

328

POLICIES AND PROCEDURES IN PROCUREMENT -- CPFF CONTRACTS AND VARIANTS  
25 February 1946

246-37

Page

Introduction -- Captain Harney W. Stover, USNR, The Industrial College of the Armed Forces . . . . .	1
Guest Speaker--Major George Bell, Executive Officer to the Procurement Judge Advocate . . . . .	1
General Discussion . . . . .	10

Captain Stover  
Students  
Major Bell

POLICIES AND PROCEDURES IN PROCUREMENT - CPFF CONTRACTS AND VARIANTS.  
25 FEBRUARY 1946.

CAPTAIN STOVER:

Gentlemen, continuing our lectures and material on purchase policies we are now getting into a more technical field of procurement. The subject today is Cost-Plus-Fixed-Fee Contracts. Tomorrow we will have the Navy counterpart of our speaker (Major Bell), Captain Andrews. We heard him once before.

So today we will open the subject by hearing from Major George M. Bell who, as I would put it, is a lawyer in uniform. He is a graduate of George Washington University Law School, Class of 1940; member of the District of Columbia Bar, and also in Utah. Major Bell served as attorney in the Office of the Chief of Ordnance. He entered military service in 1942. At the present time he is Executive Officer to the Procurement Judge Advocate.

Every time I introduce anyone who is a practicing lawyer, admitted to the Bar, I remind myself that at one time I was admitted to the Bar in the State of Indiana. My parents--at least my grandfather--have been barristers for generations in Indiana. I was not what you would call legally trained; I just had a smattering of it.

For sentimental reasons I was hauled back one summer to Indiana, appeared before the Supreme Court, and was admitted to the practice of law. Now in Indiana the constitution says saloon-keepers and lawyers must be of good moral character. I skidded in under that constitutional amendment, with a pat on the back by the Indiana Bar Association. They refused to examine me. So I always take great pride in introducing anybody who is actually allowed to go back to his home state and appear, in a legal way, before a court.

Major Bell.

MAJOR BELL:

In theory, the cost-plus-a-fixed-fee type of contract contemplates that the contractor will be reimbursed for all of his costs. In actual practice, we have found that there are numerous exceptions to this rule.

The Comptroller General, after looking over our cost-plus-a-fixed-fee contracts, decided, for example, that attorney's fees would not be reimbursed. He has rendered about 20 decisions on attorney fees and the last 11 of them, were against the reimbursement of attorney's fees.

Furthermore, the Comptroller General even goes so far as to say that if the attorney is put on the payroll of a cost-plus-a-fixed-fee contractor, and is called an attorney, he will not reimburse his salary. A contractor can hire an attorney under the cost-plus-a-fixed-fee contract if he is called

an assistant manager, clerical assistant, or else given some other kind of title. Then the salary will be reimburseable.

We had a case out in Colorado where an attorney was hired. He was not a member of the Bar and had never practiced. The particular CPFF contractor had had a very sorry deal. He thought the construction would cost about 10 million dollars, but instead it turned out it cost 20 million dollars. His fee remained exactly the same. So he thought he would get even with the Government. He kept the attorney on the payroll to dig up small claims for \$1.00, \$2.00, \$10.00, etc. The attorney sat out there for several months. He was not listed as an attorney on the payroll of the company, and the Government reimbursed the payroll including his salary while he was digging out these small claims. Every time he got a few claims together the Government auditors would have to go out there and look over the claims to see if they were proper. There seemed to be no way to get him out of there.

Finally the Government told the contractor, "We are not going to reimburse this salary any longer. You can keep him as long as you want, but we are not going to reimburse his salary." They stopped his salary but he still stayed out there. The appeal came to the War Department from the auditors: "Is there anything we can do to stop those trifling claims?" Well, the CPFF contract says we intend to reimburse for all costs. The costs continued to come in.

The Comptroller General states that fees for outside firms of accountants, like attorney's fees, will not be reimbursed, and that charitable contributions, membership in chambers of commerce, Red Cross and numerous other donations, will not be reimbursed.

The formula we have used to determine what costs will be reimbursed has, in general, been T.D. 5000. But there have been numerous variances of this T.D. 5000. Ordnance, in particular, had a tailor-made job for their Government-owned contractor-operated plants run under cost-plus-a-fixed-fee contract. So I believe we can say definitely then that, although we intend to reimburse for all costs, in fact we have numerous exceptions.

Let us look at the fee to see whether the fee is a fixed fee. If there is any additional work, the fee should be adjusted. Or if we change the work and it costs more to perform the different work, we adjust the fee. Even where the work remains the same, if there was a larger amount of subcontracting than was originally contemplated--say the cost-plus-a-fixed-fee subcontractor was to act merely as a consultant and it turns out that his subcontractor will not perform and he has to perform all of the work, then The Comptroller General has allowed an adjustment upward in the fee. But if the work costs more--the same work but it just costs more than originally contemplated--there is no adjustment of the fee. I think our Colorado contractor is a good example. The actual costs were doubled, but the scope or character of the work had not been increased.

The Comptroller General also took another position: If a contractor intended to do a certain amount of subcontracting and then increased the amount of subcontracting, the fee should be reduced. That is, if he intended

to subcontract 100 thousand dollars worth of the work and then subsequently he increased that to 200 thousand dollars, he should reduce the fee because the subcontractor was getting the fee. We had to put a special article into the contract to prevent any trouble there. That decision of The Comptroller General had a very deterring effect on the amount of subcontracting.

Then The Comptroller General got another idea: He would add up all the fees of all the subcontractors and if they exceeded the statutory limitation of 7 percent there would be a chopping off of the excessive fees. Finally this idea was dropped entirely. You can see that the proposition of a fee being "fixed" is not entirely accurate.

I think, at the outset, we should make a sharp distinction between a cost-plus-a-fixed-fee contract, which involved the operation of a Government-owned plant, and a cost-plus contract, which involves work in a contractor's plant. Most of the criticism, I think, has been levied at the latter. Where the contractor-owned plant is involved; a lot of trouble arises out of the mixed operation. Where you have, for instance, a fixed-price contract and a cost-plus contract going on in the same contractor-owned plant the operations are going to be mixed and property accounting troubles will result. If it is a Government-owned plant, we have title to everything in the place. We own the building; we own the equipment; we own all the materials, the work in process, and the finished product. The property accounting problem is very simple.

Where the contractor owns his plant and has a fixed-price contract and a CFFF contract in the same plant, there is going to be trouble as far as property accountability is concerned. There was one case where the contractor's employees would take parts from the cost-plus-a-fixed-fee contract, (that were paid for by the Government), and put them in the fixed-price contract. You can imagine what happened to his profits. There was absolutely no fraud intended. They simply wanted to get the job done. Our government auditors were presented with a hard problem.

However, if the plant is owned by the Government, the cost-plus-a-fixed-fee contractor is merely a manager. It certainly simplifies property accountability as well as other matters.

One of our early theories was that the cost-plus-a-fixed-fee contractor would be an independent contractor; that is, we would treat him about the same as we would treat a fixed-price contractor. We would give him a job to do, pay him so much for doing the job, and hold him responsible for getting the job done. But I would like to point out a few things to show you how this theory has fared in actual practice.

Land-grant freight rates became a problem at once. If the cost-plus-a-fixed-fee contractor was going to ship very much it would be fine if he could get the preferential Government rates instead of regular freight rates. The government rate is about 40 percent of the regular rate. So the lawyers got busy and worked out a procedure whereby the cost-plus-a-fixed-fee contractor holds title during processing and the Government takes title at the shipping point. We were enabled thereby to get the land-grant freight rate. But the CFFF contractor has invaded the field of the Government and is no longer an independent contractor because he is getting one of the Government's prerogatives, namely, lower freight rates.

At about the same time we found some of the States were trying to place sales taxes and use taxes on the purchases of cost-plus-a-fixed-fee contractors, adding two or three percent to the sale. You can easily see that the costs would go up tremendously. So the Government maintained that although the contract said that he was an independent contractor, in effect he was buying for the Government and should receive the same governmental immunity as if the purchase were made by the Government.

The case went to the Supreme Court of the United States and it ruled that the State could levy the sale or use taxes. The Army and Navy decided that they would not let it stand right there; that they would go out to the States and see whether the States wanted to exert all their rights under the Constitution. A team was organized which went to the different State Tax Commissions, and talked to them about the problem. Some of the Tax Commissions, from a patriotic viewpoint, and some of the Tax Commissions on the basis of the interpretations of their own State laws, said, "We will not levy use or sale taxes on the cost-plus contractor's operations." That was rather widespread.

There was an unusual amount of success in that venture. Quite a bit of effort was expended. We had tax experts and men who did nothing but work on these problems for them. But we had to relax our theory of "the independent contractor."

The third thing in which the Government intervened was in suits against CFFF contractors. If the defendant was an independent contractor, like our fixed-price contractor, then he should handle his own suits. We felt if he lost the suit it would be our expense, so we watched such suits closely. Finally we just took over the suits.

I might mention one exception there. Under the Fair Labor Standards Act, if an employee sued the CFFF contractor to get wages due, we might perhaps find ourselves in this position: The Department of Labor saying the employee was right and The Attorney General, defending the CFFF contractor, saying that the employee was wrong. So, in that limited field (maybe one other) The Attorney General stepped out of the picture and allowed the CFFF contractor to defend his own suits.

Labor relations: We at once adopted a policy that the CFFF contractor, as a part of his fee, should handle his own labor-relations problems. But that did not work out so well in actual practice. We found ourselves bargaining with the CIO and the AFL at once. We entered into a working agreement with both the CIO and AFL to the effect that they would not come in until a majority of the employees had gotten into the plant. We had one case where the Railway Conductors Union, as I recall, wanted to come in and organize the plant and become the exclusive bargaining agent for the plant, when we were just constructing the plant. There were, finally, 3,000 or 4,000 employees hired. Wouldn't it be odd if they all belonged to this Conductors Union.

Then we also had to have the right to fire employees. We could not put up with any provisions which would limit or hamper production, so we entered into this agreement with the CIO & AF of L covering the problem. It worked out very well.

Then we stationed labor-relations officers in the large CPFF plants. They were supposed to help the contracting officer at the plant in handling his labor problems. If the CPFF contractor is an independent contractor, the Government shouldn't have a labor-relations officer in his plant taking over labor problems. But we did.

The War Labor Board at one time handed down a decision in favor of an employee seeking a higher wage. Our contracting officer at the plant looked at it and said, "That is absolutely unreasonable. I refuse to authorize reimbursement." He then took a further look at the order and said, "I don't think this is a legal order from the War Labor Board. So on that ground I am not going to reimburse." The CPFF contractor said, "I'll pay the higher wages, but I insist on being reimbursed." Of course the employee wanted higher wages so the Government was really in the middle of a labor problem. I think that illustrates my point. The CPFF operation was not an independent operation; the Government was right in there all the time, in the middle.

Insurance is another example. We found if we paid the standard rates of insurance that we were paying too much for coverage. So we hired insurance experts to come in and devise insurance procedures to cut down insurance costs and provide the coverage that the Government should get in order to protect itself.

I have mentioned costs briefly before. I will mention The Comptroller General again. He said that the statutory limitations on costs--I believe for example there used to be a limit of \$750 for an automobile. If a CPFF contractor bought an automobile in excess of \$750, we could not reimburse him. Likewise if he bought a typewriter and paid more than \$75.00 we would not reimburse him.

Also The Comptroller General said that Treasury Procurement Schedules were mandatory. If the CPFF contractor could not buy at as good or better prices than the TP Schedules, the contracting officer should then make a direct Government procurement. It got to the point that at one time the Inspector General strongly suggested that the Government take over the procurement activities of the CPFF contractor. The CPFF contractor had been reduced to the point where he was subject to all the rules and all the procedures of Government procurement, and he thought it was about time for the Government to take over their purchasing.

But that suggestion was eventually thrown out and we started to get some liberalization. We got the Treasury to rule that the TPS did not apply. The statutory limitations were raised high enough so that the CPFF contractor could buy a car and still not exceed them. We tried to make the CPFF contractor independent.

Now we had Standard Cost Interpretations. I believe you have read about them. They were designed to guide the determination by the contracting officer, more or less, as to what costs would be allowed. These standard cost interpretations were cleared with the General Accounting Office, informally. When it came time for a decision to be reached, The Comptroller General did not like some of the standard cost interpretations. So, he simply ignored them. The contractor was actually purchasing at his own risk, in the

hope he would ultimately get reimbursed for it. So we say the CPEF contractor is an independent contractor except for his transportation costs, his taxation, his law suits, his insurance and labor relations and the audits by the GAO.

Really it boils down to a tripartite arrangement among labor, management, and the Government. It would seem to me that if we are going to have CPEF contracts in the future, why ~~we~~ should recognize that the Government has a very substantial obligation. As soon as it places the CPEF contract, Government must get skilled men to come in and help the Government discharge that obligation. You do not get the job done by simply placing the contract. We should have a good businessman out in the plant acting as a contracting officer or the contracting officer's representative. The Government has a tremendous responsibility.

The contract itself does not provide for any incentive for the contractor to reduce his costs. In other words, it is immaterial whether he doubles his costs or halves his costs, he gets the same fee. So the only way to possibly hold down costs is by Government supervision and control. In the case of Ordnance, they had Ordnance Industry Committees, cost comparisons, competition between the plants etc.

The War Department at one time tried to devise a new article which would give some inducement to the CPEF contractor to reduce his costs; to hold down his costs. But it was never adopted; it was never used. It was placed in the Procurement Regulations, but it was never used. Eventually, we had to develop administrative procedures to hold down the costs in the CPEF operations.

Another type of contract, closely allied to the CPEF, is the Labor Hour contract. I will discuss it briefly. Under the Labor Hour contract--sometimes called Time and Materials contract--the contractor gets a lump sum payment, say \$3.50, for each hour of direct labor worked. That \$3.50 is supposed to cover the cost of the direct labor, indirect labor, overhead and profit. Any materials used are billed at their cost.

This Labor Hour contract, or Time and Materials form of contract, was used quite extensively for ship repair contracts, for tool making, gauge repairing, engineering services. The Comptroller General at first fought it and felt that it was a cost-plus-a-percentage-of-cost contract, but later he held it was legal. It was widely used in industry; they liked to use it. Furthermore, it was a very profitable type of contract but, in my opinion, was subject to a lot more abuses than the cost-plus-a-fixed-fee contract. Although it did not account for nearly the same dollar volume as your CPEF contract, I am sure you will find more abuses took place under Labor Hour contracts than under CPEF contracts. However, it has not been subject to anywhere near the amount of criticism that the CPEF contract has.

You will find, under the Labor Hour contract that the contractor will include the hours his stenographer works, or the janitor, or the foreman, or his own time. We found some cases where some people worked 27 or 28 hours a day, charging it up at \$3.50 an hour too. (Personally, I think it is a poor form of contract).

The War Department had a policy that the Labor Hour contract would only be used where there was no other alternative. That meant if the contractor asked for it and insisted upon it, it was used. It would take, I think, express legislation to rule out that form of contract because industry uses it so widely.

If you are very careful in the selection of your contractor, and if you are very careful in drawing up your contract, specifying exactly what hours will be counted in on that \$3.50 an hour, and if you supervise the work closely you may get good results. But the experience has shown it a rather dangerous form of contract. I think we could very well use the CFFF contract in lieu of the Labor Hour contract with some advantage to the Government.

Let us get back now to the CFFF contract and look at its history in World War I. It was used, but only to a limited extent. The cost-plus-a-percentage-of-cost contract was the one that was used most widely. It caused so much trouble and was subject to so much criticism that two pieces of legislation were enacted in World War I to stop it. Nothing was done to prohibit the CFFF contract and so it was used. In peacetime we did not have either form. Then, in 1939, we found we needed a flexible cost contract so we brought out the CFFF contract. Its first authorization was for use in connection with overseas construction. Congress said you will pay the cost-plus-a-fixed-fee but the fixed fee shall not be in excess of 10 percent. Then in Public Law 703 Congress gave us general authority to use the cost-plus-a-fixed-fee, although Congress expressly prohibited the cost-plus-a-percentage-of-cost contract. I believe that marks the start of the history of the cost-plus-a-fixed-fee contract in World War II.

The first general use of it was in connection with construction. The Quartermaster Corps used CFFF contracts for construction. It was a very flexible type of contract. The contractors all seemed to like it.

Ordnance also used it for their Government-owned contractor-operated ammunition plants, small arms ammunition and some artillery plants.

The Air Corps used it for their airline and modification center contracts and for the supply contracts. All the Services used it for their design, development and experimental contracts. It is interesting to note that in some cases no fee was charged in connection with these experimental contracts.

The War Department's attitude at first was that it could be used if it was necessary. In time that attitude toughened a little bit and there was open hostility to the form. Finally, along about the Spring of 1945, there was an outright prohibition of the form, stopping the use of the CFFF form of contract except in a few stated instances. The Government-owned contractor-operated plants within the Ordnance Department were one of the exceptions. Also, the airline and modification center contracts of the Air Corps; experimental work and first-run production could use the CFFF form. The War Department said we could use this CFFF form of contract for those four (4) categories, but in all others we were prohibited from using it. When I say War Department I mean the Under Secretary of War and the Commanding General, Headquarters, A.S.F.

With the contracting officer we had a different story. He liked the form of contract and contractors liked it. The contractors felt that where they did not have knowledge of the item, they should have a flexible type of contract. They had too little experience; they did not know their costs. Some of them had too small a capital to risk on a fixed-price contract. Those in the Air Corps, particularly, were quite familiar with the CPFF form. So it was very difficult for the War Department to stamp out its use. The contractors got used to it. The contracting officers got used to it, so it was continued even though the top-side policy was against it.

It was not until 1945 that they actually stopped the use of it. But then VJ Day came along so no one bothered about the problem. We do not know whether the War Department would have been able to cut down the use of CPFF contracts or not. The AAF had the attitude that the CPFF contract gave as good results as your fixed-price contracts. They argued--and argued very effectively--that if a CPFF contract was properly negotiated, properly administered, the results were just as good as if a fixed-price contract had been used.

In this connection I think it is interesting to look at a speech that was given by Congressman Engel before Congress on 21 June 1944. I believe you will recall that Congressman Engel was the one who travelled all over the United States in his own private automobile and was so loud in his criticism of the War Department in its contracting procedures. I believe he also took a few pot-shots at the Pentagon Building here. But, any way, he went out in his own automobile, all over the country, and investigated, in this case, the Government-owned contractor-operated plants of the Ordnance Department. His speech was glowing with praise of the results accomplished. He said, "Why they have reduced their costs. They are highly efficient. They have saved manpower. They have saved materials. They have saved equipment. They have done a very difficult job and the fee has been extremely low. Most of these contractors were hired to carry on the operation of these contractor-operated plants. They did it at a very low fee. They were in the higher-income tax brackets, so if they got one percent or two percent out of it, they were doing very, very well."

Now this was his closing statement: "I have on numerous occasions pointed out how money has been wasted. It gives me a great deal of satisfaction to be able to point out this instance in which the taxpayers are obtaining value received for every dollar spent."

That illustrates one attitude of Congress.

On the other hand, I believe every time the War Department went up on the Hill for an appropriation other Members of Congress would take pot-shots at us on the use of the CPFF contract. We were continually answering questions as to why we were using it. I think several bills were introduced. One of them got so far as, I believe, passing one House of Congress to prohibit the use of the CPFF contract.

The Comptroller General also showed his hostility to the form by taking his many exceptions and doing everything he could to make it hard to get the costs reimbursed.

33

So, regardless of this attitude of Headquarters, ASF, and regardless of the attitude of some Members of Congress--Congressman Engel excepted-- the CFFF contract was widely used, especially in Air Corps, and accounted for a large volume, from the dollar standpoint, of the contracts placed.

Along with the toughening attitude of the War Department in eliminating the CFFF form, we should look briefly at their program to convert to a fixed-price basis. First, conversion was encouraged and, second, it was ordered. Finally, in the Spring of 1945, the Under Secretary of War ordered the different Services to work out a plan for converting all of their CFFF contracts to a fixed-price basis, except the four stated exceptions I mentioned earlier. The different Services all drew up their plans of operation, but they were just getting started and just getting the ball rolling when VJ Day came along and cut it off. Up to that time there had been a few conversions, but it was a hard job. The contractors were not in favor of it. They liked their CFFF form of contract and the contracting officers were not in favor of it. It seemed to be only Headquarters and some Members of Congress who were in favor of the conversion job.

Finally, one of the reasons why a damper was put on the conversion of these CFFF contracts to fixed-price was the attitude of the General Accounting Office. The Comptroller General took the position that unless we could show definitely that it was to the dollar advantage of the Government to convert, he would refuse to recognize the conversion. In one case he kept right on auditing costs after we had converted. So you can well imagine what effect that had on contractors when they were asked to convert. We would tell them, "We are going to convert." They would say, "That is all right. But, the General Accounting Office will not call it a conversion. They will continue to go ahead and audit the costs."

That, briefly, is the development and use of the CFFF contract in wartime procurement. I think those in authority and those who have studied the form and its use would say that in any wartime procurement you are going to have this form of contract. I might say it is a very useful form if it is properly controlled. You can point to the Ordnance Department's contractor-operated plants and the Air Corps' attitude toward the form as proof. The main thing, it seems, is to be very careful in the selection of your contractor. You have also got to have strong administrative controls from the War Department standpoint. You have got to have a good man in as the contracting officer's representative. You have got to watch carefully to see that efficient operations are carried on.

Now, in this connection, it might be well if a comparative cost study were conducted to see whether the CFFF contract was more wasteful than the fixed-price. In making this study it will be very difficult because you are going to be comparing the CFFF contract with the fixed-price contract that has these escalator clauses in it--sometimes called price-adjustment articles.

I think the fixed-price contracts, with these special price-adjustment articles, is no longer a fixed-price contract. It is subject to adjustment and some of those articles permit a wide variety of adjustments.

As soon as the fixed-price contract takes on these varying price-adjustment articles, adjusting the fixed price, it actually approaches the CPFF form. So it will be very difficult, if a study is made, to eliminate this factor from the comparison. I am afraid you will not find many substantial contracts placed by the War Department which were on a true fixed-price basis for use in making your comparison. Although I, personally, would suggest it--and hope some time it is done--I think it would be very difficult to get any concrete results out of it.

There is one other item that I think merits consideration. The cost-plus-a-percentage-of-cost contract got a very bad name in World War I. In World War II, legislation expressly prohibited the use of the cost-plus-a-percentage-of-cost contract. A lot of people who should know have expressed their opinion--that people fail to make the proper distinction between the cost-plus-a-percentage-of-cost and CPFF contracts. The contractor still thinks it is a cost-plus-a-percentage-of-cost contract. The psychology is very, very bad. I think it is unfortunate that we chose the name "cost plus a fixed fee". If we had called this contract by some other name, we might have received better results. There would not have been such a clamor for its use.

Now you might, for example, call it a fixed price management contract. Take the emphasis off the cost and emphasize the fact that it is a fixed fee. Or perhaps you could say a lump-sum reimbursement contract. In other words, any name which would take it as far away as possible from your cost-plus-a-percentage-of-cost contract.

I believe that ends my discussion. I understand that it is usually customary to have about a five or ten minutes period in which questions are asked. If I can possibly answer any questions, I will be glad to.

CAPTAIN STOVER:

Thank you, Major Bell.

Any questions, gentlemen?

A STUDENT:

I believe you mentioned that there was no incentive to reduce costs in CPFF contracts due to the fact that the profit is fixed. Now I should think a contractor in wartime would be interested in (1) reducing his inventory turnover and his labor turnover with materials and labor and services so scarce; and (2) is not there an incentive to increase one's net worth? If you increase your costs you automatically reduce your net worth.

MAJOR BELL:

Well, I believe there is a lot in what you say. First of all, you should always select your contractors with care. Congressman Engel pointed out how some of the finest companies in America were chosen for those Government-owned contractor-operated plants. He pointed that out as one of the reasons why that operation was so successful. Some of them did want to

hold down their costs. In peacetime operations must be on an efficient basis. It might be difficult to change from an inefficient organization over to an efficient operation at the switch over to peacetime procurement.

Of course, it should also be mentioned that you have all types of contractors.

A STUDENT:

Some are not good businessmen?

MAJOR BELL:

Some are not good businessmen. So the Government has to step in and help them run the plant and see that they do it efficiently.

What I really mean is since the fee is fixed, efficiency does not yield more profits. Under the fixed-fee type of contract, the very efficient receive the same fee as the inefficient. We tried to devise an article for use in the contract which would let the CPFF contractor earn a greater profit, a greater fee, if he made savings. But either we started the program too late or the article was not satisfactory; it was never used. We had to rely on administrative controls to get efficient operation under the CPFF contracts.

A STUDENT:

Major, how about pointing out the fluctuation requirement angle and the safety angle on CPFF contracts?

MAJOR BELL:

That was another factor why the CPFF type of contract was necessary. First we would increase production requirements and then cut them down. The CPFF contract was ideally suited to such a condition. It was very easy to increase or decrease production; the Government paid "all" costs anyway.

From the safety angle, those Government-owned ammunition plants were always in great danger. If there was an explosion, and the contractor was on a fixed-price basis, it could wipe out his capital. It was necessary to have a form of contract which would give him complete protection. The CPFF contract afforded the protection.

A STUDENT:

Fixed price makes you get more careless.

MAJOR BELL:

I would think just the opposite.

A STUDENT:

Could you spend a few minutes explaining the several methods by which they arrived at what the fixed fee should be? People who are not too experienced with it know that in establishing what the fee should be they use a percentage of the estimated cost. So then they say, "Well now what is the difference between that and the cost-plus-a-percentage-of-cost contract?"

Would you please explain that?

MAJOR BELL:

The difference is simply this. At the beginning of the contract, before work is started, presumably, the parties sit down and say, "We think it will cost so much to do the job." Then they will apply the fee to that estimate. The fee becomes fixed at that point, before they ever start the work. So, actually, the percentage of the cost then is the percentage of the estimate.

Now, in actual practice, as in the case of the Colorado contractors I pointed out, the actual cost may be very greatly in excess of the estimate, in which event the percentage of the actual cost goes way down. But the fee is fixed on the estimated rather than on the actual cost.

On the cost-plus-a-percentage-of-cost contracts, after all the costs are in, you take your 10 percent or 7 percent and figure your fee.

A STUDENT:

What was the attitude of the Comptroller General on contractors buying use and occupancy insurance which would protect their profits in case those plants were shut down on account of an explosion, fire or windstorm?

Also, did you find any plants that were not in flood areas putting in costs for flood insurance and insuring against earthquakes?

MAJOR BELL:

I am sorry but I cannot answer your first question. As to the second, the War Department, where there were great dangers, like your ammunition plants, included certain articles in the contract to the effect that the contractor was saved harmless from any loss. If the plant blew up, the contractor was not liable. The same was true as to floods and earthquakes. So there was no real necessity for his carrying insurance.

CAPTAIN STOVER:

I believe our time is up. Again I want to thank you, Major Bell, for this fine presentation.

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