9. After conducting negotiations concerning various qualifications to Comstock's bid and certain modifications in the work proposed by Becon, (R10 at 90, 174-176), Becon and Comstock entered into a subcontract agreement signified by a letter of intent in late March, 1987. (D.E. 29). The letter, which was dated March 20, 1987, indicated that "the final Subcontract shall include all pertinent changes and additions based upon negotiations through this date." (*Id.*) It was signed by Comstock's authorized representative, Larry Hafling, on

March 31, with the [**8] notation that the agreement was "subject to scope clarifications made prior to bid, with bid, and per subsequent negotiations." Comstock's piping manager, John Mayne, Jr., testified that the effective date of the agreement was March 20, 1987. (R1 at 72-76). Becon's project engineer, Paul Sheridan, also acknowledged that the agreement was effective as of March 20, 1987. (R10 at 82; R11 at 143-44). Moreover, Becon's Dale Eichhorst stated that during construction, "we were working as if the contract had been [**9] signed, we were working off the letter of intent." (R8 at 122).

10. The letter indicated that the value of the subcontract "will be \$ 15,734,494.00." (P.E. 1956). It also confirmed Becon's March 18, 1987 verbal award and notice to proceed with design engineering and mobilization for the subcontract. Finally, it provided that a formal subcontract would be prepared and sent to Comstock for execution "shortly." (*Id.*)

11. During performance of the job, the parties continued to discuss finalization of the subcontract and negotiated certain points. (*See* D.E. B; R7 at 68-79). It was not until February 26, 1988, when the contract was nearly substantially complete, that the parties [**9] signed a subcontract. (D.E.1). This subject is addressed below.

D. Incomplete Drawings

12. The design documents provided to Comstock for the performance of the work were incomplete and lacked certain dimensions that were necessary to precisely locate some of the mechanical work.

13. Comstock reasonably anticipated that it would receive fully-dimensioned orthographic drawings that were issued or released for construction. (R1 at 85-86; R13 at 164). Becon's internal documents indicate that Becon itself anticipated that issued-for-construction drawings would be prepared by Giffels, the Project engineer (P.E. 1212 at 6), and expressed concern that its subcontractors would proceed without issued-for-construction drawings. (P.E. 1210). The diary of Becon's project engineer, Paul Sheridan, indicates that on March 16, 1987, however, Ohbayashi and Giffels informed Becon that it was to proceed with the existing design documents and "hope for the best." (P.E. 2011-9-10; R12 at 139-40).

14. On March 27, 1987, at the last meeting prior to Comstock's signing of the letter of intent, Becon informed Comstock representatives that there would be no issued-for-construction drawings and [**10] that the bid drawings were to be used for construction. (R3 at 110-111; P.E. 94).

15. The problem, according to Comstock, was that the lack of fully-dimensioned drawings forced Comstock to resort to a different, more expensive method of pipe fabrication than originally contemplated. (R1 at 129-30). Fully-dimensioned drawings would have enabled Comstock to fabricate mechanical piping in the largest components possible and thereby reduce the number of field welds and other associated field work. (*Id.*, R5 at 79, 113-118). Comstock's practice was to fabricate pipe in sections that would fit into a 40 ft. by 10 ft. by 10 ft. box that could be transported by an interstate carrier without special permits for trucking the fabricated pipe. (R1 at 132).

16. Because Comstock never received fully-dimensioned orthographic drawings, Comstock was required to add additional field welds and trim allowances so that the pipe could be cut to the required dimension once precise dimensions were obtained in the field. The result, according to Comstock's Mechanical's president, Cleve Whitener, and mechanical project manager John Mayne, was considerable extra work for pipefitters in the field. (R13 at [**11] 170-71; R5 at 116). According to Mayne, this resulted in an increase of approximately 16 to 17 percent in direct craft labor to install the pipe. (R1 at 134-36; P.E. 1980). Curiously, Comstock never submitted a change order proposal for this work. (R5 at 72).

17. It is clear that Comstock personnel were aware at the time they signed the letter of intent that they would not have the benefit of fully dimensioned issued-for-construction drawings in performing subcontract work. According to Paul Makris of Comstock, who was present at the March 27 meeting, Comstock personnel later discussed among themselves the additional engineering that was made necessary by the lack of completely dimensioned drawings. (R6 at 95-96). Comstock President Cleve Whitener, who was not present at the meeting, testified that under such circumstances Comstock had to consider the additional "cost of preparing [isometric] drawings using vendor data and undimensioned drawings." (R14 at 84-85). Although Comstock may have told Becon "we have to have more than this," (R6 at 96), at [*914] the March 27 meeting, at no time prior to signing the letter of intent did Comstock object formally, (R10 at 87; R7 at 65), nor did [**12] it seek to modify its price quote to include an additional trim allowance. (R14 at 82, 88-89). In his deposition testimony, Becon's Paul Sheridan indicated that Comstock's John Mayne complained regarding the absence of issued for construction drawings; however, Sheridan testified that this occurred after the March 27 meeting. (R11 at 147-48; *see also* Mayne testimony at R1 at 105-06). Arguably, Comstock considered a strongly worded complaint unnecessary in light of the fact that the letter of intent fixed the parties' contractual obligations as of March 20, 1987--several

days prior to the discussion of the drawings. Therefore, Comstock may (assuming an appropriate reservation of rights) be entitled to an equitable adjustment to its contract price for the extra work performed in the field. Insofar as Comstock was aware of this change of plan at the time it entered into the contract, however, the issue is not supportive of Comstock's Count 17 theories of abandonment and cardinal change. (See R6 at 95-96). However, Comstock has explained that the problem of incomplete drawings was exacerbated by delays in receiving some vendor data--an unanticipated occurrence. (See below, Section [**13] I.E.).

Sepias. 18. Comstock also asserts that its performance was hurt by Becon's failure to provide clear sepias. (R1 at 111-127). Comstock mechanical project manager John Mayne, Jr. notified Becon of a number of non-reproducible sepias on March 31, 1987. (P.E. 1229). Becon's Dale Eichhorst acknowledged that as late as October 15, 1987, Becon was requesting that Ohbayashi and Giffels provide clear reproducible sepias. (R9 at 81). Comstock wrote several letters in early 1988 asking that it receive better quality sepias to prepare as-built drawings showing the final state of the work. (P.E. 592; P.E. 590; P.E. 597). It does not appear that unclear sepias prevented work from being done, but according to Mayne, they made the job more difficult (R1 at 126). Comstock's electrical project manager, Gerald Evans, indicated that poor sepias required Comstock to seek some clarifications, but that the sepias were not a serious problem for the electrical work, and that only about ten to fifteen percent of the sepias were so bad as to require another copy. (R4 at 66, 104-06). Mr. Eichhorst recalled requests for copies of about 30 drawings, or 10% of the total. (R9 at 82).

E. Incomplete [14] Vendor Data**

19. Both the cost and the resulting effect of not having fully-dimensioned drawings could have been substantially mitigated if Becon had timely provided vendor data and drawings to Comstock. (R14 at 83-86; 98-99).

20. Becon and Ohbayashi initially contemplated that Becon would procure the major items of equipment for Area 500, including boilers, pumps, compressors, and electrical equipment. (R8 at 76). Becon procured these items because of the long lead time associated with obtaining these major items of equipment. (R8 at 87). Although Becon and Ohbayashi initially intended that the successful mechanical bidder would provide the remainder of the mechanical equipment, Becon proposed in late 1986 that Becon itself should perform some additional procurement to minimize the possibility of schedule slippage. (R8 at 75). Ohbayashi ordered Becon to proceed with the additional procurement on January 20, 1987. (R12 at 123).

21. The parties understood that Becon would provide vendor data (working drawings supplied by the manufacturers of equipment and specialty items which depicts dimensions and configuration of the furnished items). (R1 at 45). John Mayne, Jr. testified [**15] that at the February 23, 1987 meeting with Becon, Comstock indicated that it would need vendor data approximately one week after receiving the notice to proceed with the work, if awarded the bid. (R1 at 45; see P.E. 28). Becon's Dale Eichhorst and Paul Sheridan testified that at this time Comstock knew or should have known that vendor information could not be available so quickly with respect to equipment procured under the January 20 order by Ohbayashi, given the time lapse between the placing of an [*915] order and the receipt of vendor information. (R7 at 30-32; R11 at 27; see also R10 at 72). John Mayne, Jr., on the other hand, insisted that Comstock did not have any indication whatsoever that it would not have vendor drawings in time to prepare isometric drawings. (R1 at 185).

22. The very first Request for Information (RFI) submitted by Comstock on April 2, 1987 requested a schedule for transmittal of vendor drawings for "all the major pieces of equipment" to be installed in Area 500. (R2 at 63-64; P.E. 96). When no response was forthcoming, Comstock again requested the vendor data on April 12; it expressly informed Becon that the information was critical to continued progress [**16] on mechanical isometric drawings which were needed for pipe fabrication. (P.E. 97). Over a month later, on May 15, 1987, Becon finally responded to these two RFIs by indicating that preliminary drawings would be sent as they arrived from the vendors. (P.E. 96 and 97). On June 9, Becon wrote to Ohbayashi of the difficulties experienced by Comstock on the project, and asked that, among other things, Ohbayashi "improve the turnaround time of vendor prints." (P.E. 1235). As of June 11, a number of vendor drawings were still missing. (P.E. 118). Although Becon's Mayfield replied promptly, drawings for various meters and instruments still had not been provided by Giffels or Ohbayashi. Thereafter, Comstock received the vendor data throughout the course of the Project, with some vendor drawings not being received by Comstock until 1988. (See P.E. 314; R1 at 184).

23. Whether or not it was realistic to expect all vendor information within a week of the issuance notice to proceed (which was March 18, 1987, according to P.E. 1956), Comstock could not reasonably anticipate the delays it actually encountered in receiving some vendor information. A telling comparison may be drawn with Comstock's [**17] own contractual obligation to provide "all submittals and vendor prints submitted to the contractor - 5/1/87" (P.E. 1955, Art. 4.0, p.6 of 10)--a little more than a month after the effective date of its

contract. Becon did not intentionally withhold vendor information from Comstock, but generally passed on whatever data it received. (R7 at 127-28). Nevertheless, Becon had a contractual duty to provide its subcontractor with the information in a timely manner. This obligation assumed special significance in light of Toyota's mandate that time was of the essence, and that time extensions were not an alternative. Furthermore, Comstock's need for vendor data was particularly acute in light of the fact that Comstock was not provided with fully dimensioned issued-for-construction drawings. (See R14 at 83-89).

24. Because Becon did not provide this information to Comstock in a timely manner, Comstock's craft personnel had to determine the missing dimensions once the material and equipment were received in the field and modify the piping accordingly. Comstock's mechanical project manager, John Mayne, was unable to specify the number or percentage of vendor drawings which were missing [**18] at the time Comstock needed them to prepare isometrics, although he recalled that it was "a definite problem." (R1 at 184).

F. Requests for Information; Coordination Problems

25. Because the design was incomplete in some respects, Comstock encountered a number of conflicts in installing its work. In response to these conflicts, Comstock forwarded requests for information (RFIs) to Becon in accordance with the requirements of the subcontract. During the course of the Project, 504 RFIs were initiated. According to Gerald Evans, getting answers from Becon on electrical matters did not prove to be a special problem. (R4 at 27). Nor was there evidence that problems occurred with respect to the majority of Comstock's mechanical questions. Yet in a number of cases, at least, Becon failed to provide reasonable responses to these requests and to cooperate with Comstock in resolving design problems and conflicts in the field.

Pertinent Contract Provisions. 26. The subcontract agreement contained a number of broad provisions which provide ammunition for claims by both parties². Regarding [*916] a critical area of responsibility, Comstock understood its engineering responsibility [**19] to mean typical construction detailing, including; e.g., mechanical routing, electrical conduit and tray routing, heat tracing engineering, coordination with other trades, required testing, punch listing, and assuring compliance with applicable codes. (P.E. 277). Eichhorst and Sheridan testified they had no disagreement with Comstock's interpretation of its engineering responsibility as set forth. (R8 at 134-36; R11 at 40-41). Sheridan admitted that Giffels was paid extra to coordinate vendor data with the design documents. R12 at 142.

2 Under the subcontract agreement, Comstock had a duty to "notify Becon of any errors, omissions or discrepancies in furnished drawings." (See P.E. 1955, SC-2; *see also id.*, G.C. 6C). According to Article 11.2.2 of the Ohbayashi General Conditions, moreover, contractors were to report to the Construction Manager "apparent discrepancies or defects" in the work of the Construction Manager of other contractors. On the other hand, Comstock was not responsible for defective plans or specifications provided by the Architect/Engineer, Construction Manager or Owner of the Project or Project Site." (*Id.*, Ohbayashi General Conditions, Art. 3.6). Also, the Construction Manager was expressly obligated to provide necessary information or services "with reasonable promptness," (*Id.*, Art. 7.3); "to coordinate and provide general direction of the work and progress [of contractors]" (*Id.*, Art. 6.3.2); and "receive and review" shop drawings and other submittals and "coordinate them with information contained in related documents" (*Id.*, Art. 6.3.20).

On the other hand, the Subcontract provided that "This work will be going on during the duration of this Subcontract and the Subcontractor shall coordinate the work activities." (P.E. 1955, article 4.0). Article 9 of the Subcontract General Conditions require Comstock to "fully cooperate and coordinate with such other parties engaged on the project and shall cause its employees to work harmoniously with other personnel on the project." (P.E. 1955, Subcontract General Conditions, art. 9). And Comstock was obligated under Article 34 of the Summary of Work to "verify the piping connections to all equipment and modify the piping as necessary to match the equipment." (D.E. B).

[**20] **Coordination Meetings.** 27. Becon held weekly construction meetings with Comstock (R7 at 15-16) and weekly coordination meetings with all subcontractors during the course of the Project. (R7 at 15-17). Becon had a contract coordinator on site after mid-1987. (R7 at 22-23). Comstock's John Mayne, Jr. confirmed that there were no significant coordination problems with a number of other subcontractors and suppliers. (R4 at 149-154).

28. There were, however, a number of cases in which Comstock alleges Becon failed to cooperate with Comstock in resolving questions and conflicts.

Material Review and Deliveries by Becon. 29. Early in the Project, when questions arose as to precisely what material Becon and Comstock were each to supply, Be-

con rejected Comstock's request for a comprehensive review of the materials to be provided. (R2 at 71-74; P.E. 123) Becon indicated a willingness only to answer specific questions, apparently on the basis that the contract provided that any equipment not shown on the equipment schedule was Comstock's responsibility. (R12 at 112). In one case, Comstock's RFI was met with the response that Becon had delivered the equipment which was the [**21] subject of the query; on checking with the vendor, Comstock determined that Becon had not yet issued a purchase order on the equipment. (P.E. 164).

30. There was also evidence that Becon failed to provide some equipment in a timely manner. *See* P.E. 357, R6 at 13-14 (LA Water skids); R6 at 36 (motor control centers); R6 at 38 (pumps and valves), R4 at 6 (cable trays). Mr. Sheridan testified that unless a specific date for delivery of equipment was set forth in the subcontract, Becon "made no commitment to Comstock as to when that equipment was going to be on the job site." (R10 at 197, 205). As late as September, 1987, some material was still not on site. Mr. Sheridan acknowledged a September conversation with representatives of Ohbayashi in which Becon and Ohbayashi agreed to have Comstock make the remaining purchases Becon was responsible for to avoid alerting Toyota to Becon's procurement problems. (P.E. 2011-5; diary entry for September 24, 1987).

Concrete Trenches. 31. When attempting to install large bore pipe in concrete trenches in the pre-waste water treatment facility in late July, Comstock discovered that the trenches installed by Messer, another Becon subcontractor, [**22] were too narrow. [*917] Comstock proposed a solution. (R1 at 158) Comstock's RFI was submitted on July 23, 1987, with a reply requested by July 26. (P.E. 267). Ultimately, Comstock communicated directly with Giffels' on-site engineer to arrive at a solution and then simply submitted a subsequent RFI asking Becon to confirm the solution Comstock had discussed with the Giffels engineer. (*See, e.g.*, P.E. 267, P.E. 267-1; R1 at 160).

Flexible Connections Problem. 32. Because a specified connection met only one of the two requirements specified, but not both, Comstock requested direction from Becon as to how to proceed and suggested a possible solution. Becon's only response, written by Mark Mayfield, a young field engineer on his first job, was "meet spec." (P.E. 1484-1). Becon's Dale Eichhorst admitted that he "would have preferred to see a more detailed answer," and that the perhaps the question "should have went [sic] to somebody else." (R8 at 185-86).

Pipe Routing at Air Dryer. 33. When pipe could not be routed in the manner that was shown on the orthographic drawings because of conflicts between piping

and equipment, Comstock proposed a solution to resolve the [**23] conflict. In accordance with section 11.2.2 of the Ohbayashi/Becon General Conditions, which were incorporated in the Subcontract, and section 22 of the Summary of Work Comstock issued an RFI to Ohbayashi through Becon. (P.E. 263). Rather than discuss the matter with Comstock and express its approval or disapproval, Becon's Mark Mayfield responded by indicating that under the contract, Comstock was to "provide engineering services" and "coordinate its work with all trades." (P.E. 263). Again, the response indicates a lack of cooperation.

Line Running into Catwalk in 500 Trestle Area. 34. Where certain piping lines ran into obstacles due to the uncoordinated design, Mayfield's response to Comstock's proposed solution was for Comstock to "coordinate pipe with all trades per contract." (P.E. 266). Comstock eventually discussed the problem with Giffels. As was often the case, Becon ultimately acknowledged that the work was not within the scope of Comstock's contract, issued a CCN (in February, 1988), and paid Comstock for the direct cost of the additional labor and material required at the unit rates set forth in the Subcontract. (R8 at 23-25).

Boiler Relocation Problem. [**24] 35. Comstock relied upon the equipment location drawing in placing the boilers in the utility building. Unfortunately, there was a conflict between this drawing and the vendor drawing, and the boilers were set 6" too far south. (R1 at 142; R8 at 23). When Comstock alerted Becon to the problem, Becon advised Comstock that "per the contract, Comstock is responsible for engineering and insuring the correctness of the finished product, not Becon or Ohbayashi!" (P.E. 256). Becon's denied Comstock's later claim on the basis that Comstock should have alerted Becon to the problem prior to setting the boilers. According to Dale Eichhorst, Comstock submitted a Change Order Request for the relocation but later withdrew it. (R8 at 23).

DAF Unit. 36. At the end of September an issue arose regarding the vendor drawings supplied for the Area 502 dissolved air flotation (DAF) unit, which differed substantially from the engineer's design. The vendor drawings called for 50% more pipe, 50% more pipe fittings, and a 42% increase in pipe welds. (P.E. 285). Despite the increase in labor and materials required to install the work, Becon asserted that the additional costs were Comstock's under [**25] Article 34 of the Subcontract, which required it to "verify the piping connections to all equipment and modify the piping as necessary to match the equipment." (R1 at 169-70; P.E. 1955, Summary of Work, Art. 34). Comstock's letter of October 2, 1987, however, argued that changes of this magnitude were not part of the risks Comstock contemplated under Article 34. (P.E. 285). Although Becon's Paul Sheridan

consistently denied Comstock's claim for extras during his tenure (*see, e.g.*, P.E. 581; P.E. 284), apparently for fear of setting a precedent in similar situations (R13 at 133-36), a CCN was issued to Comstock within days of his departure in January 1988. (P.E. 1143).

Zurn Piping Conflict with Control Valves. 37. Piping supplied by Zurn, another Becon subcontractor, conflicted with [*918] the accessibility of certain control valves. Comstock recommended a modification; Becon responded that Comstock should work out the problem directly with Zurn, and notify Becon if it could not be resolved. (R1 at 165-66; P.E. 268) Comstock was ultimately compensated for the work in April 1988.

Pipe Penetrations. 38. When Comstock's piping layout did not match wall penetrations installed [**26] by other contractors and core drilling was required, Comstock was advised to core drill the holes to the correct size at its own expense. (See R1 at 187-193; P.E. 276, 274). Later, however, after Mr. Sheridan left the job, a change order was issued to cover the core drilling work. (See R12 at 28-29).

Roof Conflicts. 39. In RFI No. 71, Comstock advised Becon that a roof opening installed by Messer, another sub, was smaller than it was required to be for Comstock's 16-inch pipe. When Comstock requested that Becon have the responsible contractor rework the framing and enlarge the opening in accordance with the contract requirements, Becon claimed that Comstock was the responsible contractor and the entity insuring that the openings were the correct size. Again, Comstock was eventually reimbursed for the work after Mr. Sheridan left the job. (See R1 at 193-195; P.E. 1273, RFI M-71).

40. Another conflict involved a curb opening at exhaust fan 502-6, where structural steel installed by another Becon subcontractor prevented Comstock from installing its work. (P.E. 560, item 2C). The conflict was first brought to Becon's attention by Comstock's RFI M-70 dated June 5, 1987. (P.E. [**27] 1273). Becon's initial response was that Comstock was responsible for taking care of the problem. As of December, 1987, the problem was still unresolved. (P.E. 574). Becon subsequently requested that Comstock perform steel modifications to resolve the conflict; Comstock refused. (P.E. 575, 576). In light of Comstock's continuing protestations, Becon eventually made other arrangements. (P.E. 1952).

Equipment Pads. 41. In late 1987, Comstock discovered that concrete housekeeping pads installed by another Becon subcontractor were not installed at locations depicted on mechanical drawings. (R2 at 27-28; P.E. 311). When Comstock requested a change order to modify its pipe so that it would match up with the previously installed pads, Becon rejected its request, citing Comstock's responsibility to "verify the accuracy . . . of

any work performed by others that...[it] must tie into, work from or match in any manner. . . prior to proceeding with the...work." (P.E. 1955, Summary of Work, Art. 22). According to Becon, Comstock did not check the location of the pads, which were poured prior to pipe fabrication. (P.E. 311). Mayne, however, insisted that fabrication was performed within [**28] four weeks of mobilization--before pouring of slabs. (R2 at 31-32).

42. In another case, Becon moved as many as five pump pads in order to miss a single drain hub. (R2 at 37-38). When Comstock requested a change order to correct the pump pads because the pipe in question was large diameter steel pipe (R2 at 38-39; P.E. 279), Becon indicated that the costs of changes were to Comstock's account because of its verification obligation. (P.E. 1267). According to Comstock, however, these particular pads "were poured so late that any coordination of piping isometrics and fabrication with pump pad verification was impractical." (P.E. 1267). Comstock proceeded to correct the problem. (R2 at 45-48).

43. Because of the problems associated with location of equipment pads, Comstock initiated a number of CORs (R7 at 112-13). At Becon's request, Comstock incorporated all of these into a single COR for the cost of the concrete it provided. (Id.) The original request was for \$ 230,007.00 (R7 at 112). Becon rejected this request, and its field engineer, Mark Mayfield, worked with Comstock to arrive at a quote of \$ 121,800.00. (R7 at 119). Despite the joint effort, Becon rejected the proposal and the [**29] amount remains in dispute. (R7 at 120-21).

Painting of Insulated Pipe. 44. A considerable volume of correspondence and a number of meetings were devoted to the subject of Comstock's responsibility for finish painting of insulated pipe. Although the record was fairly clear that Comstock had excluded [*919] this work from its scope of work (see P.E. 64), the argument raged for some months until early 1988, when Becon at last subcontracted the work to another. (See R2 at 47-61).

Suit on Ingersoll Rand Mistake. 45. As Sheridan and Eichhorst testified, Becon attempted to force Comstock to coordinate its work directly with other Becon or Ohbayashi subcontractors in an effort to save time and money. (R11 at 51-52; R9 at 72). In at least one case this extended to resolution of related cost issues as well. Where Comstock was forced to do extra work because of an error in vendor drawings provided by Becon, Comstock was required to bring a lawsuit to obtain payment for the work occasioned by the dimensional error. (R8 at 162-64).

Becon's Warning to Ohbayashi. 46. In a letter of June 22, 1987, Becon, among other things, requested that

Ohbayashi (1) answer all RFIs within [**30] three working days and provide clear, concise answers, (2) expedite review and approval of all submittals, (3) freeze the design of the work being installed by Comstock because "a steady stream of specification revisions and revisions to drawings is Comstock's best excuse not to perform or meet the schedule dates," (4) stop the reinterpretation of the specifications by Giffels and the owner, and (5) provide complete definitions of what is wanted when questions or changes are given to Comstock. (P.E. 1236). Becon concluded, "It is also important to keep in mind that if a contract is significantly changed by one party then the contract may no longer be valid." (Id.) See also P.E. 1235 (Becon's June 9 letter to Ohbayashi urging it to improve turnaround time on revisions and vendor prints), and P 85-87, *infra*.

Summary of RFIs. 47. Of 504 RFIs, more than 200 queries were submitted in May and June, 1987. According to John Mayne, those reflect the number of questions raised by lack of information on documents in Comstock's possession--information which it needed to complete isometric drawings. This had an immediate effect on Comstock's performance. A peak number of 78 RFIs [**31] were submitted in October, 1987, when Comstock was entering the finishing stage on a number of systems and areas and was running into conflicts in the field, creating, to use Mayne's word, "chaos." (R3 at 58-63; P.E. 1976)

Conclusion. 48. The evidence indicates that in a number of cases Becon failed in its duty of cooperation and coordination as general contractor and increased the cost of performance to Comstock. This may have been because Becon was frustrated by lack of cooperation from Ohbayashi and Giffels, because it was actively seeking to minimize the administrative load on an under-sized staff (see P.E. 1206, indicating Becon's "arbitrary cuts" in staffing in an effort to secure the general contract), or because of the inexperience of individuals on its staff. In any event, it is clear that Becon should have taken a more active role in coordinating the work of separate contractors and expeditiously resolving design conflicts. Becon did pay Comstock for the direct costs of performing much of the foregoing extra work. (R13 at 171-72). Comstock insists, however, that it is still owed for mobilization and demobilization costs, time spent in redirecting workers, replanning [**32] the work, and in obvious inefficiency.

G. Denial of Time Extensions

49. From early on in its discussions with Becon, Comstock was informed repeatedly that the completion schedule was critical to Toyota, which stood to lose tens of millions of dollars if completion of the facility were delayed. (See R8 at 45, R13 at 83-84). All bidders were

so informed during the bid cycle. Article 4.0 of the Sub-contract executed by Comstock provided that "time [was] of the essence." (P.E. 1955; D.E. 1). During the post-bid meeting on February 23, 1987, Becon advised Comstock that, contrary to the provisions in the bid documents, no time extensions would be granted to Comstock during the course of performance of the sub-contract. (R1 at 47-48; P.E. 1955; R7 at 35; R10 at 73-74; P.E.28, item 29). According to Comstock's John Mayne, Jr., Comstock had bid the job assuming that it would be given time extensions as needed (R1 at 48); this new information amounted, in Mayne's words, to "a very significant statement" by [*920] Becon. (R1 at 47). There is no evidence, however, that Comstock ever altered or adjusted its bid to take into account this information. In any event, Comstock was clearly aware [*33] that Becon would authorize no time extensions during the course of the job--a development which quite likely had the greatest effect on Comstock's ability to plan and perform its work as well as the costs incurred by Comstock during performance. Comstock cannot be faulted for taking Becon at its word and failing to request formal time extensions during the course of the job.

Boiler Delays. 50. Package boilers purchased by Becon and installed by Comstock were probably the largest items of equipment installed in the utility area. There were two major delays on boiler installation: one involved the setting of the pressure relief valves, and the other the design and fabrication of boiler catwalks.

51. Despite the fact that Comstock and Becon became aware of a potential problem with the setting of the pressure relief valves in September, 1987 (R2 at 98-99), and Comstock took measures to resolve the problem (even though it did not furnish the equipment (P.E. 402; P.E. 403; P.E. 405; R2 at 99-104), the state inspector denied acceptance of the setting in mid-December. (R2 at 106-108). Becon issued a CCN instructing Comstock to change the values and settings on one boiler and put [*34] all the others on hold. (P.E. 425; R2 at 109). Even though the boilers could not be operated without the valves, Becon authorized no extension of the contract milestone date for the first boiler, December 15, 1987. (P.E. 425; R2 at 108, 110). The main valves did not arrive at the Project until around February 1, 1988. (P.E. 445, item 8). Comstock was obliged to design and fabricate boiler catwalks. On September 9, 1987, Becon requested that Comstock finalize engineering drawings for the platforms, noting that delays beyond September 16 would adversely affect the schedule. (P.E. 400). After Comstock submitted its design calculations for the platforms, however, serious discrepancies between its design and Giffels' plans were noted. (R2 at 112-13). It was then determined that Becon had failed to transmit a January 23, 1987 specification revision to Comstock which sub-

stantially revised the parameters for the platform design. (R2 at 112-13; R6 at 43-44; P.E. 901-4). On October 8, 1987, Comstock informed Becon of the failure to transmit the revised specification to Comstock and noted consequences to the price and performance time. (P.E. 1275; R2 at 113-14). Comstock later informed Becon [*35] of the need for a time extension to complete platform work, noting that installation could not begin before January 2, 1988. (P.E. 1293).

52. Other delays related to the boilers involved late coordination of valves for Honeywell instrumentation and control work (P.E. 426; R2 at 123-25) and late receipt of force draft fan main damper linkages, which arrived on January 29, 1988. (P.E. 446; R2 at 127-28). Neither delay was the fault of Comstock. A Comstock letter of February 1, 1988 summarized approximately 30 items relevant to boiler startup, none of which involved delays by Comstock. (P.E. 445; R2 at 136).

53. Although Becon did "redefine" certain project milestones (see, e.g., (P.E. 1253; P.E. 184), these bore no relationship to the time extension to which Comstock was entitled. (R6 at 31-32). Becon instructed Comstock to increase its manpower to meet the schedule set. (P.E. 1327). The controlling factor was a conflict between the milestones set forth in Comstock's subcontract and the milestones in the instrumentation and control subcontractor's agreement with Ohbayashi. (R9 at 70-71; P.E. 1268; R11 at 76-77). In any event, as Comstock's scheduler, Paul Makris, noted, the actual [*36] extensions, when they happened, occurred too late to permit Comstock to efficiently plan ahead or perform the work efficiently. (R6 at 31-32, 55-56).

54. Becon contends that changes to certain interim milestone dates constituted time extensions, yet it has asserted a counterclaim because of Comstock's supposed failure to achieve the milestone associated with start-up of one boiler.

Effect of Time Limits. 55. Because of the changes to the work, coupled with the time limitation imposed by Becon, Comstock was required to substantially increase its [*921] workforce to accomplish the work on time. At the February meeting, Comstock informed Becon that it anticipated a work week of eight hours per day, five days per week. (R1 at 42-43). It also stated that it expected its mechanical manpower would peak at 136 persons. (P.E. 28; R6 at 46; R1 at 42-44). As it happened, Comstock's actual manpower peaked at about 350 persons. (R3 at 36). Among other things, Comstock was required to work more than 34,000 hours of craft labor overtime. (R13 at 214, P.E. 1994).

H. Volume of Changes

56. No element is more critical to Comstock's abandonment and cardinal change claims than its allegation [**37] that changes well beyond what it anticipated dramatically affected its ability to plan and perform the work. Comstock was on notice that significant changes were in the offing, although it could not have anticipated the number of changes it was ultimately required to perform.

What Comstock Knew or Should Have Known. 57. Becon's Paul Sheridan and subcontract administrator Dale Eichhorst insist that Comstock was put on notice that there would be "lots of changes" in the project. (R10 at 54, 57; R6 at 176; R7 at 24-25, 35-36). Although Comstock's mechanical project manager, John Mayne, Jr., disagrees with this characterization (see R3 at 87-89), Mayne's own minutes of the February 24, 1987 meeting reflected the fact that there would be "extras", meaning additional work. (P.E. 43; R1 at 56-57). Based on the circumstances, moreover, Comstock was or should have been aware that substantial changes were contemplated.

58. Among other things, Comstock was aware that there would be significant forthcoming changes relating to startup work and the liquid tank farm. (R3 at 80). Comstock's original bid (D.E. 136) contained a price of \$ 131,000 for startup of systems. (R7 at 27-28). At [**38] the February 23 meeting between the parties, Becon asked Comstock to revise its startup price to include work through the manufacturing area of the Project. (R1 at 44; R7 at 28, 45-47). Comstock was asked to come up with a budgetary number to be included in the contract price. (R7 at 29). Following the March 3, 1987 meeting, Comstock submitted a revised estimate in the amount of \$ 990,369. (D.E. 24). As Comstock's John Mayne, Jr., testified, however, the figure was only an estimate since the scope of start-up work was not completely defined. (R1 at 66; R3 at 93-94). Subcontract amendments related to start-up ultimately totalled \$ 1,995,892. (R3 at 156; D.E. D).

59. At the February 23, 1987, meeting Comstock was shown preliminary drawings of the proposed automotive fluids liquid tank farm. (R3 at 81-82; R9 at 9-10). Comstock was informed that as soon as the liquid tank farm package was assembled and complete enough to be priced, it would be issued as a change order to the contract. (R1 at 46; R7 at 29-30; R10 at 73). It was anticipated that a change notice would be issued soon after contract award. (P.E. 32). The liquid tank farm ultimately resulted in changes of \$ 1,465,250 to the [**39] contract price. (R1 at 46-47; R3 at 156; D.E. D).

60. Comstock was also informed that it should provide an allowance in its price for structural steel. Subcontract amendments related to supplemental steel resulted in payments totaling \$ 294,472. (R3 at 157-58;

D.E. D). Comstock has reserved a substantial claim for supplemental steel under a separate count in its complaint. This issue was not addressed in the Count 17 presentation.

61. The contemplation of changes was also at the heart of negotiations relating to unit price provisions to be included in the contract. (R3 at 88). The subject was first raised by Becon during the February 23 meeting. (P.E.28, item 7; R1 at 49; R7 at 40). This discussion continued at the March 3, 1987 meeting between the parties, at which time Comstock proposed a new method for the pricing of contract changes. (R10 at 75-76).

62. Significantly, bidders were informed by Becon that a resident cost engineer and resident scheduling engineer would be required for both the mechanical and the electrical [*922] contract. (D.E. 19). During the negotiations between Comstock and Becon, Comstock suggested that it supply only one cost engineer and one scheduling engineer [**40] to handle both projects, in a combined role, as a cost-saving measure. However, Becon replied after some consideration that one scheduling engineer would be acceptable but that each side of the Project, mechanical and electrical, needed its own cost engineer to handle the pricing of change orders. (R10 at 169). Paul Makris, Comstock's scheduling engineer, admitted that the requirement of resident engineers was "some acknowledgment of the fact that . . . we knew there were going to be additional changes." (R6 at 82).

63. For change work (other than startup work), Comstock had contracted for a substantial markup of 21% for overhead and profit. (R 9 AT 61).

64. Given all of the foregoing, Comstock was or should have been aware that significant changes were anticipated for the Project.

"A Lot of Changes." 65. On the other hand, Comstock could not reasonably anticipate the number of changes that it actually encountered. As Becon's post-Project analysis for Ohbayashi stated, "[Giffels'] incomplete design caused the issuance of numerous bulletins, specification updates and field changes resulting in over 450 major change orders issued by Ohbayashi to Becon, which in turn required [**41] change notices to all effected subcontractors." (P.E. 1421). The "extreme number of changes" was burdensome to personnel on site. (*Id.*). Becon wrote Ohbayashi on more than one occasion regarding its concerns with ongoing changes and potential "impact" claims by Comstock. (P.E. 1235; P.E. 1236).

66. Comstock received a total of 238 contract change notices (CCNs) during the Project, and initiated a total of 227 change order requests resulting in 208 subcontract amendments. (P.E. 1977; P.E. 19676; R3 at 40-

41). Compared to its anticipated labor hours, Comstock experienced a 61% increase in electrical labor and an 87% increase in mechanical labor. (R3 at 38-40). Comstock's original subcontract price of approximately \$ 14.7 million was increased by subcontract amendments to over \$ 21 million--about a 50% increase in the contract amount. Of course, between \$ 3 and \$ 4 million in approved changes--about half of the total--relate to work Comstock was aware of at the time of entering into the contract (startup work, liquid tank farm, supplemental steel). Comstock's accountant testified that the total cost of performance was \$ 26,895,650, more than 80% more than the original price.

67. [**42] The great majority of the approved changes related to area 501, the utility building--especially the boiler area. (R3 at 44-46). There is no doubt that the significant number and timing of the changes caused inefficiencies in project planning and in performance of the work--especially since there were no time extensions. As Mr. Mayne testified: "We had people on top of people, . . . too many people in the specific work areas trying to get this work done on as timely a basis as we could possibly do it. It slowed our . . . work down [doing changes and original contract work simultaneously]." (R3 at 62-63; *see also* R6 at 55-56).

68. Mayne also testified that from a proposed mechanical staff of 11 persons plus a project director, Comstock went to 29 staff plus a project director, a mechanical project manager, and Ron Gordon, who was enlisted to assist with change orders. (R5 at 122).

69. Comstock electrical project manager Gerald Evans provided similar testimony regarding the effect of changes on the electrical work. (R4 at 13-29). He did, however, testify that all of the electrical claims had been addressed by change order.

I. Early Performance, Administration and Scheduling [43] Problems**

70. Contrary to its plan, Comstock did not mobilize immediately after signing the letter of intent on March 31, 1987. Moreover, it experienced other significant problems early in the job.

Slow Mobilization. 71. According to Becon's Paul Sheridan, Comstock's mobilization was slow. (R10 at 102). Comstock's lack of activity during this period was corroborated by Robert Jordan, Ohbayashi's project manager, [*923] (R13 at 75), and by Comstock's own manpower loading comparisons. (P.E. 1979) According to Jordan, the time lost during the early weeks of performance was never regained. (R13 at 77).

72. Becon's Dale Eichhorst testified that through July 1987, the overall schedule appeared to be on target. (R9 at 23). However, he explained that problems such as

the NPS hanger problem remained and eventually caught up with Comstock and affected the schedule later. (*Id.*, P.E. 1248). The testimony is in conflict regarding the reasons for Comstock's slow start.³

3 Paul Sheridan testified that work was available for Comstock in the spring of 1987, but that Comstock was slow to respond. (R10 at 100-102). He asserted that Comstock could have begun purchasing material, setting up warehouse space, hiring and qualifying welders, and establishing procedures. Available mechanical work included roof drains, trestle piping and welding, and moving equipment to the job site. (R10 at 102).

Comstock's witnesses disagree that work was available. Paul Makris testified regarding delays in access to the cable tray (R6 at 34; R12 at 155-56; the 15KV cable between penthouses (R6 at 35); grounding along the trestle (held up by grading delays)(R6 at 35; *see also* R11 at 8); switch-gear delivery delays (R6 at 35); boiler stack foundation delays (R6 at 37); motor control center delivery delays R6 at 36); pump delivery delays (R6 at 38); waste water pretreatment access delay (R6 at 39-40). (D.E. 35; R6 at 34-41). Comstock also points to Becon's own complaints regarding delays associated with approvals by Ohbayashi, delays in vendor prints and the "continuous flow of revisions" which were "impacting [sic] the schedule for the project." (R8 at 168-69, P.E. 1235). For example, Paul Sheridan admitted to delays to victaulic piping at the trestle affecting the schedule as of May 20, 1987 (R12 at 150-52), Becon-furnished cable tray still missing in May (R4 at 6) and in June (R12 at 155-56). Sheridan also acknowledged that roof work was still being performed by another Becon subcontractor in April, 1987 (R12 at 11). Also, Becon's final analysis of the job indicated that SOFCO was delayed in its performance of structural steel work, and was still in area 500 in April and May, 1987. Comstock's John Mayne testified regarding the many early RFIs which were necessitated by lack of information. (R3 at 60-62).

[**44] **Administration and Scheduling Problems.** 73. Under the provisions of the Subcontract, Comstock was obligated to have on site a full-time project manager, two cost engineers, and a scheduling engineer. Comstock delayed providing cost and scheduling engineers to the project (R10 at 112), and failed to submit on a timely basis contractually required progress curves, a satisfactory schedule, or a quantity reporting system. (R10 at 116).

74. Under the provisions of the subcontract, Comstock was obligated to submit a schedule for approval within 15 days of the beginning of the job. (P.E. 94, item 15A; R7 at 63). The schedule was required to be developed using Primavera, the computer software utilized by Becon. (R10 at 54-56). Scheduling requirements were discussed in pre-bid meetings, (*see* D.E. 19; D.E. 20), and at the March 27, 1987 meeting between Becon and Comstock. (P.E. 94, item 15a). Counting from the day Comstock executed the letter of intent, March 31, 1987, this schedule would have been due in mid-April 1987. (R10 at 104). A Primavera schedule acceptable to Becon was not supplied until the summer, however. (R10 at 155-56). Becon complained about scheduling problems [**45] in a series of letters: April 30, 1987 (D.E. 32), May 29, 1987 (D.E. 33), June 5, 1987 (D.E. 34), and June 30, 1987 (D.E. 35). (R10 at 160-62). When Comstock's scheduler, Z. Palfry, showed up on site in mid-May, he had to be trained by Becon's scheduling supervisor. (R10 at 116-17). When a Primavera schedule was at last submitted on June 29, 1987, it was out of date--being, essentially, the bid schedule. (R6 at 76-77, 118). Apparently, Comstock was attempting to get Becon to recognize its original plan of work as a baseline for measuring delays to Comstock--and a tacit admission of Becon's own fault in delaying Comstock. (R6 at 14-16, 78-81). On August 3, 1987, Becon advised Comstock that its submitted schedule was conditionally accepted. (R10 at 164-65; D.E. 37). The approved schedule was a bar chart. (R6 at 12-13, 16-17).

75. Although computer equipment was necessary for running the job, this equipment was not even ordered until sometime in April. (R6 at 62-63).

76. Whether or not it had been delayed by Becon, Comstock's failure to present an acceptable schedule for several months militates [**924] against its claim under Count 17, if only because both parties presumably needed some form [**46] of schedule for project planning--a schedule which recognized the present realities of the job. As stated in the letter from Becon to Comstock dated June 30, 1987, Comstock had not provided a schedule reflecting "the current situation relative to material deliveries, availability of areas to work, status of Comstock's pipe deliveries or pipe supports, the status of engineering submittals and the work that was scheduled to be completed but is not." (D.E. 35). Becon's Paul Sheridan testified that the effect of Comstock's failure to comply with scheduling and reporting requirements was to: (1) strain relationships between Ohbayashi, Becon and Comstock; (2) slow up Comstock's ability to bill Becon; and (3) affect Comstock's ability to manage work in the field and plan its progress. (R10 at 172-73). However, Paul Makris testified that Comstock did employ intermediate bar charts for scheduling purposes from late

April on. (R6 at 20). Although it is unclear what specific effect this delay had on the performance of the job, it raises important questions regarding Comstock's share of responsibility for its later acceleration and productivity problems.

77. Becon also alleged that Comstock could [**47] not track quantities of material used for some months. This information was needed to update the schedule and for billing purposes. (R10 at 157). Becon asserted that Comstock's inability to use the system apparently required considerable manual recording of data and diverted resources from other tasks. According to Comstock's Paul Makris, the reconciling of Comstock and Becon cost codes took a fair bit of time (R6 at 121). Comstock's John Mayne, Jr., however, insists that the main problem in getting its tracking system approved was related to a difference of opinion between Comstock and Becon regarding the degree of front-end loading to be permitted--that is, the percentage of payment for various materials early in the job. (R4 at 137-39). Makris testified that, at least from summer, 1987, on, Comstock provided a commodity curve and monthly reports addressing contract dollar amounts, manpower, and scheduling narratives. (R6 at 23-27)

Material Procurement. 78. Sheridan claimed that poor material procurement by Comstock was a major cause of difficulties experienced by Comstock on the project. (R12 at 109-111). Sheridan said Comstock personnel had indicated that the individual [**48] responsible for the mechanical procurement had not performed properly and that a lot of shortages were causing problems. (R11 at 13). In addition, a Becon evaluation of Comstock submitted to Ohbayashi after the Project was completed rated Comstock's performance as "poor" and identified material procurement as a partial cause. (R12 at 109-111; P.E. 1421; R9 at 134-35).

79. Comstock's John Mayne, however, testified that the material buyout was "a slow, cumbersome process" because of the "large amount of change notices being issued" and the "vast amount of confusion and incompleteness in regards to the specifications and the drawings." (R4 at 135-137).

Internal Friction. 80. According to Sheridan, the foregoing problems were exacerbated by strained relationships within Comstock's administrative ranks early in the job (R10 at 111) and in the fall of 1987 (R10 at 210-11). Sheridan's recollections of supposed admissions on this subject by Comstock staff can be given little if any weight (Sheridan being the most unlikely of confidantes for Comstock personnel). However, "strained feelings" between Comstock's mechanical project manager, John Mayne, Jr., and Comstock project director [**49] John Mattox were corroborated by Comstock's electrical pro-

ject manager, Gerald Evans. More significant is Evans' admission that Mattox, having been trained as an electrical engineer, had difficulty overseeing the mechanical side of the job (R4 at 58), necessitating the presence of Mayne.

81. Judging from the evidence presented, whatever internal friction there was in Comstock's ranks paled beside the lack of communication that characterized the Comstock/Becon relationship, at least during Mr. Sheridan's tenure on the job, first as project engineer and later as project manager. (R1 at 174-75). John Mayne, Jr. indicated that there was more cooperation on the job (at [*925] least for a time) after Mr. Sheridan left in early 1988.

Discussions Regarding Comstock's Performance.

82. Difficulties in Comstock's performance prompted a series of discussions between the parties. Becon advised Comstock by letter dated April 30, 1987 (D.E. 32) that Comstock was not meeting its contractual obligations regarding mobilization. (R10 at 112). In light of continuing problems, Becon wrote Les Wuerfl, president of Comstock, on May 29, 1987. (D.E. 33). In response, Comstock upper management visited [**50] the site and, in Sheridan's words, assured Becon that "whatever had to be done to meet the schedule and get on top of the project would be done . . ." (R10 at 118-19).

83. A further letter to Wuerfl followed on June 5, 1987. (D.E. 34, R3 at 172-73). At this point, two months after the notice to proceed, Comstock still had not established a quantity reporting system that could be audited or monitored. (R10 at 119-20). The response was more visits from Comstock upper management. (R10 at 120). On June 10, 1987, Becon again expressed its concern and dissatisfaction to Comstock's management. (D.E. 35; R3 at 173-74). Becon was again assured that Comstock would do whatever was necessary to correct its internal problems. (R10 at 121-22).

84. Becon's continuing concerns were set forth in letters of September 15, 1987 (D.E. 39), and September 18, 1987 (D.E. 41). In an historical review of the job prepared for Ohbayashi and Toyota at the end of the Project, Becon rated Comstock's mechanical work as "poor" based on problems with engineering takeoffs, material purchasing, and expediting. (R9 at 134, P.E. 1421).

85. However, Becon was also critical of Ohbayashi. During June of 1987, Becon's [**51] project manager, Chuck Kinney, wrote two letters which, while emphasizing Comstock's struggles and "internal problems," leave no doubt regarding Becon's increasing concerns "on the other end" and the increasing delicacy of Becon's position as middleman.

86. On June 9, 1987, having just notified Comstock of their own shortcomings and warning of action to come if they did not, Becon made some suggestions to the construction manager which were intended to "eliminate claims from Comstock for constructive interference by Ohbayashi and Becon." Becon offered the possibility of converting Comstock's subcontract to a time and material contract and having Becon direct Comstock's staff, or, alternatively, reducing the scope of the subcontract. Were a replacement to be chosen, that subcontractor should be on a time and material contract. Becon foresaw that with other subcontractors beginning work in the area, coordination problems would only increase, perhaps causing Comstock "to file impact claims." Becon concluded that it was "incumbent" that Ohbayashi (1) improve turnaround time on approvals of revisions affecting the schedule; (2) finalize mechanical and electrical design for Area 500 and [**52] eliminate future specification revisions and bulletins, and (3) improve the turnaround time on vendor prints." (P.E. 1235).

87. On June 22, 1987, Becon sent an even stronger letter to Ohbayashi. The letter was again diplomatically couched in terms which suggested that all had to play their part to make certain that Comstock should be left to stew in their own juice--but the import was clear: there was a danger of the "collective impact" of changes to Comstock's work. To quote Mr. Kinney, "We do not have a right to impact a contractor ... [and] if a contract is significantly changed by one party then the contract may no longer be valid." Becon proceeded to list a number of ways in which Ohbayashi and Becon could avoid or "minimize any claim of impact" by Comstock, including: (1) answer requests for information (RFIs) within 3 working days and provide a clear, concise answer; (2) expedite review and approval of submittals, and do not reject submittals on technicalities; (3) stop changing the drawings and specifications affecting Comstock's work; (4) stop the reinterpretation of specifications by Giffels and Toyota; (5) provide complete definitions of what is wanted when questions [**53] or changes are given to Comstock; (6) give priority to Comstock in conflicts between subcontractors. (P.E. 1236).

[*926] 88. Later, when Becon and Ohbayashi determined that Becon would have difficulty procuring all of the material it was required to purchase, Becon, with Ohbayashi's knowledge and support, requested that Comstock purchase this material so that Toyota would not learn of Becon's procurement deficiencies. (P.E. 2011-5).

NPS Hanger Delays. 89. Of all of the performance related problems for which Comstock is responsible, the clearest and most significant item involves the failure of its supplier, NPS, to deliver pipe hangers on time. Comstock President Cleve Whitener admitted in early De-

ember, 1987 that this "very severe problem" was not Becon's fault. (R7 at 85). The inefficiencies caused by NPS's failure to deliver hangers to Comstock on time were costly (R9 at 130) because the method Comstock was forced to use for hanging pipe to work around this problem was extremely inefficient. The pipes could not be erected in an orderly fashion which would allow loading, testing, insulation and other subsequent work to be done in the anticipated sequence. (R9 at 131; R6 at [**54] 123). NPS's failures accounted for a "tremendous amount" of the increase in manpower and consequent overruns experienced by Comstock. (R9 at 131; R14 at 16).

90. As John Mayne, Jr., admitted, the NPS delay was "a crucial item and . . . hurt us." He was, however, unable to agree with Becon's Eichhorst that the effect on the job was "devastating." (R4 at 116-17). He testified that NPS was backcharged for "around \$ 80-85,000. (R2 at 147). Mayne also testified that the hanger delay was responsible for at about 15-20% of the \$ 250,000 in additional compensation paid to Manville. The bulk of the responsibility for delay he assigned to Becon. (R5 at 100-06). Paul Makris testified that the delays associated with hanger delivery caused pipe installation to be less efficient, and delayed heat tracing, hydro testing, insulation, and painting. (R6 at 123).

91. Although the evidence does not yield a specific figure in terms of dollars or percentages to be assigned to the productivity cost of the hanger delay, the Special Master does not find John Mayne's testimony regarding the direct costs Comstock incurred due to the NPS hanger delay problem a convincing evaluation of the total cost of the [**55] hanger delay.

Other Delivery Problems. 92. Although there was some testimony that Comstock experienced problems getting prompt delivery of equipment from some other vendors (see R4 at 71-73), there was no specific proof of their significance.

Air Compressor Problems. 93. There is at least one other specific problem for which Comstock bears responsibility--corrective work on Ingersoll-Rand air compressors. Before these large pieces of equipment were grouted in place, Becon suggested to Comstock that the manufacturer's representative be brought in to check their alignment. Comstock failed to do so. Later, the manufacturer determined that the compressors had been improperly set, and notified Becon that the warranty would be voided if they were operated as installed. (R11 at 82-83). As a result, Comstock was required to disconnect all piping from the compressors, chip out all grout, re-level and realign the equipment, and complete installation to the satisfaction of the manufacturer. John Mayne testi-

fied that the total estimated correction cost was between \$ 60,000 and \$ 80,000.

94. Although Becon witnesses testified as to a number of other issues relating to Comstock's [**56] performance, the Special Master finds that none were proven significant in the conduct of the job.

J. Withholding of Payment and Comstock's "Impact" Claim

95. As Mr. Mayne testified, the parties generally followed the amendment procedure established by their original agreement. (R4 at 93-94). Normally, Becon would issue a Contract Change Notice in response to which Comstock would submit a Change Order Proposal. (R4 at 93). After negotiations, a subcontract amendment would be executed once an agreement was reached regarding an amount.

Effect of Changes. 96. Because of the substantial quantity of changed work performed, Becon allowed Comstock to bill for the value of work covered by a Contract [**927] Change Notice (CCN) as determined by Becon, even though no subcontract amendment had been executed. When Becon failed or refused to issue a CCN for changed work, Comstock initiated a Change Order Proposal (COR) when it performed work which it believed to be beyond the scope of its subcontract.

97. Comstock, however, could neither bill nor received payment for work covered by a COR until Becon issued a CCN. Becon was often very slow in reviewing and approving Comstock's CORs [**57] and other pricing proposals in a timely manner; this had an adverse effect on Comstock's cash flow for the Project. According to Mr. Mayne, for work covered by a COR, Becon did not issue a CCN until almost three months after Comstock discovered the problem. (R5 at 96). For example, Comstock repeatedly requested a CCN in connection with the extra work it performed on the boiler platforms. (R2 at 112-13, 129; P.E. 430). Comstock first requested a CCN on October 8, 1987 (P.E. 1275); the CCN was not issued until February 4, 1988.

98. Although Becon instructed Comstock to proceed with changed work based on its verbal directive, Becon could only bill for changed work after Ohbayashi issued a written directive (RRAT form) authorizing the work. (See R9 at 24-25; R6 at 188-89). Becon repeatedly advised Ohbayashi that it was not reviewing and approving RRAT forms in a timely manner (R9 at 84-85; R12 at 88, 158), and the delays in RRAT issuance delayed payment to Comstock. At one point late in the job, the number of change proposals to be reviewed by Ohbayashi's area manager was so great that Comstock sent two of its field engineers to the area manager's office to assist him in cleaning and [**58] organizing his desk so that the

Comstock proposals could be reviewed and processed. (R5 at 97-99). In May, 1988, after the construction work was complete, Comstock submitted a claim for over \$ 84,000 in "financing costs" associated with delay in approval of amendments on work ordered by CNN.

"Impact Statements." 99. During much of the project, approval of subcontract amendments was delayed by Becon's refusal to act upon Comstock change order requests (CORs) containing so-called "impact" statements. (R2 at 154-55; R9 at 83-84; R7 at 109). On September 15, 1987, Becon notified Comstock that it was "far behind schedule and that no significant improvement is occurring in the rate of progress . . ."; Comstock's progress was at 36.6% versus the scheduled 55%. (D.E. 39). Becon therefore instructed Comstock to "dramatically increase the manpower working on the mechanical work" and other actions to achieve the milestones established for the job. (*Id.*). Meanwhile, Becon would withhold payments "until an acceptable recovery program has been approved and implemented." According to Comstock's John Mayne, Comstock was responsible for some of the problems, but the main cause of delays [**59] was "a general lack of information, a lack of cooperation, and a lot of change orders being issued, a lot of change work taking place with the refusal of change notices . . ." (R2 at 149). Comstock soon had 350 pipefitters on the project, compared to the 100 it originally anticipated. Many change orders were outstanding.

100. In mid-October, 1987, Comstock submitted two CORs the following language: "Please understand that this work has affected our schedule and sequence of work." (See P.E. 1288-1; 1288-2; D.E. 135; F7 at 80). Comstock then sent a letter requesting Becon resolve and approve all outstanding change orders (involving more than \$ 2.3 million), and informing Becon that Comstock would do only approved change order work. (R2 at 150-52). Then Comstock received an October 16, 1987 letter, Becon advised Comstock that Ohbayashi would accept only a proposal that was completely priced, and that Comstock should resubmit their proposals without the "impact" statement, adding whatever price or extra crew or extra cost was necessary to cover "impact" and make the proposal final. (P.E. 1957; R2 at 154-55; R4 at 207-08; R7 at 80-81; R9 at 86, 99, 132). Comstock was still receiving payment [**60] since it was permitted to bill on completed contract change notices (CCNs) for which it had submitted a COR, rather than have to wait until a subcontract amendment was executed. (R7 at 133; R9 at 90).

[*928] 101. Comstock and Becon met twice in December, 1987 to attempt to resolve the "impact" question. (R7 at 81). According to John Mayne, Comstock realized the onus was on them to provide a method for reim-

bursment of additional costs experienced by Comstock as a result of inefficiencies. (R2 at 159).

102. One method considered was based upon the Comstock performance factor. (R2 at 159). At or before the first meeting, Comstock's Ron Gordon gave Becon personnel several MCA bulletins dealing with factors affecting productivity on construction projects (D.E. 138, R7 at 82), and performed a calculation with the factors set forth in MCA Bulletin No. 58 (D.E. 138). Comstock's productivity analysis assigned a significant percentage of the responsibility for a decrease in productivity to Comstock and its subcontractors. ⁴ Comstock's Cleve Whitener admitted that its productivity was reduced in part by its problems with mobilization and procurement in the early stages of the project (R7 at 85), [**61] and that Comstock had not performed perfectly on site and that it or its subcontractors had deficiencies. (R14 at 63).

4 The figures contained in D.E. 137, notes of Becon's Paul Sheridan from a meeting on 12/3/87, assigned 35% of the productivity problem to Comstock and 65% to the owner. Comstock's John Mayne's notes from a meeting on 12/17/87 indicate assumption of 40% of the responsibility. (D.E. 139; P.E. 1958). Although Comstock's Cleve Whitener testified that the percentage allocations represented the consensus of Comstock's management (R14 at 65), he explained that management agreed on the figures as an offer to make to Becon to resolve the "impact" matter. (R14 at 65-66).

Because the percentage allocation of responsibility found in the exhibits of both parties are evidence of an attempt to compromise a claim, the undersigned does not find the numerical figures to be probative of the *extent* of responsibility for inefficiency to be assigned to Comstock. The fact that Comstock assumed a notable percentage of responsibility is consistent with other evidence that Becon was not totally at fault for Comstock's productivity problems.

[**62] 103. The meeting failed to settle the impact issue. Following the meeting, Comstock attempted to estimate the effect on worker hours. (D.E. 139, R7 at 85-86). Comstock's cost engineer, Tom Falso, assigned \$ 1,390,582.00 to the "impact" problem. (R7 at 86-87). [[In the estimate, Comstock assigned responsibility as 40% to Comstock and 60% to others. (P.E. 1958; R7 at 87).]] This document was transmitted to Becon on December 18, 1987, during a second "impact" settlement negotiations. (R2 at 158-65; R7 at 86; R14 at 96).

104. The December meetings failed to resolve the productivity question. (R2 at 165).

Overtime Charges. 105. At this same time, Comstock sought to reach an agreement with Becon that all changed mechanical work would be priced at overtime rates. Because of the quantity of changed work it was required to perform, coupled with the lack of time extensions, Comstock necessarily performed considerable base contract and changed work on overtime. To Comstock, addressing the additional cost by pricing changes at the overtime rate seemed the simplest way of offsetting the additional cost. (See R2 at 156-57). Although Comstock produced a letter from Ron Gordon to [**63] Paul Sheridan dated December 8, 1987 (P.E. 1317) which indicated an agreement by Becon to pay overtime on all outstanding change orders, there was no proof that Becon ever received the letter. (R11 at 106-07). Moreover, although Comstock's Whitener recalled that Becon personnel verbally approved the request to price at overtime rates, he admitted that Comstock knew they did not have the authority to make a binding commitment, or that any agreement was reached. (R14 at 59-61). Becon's Eichhorst testified that he was never told to accept proposals based on overtime pricing at this time. (R9 at 101).

106. Overtime work and the failure of Becon to approve CORs continued to be a source of friction between the parties. (R2 at 165-69; see P.E. 1338; P.E. 1959). One letter from Gordon to Sheridan dated January 14, 1988, Comstock advised Becon that among the disputed items were certain change order requests (CORs) had been priced at a higher, "overtime" rate in an attempt to provide compensation for "impact"--loss in productivity. (P.E. 1960; R7 at 88-89). In his letter of January 20, 1988, [*929] Becon's Paul Sheridan stated that "compensation for overtime worked . . . is related to reaching an [**64] agreement on impact." (P.E. 1349).

107. Immediately after Paul Sheridan left the job, newly promoted project manager Dale Eichhorst worked with John Mayne, Jr. to negotiate and close out as many outstanding claims and CORs as possible. This resulted in additional payments to Comstock. (R9 at 44-45). Comstock's position was that the impact claim could not be resolved without dealing with its claim relating to supplemental steel (an issue which the parties agreed was beyond the purview of Count 17). Eichhorst's letter of February 1, 1988 to John Mayne, indicated that discussions should continue on Comstock's impact claim since several issues could be resolved while discussions on supplemental steel proceed. (P.E. 1363). He also indicated that the overtime issue needed to be resolved along with the impact claim. (P.E. 1363).

108. Things came to a head in March, 1988, however, when Becon's total payments to Comstock equaled the revised contract price (including approved subcontract amendments) less retainage, and Becon refused to

make further payments on unprocessed change orders. Comstock received only partial payment on its monthly pay estimate.

109. Meanwhile, an agreement was reached [**65] regarding overtime. According to Mayne's March 9, 1988 letter (see P.E. 1408), Comstock offered to remove the so-called "impact" statements from its CORs in exchange for having all manhours on unapproved CORs (with certain exceptions, including two major supplemental steel claims) approved at the premium (overtime) rate. After several letters were exchanged, an agreement was reached by the parties (on or around April 8, 1988) that proposals which were not already subcontract amendments would be priced at an overtime rate in exchange for the removal of the "impact" statement. (P.E. 1408; R9 at 95, 102-103). A series of letters evidence an understanding to price outstanding change orders at the higher rate. (P.E. 1363; D.E. 107, D.E. 108, D.E. 109; D.E. 113; and D.E. 114). (See R5 at 41-46). Comstock's John Mayne, Jr. testified that the higher rate may have increased Comstock's compensation by between \$ 250,000 and \$ 400,000. (R5 at 49).⁵

5 It appears that Becon may have failed to adhere to this agreement in at least one instance. (See R3 at 19-21; P.E. 1409; P.E. 1411; P.E. 1415).

[**66] 110. Although Becon contends the withdrawal of the statement constituted a release of a broad-based claim for inefficiency or loss of productivity (which Becon contends to be synonymous with a claim for cardinal change or abandonment), this is not clear from the record. Becon insists that impact and overtime were linked; yet no specific impact claim was ever submitted to Becon after the December, 1987, meetings and prior to the overtime arrangement, and no release of the claim was signed. (See R9 at 111-14). At most, it may be said that Comstock has settled claims for additional direct labor costs associated with changes (except for those categories of changes which were specifically excluded by the parties' agreement and/or which remain unresolved). Comstock may still be entitled to recover claims for additional home office and job site overhead. (See R3 at 22; P.E. 1382; P.E. 1389; P.E. 1434; P.E. 1443; P.E. 1446).

Electrical Impact Claim. 111. Comstock settled its productivity claims, as well as all other claims relating to electrical work. (R4 at 30, 40, 49). Comstock and Becon settled the electrical "impact" claim in the fall of 1987; in exchange for additional electrical [**67] work, Comstock withdrew its "impact" statement from several proposals and notices. (D.E. 151; R10 at 189-95). Thereafter, Becon processed electrical changes even while pro-

posals for the mechanical side continued to be held. (R9 at 86).

Final Withholding. 112. Comstock achieved substantial completion of the Project no later than April 8, 1988 (P.E. 599) and demobilized later that year. However, Becon continues to withhold 5% retention on the revised subcontract amount (in excess of \$ 1 million) pending settlement of all claims. (R9 at 145). According to the testimony of Dale Eichhorst, one reason for this withholding [*930] may be to pay litigation related expenses. (R9 at 143-46).

113. Becon also admits owing at least \$ 23,371 to Comstock for extra concrete and equipment pads, an item which is the subject of count 10 of Comstock's action in chief. Comstock's initial claim for \$ 230,000 was reviewed and rejected by Becon. (R7 at 112.) Comstock resubmitted the claim at the lower figure of \$ 121,000. (R7 at 112). Becon offered \$ 23,371 in settlement of the claim; the matter apparently remains in dispute. (R7 at 121-22).

K. Continuing Contract Negotiations and Signing of Subcontract

[**68] 114. Throughout the performance period, both parties reaffirmed their intent to be bound by the terms of their agreement. Following the signing of the letter of intent by Comstock on March 31, 1987, negotiations continued for almost a year before the parties executed a final Subcontract. (R3 at 114). Becon submitted a proposed draft of the agreement to Comstock, after which Comstock proposed changes in the fall of 1987. (R3 at 114-15; D.E. 49; D.E. 52, D.E. 58; D.E. B). A final Subcontract Agreement was signed on February 26, 1988. (R3 at 119-20; D.E. 1). By this time, Comstock's performance was nearly substantially complete. (See P.E. 1979).

115. During the course of performance, moreover, Becon and Comstock entered into 207 subcontract amendments collected in the record at D.E. 11 (R3 at 119). These amendments increased the Subcontract price by \$ 7,602,247. (R3 at 154-55; D.E. D). The parties generally adhered to the amendment procedure established by the subcontract (R4 at 94). Each of the 207 amendments contained the following statement:

The completion date, subcontract price and all other terms, covenants and conditions of the above referenced subcontract, except [**69] as expressly modified by this and previous amendments, if any, *remain in full force and effect.* (emphasis added).

116. At the time the Subcontract Agreement was executed in February, 1988, 47 of the subcontract amendments involving work totalling more than \$ 2,175,556.23 had been signed. (R3 at 120-21). The Project was about a month from being substantially complete. More than 90 percent of the work had either been finalized by subcontract amendment or was the subject of a pending change order proposal. (R7 at 6; D.E. C).

117. Subsequent to the execution of the Subcontract, more than 150 more subcontract amendments were entered into--the bulk occurring in the late spring and early summer of 1988, after the job was substantially complete.

118. In only two cases did Comstock place a reservation of rights on the subcontract amendment. (R4 at 84-88). On Amendment 198 (signed July 6, 1988), Comstock reserved rights to claim what it considered to be the full value of its structural steel claim. (D.E. 11). On Amendment 181 (signed June 15, 1988), Comstock reserved its rights to claim the difference between the premium rate and straight labor rate on an extra for victaulic fittings. [**70] (*Id.*).

L. Proof of Costs

119. Despite specific evidence that Comstock was responsible for some major problems on the job, (*see, e.g.,* R4 at 114), Comstock did not establish to what extent its increased costs were attributable to Becon, and not to its own conduct.

120. Comstock's John Mayne, Jr. admitted that there may have been errors or underestimations on Comstock's part during the bidding process, although he characterized the estimate as "very good." (R4 at 112-13; R5 at 66). Interestingly, Comstock's Gerald Evans indicated that a 21% markup was the usual loading placed on bids (R4 at 43); the record, however, reflects that Comstock included only a 15% markup. (D.E. 140) Also, Comstock reduced its original bid prices by over \$ 200,000 in order to claim both the electrical and mechanical work ⁶. (R7 at 71).

⁶ The reasonableness of Comstock's mechanical bid is not relevant to its entitlement to damages in quantum meruit, since that depends only on the reasonableness of its total expenditures. Since Comstock has made the difference between its contract price and total expenditures a part of its case on Count 17, however, the reasonableness of its original bid is pertinent as to the underlying question of cardinal change.

[**71] [*931] 121. Finally, there is the problem that Comstock settled its productivity claims and other claims on the electrical side; it received compensation

through subcontract amendment # 57 for the electrical "impact" claim (D.E. 11, amendment 57; P.E. 1142; R4 at 23-24), and it is unclear how much of its total costs are related to additional electrical worker hours. (R5 at 71).

III. CONCLUSIONS OF LAW

A. Introduction

Count 17 of the Complaint is asserted as a theory of recovery in the alternative to Counts 1 through 16. Plaintiff alleges that due to numerous and substantial changes in the work to be performed, the total price of the Subcontract exceeded the original agreed upon price by at least 70 percent. The legal basis of recovery under Count 17 is found in paragraphs 94 and 95 of the Complaint, as follows:

94.

The increase in the work to be performed, and in the value of such work, was so extensive as to constitute a **cardinal change or abandonment of the subcontract**. The work which L.K. Comstock was ultimately to perform was no longer the work for which it had initially bargained, and was not the work which was fairly and reasonably within the contemplation of [**72] the parties when the contract was entered into.

95.

L.K. Comstock is therefore entitled to compensation for the costs which it incurred in performing the work in its substantially changed state, as well as compensation for reasonable overhead costs and profits.

Both abandonment and cardinal change may properly be utilized to establish a basis for recovery outside the original contract in cases where the contractual obligations of a construction contractor vary materially from the original expectations of the parties regarding the scope and manner of work. Plaintiff asserts that where a construction contractor claims that a contract has been cardinally changed or mutually abandoned, the proper legal inquiry focuses on *all* the surrounding circumstances to determine whether the contract's overall undertaking so far exceeded the general scope of his anticipated obligations that the only equitable basis for affording a remedy is a recovery in *quantum meruit*.

The Special Master has examined the relevant authorities governing both the abandonment and cardinal change theories. In addition to finding that a Kentucky court would consider either or both of these theories, the undersigned [**73] has considered how both Kentucky precedent and the larger body of relevant case law apply to the facts in the case at bar.

B. Contract Abandonment

Basic Principles Under Kentucky Law

[HN1]A contract may be abandoned expressly or implicitly by the parties acting inconsistently with its terms. In *Texaco, Inc. v. Debusk*, 444 S.W.2d 261 (Ky. 1969), the court sustained the trial court's instruction to the jury concerning whether an equipment maintenance lease was canceled or abandoned by mutual agreement by the contracting parties. *Id.* at 263. The court viewed the evidence of the conduct of the parties and the plaintiff's "company policy" as being sufficient to submit the question to the jury. Quoting from AM. JUR. 2D, the court recognized that:

[HN2]"A contract may be rescinded or discharged by acts or conduct of the parties inconsistent with the continued existence of the contract, and mutual assent to abandon a contract may be inferred from the attendant circumstances and conduct of the parties...."

While as a general rule a contract will be treated as abandoned or rescinded where the acts and conduct of one party inconsistent with its existence are acquiesced in by [**74] [*932] the other party, to be sufficient the acts and conduct must be positive and unequivocal."

444 S.W.2d at 263 (reference omitted).

[HN3]"[A] written contract can be modified or abandoned by a subsequent oral agreement, [but] the proof to support such an assertion must be *clear and convincing*." *Dalton v. Mullins*, 293 S.W.2d 470, 475 (Ky. 1956) (emphasis added). This action was originally brought for breach of a contract by which Dalton subleased a tract of coal to Mullins, Dalton was granted exclusive sales agency for the sale of coal mined by Mullins, and Mullins agreed to pay Dalton for the use of Dalton's loading ramp for loading the coal. Dalton claimed that Mullins was loading coal over ramps other than Dalton's and selling his coal through other agents. Mullins filed a counterclaim for breach by Dalton of the contract. Later, Dalton amended his complaint, or petition, to as-

sert in the alternative that the parties had abandoned the original agreement. The case was tried to the court, which entered judgment for Mullins, after it calculated and set off the amounts to which each party was entitled for various claims under the contract.

On appeal the Court of Appeals [**75] reviewed in substantial part the evidence heard by the court below, and noted the trial court's findings would not be disturbed unless they were flagrantly against the evidence. *Id.* at 475. In evaluating the evidence under the "clear and convincing" standard to be applied by the trial court, the appellate court observed, "the evidence on an alleged abandonment was in conflict." *Id.* The court found not only that the proof of cancellation of the contract was far from convincing, but also that the trial court correctly determined that Mullins had not acquiesced in Dalton's alleged abandonment of the contract.

More recently, Kentucky's highest court has stated that [HN4]the "clear and convincing" standard of proof means "that the evidence must not be vague, ambiguous, or contradictory, and must come from a credible source." *Wehr Constructors, Inc. v. Steel Fabricators, Inc.*, 769 S.W.2d 51, 54 (Ky. 1989).

Abandonment of a Construction Contract

The only Kentucky authority that addresses the principle of abandonment in the construction contract setting is *Wright v. Wright*, 11 Ky. 179 (1822). In this case, the plaintiff was engaged to build a horse grist, saw mills, [**76] and the housing for the grist and the mills for his uncle, the defendant. The contract sum was \$ 775. After the work commenced, the defendant altered the dimensions of the walk wheel and the cog wheel for the mills. The parties did not agree on the price for the additional work to be performed, but plaintiff performed the work.

Plaintiff brought suit to recover for the work performed. The trial court instructed the jury that in assessing damages it could find either: (1) what the work was reasonably worth, if it believed that after the contract was first made and the work was begun, the plan was "materially and substantially altered by consent of the plaintiff and defendants, and upon that altered and enlarged plan, the work had been done without prices fixed by the parties for the work;" *id.* at 180; or (2) what the value of the work was by the standard fixed by the parties when they originally contracted for the work to be performed for \$ 775. *Id.* The jury apparently returned a verdict for the plaintiff and the defendant appealed the judgment.

On appeal, Kentucky's high court found the instructions given in the alternative to be in error because they imbued the jury with [**77] unlimited discretion in assessing damages. *Id.* at 181. The court held that:

[HN5]"where a carpenter or builder agrees to erect any building for a particular sum of money, but additions or alterations are afterward made, the tradesman is bound by contract, as far as it can be traced, and entitled to recover on a *quantum meruit* for the excess only."

Id. at 181 (reference omitted). Although the court reversed the judgment for the plaintiff, it recognized that under a different set of facts sufficient to show the contract had been abandoned, recovery in quantum meruit for all of the work performed would be appropriate.

[*933] We admit, that if the original plan for the work had been so entirely abandoned, that the contract could not be traced and applied to any particular part of the work performed,... the plaintiff ... would be permitted to recover for the whole work done, according to measure and value, as if no contract had ever been made; but in the present case, the original contract is not proved to have been wholly abandoned.

Id. at 181-82. The court did not, however set forth an explicit standard for determining to what extent alterations must depart [**78] from the original plan to effect an abandonment of the contract ⁷.

7 Neither did the court consider whether the focus should be merely on the physical form of the structure or instead on the total undertaking of the contractor. *Cf.* and *compare Aragona Constr. Co. v. United States*, 165 Ct. Cl. 382, 390-91 (1964) with *Edward R. Marden Corp. v. United States*, 194 Ct. Cl. 799, 442 F.2d 364, 369 (Ct. Cl. 1971), discussed *infra*.

The contrast between a contract for construction of a nineteenth century grist and saw mill and a contract for performance of mechanical and electrical work in the utility plant of a state-of-the-art automobile manufacturing facility seems to defy meaningful comparison. Nevertheless, the principles recognized by the court in *Wright v. Wright* may be interpreted and applied herein in the light of later Kentucky authorities on abandonment of contracts generally, and decisions from other state and federal courts concerning abandonment of a construction contract.

To recapitulate [**79] the relevant controlling authorities as applied to the claim at bar, Kentucky's high court has recognized that [HN6]if the original plan for the work in a construction project has been entirely abandoned, the contractor would be entitled to recover for the whole work done, according to its value. *Wright v. Wright*, 11 Ky. at 181-82. Parties can be shown to have abandoned the contract expressly or implicitly. See *Texaco, Inc. v. Debusk*, 444 S.W.2d at 263. However, whether the evidence suggests that the parties overtly agreed to abandon the agreement, or whether a fact finder can infer abandonment from attendant circumstances and the conduct of the parties, the proof must be clear and convincing to sustain a finding that the contract has been abandoned. *Dalton v. Mullins*, 293 S.W.2d at 475.

Persuasive Authority

Abandonment has been recognized by other courts as a valid principle in construction disputes. As in other situations, parties to a construction contract may manifest their intent to abandon the contract by their conduct, and abandonment may be implicit from the circumstances surrounding the performance of the work. Among other things, courts have considered [**80] the number of changes; the effect of the changes on original and changed work in terms of extra cost and the number of workers needed; and whether the parties observed the contract terms, including the contract procedure for changes.

One of the major cases relied upon by the plaintiff is a decision from the California Court of Appeals in *C. Norman Peterson Co. v. Container Corp. of America*, 172 Cal. App. 3d 628, 218 Cal. Rptr. 592 (Cal. Ct. App. 1985), in which the plaintiff asserted a variety of bases for its claim that the contract was abandoned. The original contract price for modernizing a papermill was \$ 4.79 million. That amount was modified to \$ 5.54 million. At trial, the plaintiff (CNP) sought to recover its total costs, and the jury awarded an additional \$ 2.9 million. *Id.* at 594. In addition to claiming the costs for direct labor and materials due to excessive changes, the plaintiff asserted that the project was poorly engineered, that promised drawings were delayed up to one year on the 18 month project, that the defendant wrongfully refused to grant time extensions, and that the owner ordered the contractor to accept changes without written change orders. The [**81] engineer, who was also to serve as construction manager, expended significant time (nearly 17,000 hours) redesigning the project while CNP was trying to complete the work. *Id.* at 596. During a crucial shutdown period, the plaintiff had as many as 300 or more people on the job, and the hundreds of oral and written change orders rendered the maintenance of exact cost records

impossible. [**934] *Id.* at 596-97. The court described the effect of the changes as having

had a dynamic impact on successive phases of the planned construction during this period. As a result, there was a loss of productivity and substantial increases in costs to CNP for performing both the original contract work and the changed work. The majority of CNP's claim at trial involved the impact costs resulting from CNP's work during the shutdown period.

Id. at 597. The court concluded that "there was substantial evidence that change orders and extra work imposed by the Owner upon the contractor were of such magnitude as to change the scope of the work originally contemplated under the contract, [and] the record supports the court's findings and conclusions that the parties had abandoned the original [**82] contract." *Id.* at 598. Said the court:

[HN7]Abandonment may start with an intent to abandon by one or both of the contracting parties and conclude with an agreement by each that the contract is terminated and of no further force and effect.

Id. In such cases, the court concluded, the principle of abandonment applied even though the contractor continued with construction; "although the *contract* [was]...abandoned, the *work* [was]...not." *Id.*

Plaintiff analogizes the defendant's failure to issue "for construction" drawings in the case at bar to a similar failure in *Schwartz v. Shelby Constr. Co.*, 338 S.W.2d 781 (Mo. 1960). In *Schwartz*, the general contractor failed to provide the plaintiff-plumbing subcontractor with a complete set of plans for an FHA apartment complex. The court found this failure "highly material." *Id.* at 790. "There was certainly a lack of wholehearted cooperation essential on such a project...." *Id.* at 786. The fact that the contractor was left "to his own devices" evidenced a "substantial lack of cooperation." *Id.* at 790.

The *Schwartz* court also found that the defendant had repeatedly represented the job [**83] as one for mass production and prefabrication, when, in fact, the progress of the work resulted in frequent obstacles and the need for constant adaptation by the plaintiff. The work could not be planned because the exact dimensions of each building varied from one to the next. *Id.* at 784-86.

The stage was set for abandonment when some eight months into the job, all parties were aware that the plaintiff could not complete the work within the contract price, even with an allowance on some extras. *Id.* at 787. The plaintiff had insisted early on that the job they were performing was totally different from the work called for under the contract, and that project should be paid for on a "time and materials" basis. *Id.* at 790. Controversies arose over delays, responsibility for delays and added costs. *Id.* at 787. The general insisted that the plaintiff submit specific costs, but plaintiff stated that the ultimate cost could not be determined. The general made a total of more than \$ 845,000 in payments on the \$ 810,000 contract and then refused to make further payments. Plaintiff walked off the job. *Id.*

Under legal principles similar to those recognized by Kentucky courts, [**84] as stated above, the Missouri Supreme Court concluded that the parties had abandoned the contract due to the day to day changes made from the beginning to the completion of the job. *Id.* at 788.

[HN8]An abandonment may be accomplished by express mutual consent or by implied consent through the actions of the parties....Plaintiff cannot be guilty of a breach of the contract if it has been mutually abandoned....Where acts and conduct are relied on to constitute an abandonment, they "must be positive, unequivocal and inconsistent with an intent to be further bound by the contract."

Id. (citations omitted). The court recited a litany of major and minor changes, only one of which was actually issued pursuant to a change order according to the contract. *Id.* at 788-90. The court also identified numerous departures from the contract by the general. *Id.* at 789-90. In this case, although the general insisted that the parties still had a contract, the court found that actions speak louder than words. The general's acquiescence in Schwartz's departure from the contract was evidence of abandonment. *Id.* at 790. On the basis of its conclusion that the [*935] parties had abandoned [**85] the contract, the court found the plaintiff entitled to proceed for recovery in *quantum meruit*.

Conclusion

In a number of respects, the case at bar is similar to the foregoing authorities. Plaintiff Comstock was confronted with a construction project which was different in many respects from the job it contracted to do. The

project design was unfinished, and many changes continued to be made during the course of the construction period, resulting in substantial increases in manpower and job cost, and significantly reducing productivity in the field. These effects were exacerbated (at least on the mechanical side) by Becon's failure to provide vendor data in a timely manner and its lack of cooperation in addressing legitimate questions and conflicts.

On the other hand, Comstock was aware at the time it entered into the contract that it would be strictly limited to a specific time frame and, further, that substantial extra work would be ordered by Becon. Comstock had been told it would need a cost engineer and a scheduling engineer on the job. There had been an extensive discussion of unit pricing standards, which is evidence that significant additions and/or changes were [**86] anticipated. Despite its claim that the defendant failed to disclose critical information at the time the letter of intent was drafted regarding the scope of the work to be performed, the plaintiff cannot reasonably claim to have been unaware of the incomplete status of the project's design, the significant volume of changed or additional work to be anticipated, and the time-frame in which the work was to be completed.

Under the untested standard enunciated in dicta in *Wright v. Wright*, that is, whether the plan for work was so entirely abandoned that the contract could not be traced and applied to any particular part of the work performed, the undersigned finds that the plaintiff has not demonstrated by clear and convincing evidence that the contract was abandoned. Comstock contracted to perform the mechanical and electrical work in the utility plant of Toyota's Georgetown facility, and that was essentially the work it performed. Although there were numerous changes in discrete aspects of the work, Comstock knew at the outset that its undertaking would expand to include the liquid tank farm, start-up, and supplemental steel. The evidence established that both parties also anticipated, [**87] or reasonably should have anticipated, substantial additional work which could not be specified at the time they signed the letter of intent. It follows that significant change was unquestionably a feature of Comstock's undertaking, and Comstock cannot rely upon changed work which was anticipated, both specifically and generally, to assert that the work cannot be traced to the contract.

In addition, there is evidence that Comstock was at least partially (although not primarily) responsible for job delays and inefficiencies. Furthermore, the problems experienced by Comstock's mechanical team were not felt to the same degree on the electrical side.

Most critically, however, Comstock not only finished the job, unlike the plaintiff in *Schwartz*, but repeat-

edly reaffirmed its adherence to the contract established by the parties. The decision in *C. Norman Peterson* may be distinguished at the outset by the fact that the Subcontract Agreement in the case at bar was executed in February 1988--nearly a year into performance, after the contract was allegedly abandoned, and at a time when construction was nearly substantially complete. Moreover, although during certain periods the parties [**88] did not conform strictly to the contractual change order process, at no point did they abandon that process--and Comstock personnel were aware that in the failing to observe contractual niceties they performed extra work at their peril. Indeed, during the latter stages of the job and after construction was substantially complete, Comstock negotiated and signed the bulk of the 207 subcontract amendments incorporating \$ 7.6 million in changes. Comstock never asserted that the contract had been effectively abandoned during the performance of the work.

In conclusion, although Comstock's dilemma bears similarities to those described in *C. Norman Peterson* and *Schwartz*, this sophisticated [*936] subcontractor consistently restated its adherence to the contract during and after construction. Without passing upon whether plaintiff is entitled under other claims asserted in the complaint⁸ to compensation for extra work, including overhead and profit, associated with all of the additional duties it assumed during the project, the Special Master finds that at best, the evidence of abandonment of the agreement in the case at bar was "in conflict." The proof most certainly was not clear and [**89] convincing, as it is required to be under Kentucky law.

8 In addition to other counts in the complaint, in Count 14 plaintiff alleges that because Becon substantially and unreasonably delayed the issuance of CCN's, plaintiff was forced to finance at its own expense work already performed. It seeks \$ 84,454.00 in financing costs.

Plaintiff alleges in Count 15 that it is entitled to \$ 637,833.42 for additional overhead expenses and profit.

C. Cardinal Change

Plaintiff Comstock concedes that Kentucky courts have not addressed or recognized the theory of cardinal change, but that there is no reason why a Kentucky court would not apply it. Defendant Becon has argued that cardinal change is a doctrine of federal government contract law which developed in response to certain unique problems presented by federal government contracts, and which doctrine cannot be "engrafted" onto Kentucky law. The undersigned finds a Kentucky court confronted with the cardinal change claim before this Court would consider [**90] the merits under applicable law.

Basic Principles

Unlike other contract settings, in construction projects, changes are often ordered after the award of a contract. J. Sweet, *LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING, AND THE CONSTRUCTION PROCESS*, at 454 (4th ed. 1989).

Design may prove to be inadequate. Methods specified become undesirable. Materials designated become scarce or excessively costly. From the owner's planning standpoint, program or budget may change. Natural events may occur that necessitate changes. For any of many reasons it often becomes necessary to direct changes after the contract has been awarded to the contractor.

Id. The usual government contract changes clause permits the government to unilaterally order changes "within the general scope of this contract." *Air-A-Plane Corp. v. United States*, 187 Ct. Cl. 269, 408 F.2d 1030, 1032 (Ct. Cl. 1969). Changes clauses are found in most private construction contracts as well, *see, e.g.*, AIA DOCUMENT A201, *GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT*, Art. 7, including the agreement of the parties in the instant case. (P.E. 1955, General Conditions, Article 4). The changes clause [**91] or article will also provide for compensation for deletions or additions. Sweet, *supra*, at 431. However, the claims court and other federal courts have consistently ruled that:

[HN9][A] "changes" provision does not authorize a "cardinal" change -- a drastic modification beyond the scope of the contract. Rather, a fundamental alteration of this type is a contract breach, entitling the contractor to breach damages.

Air-A-Plane, 408 F.2d at 1033 (citing decisions from federal and claims courts in government contract cases).

According to Professor Sweet, the doctrine of cardinal change "developed not primarily to deal with an abuse of the changes clause, [but] because of jurisdictional aspects of federal procurement." Sweet, *supra*, at 460.

Before 1978, a dispute between a contractor and a federal procurement agency

would have to first go before an agency board of contract appeals if it arose *under the contract*. To by-pass the Board of Claims (now U.S. Claims Court), the contractor had to show a *breach of contract*. To accomplish this, the contractor would seek to show a course of conduct -- usually a large number of changes, drastic changes, or [**92] other wrongful agency conduct that it could establish as a breach of contract.

Id. (emphasis in original) Legislative changes in 1978 allowed a contractor to choose the preferred litigation route. 41 U.S.C. §§ 601 [**937] et seq. Nevertheless, the theory retains viability in "*both federal procurement and private disputes*." Sweet, *supra*, at 460 (emphasis added).

[HN10]In the public contract setting, the limits under the cardinal change doctrine to the nature and magnitude of changes the government can order under the contract "prevents government agencies from circumventing the competitive procurement process by adopting drastic modifications beyond the original scope of a contract." *Cray Research, Inc. v. Department of Navy*, 556 F. Supp. 201, 203 (D.D.C 1982) (emphasis added).⁹ On this basis, the defendant argues that it is inapplicable in the private contract setting. This position, however, ignores the essential similarity of public and private construction contracts with regard to the mechanism for unilateral ordering of changes by the party for whom the work is being performed, and concerns about misuse or overuse of that unilateral authority. These features of any [**93] contract for construction are the central focus of the cardinal change doctrine.

⁹ See also *Drainage Dist. No. 1 v. Rude*, 21 F.2d 257 (8th Cir. 1927) and cases cited therein. Although the doctrine of cardinal change had not fully developed at the time of this decision, it suggests that one source of the doctrine can be found in disputes arising from construction contracts with municipalities.

[HN11]The power of the owner, be it a federal agency or a private developer, to order changes is subject to abuse.¹⁰ The theory of cardinal change allows a contractor in a losing contract, where the owner has abused its power, to bring an action for material breach of contract, alleging that the changes ordered exceed the reasonable expectations of the parties.

[A] cardinal change is a breach. It occurs when the government effects an alteration in the work so drastic that it ef-

fectively requires the contractor to perform duties materially different from those originally bargained for. By definition, then a cardinal [**94] change is so profound that it is not redressable under the contract, and thus renders the government in breach.

Allied Materials & Equip. Co. v. United States, 215 Ct. Cl. 406, 569 F.2d 562, 563 (Ct. Cl. 1978). "The 'cardinal change doctrine' is not a rigid one; its purpose is to provide a breach remedy for contractors who are directed by the government to perform work which is not within the general scope of the contract..." *Edward R. Marden Corp. v. United States*, 194 Ct. Cl. 799, 442 F.2d 364, 369 (Ct. Cl. 1971).

10 Professor Sweet explains:

To appreciate the centrality of the changes process to construction, the shifts in bargaining power because of changes must be appreciated. When an owner is preparing to engage a contractor, as a rule the owner has superior bargaining power. The hotly competitive construction industry and the frequent use of competitive bidding usually allow the owner to control many aspects of the construction contract terms.

A few contractors will deliberately bid low and drive out more prudent and experienced contractors with the hope that they will be able to demand and receive additional compensation by pointing to design ambiguities and amassing large claims toward the end of the project.

The contractor who is performing moves into a much stronger bargaining position. This is clearly so if the owner *must*, for either practical or legal reasons, order any additional work from the contractor. It would be even stronger bargaining position if it could refuse to execute the change unless there were a mutually satisfactory agreement on the effect of the change on price or time. Yet

any bargaining advantages to the contractor by being in the position to refuse to do the work until there is an agreement are usually tempered by contract provisions that require the contractor to do the work even if there is no agreement on the price or time. (To counter this, a contractor can assert that the direction is a cardinal change.) This can be made even worse by the dominance some owners have over the changes process through their control over the purse strings. This power...to withhold payment until the contractor agrees on the price and time can exert immense pressure on the contractor to accept whatever the owner or design professional is willing to pay.

Sweet *supra* at 459.

[**95] [HN12]This broad principle has been recognized by state courts as well as federal tribunals, and in private as well as public contract settings. For example, in a diversity action decided under Louisiana law, the United States District Court for the Fifth Circuit upheld the jury's finding of a breach of contract in *Nat Harrison Assoc., Inc. v. Gulf State Utilities Co.*, 491 F.2d 578 (5th Cir. 1974). The defendant argued on appeal that [**938] Nat Harrison's suit was barred as a matter of law because it had failed to comply with the contractual requirement that the contractor give notice of extra cost or delay to the owner. Acknowledging the purpose and enforceability of notice provisions, the court held:

[HN13]There is a point, however, at which changes in the contract are to be considered beyond the scope of the contract and inconsistent with the "changes" section....Damages can be recovered without fulfillment of the written notice requirement where the changes are outside the scope of the contract and amount to breach.

Id. at 583 (references omitted). Although the court relied upon decisions in court of claims cases which expressly recognized and applied the theory of cardinal change, [**96] it did not adopt the term "cardinal change."

In *Oberer Constr. Co. v. Park Plaza, Inc.*, 18 Ohio Op. 2d 198, 179 N.E.2d 168 (Oh. Ct. App. 1961), the

court considered a contractor's action to recover the reasonable value of excavation services performed in a private project. As to the applicable law, the court held:

The accepted law is that: "An owner commits a breach of a construction contract by changing plans and specifications otherwise than the contract permits and ordering substituted performance....A change that is wrongfully required may involve so great delay or expense as to amount to a total breach as a practical repudiation of the construction contract.

Id. at 170. Again without naming the theory of cardinal change, the court recognized the applicability of the theory and held that the plaintiff was entitled to restitution of value received by the owner. *Id.* at 171.

In *Fuller Co. v. Brown Minneapolis Tank & Fabricating Co.*, 678 F. Supp. 506 (E.D. Pa. 1987), the plaintiff brought a declaratory judgment action for determination of issues relating to a state court action in Minnesota for breach of plaintiff's contract with the defendant to design, [**97] manufacture and supply equipment for the plaintiff's power station. The defendant argued that the plaintiff made radical design changes beyond the scope of the agreement. The court recognized that:

under the contract doctrine of "cardinal" change that where a party to a contract alters the terms of the other party's performance to such an extent that the alterations could not have been within the realm of the parties' contemplation as evidenced by the parties' written agreement, the other party may elect not to perform and hold the other party liable for breach.

Id. at 509.

The jury's verdict that the prime contractor had ordered changes beyond the scope of the contract was upheld in *Peter Kiewit Sons' Co. v. Summit Constr. Co.*, 422 F.2d 242 (8th Cir. 1969). The construction project at issue in this case was the Minuteman Missile Project at Ellsworth Air Force Base in South Dakota. The plaintiff was awarded the prime contract, and engaged Summit as a subcontractor for site work, excavation and backfill. The court's discussion of cardinal change arose from the defendant's counterclaim concerning the backfill procedure and to what extent Summit was responsible [**98] for the entire backfill operation. It found sufficient evidence to support the jury's finding that the "changes or-

dered by Kiewit went so beyond the scope of the subcontract, including the 'changes' provisions of section 4, as to breach the Subcontract." *Id.* at 255. Although the court did not address the question of whether state or federal law was applicable to the issue in what is presumed to be a diversity action, it cited both a court of claims case, *Saddler v. United States*, 152 Ct. Cl. 557, 287 F.2d 411 (Ct. Cl. 1961); and the state court decision in *Oberer Construction Co.*, *supra*. See also *Westinghouse Electric Corp., v. Garrett Corp.*, 437 F. Supp. 1301 (D.Md. 1977) (court sitting in diversity found that federal law controlling government contracts would provide "persuasive guidance" to interpretation of changes clause in subcontract for component parts of United States Air Force enemy radar jamming devices, where subcontractor alleged alternative theories of breach, one of which was cardinal change), *aff'd* 601 F.2d 155 (4th Cir. 1979).

Other cases in which state courts have applied the cardinal change doctrine include: *Housing Authority of Texarkana v. E.W.* [**99] [*939] *Johnson Constr. Co.*, 264 Ark. 523, 573 S.W.2d 316 (Ark. 1978) (award based upon breach of warranty of plans and specifications in project for remodeling public housing resulting in cardinal changes to contract upheld; changes were not within scope of original contract and forced contractor into different undertaking than original contract); *Hensel Phelps Construction Co. v. King County*, 57 Wash. App. 170, 787 P.2d 58 (Wash. Ct. App. 1990) (rejecting cardinal change claim by contractor for construction of county jail because magnitude of changes was insufficient to measure up to changes found to be cardinal in court of claims cases, and because plaintiff failed to exhaust contract's remedial provisions.); *Rudd v. Anderson*, 153 Ind. App. 11, 285 N.E.2d 836, 840 (Ind. 1972) (outlining development of Indiana law standing for the proposition that where there is lump sum construction contract, if "cumulative changes no longer appear to be an appendage of the original...contract, reasonable value is the only feasible test of total value for the total construction."); *Watt Plumbing, Air Conditioning and Electric, Inc. v. Tulsa Rig, Reel & Mfg. Co.*, 533 P.2d 980, 982 (Okla. 1975) [**100] (trial court affirmed in determination that "cardinal change doctrine was not applicable where the subcontractor agrees to perform for an agreed price the changes alleged to constitute a cardinal change.").

In summary, a number of courts in decisions based upon state law have applied the doctrine of cardinal change. While it may not always bear the name "cardinal change," and may or may not be clearly borrowed from federal procurement law, the core theory that when an owner orders changes beyond the scope of the work agreed to be performed the contractor is entitled to damages (in some form) for breach, has been widely recognized. As discussed above, moreover, situations where

ordered changes exceed the general scope of the contract are sometimes addressed under the principle of abandonment. Regardless of which theory is applied, the result is the same: the party performing the work is entitled to seek a remedy outside the contract for the reasonable value of work performed.

Nature of the Inquiry

In *Wunderlich Contracting Co. v. United States*, 173 Ct. Cl. 180, 351 F.2d 956 (Ct. Cl. 1965), the court emphasized the comprehensive inquiry necessary under a cardinal change [**101] analysis:

[HN14]There is no exact formula for determining the point at which a single change or a series of changes must be considered to be beyond the scope of the contract and necessarily in breach of it. Each case must be analyzed on its own facts and in light of its own circumstances, giving just consideration to the magnitude and quality of the changes ordered and their cumulative effect on the project as a whole.

Id. at 966. The existence of a cardinal change is principally a question of fact, requiring that each case be analyzed in light of the totality of the circumstances. *Air-A-Plane v. United States*, 187 Ct. Cl. 269, 408 F.2d 1030, 1033 (Ct. Cl. 1969).

In *Air-A-Plane*, the contractor agreed to manufacture certain smoke generators for the government. *Id.* at 1031. Because there were numerous (plaintiff alleged approximately 1000) changes to the smoke generators to be furnished, "the contract took on the aspects of a design or development contract...The frequency and nature of the changes were disruptive of [plaintiff's] production." *Id.* at 1032. The court rejected the government's argument that the plaintiff was estopped from asserting cardinal [**102] change because he had pursued administrative remedies under the changes clause. *Id.* at 1034. The parties were directed to offer upon remand the following evidence to the trial court:

the number of changes, the number of parts of the smoke generator, the parts changed and those left unchanged, the effect of the changes on the unchanged parts, the character of the changes, the timing of the changes, and the extent of engineering research and development the plaintiff had to do.

Id. at 1037.

[HN15]Some decisions have tied the question of cardinal change to the nature and extent of physical changes in the construction project. *See, e.g., Aragona Constr. Co. v. United States*, 165 Ct. Cl. 382, 390-91 (1964). This, however, is only part of the picture. The central consideration should be the effect on the contractor's anticipated work. *Edward R. Marden Corp. v. United States*, 194 Ct. Cl. 799, 442 F.2d 364, 369 (Ct. Cl. 1971), is exemplary of this principle. In *Marsden*, an aircraft hanger being constructed collapsed when the contractor erected and released arches that rested on buttresses before the tie-rods had been installed. *Id.* at 365. The government [**103] initially determined that the structure collapsed due to faulty construction methods by the contractor and directed the contractor to reconstruct the hanger in accordance with the original design requirements. *Id.* at 365, 370. The contractor claimed that the specifications were defective in failing to specify that the tie-rods had to be installed before the arches were released on the buttresses. *Id.* at 370. The reconstruction resulted in increased costs of almost double the original price.

The court recharacterized the defective specifications claim as a cardinal change claim, merged it with a breach claim, and remanded for trial. It found that excessive changes, resulting in almost double the contract price, constituted a cardinal change. Although the design itself did not change significantly, the court held that by any standard "the events alleged would have to be deemed to have materially altered the nature of the undertaking." *Id.* at 370. Observed the court:

[HN16]Where a cardinal change is concerned, it is the *entire undertaking of the contractor, rather than the product, to which we look.*

Id. at 370 (emphasis added).

In this regard, the total [**104] increase in cost to the contractor is pertinent. In *Air-A-Plane, supra*, the court recognized that evidence of damages should be presented to the fact finder, even though the court may ultimately decide there was no cardinal change.

One reason for trying damages along with cardinal change is that the cost of the changed item as compared to that of the original is a factor in deciding whether the modification is or is not cardinal.

408 F.2d at 1033.

[HN17]In some circumstances a cardinal change may result from a failure to provide adequate construction drawings. In *Westinghouse Electric Corp. v. Garrett Corp.*, 437 F. Supp. 1301 (D. Md. 1977) *aff'd* 601 F.2d 155 (4th Cir. 1979), the plaintiff, Garrett, subcontracted with Westinghouse to assemble cooling pods for military electronic countermeasure devices. Westinghouse delayed several months in supplying Garrett with source control drawings ("SDC's"), which are similar to issued-for-construction drawings. SDC's would have specified dimensions and tolerances and, like issued-for-construction drawings, would greatly facilitate the subcontractor's efficient performance. Due to the lack of SDC's Garrett was required to [**105] make constant design revisions, and, similar to Comstock's allegations, it incurred substantial additional costs trying to overcome these deficiencies and maintain the tight completion schedule.

The court examined the effect of Westinghouse's delay in supplying SCD's and held that Westinghouse imposed a cardinal change upon Garrett. According to the court:

Failure to provide SCD's, even if adequate alternative sources of information were made available, thus *fundamentally altered the nature of Garrett's undertaking*. Having SCD's to work from was in some sense the basis of Garrett's bargain. Garrett was entitled to the ease of working from a single source of information and to the facilitation of incorporating otherwise disruptive changes that come from having such a source or "base line." *On a contract with a delivery schedule as tight as that at issue, source control drawings become critical and nonidentical substitution becomes fundamental; it goes to the heart of the vendor's undertaking.*

Id. at 1333 (emphasis added).

[HN18]Any departure from contractual obligations which "fundamentally alters" a contractor's undertaking may give rise to a claim of cardinal change. [**106] *See, e.g., Nat Harrison Assoc. v. Gulf States Utilities Co.*, 491 F.2d 578 (failure to provide right-of-way and materials, and to extend time for performance); *Allied Materials & Equip. Co. v. United States*, 215 Ct. Cl. 406, 569 F.2d 562 (Ct. Cl. 1978)(failure to provide tooling equipment required by contract). *See also Embassy Moving & Storage Co. v. United States*, 191 Ct. Cl. 537, 424 F.2d 602 (Ct. Cl. 1970) (change in delivery points of

baggage was material alteration where the place of delivery was not incidental matter, but was the subject of the contract). Although no decision on point could be found, a general contractor's abdication of duties of coordination and cooperation could form the basis of a cardinal change. *See, e.g., Shea-S & M Ball v. Massman-Kiewit-Early*, 196 U.S. App. D.C. 338, 606 F.2d 1245, 1251 (D.C. Cir. 1979). Most, if not all, of the principles stated in the foregoing authorities bear upon the inquiry undertaken in the case at bar.

Effect of Modifications; Continued Performance

[HN19]A number of decisions have recognized that a cardinal change claim is not barred by the fact that some or all of the changed work at issue is covered by [**107] executed change orders. The fact that a party may have sought, released, or otherwise compromised a claim under a contract's equitable adjustment clause or other remedial clauses will not necessarily operate as a bar to claims for relief outside the contract. Said one court, "We have certainly never intimated...that the contract is limited to a suit for extra costs incurred in performing duties fundamentally outside of the scope of the contract...." *Allied Materials*, 569 F.2d at 564. *See, e.g., Atlantic Dry Dock Corp. v. United States*, 773 F. Supp. 335 (M.D. Fla. 1991)(court refused to bar cardinal change claim as matter of law on grounds of accord and satisfaction despite presence of 130 change orders providing that each change was "in full and final settlement of all claims arising out of this modification including all claims for delays or disruptions resulting from, caused by, or incident to such modifications or change orders"); *Jack Cooper Constr. Co.*, 84-3 BCA (CCH) P 17,703 (V.A. 1984) (where contractor executed 20 modifications to a contract, and the Board of Contract Appeals considered the modifications in determining whether the cumulative effect of those modifications [**108] constituted a cardinal change); *In re Boston Shipyard Corp.*, 886 F.2d 451 (1st Cir. 1989) (even though the contractor executed a contract modification which "settled...all contractor's claims," the court still examined the overall scope of the contractor's changed obligations to determine whether a cardinal change occurred); *Nat Harrison Assoc. v. Gulf States Utilities Co.*, 491 F.2d at 584-85 (contractor's release of claims for additional compensation "for extra work of any nature" did not preclude a recovery under a cardinal change analysis). *See also C. Norman Peterson Co.*, 172 Cal. App. 3d 628, 218 Cal. Rptr. 592 (Cal. Ct. App. 1985) (court permitted recovery under abandonment doctrine even though contractor had executed several change orders and had received additional compensation).

In *Saddler v. United States*, 152 Ct. Cl. 557, 287 F.2d 411 (Ct. Cl. 1961), a contractor recovered under a

cardinal change theory even though the contractor executed a change order concerning the changed work. Near the completion date of the project, the government imposed a change which more than doubled the amount of earth and other material that the contractor was required to place [**109] in a levee. This was after the contractor had agreed, with qualifications, to a change in specifications following a flood early in the project. The contractor performed the changed work, but initially refused to execute the change order the government issued. Rather, it proceeded with the work under protest. After losing a claim of breach for additional compensation before the Corps of Engineers Claims and Appeals Board, the contractor executed the change order. He received compensation for the additional work, and accepted final payment. *Id.* at 412.

The court of appeals held that a cardinal change occurred because the work covered by the executed change order altered the fundamental nature of the work performed. It found several elements significant in evaluating the seriousness of the change. The contract at issue was a relatively small contract, in the amount of \$ 12,575, "perhaps involving a small margin." *Id.* at 414. The new work extended the performance period well beyond the pre-summer season during which plaintiff undertook the job to keep his men busy before the opening of the summer [*942] construction season. The defendant appeared to have disregarded certain qualifying [**110] conditions which accompanied plaintiff's bid on revised specifications after a flood early in the project. *Id.*

The court rejected the government's contention that the contractor had waived its cardinal change claim. It considered the magnitude of the change, the plaintiff's reluctance to undertake additional work, and the fact that when the contractor submitted his unit price bid, he "was given no idea of how extensive the change was to be." *Id.* at 414.

A primary concern underlying *Saddler* is the unfairness to a contractor in making him address the cumulative effect of change orders before their ultimate significance can be assessed. In *Atlantic Dry Dock Corp.*, the court observed:

Determining the merits of a cardinal change claim requires an examination of the totality of the circumstances surrounding the project and the many modifications....Two of the relevant circumstances are the cost of completing the project and the number of changes made....These facts cannot be known until the project is completed or nearly completed. Neither can it be known until completion or near com-

pletion whether "the project [plaintiff] ultimately constructed was essentially [**111] the same as the one [plaintiff] contracted to construct."...

773 F. Supp. at 339-40 (citations omitted).

The obvious risk faced by a contractor contemplating the suspension of performance because of an alleged breach by the owner is that the contractor who abandons the work is liable for breach if the abandonment is deemed wrongful. "Undoubtedly, the cautious contractor might often proceed under the revised contract because of doubt whether he could invoke the cardinal change doctrine." *Allied Materials*, 569 F.2d at 564. Thus, [HN20]some courts conclude that continued performance does not bar a cardinal change claim.

However, there is authority for the proposition that contract modifications, fairly executed, may bar a cardinal change claim. A recent example is *In re Boston Shipyard*, where the plaintiff contracted for the overhaul of a naval vessel for approximately \$ 5 million. There were hundreds of change orders. BSC and the government eventually negotiated a settlement of claimed costs due to delay and disruption in the amount of \$ 500,000, which was executed as a modification to the contract. The modification bore the language that it "definitizes a settlement of [**112] all contractor's claims on the above job order as of 30 August 1985...." *Id.* at 454. The court found the modification barred the plaintiff's claim. Furthermore, it rejected the plaintiff's claim that it signed the modification because it was under conditions of economic duress, because the plaintiff had waited over a year and half before asserting the claim ¹¹.

11 According to at least one state court, a failure to exhaust contract procedures may also foreclose extra-contractual remedies. In *Hensel Phelps Constr. Co. v. King County*, 57 Wash. App. 170, 787 P.2d 58 (Wash. Ct. App. 1990), the court rejected a subcontractor- plaintiff's claim for recovery in *quantum meruit* because of additional costs due to an accelerated schedule and stacking of trades in the construction of a county jail. The court observed that the plaintiff "never asked for an extension of time or gave written notice of change of conditions, although such remedies were included in the subcontract." 57 Wash. App. at 173. While acknowledging that in some cases extreme changes might justify recovery outside the contract, the court affirmed the trial court's dismissal of the *quantum meruit* claim because it found that each of the plaintiff's specific complaints was contemplated by the contract which

provided a procedure for remedial relief unexploited by the contractor. *Id.* at 176.

[**113] In *Watt Plumbing, Air Conditioning & Elec., Inc. v. Tulsa Rig, Reel & Mfg. Co.*, 533 P.2d 980 (Okla. 1975), the plaintiff was the electrical subcontractor in a project to construct a new hospital wing. Although the parties adhered to the contractually required written change order process, at the completion of the project the plaintiff-subcontractor sued for quantum meruit recovery based upon a theory of breach by excessive changes. Rejecting the plaintiff's claim, the Oklahoma Supreme Court held:

It is axiomatic that by mutual assent parties to an existing contract may subsequently enter into a valid contract to modify [*943] the former contract provided there is consideration for the new agreement. An alteration of a contract cannot constitute a breach of contract because it becomes a part of the contract. The contract as altered is the agreement between the parties.

Id. at 983.

Another court, relying upon general contract principles, has found that continued performance on agreed upon changes constitutes a modification to the contract, and not a breach. In *Oberer Constr. Co. v. Park Plaza, Inc.*, 18 Ohio Op. 2d 198, 179 N.E.2d 168 (Ohio 1961), discussed *supra*, [**114] the court held:

The accepted law is that:..."An assent by the contractor and proceeding with the work as demanded, without reservation of rights, will operate as a variation of the original contract leaving no claim for damages."

Id. at 170 (references omitted). In this case, however, the contractor refused to proceed with the changed work, and it was found to be entitled to restitution under the circumstances.

In *Fuller Co. v. Brown Minneapolis Tank & Fabricating Co.*, 678 F. Supp. 506 (E.D. Pa. 1987), also discussed *supra*, the court "assumed" that the design changes at issue were cardinal changes, *id.* at 510 n.4, but it also held that a party cannot recover under the cardinal change theory if it continued its performance. In that event, the defendant "remains bound by the terms of the contract. Its only remedy...is a claim for monetary damages." *Id.* at 509-10. The court explained:

BMT's action is perhaps best described as an action for breach of the "changes" clause based on Fuller's [the owner's] alleged failure to make a proper "equitable adjustment" to the contract price.

Id. at 510 n.3.

Other Limits on Cardinal* [**115] *Change

A certain number of changes are usually to be expected in a construction contract setting. With this in mind, the Veterans Administration Board of Contract Appeals found in *Jack Cooper Constr. Co.*, 84-3 BCA (CCH) P 17,703 (V.A. 1984), that a doubling of the contract time and a 16% increase in price did not amount to a cardinal change. *Id.* at 88,343. The court found that every construction project has a reasonable number of changes, there was no limit on the cumulative limit on authorized changes under the changes article, and the work was not substantially different from that reasonably contemplated by the parties when the contract was entered into. *Id.* at 88,343-44.

Similarly, in rejecting a claim for cardinal change the First Circuit observed that [HN21] a certain amount of delay and disruption may be anticipated in any construction contract, and that a change becomes cardinal only when it exceeds the scope of predictable changes. *In re Boston Shipyard Corp.*, 886 F.2d 451, 457 (1st Cir. 1989).

In addition, a cardinal change claim may fail if the performing party fails to demonstrate the nexus between unanticipated changes and additional costs. In *Wunderlich* [**116] *Contracting Co. v. United States*, 173 Ct. Cl. 180, 351 F.2d 956 (Ct. Cl. 1965), the court rejected the plaintiff's cardinal change claim, finding that although the "plaintiffs' performance has been lengthier and costlier than anticipated at the time the bid was submitted,...in the long run they contracted essentially the same project as that described in the contract." *Id.* at 966. Criticizing the plaintiffs' proof of additional costs, the court noted that the plaintiffs "stand on the basic unproved assertion that the defendant was responsible for all losses on the contract." *Id.* Said the court:

Although we do not doubt that plaintiffs and their subcontractors encountered delays and difficulties in proceeding with the plans provided by defendant, all that plaintiffs have attempted to prove with respect to any of the major claims is the total amount of costs and the total delay experienced on the project. No satisfactory

evidence has been presented to differentiate between the reasonable and unreasonable government delays, or between delays attributable to defendant and delays unavoidably caused by extraneous circumstances. *It is incumbent upon plaintiffs to show the* [**117] *nature and extent of the various* [*944] *delays for which damages are claimed and to connect them to some act of commission or omission on the defendant's part.*

Id. at 969 (emphasis added). [HN22]"Recovery of damages for a breach of contract is not allowed unless acceptable evidence demonstrates that the damages claimed resulted from and were caused by the breach. "The costs must be tied in to fault on the defendant's part." *Boyajian v. United States*, 191 Ct. Cl. 233, 423 F.2d 1231, 1235 (Ct. Cl. 1970); *C. Norman Peterson*, 218 Cal. Rptr. at 602 (references omitted).

"Engrafting" Cardinal Change onto Kentucky Law?

The defendant has placed great reliance upon the rejection by the district court in Mississippi of the cardinal change doctrine in *Litton Systems, Inc. v. Frigitemp Corp.*, 613 F. Supp. 1377 (S.D. Miss. 1985). Litton entered into contracts for the construction of several Landing Helicopter Assault vessels and thirty United States Navy destroyers. Litton subcontracted substantial construction work on the vessels to Frigitemp. Following significant delays on the project, Litton brought suit. Frigitemp counterclaimed, and its cardinal change claim was before [**118] the court on Litton's motion for partial summary judgment. The court found that "large scale changes were made during the course of construction." Despite this finding, the court rejected the defendant's cardinal change claim, which was based primarily upon court of claims cases. It held:

Mississippi law clearly and unequivocally denies extra-contractual relief where the parties have expressly contracted upon a subject.

Id. at 1382. The court recited substantial authorities from the Mississippi Supreme Court in support of its holding, and also noted that under Mississippi law, "where there is a contract, parties may not abandon same and resort to quantum meruit." *Id.* Moreover, according to the court, the Fifth Circuit had previously rejected the application of the cardinal change doctrine under Missis-

sippi law in *Jackson v. Sam Finley*, 366 F.2d 148 (5th Cir. 1966).

Kentucky courts have not taken the same position toward abandonment by mutual consent or restitution in quantum meruit. See discussion of abandonment *supra*. Furthermore, although no reported decision in Kentucky reveals a contractor who has recovered under a theory akin to cardinal change, [**119] the court has found no decision specifically rejecting the theory as a basis for a cause of action.

In *Ingram v. State Property & Bldg. Com.*, 309 S.W.2d 169 (Ky. 1957), Kentucky's high court declined the opportunity to reject a theory of recovery based upon changes outside the scope of the contract. In that case, the plaintiffs agreed to perform architectural services for building a student union at Western State College under a guaranteed maximum contract.

These services were performed and plaintiff sued for an additional \$ 11,032.47 on the theory that requests by the defendant for changes and additions in the construction work resulted in "extra labor for the architects *beyond the scope of the contract*, in that a more elaborate and more expensive building was demanded contrary to the nature and size of the structure contemplated at the time of the negotiation of the contract." *Id.* at 171 (emphasis added). The trial court dismissed the claim.

In addressing the plaintiff's claim of error on appeal, the court found that:

the question of whether or not recovery may be had for work performed outside a particular contract, but rendered in connection therewith is [**120] *dependent upon the proper interpretation of the agreement involved*. However, if the services for which extra pay is claimed are included in those for which the agreed compensation is stipulated, no further recovery may be had.

Id. at 172 (emphasis added). As to the contract itself, the court found that although the plans lacked exact details, the contract clearly and unambiguously required the architects to plan a building which the appellant would approve, and to make such changes and additions as might be required, in return for the maximum compensation stated in the agreement. *Id.* at 171. Rejecting the merits of [*945] the plaintiff's claim, but not the underlying theory, the court framed the plaintiff's failure as follows:

Appellant attempts to establish by lengthy argument that certain items of

work admittedly performed by the architects in connection with the construction of "A Student Union Building" were "without the scope of the contract," but he makes no effort to show what kind of services were embraced "within it."

Id. at 172. Although the court dismissed the complaint, it did so based upon the clear language of the agreement, *id.*, and [**121] not because it rejected the plaintiff's theory, which as restated by the appellate court bore the markings of a cardinal change claim.

[HN23]A federal court sitting in diversity must exercise its best judgment as to how a state court would hold if confronted with the facts. *Bagwell v. Canal Ins. Co.*, 663 F.2d 710 (6th Cir. 1981). "When a federal court is confronted with an issue undecided by state law in a diversity action, it is the Court's responsibility to decide this unsettled issue of state law as a Kentucky court would with the mandate of *Erie Railroad Co. v. Tompkins*, 304 U.S. 64, 82 L. Ed. 1188, 58 S. Ct. 817 (1938)." *Guarantee Elec. Co. v. Big Rivers Elec. Corp.*, 669 F. Supp. 1371 (W.D. Ky. 1987). The court must "ascertain from all available data what the state law is and apply it," *Bailey v. V&O Press Co., Inc.*, 770 F.2d 601, 604 (6th Cir. 1985), in the exercise of its best judgment. *Bagwell*, 663 F.2d at 712.

In its determination of a question unanswered by state law, it is appropriate for the federal court to consider analogous state cases and relevant dicta, the restatement of law, law review commentaries and decisions of other jurisdictions or the "majority [**122] rule."

Guarantee Elec., 669 F. Supp. at 1377.

[HN24]A cardinal change claim is based upon the contract principle that "where there is a substantial failure of a party to perform under a contract, the innocent party may treat that failure as a material breach of contract, stop performance, and sue for contract remedies." W. Haynes, KENTUCKY JURISPRUDENCE: CONTRACTS § 23-4. A contract may also be rescinded if the breach is material. *Evergreen Land Co. v. Gatti*, 554 S.W.2d 862, 865 (Ky. Ct. App. 1977). However, the "court does not look lightly at rescission, and rescission will not be permitted for a slight or inconsequential breach." *Id.* Upon breach of a contract by one party, the other may elect to rescind and recover the value of any performance rendered. *Columbian Fuel Corporation v.*

Skidmore, 308 Ky. 447, 214 S.W.2d 761, 765 (Ky. 1948).

The defendant cites *Codell Constr. Co. v. Commonwealth*, 566 S.W.2d 161 (Ky. Ct. App. 1977), for the proposition that the "doctrine of unjust enrichment has no application in a situation where there is an explicit contract which has been performed." *Id.* at 165. The facts and claims in the case at bar are distinguishable [**123] from the facts in *Codell*. Most importantly, the principle recited assumes the existence of a contract, whereas the cardinal change doctrine rests upon the theory that because of the owner's or prime contractor's material breach, the contractor is entitled to rescind the contract. Once the contract is displaced, the contractor is entitled to restitution of the value of services rendered.

The Special Master finds that a Kentucky court confronted with the cardinal change claim arising from the facts before this Court would recognize the claim and consider the merits of it as presented to the undersigned. The court would consider carefully the authorities from other jurisdictions and apply the law as it appears in the most soundly reasoned opinions, as most consistent with the principles of Kentucky's law of contract.

As to the applicable standard of proof, this Court cannot ignore the firmly established principle that a Kentucky court does not look lightly at rescission of contract. The undersigned is of the opinion that a Kentucky court would tend to take a conservative approach in adopting the positions of other courts as to the guiding principles of cardinal change. Although [**124] the Kentucky Supreme Court has not had the opportunity to pass upon the quantum of proof that would be required to establish a cardinal change, the undersigned is persuaded that based [*946] upon Kentucky's law of rescission, and the "clear and convincing" standard applied to proof of modification or abandonment of written contracts, the Court must apply the same high standard to plaintiff's cardinal change claim.

Conclusion

For many of the same reasons that it failed to prove the contract was abandoned, Comstock has failed to demonstrate that it is entitled to restitution on a theory of cardinal change. Although it does not appear, at least insofar as mechanical work is concerned, that Comstock has waived a claim for damages by agreeing to comprehensive contract amendments as in *Watt Plumbing and Oberer Construction, supra*, Comstock's continued performance of the construction project, its adherence to the contractual change order process, and the novel eleventh-hour reaffirmation of the contract all augur in favor of a remedy under, not apart from, the contract. *Cf. Fuller Co., supra*, 678 F. Supp. at 510 n.3. Comstock's action is

appropriately one "for breach of the "changes" [**125] clause based on [the owner's] alleged failure to make a proper "equitable adjustment" to the contract price. *Id.*

Given this unique combination of circumstances, the result would be the same even under standards enunciated in the most liberal cardinal change cases. Accepting the assumptions of the most generous authorities, *Atlantic Dry Dock* and *Peter Kiewit*, that a cardinal change claim cannot be evaluated until or near the completion of the project, the Special Master finds that the plaintiff in the case at bar failed to exploit a rare opportunity it had near the end of its work to sound an alarm. At the time when the plaintiff's work was 90 percent complete, it reaffirmed the agreement, with no reservation of rights, no qualification, no hint that the plaintiff had taken any position as to the contract having been breached by the defendant's ordering of changes outside the scope of the work agreed upon.

When the Subcontract Agreement was signed on February 26, 1988, Subcontract Amendments 1-47 had completed the change order process and had been signed by Comstock. Many more change order requests were in the pipeline, as the great bulk of the substantial changes had [**126] been initiated by fall of 1987. The work was to be completed on or before April 8, 1988, a little more than one month from the date of signing the Subcontract Agreement. Although the plaintiff may not have known the specific results of the accumulated changes at that time, the magnitude of the impact of the changes was, or should have been recognized as Comstock was winding down the job. Yet, instead of seizing the opportunity near the end of the project to formally question whether the work performed fell within the scope of the work originally contemplated, or taking any action from which a reservation of rights could be inferred, the plaintiff reaffirmed its adherence to the contract. By any interpretation of the legal significance of Comstock's execution on February 26, 1988, of the Subcontract Agreement, when Comstock signed the agreement it was obligated to assert that the contract was no longer binding or to assert some position in the nature of a reservation of rights to later assert abandonment or breach by excessive changes. Neither at this time nor during the process resulting in more than 150 additional change orders did Comstock raise the alarm.

Other factors contribute [**127] to the conclusion that Comstock should not receive restitution based upon a cardinal change. Although Comstock was did not and could not anticipate *all* of the changes which ultimately were made on the Project, it was aware at the time of executing the letter of intent that significant extra work was planned, and that it did not have all of the information it needed to specifically price that work. This included not only extras associated with start-up, the liquid

tank farm, and supplemental steel, but also extra work necessitated by incomplete or undimensioned drawings which Comstock was told to treat as issued-for-construction drawings. Whether or not the latter would entitle Comstock to an equitable adjustment to its contract, Comstock's initial awareness of drawings deficiencies must be taken into account in determining the anticipated scope of changes on this Project. See *Boston Shipyard, supra*.

[*947] Thus, while on every project a certain number of changes, delays and disruptions may be expected, see *Jack Cooper* and *Boston Shipyard, supra*, if anything the parties to this contract had reason to expect a greater-than-normal number of changes and resultant impact on the [**128] work.

In addition, Comstock has failed to prove that Becon was responsible for its total extra cost on this Project. Although there is much evidence regarding Becon's failings on the job, there is also evidence that Comstock was at least partially responsible for the inefficiencies and extra costs plaguing the job. Yet in its proof and arguments Comstock provided no basis upon which the total costs attributable to it may be segregated with reasonable certainty. See *Wunderlich Contracting, Boyajian, C. Norman Peterson, supra*. The plaintiff's burden is to show that the increased costs were brought about by the alleged breach, and on this important issue of causation, the plaintiff's proof was insufficient.¹²

12 Because the undersigned concludes that plaintiff failed to sustain its burden in proving either that the contract was abandoned or that the defendant materially breached the agreement under the doctrine of cardinal change, these Findings and Conclusions will not be unnecessarily lengthened by an academic discussion of damages. However, if liability on Count 17 had been established, the Special Master would confront the task of assessing damages with misgiving.

While the total cost measure of benefit conferred may be an appropriate method of calculating recovery in quantum meruit; *National Surety Corp. v. Mullins*, 262 Ky. 465, 90 S.W.2d 707, 708 (Ky. 1936); *Salisbury v. Wellman Electric Co.*, 173 Ky. 462, 191 S.W. 289 (Ky. 1917); the total cost measure alone does not provide a rational basis upon which to render an award where that figure is under the ill-defined shadow of factors for which the defendant cannot be held accountable. Moreover, the rebuttable presumption applicable when assessing damages that the contractor's costs are reasonable, see *Bruce Constr. Corp. v. United States*, 163 Ct. Cl. 97, 324 F.2d 516 (Ct. Cl. 1963), cannot substitute for the plain-

tiff's obligation to prove causation in the first instance. See Aaen, *The Total Cost Method of Calculating Damages in Construction Cases*, 22 PAC. L.J. 1185, 1190-91 (1991).

Before the total cost method can be applied, the contractor must show that the defendant was responsible for the delay [or disruption in productivity, etc.], that the contractor is entitled to compensation for any extra costs occasioned by the delay [or disruption], and that the delay caused some extra cost. *The total cost method can be used only after causation has been established.*

Id. at 1191 (emphasis added).

[**129] The task confronting a party seeking to prove abandonment or cardinal change based upon numerous unanticipated changes is inevitably a formidable one, and the required quantum of proof generally is substantial. This is particularly true under Kentucky contract law. Having benefitted from exhaustive presentations by able counsel for both parties, the Special Master must conclude that the Plaintiff has failed to carry its burden of proof on Count 17, and is left to its remaining, contract-based claims.

III. FINAL CONCLUSION

Accordingly, judgment on Count 17 of the plaintiff's Complaint should enter in favor of the defendant when and as the Court deems appropriate, and this matter should proceed on the merits of the remaining claims.

Rule 53(e)(2), Fed. R. Civ. P., provides that particularized objections to this proposed Findings of Fact and Conclusions of law should be served upon the other party within 10 days of the party being served with Notice of Filing, to be filed of even date herewith. In recognition of the complexity of the claim at bar, and the length of these Findings and Conclusions, and pursuant to Rule 6(b), the time for filing objections pursuant to Rule 53 will be [**130] extended to 20 days from service of Notice of Filing.

This 24th day of July, 1992.

THOMAS J. STIPANOWICH, SPECIAL MASTER

