Aug 22

HEDL-TME 71-124
SEPTEMBER 1971

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DATE 11/30/72

OVERALL OUTLINE OF RESPONSIBILITY
FOR
CONSTRUCTION OF THE
FAST FLUX TEST FACILITY

HANFORD ENGINEERING DEVELOPMENT LABORATORY
UNITED STATES ATOMIC ENERGY COMMISSION

Operated by

CONTRACT AT(45-1)-2170

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HANFORD ENGINEERING DEVELOPMENT LABORATORY

Richland, Washington
operated by

WADCO CORPORATION

A Subsidiary of Westinghouse Electric Corporation
for the

United States Atomic Energy Commission Under Contract No. AT(45-1)-2170

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SECTION 1: INTRODUCTION

This general outline delineates the working arrangements under which the Hanford Engineering Development Laboratory (HEDL), Westinghouse Advanced Reactors Division (RPD), the Bechtel Corporation, and the U. S. Atomic Energy Commission (AEC) will work together in carrying out their respective responsibilities during the construction, testing, and early operation of the Fast Flux Test Facility (FFTF). This outline is written to describe basic working relationships between organizations and is not intended to delineate functions of groups or individuals within an organization. In case of conflict or discrepancies between the requirements of this outline and the terms and conditions of the contract agreements, the contract shall govern; such conflicts shall be immediately brought to the attention of the contracting officer and action taken to resolve.

It is intended that engineering information, data and contract actions will be coordinated between the respective participants to assure a close working relationship and effective execution of the project. Specific procedures/ instructions to be utilized in carrying out the individually defined responsibilities are referenced in Appendix A. It is essential that actions required by responsible organizations be taken immediately and all other organizations are kept fully informed in a timely manner.

SECTION 2: GENERAL DESCRIPTION OF ORGANIZATIONS

Included in this outline are the following organizations and their general roles:

- 2.1 HEDL: The HEDL has been established as the program manager and operator for the AEC's Fast Flux Test Facility. The HEDL is assigned the responsibility for the complete FFTF including the technical adequacy, selected design and procurement, safety, operability and quality assurance.

- 2.2 AEC: The AEC has the responsibility, as the final customer, for the setting of standards of plant performance and acceptance of the work under this contract. RDT and RL activities are coordinated through the Office of the Assistant Director for Pacific Northwest Programs. The AEC administers contract AT 45-1-2170 (AEC/HEDL).
- 2.3 BECHTEL: The Bechtel Corporation (AE/CM) is responsible for the construction management, complete inspection services and engineering design and procurement responsibility as assigned. Each of these functions shall report separately to the Bechtel project manager.
- 2.4 WESTINGHOUSE ADVANCED REACTORS DIVISION (ARD): ARD (RPD) shall be responsible for overall surveillance of the construction, inspection and early operation of the reactor plant to verify that their design requirements are met in all respects. ARD is also responsible for providing engineering support for the systems and components assigned to their cognizance. In accordance with the above, ARD is responsible for providing overall plant operating and test procedures.

SECTION 3: ENGINEERING

a. Document Submittal:

General - All suppliers of hardware, material and components are responsible for providing to Bechtel Engineering data packages, i.e., drawings, etc., required for construction.

1. Bechtel - Bechtel Engineering is responsible for obtaining copies of design and construction drawings, vendor data and descriptions of procured equipment and materials to be used during construction. Bechtel shall check and confirm all such submittals for suitability for installation, completeness and compliance with contract requirements. After such review, Bechtel shall note whether these submittals are approved, approved as noted, not approved, or incomplete. For those submittals not in compliance Bechtel will take appropriate corrective actions. If Bechtel should find, as a result of such corrective action, that the returned marked-up submittals result in a change to any contract or procurement action, Bechtel shall immediately notify HEDL and the AEC in writing. The change will then be processed as prescribed under the Design Changes section of this outline.

All actions required on the submittals should be called out and clearly marked on each pertinent sheet of every copy of the submittals. After review, Bechtel Engineering shall transmit the submittals to HEDL for concurrence, or information, as appropriate, then to Bechtel Construction for action. If, during review, Bechtel Engineering finds any conflicts or errors in the contract drawings and specifications, or any submittal which is late or "not approved" and which will result in probable delay to the project, they shall immediately take corrective action with Bechtel's construction manager and notify HEDL.

b. Design Changes:

1. Bechtel: For all design changes originating at the Site, Bechtel engineering will act as a focal point and clearing house in processing such design change requests. Bechtel Engineering will be responsible upon receipt and review of the design change request to forward the request to the cognizant design agency (ARD, AI, et al) together with its independent recommendation. Review and approval, of the change request will be obtained by the design agency in accordance with existing design change procedures (WHAN-M-17). Upon completion of the review and approval process, the request will be returned by the design agency to Bechtel Engineering with appropriate markings.

c. Drawings and Specifications:

1. Bechtel: Bechtel Engineering shall maintain a current project drawing list and current set of correct drawings, specifications and other required design information. The collected information shall be incorporated on the master set of original tracings and revised prints issued periodically during the course of construction.

Upon completion of the project, Bechtel Engineering shall furnish to HEDL a complete and correct record set of reproducible final tracings and a marked-up set of specifications depicting the completed project.

d. Project Schedule:

1. Bechtel: Bechtel engineering shall prepare and maintain overall project cost estimate as required.

SECTION 4: CONSTRUCTION

a. Construction Schedule :

1. Bechtel: Bechtel Construction is responsible for preparation and maintenance of the complete construction schedule for the entire project showing all interrelationships between subcontractors, procurement actions and exact sequencing of work. This schedule will be consistent with the overall schedule furnished by Bechtel Engineering. In addition, Bechtel shall prepare and maintain detailed work sheets which list activities within each subcontract or major work activity.

The schedule shall be kept current and shall clearly show all work accomplished as well as slippages in schedule and alternative methods to correct schedule slippages without affecting overall completion date. Copies shall be forwarded to the AEC, HEDL and ARD. Should the project warrant, or the AEC or HEDL request, Bechtel Construction shall expand and define in greater detail any areas of the schedule.

2. HEDL: HEDL shall review and approve the construction schedule prepared by Bechtel Construction including any revisions thereto.

b. Construction/Installation Procedures :

1. Bechtel: Bechtel Construction shall prepare, based upon input from the cognizant design agencies (ARD, Bechtel Engineering, et al) required construction/installation procedures including rigging procedures and rigging sketches. Selected procedures shall be forwarded to HEDL and others for review and approval prior to implementation. Appendix A, Reference 1, identifies those construction/installation procedures to be prepared for HEDL approval and other approval.

2. ARD: ARD shall review and approve construction/installation procedures submitted by Bechtel as specified in Appendix A, Reference 1.
3. HEDL: HEDL shall review and approve construction/installation procedures submitted by Bechtel Construction as specified in Appendix A, Reference 1.

c. Manpower Schedules:

1. Bechtel: Bechtel Construction shall prepare and maintain manpower schedules for its subcontractors for all work to be performed on this project. Copies of the schedules shall be forwarded monthly to the HEDL and AEC together with Bechtel's assessment of the adequacy of the manning level and its impact on the overall construction schedule.
2. HEDL: HEDL shall review these manpower schedules and promptly advise Bechtel Construction of any significant comment or concern.

d. Record of Tests:

1. Bechtel: Bechtel Construction shall arrange for, maintain and furnish to HEDL all records of tests at the site for all materials, equipment or systems tested except those included in the REACTOR PLANT ACCEPTANCE TEST PROGRAM.

e. Government Furnished Equipment and Material (GFE&M):

1. HEDL: HEDL shall provide to Bechtel Construction inspected GFE&M to the construction site.
2. Bechtel: Bechtel Construction shall receive and examine all GFE&M to confirm suitability for installation and use, and determine if damage has occurred and calls for inspection.

f. Storage:

1. HEDL: HEDL will identify and arrange for areas near, or at, the Site which may be utilized as storage space for Bechtel Construction.
2. Bechtel: Bechtel Construction will be responsible for protection and storage of all materials delivered to the site and shall establish procedures and controls to assure that materials and equipment are identified, segregated and properly handled and stored.

g. Files and Records:

1. HEDL: HEDL shall maintain complete files of all procurement schedules, project schedules and project completion schedules.

h. Safety and Fire Protection:

1. Bechtel: Bechtel Construction will be responsible for and see that all work performed shall be in accordance with all codes related to safety and fire protection, including the latest edition of the Washington Administrative Code, the State of Washington Department of Labor and Industrial General Safety Standards, AEC Manual Chapter 0550, Operational Safety Standards, and National Fire Codes. These are considered minimum requirements. On its own initiative or upon notification, Bechtel shall take such actions necessary to assure compliance as required. If changes require deviations in approved design documents, it shall be handled as prescribed under the "Change Order" section of this manual. Bechtel shall, during inspection of the work, notify HEDL of any violations to the above safety and fire protection standards and the corrective action taken. Bechtel shall provide followup inspection to assure violations are corrected.
2. HEDL: HEDL shall review all safety and fire protection violations and take appropriate action. In addition, HEDL will independently audit Bechtel operations to assure compliance with manual requirements.

i. Environmental Protection

1. Bechtel: Bechtel Construction shall assure that his field personnel or subcontractors do not dispose of any construction materials or other wastes, solids, liquid or gaseous, in such a manner or in locations that will violate Federal, State or Local Government Air & Water Pollution Control standards, rules or regulations.

Fuels, oils, chemicals and other materials used in connection with the contract will be stored, handled and used in a manner to prevent their release to the atmosphere or to surface or ground water in violation of Federal, State or Local Government Air & Water Pollution standards, rules or regulations. On his own initiative, or upon notification, Bechtel will take necessary action to correct any violations and promptly advise HEDL and AEC.

2. HEDL: HEDL shall review all reports and shall take appropriate action. HEDL will provide advice on disposal of waste through other RL contractors.

j. Project Construction Cost Estimates:

1. Bechtel: Bechtel Construction shall prepare, as soon as possible, an overall, completely detailed cost breakdown covering all elements of the work. The breakdown estimates will be used as a basis for evaluating the progress of the work. Bechtel shall explain differences between actual and estimated costs and shall provide copies of such to HEDL and AEC for review.
2. HEDL: HEDL shall review estimates, maintain cost records, and forward all recommendations to the AEC.
3. AEC: The AEC will review estimates and recommendations and approve cost estimates and cost estimate changes.

k. Completion and Cost Closing Statements:

1. Bechtel: Prior to final closeout of the contract, Bechtel Construction shall furnish complete cost data to HEDL and AEC.
2. HEDL: The HEDL will prepare the completion and cost closing statements for the project utilizing Bechtel's input and its own cost data records. The statement will then be forwarded to the AEC for action.
3. AEC: The AEC will review the statements and retain for its use.

SECTION 5: INSPECTION

General

Each design contractor (Bechtel Engineering, ARD, et al) for their own components, material and systems shall provide inspection requirements and criteria. The inspection requirements for the FFTF Project will be followed as outlined in WHAN-M-14.

a. Close-Out Inspection/Testing:

1. Bechtel: Prior to turnover, Bechtel Construction shall notify HEDL and AEC when any systems, subsystems or equipment items are ready for partial or final inspection and checkout. These systems, subsystems and equipment identified as falling within CP 4-6 shall be inspected and tested by Bechtel Inspection in accordance with Bechtel prepared test procedures. All other testing (Reactor Plant Systems Components, etc.) shall be tested in accordance with the approved FFTF Reactor Plant Acceptance Test Program.
2. ARD: ARD shall prepare test procedures for, and participate in, the acceptance and testing of all equipment, subsystems and systems identified in the FFTF Reactor Plant Acceptance Test Program.
3. HEDL: HEDL shall approve final inspection and test procedures identified in the FFTF Reactor Plant Acceptance Test Program and participate in the testing of such equipment, subsystems and systems in accordance with these approved test procedures and plant operating procedures to assure satisfactory operations and compliance with codes, standards and specifications. HEDL shall also submit to AEC for approval the Inspection and Test Reports for tests covered under the FFTF Reactor Plant Acceptance Test Program. For those other tests covered under CP-1, HEDL shall approve the Inspection and Test Report.
4. AEC: Review and approve the Inspection and Test Reports for all tests covered under the FFTF Reactor Plant Acceptance Test Program.

APPENDIX A

REFERENCES

1. WHAN-M-17, INSTRUCTIONS FOR SUBMITTAL AND CONTROL OF FFTF
DESIGN DOCUMENTATION, REVISION 2, AUGUST 24, 1971.
2. REACTOR PLANT ACCEPTANCE TEST PROGRAM
3. WHAN-M-14, QUALITY ASSURANCE PROGRAM PLAN FOR FFTF, REVISION 3,
AUGUST 1971.

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