

W. E. Kelley, Manager

December 15, 1962

F. M. Ealmore, Director, Production Division

N-112-5

PROPOSAL OF AWARD - CONTRACT AT(50-1)-1485 WITH THE CHEMICAL CONSTRUCTION CORP.

SYMBOL: PP:AJB:gr

ATTENTION: V. Duncombe

Purpose

This memorandum requests that a contract with the Chemical Construction Corp. be prepared in accordance with information hereinafter set forth. This memorandum provides a complete record of the negotiations leading to the proposed contract and also constitutes the report of the Staff Panel consisting of Messrs. H. Medvin, P. Tobin, E. H. Brown and A. J. Beyer which met on several occasions during the course of negotiations for the proposed contract.

Summary and Recommendations

It is recommended by the Staff Panel that a CFFP contract be prepared with the Chemical Construction Corp. for the performance of studies on the application of certain processes owned or controlled by the Chemical Construction Corp. to the recovery of uranium from certain waste residues which are presently stored at the LCON, Haist and Robertson Sites; for the performance of engineering studies to select the most feasible process for the treatment of these wastes, including analyses of capital and operating costs, operational reliability, and adaptability to the recovery of other valuable metals contained in the waste residues; and for the performance of studies to select the most suitable sites for the operation of a waste residue retreatment plant. It is contemplated that the work under this contract, if successful, will have accomplished all technical tasks which are required preliminary to an A-E contract for design of an actual plant for processing of the waste residues.

It is proposed that the contract be for a term of seven months, from 1/1/63 to 7/31/63. The estimated cost of this work is \$37,863 plus a fixed fee of \$2,800. The proposed fixed fee is equivalent to 7.72% of the estimated costs for labor, overhead and supplies.

Funds are available under Budget Activity 2601.

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A Type B patent clause is proposed and the Contractor will give the Commission a royalty free license to his background patents, know-how, etc. for the recovery of uranium, thorium, beryllium and zirconium; the Contractor will not give the Commission a royalty free license for the recovery of any other metals.

The Review Board's particular attention is invited to Paragraphs 9d and 9e under "Discussion" which describe certain relationships with African Metals Corp. which may arise in connection with this undertaking and which describe the Chemical Construction Corp.'s policies relative to A-E contracts (it should be noted that in the event the proposed contract is successful, the Chemical Construction Corp. would be very favorably situated in bidding for an A-E contract on this undertaking.)

Discussion

The information hereinafter set forth is submitted in accordance with the basic outline recommended by GM-S&S-39. It should be noted that this presentation utilizes only the principle numerical headings of the recommended outline.

1. The proposed Contractor is the Chemical Construction Corp. of 488 Madison Avenue, New York.
2. Work to be performed under the proposed contract will be conducted at the Contractor's offices at 488 Madison Avenue, N. Y. and at its laboratory and pilot plant located at Linden, New Jersey.
3. The assigned contract number is AT(30-1)-1485.
4. Information requested in GM-S&S-39 under this heading is not applicable to the proposed contract.
5. The proposed action will be a CPTF contract and it is proposed that it be submitted to the Contractor in definitive form.
6. The scope of work for the proposed contract is generally as follows:
 - a) The Contractor shall perform research and development work calculated to demonstrate on a laboratory and/or a semi-pilot plant scale the feasibility of certain processes, known to the Contractor and involving leaching and/or precipitation under conditions of elevated temperatures and pressures, for the recovery of uranium from waste residues located at the Commission's LOON, Haist and Robertson sites.

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- b) The Contractor shall determine by application of engineering principles and methods the relative feasibility of the processes referred to in subparagraph a) and of a certain ion-exchange process which was developed for the Commission by Vitro Corp. of America for the efficient and economic recovery of uranium from the aforementioned residues.
- c) The Contractor shall concurrently with the performance of work described in subparagraphs a and b examine certain areas and/or facilities which will be specified by the Commission to appraise their relative merits as sites for the location of a plant for the industrial scale processing of the aforementioned waste residues.

It is proposed that the contract term shall be from January 1, 1953 to July 31, 1953.

7. The proposed contract has been negotiated with the Chemical Construction Corp. and formal advertising has not been employed. This was done because the Chemical Construction Corp. is the only company in the United States known to have knowledge of and experience in certain processes involving leaching and/or precipitation under conditions of elevated temperatures and pressures. Since we desire that research and development be performed on these secret Chemico (owned or controlled) processes to determine, among other things, the feasibility of adapting them to uranium extraction we could not obtain competition from any other source. Certain preliminary technical information, available to the negotiators of the proposed contract, have indicated that the aforementioned processes might have unusual advantage for the economic and efficient recovery of the uranium contained in the residues hereinbefore referred to. In view of these circumstances, it appeared that no company other than the Chemical Construction Corp. would be qualified to perform the services described in the scope of work outlined in paragraph 6. above.
8. This paragraph, as outlined in G-345-39, is not applicable with respect to the proposed contract action.
9. History of Negotiations

- a) Background - In May 1952, Mr. A. J. Beyer, an employee of NYOO who had been assigned responsibility for technical developments associated with plans for recovering uranium from the aforementioned waste residues, noted the existence of certain processes which were reputed to be controlled by the Chemical Construction Corp. His analysis of these processes, to the extent their technical details were available in the press, indicated that they might offer unique advantages for the processing of the waste residues for which, to date, no entirely adequate processing methods had been developed. A review of the processes with technical personnel of the Chemical Construction Corp. substantiated the preliminary estimates to the extent that it was the consensus of the Process Development Branch of the Production Division that they should be examined for application to the waste residue

problem. A recommendation to this effect was made to Management. In view of the above, Management authorized preliminary negotiations with the Chemical Construction Corp. to determine if there was likelihood that a mutually satisfactory contract could be negotiated with that company. Several discussions were held, Chemical Construction Corp. being represented by Messrs. John Dasher, John Berger, A. S. Phillips and E. F. Bliss, Jr.; NYOO was represented by Messrs. S. H. Brown, A. J. Beyer, P. Tobin, K. Edwin and Mrs. Rebecca Yablonsky.

- b) Estimated Costs and Fee - As a result of the discussions, the Chemical Construction Corp. in a letter, dated November 11, 1952, signed by E. S. Roberts, Vice-President and Chief Engineer, submitted a proposal for a term of 7 months work at an estimated cost of \$5,408 per month plus a fee of \$500 per month or a total estimated cost of \$37,856 plus \$3,500 fee. This proposal included factors involving a negotiated overhead to be applied for labor at its Linden and New York offices of 44 and 74% respectively.

In preliminary discussions the contractor had requested negotiated overhead rates of 50 and 85% against Linden and New York labor. A review of the Contractor's records by Messrs. P. Tobin and H. Connelly of the Finance Division indicated, on the basis of the records as submitted, that the technically justifiable overhead rates should be 44 and 74% for Linden and New York respectively. A copy of Mr. V. Del Vecchia's memorandum of November 12, 1952 to me on the matter is attached hereto. The Contractor was unwilling to accept the overhead rates as proposed by our Finance Division since, in his judgment, they would not fully compensate him for expenses which would be incurred; however, he had expressed initial willingness to undertake the proposed work without fee provided his costs would not be in excess of the reimbursements which he would receive. It was proposed to the Contractor that the Commission would not be adverse to paying a reasonable fixed fee if the Contractor would accept the 44 and 74% overhead rates. This he agreed to do and, accordingly, requested a fee.

With respect to the fee requested in Mr. Robert's letter of November 11, 1952, it was the consensus of the Contract Panel that it was excessive even when consideration was given to the circumstances under which it was requested. Accordingly, on November 26, 1952, Mr. A. J. Beyer, for NYOO, proposed to Mr. J. Berger of the Chemical Construction Corp. that his company give consideration to accepting a lower fee. It was proposed that a fee of \$550 per month or \$2,450 for the 7 month term of the proposed contract be considered. On December 1, 1952, by telephone, Mr. Berger offered, for the Chemical Construction Corp., to accept a fee in the equivalent of \$400 per month or \$2,800 for the proposed term of the contract. This final proposal by the Chemical Construction Corp. was tentatively accepted by Mr. Beyer, subject to Management's approval.

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There follows a tabulation detailing the estimated costs for the subject contract as finally agreed after negotiations with the Chemical Construction Corp. This tabulation also shows what the estimated costs would be if overhead rates of 50 and 85% were applied against Linden and New York labor respectively assuming the increase in overhead was compensated by a proportionately lower fee. The tabulation shows that the fee, which represents 7.72% of the estimated cost for labor, overhead and supplies would actually amount to a fee of 2.65% on the basis of the higher overhead figures. It is the consensus of the Contract Panel that the estimated costs are reasonable and that the requested fee is equitable.

Estimated Costs of Contract

<u>Item</u>	<u>Agreed Costs Per Month</u>	<u>Comparative Costs Per Month</u>
1. Supplies	\$ 300.00	\$ 300.00
2. Linden Labor - 2 investi- gators & 1 1/2 - 2 analysts	1,700.00	1,700.00
3. Overhead on Linden Labor	748.00 (44% of line 2)	850.00 (50% of line 2)
4. New York Labor - 3 part time engineers, plus designers, draftsmen, estimators, & secretar- ial help	1,400.00	1,400.00
5. Overhead on New York Labor	1,036.00 (74% of line 4)	1,190.00 (85% of line 4)
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Sub Total	\$5,184.00	\$5,440.00
Fee	400.00 (7.72%)	144.00 (2.65%)
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Sub Total	\$5,584.00	\$5,584.00
6. ADT Protection Service	50.00	50.00
7. Travel	175.00	175.00
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Total Estimated Monthly Cost + Fee	\$5,809.00	\$5,809.00
Total Estimated Cost for 7 Months	\$37,863.00	
Total Fixed Fee	2,800.00	
Total Funds Required	<u>\$40,663.00</u>	

- c) Patents - A significant problem in the negotiations was the development of a mutually acceptable patents clause. The Contractor believes that patents, secret processes, technical information, and know-how which he now has and which were developed in the course of his private endeavors have important monetary value to him. He believed that the patent clause for the proposed contract should provide him with adequate protection in the application of the knowledge which he already has and which he might apply or further develop in the course of the proposed work as it pertains to the recovery of all valuable metals including uranium.

Accordingly, the Contractor has requested a Type B patent clause. It is the consensus of the Contract Panel that a Type B patent clause is equitable. The Contractor, for his part, will grant to the Government a non-exclusive, irrevocable, non-transferable, royalty-free license to practice or caused to be practiced, throughout the world, for the recovery of uranium, thorium, zirconium and beryllium for governmental purposes, any and all inventions (patented or unpatented), secret processes, technical information, and know-how which he has made or developed other than in the course, and within the scope of the work under this contract, and which have been used, tested and embodied in any portion of the work under this contract. The Contractor does not propose to grant to the Government any background rights relative to the recovery of any valuable metal other than uranium, thorium, zirconium and beryllium whether or not such recovery is by or for the Government or for governmental purposes. Certain of the waste residue materials which will be studied contain valuable metals such as cobalt, nickel, copper and vanadium.

- d) Relations With African Metals Corp. - In view of the fact that certain of the waste residues contain valuable metals other than uranium and are actually the property, except for the contained uranium of the African Metals Corp., both Contractor representatives and the Staff Panel have given careful consideration to the possible eventuality of valuable metals other than uranium being recovered from these waste residues during or incidental to the recovery of uranium. After consideration of the circumstances, the Contractor proposes that neither the Government nor its predecessor will be held liable by the Chemical Construction Corp. for any patent infringements, royalties, or other damages if valuable metals other than uranium are recovered from the materials owned by African Metals Corp. concurrently with or incidental to the recovery of uranium provided:

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- 1) The Government promptly notifies the Chemical Construction Corp. of such situation and
- 2) The Government agrees to transmit a copy of the proposed contract to African Metals Corp. within a reasonable period after its execution.

During the course of the negotiations the negotiators informed the Chemical Construction Corp. representatives that the Commission could not agree to aid in any manner in collecting royalties from the African Metals Corp. in the event the operation should effect beneficiation of valuable metals which are the property of African Metals.

Informal discussions with African Metals Corp. representatives indicate that that company would pose no objections to the proposed arrangements but, on the contrary, would welcome any developments which might enable it to economically recover valuable materials from the wastes to which it has title.

- e) General - During the course of the negotiations with the Contractor, it became apparent he had some concern that, under the terms of the Contract, he might be required to furnish detailed engineering designs and equipment specifications and that he might be required to furnish process information regarding the specific conditions for the recovery of valuable metals other than those for which he has offered the Commission royalty-free licenses relative to his patents, know-how, etc. For the Commission's part, the Staff Panel believed that the terms of the contract should be definitive in that the technical information which the Contractor would provide as a result of his work under the contract should be sufficient to constitute the basic knowledge essential for the detailed design by any qualified process engineering organization of an industrial scale plant for the processing of the waste residues by whichever process the Contractor recommended. The Contractor expressed willingness to accept such a requirement provided he had protection with respect to the aforementioned reservations. It was agreed by the Contract Panel that such protection would be offered the Contractor within the scope of work as defined in the contract.

Despite the above proposed agreements, the Contract Panel desires that the Review Board take specific notice of the fact that in the event the undertakings of the proposed contract are successful and a process of the type with which the Chemical Construction Corp. has experience is accepted for processing the waste residues, the Chemical Construction Corp. will be in a most advantageous position with respect to other engineering companies in bidding for the performance of architect-engineer functions related to the construction of such a plant. This is so even though the Contractor is willing to agree to provide all

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technical information necessary for the basis of a detailed design of an industrial scale plant. The Contract Panel desires also that the Review Board note that it is the Contractor's established policy to limit use of his designs, provided in connection with an A-E contract, to the specific facility for which the designs are being provided. That is, he would not permit use of his detailed designs for the construction of a second similar plant without an agreement acceptable to him. It should be further noted that the Mallinckrodt Chemical Works with Manhattan Engineering District's approval did agree to such terms with the Chemical Construction Corp. with respect to the nitric acid recovery unit which it provided at the Mallinckrodt Chemical Works under sub-contract to Blas-Knox several years ago.

The proposed Contractor, as hereinbefore noted, is especially skilled in the application of processes involving leaching and precipitation under conditions of elevated temperatures and pressures. In addition, the Chemical Construction Corp. has an international reputation as a highly qualified engineering and construction organization for the design and erection of chemical processing plants. The Chemical Construction Corp. is a wholly owned subsidiary of the American Cyanamid Co. which is one of the largest chemical companies in the United States. In view of the foregoing, it is believed the Chemical Construction Corp. is both financially and technically qualified for the performance of the work which it is proposed be undertaken.

As previously noted, the Staff Panel for the negotiation of the proposed contract is comprised of Messrs. M. Medvin, P. Tobin, S. H. Brown and A.J. Beyer. Mr. Beyer has been assigned the primary responsibility in connection with the negotiations which have been conducted. His telephone extension is 278.

Attachment: 11/12/52 fr Del Vecchia to Belmore

cc: H. B. Fry
F.M. Belmore
J. C. Clarke
F. Chrestia
G. T. Shannon
S. H. Brown ✓ (2)

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