

SECTION 01000

INTRODUCTION

01001 SCOPE

This Title II Report provides the plans and specifications for construction of facilities associated with Phase IIB Construction of the 881 Hillside Remedial Action. Phase IIB Construction of the project includes the following facilities:

- Influent collection gallery, sumps, wells, pipeline, and electrical.
- Effluent discharge line and structure.
- Building 891 truck loading dock.
- Site cleanup, final grading, and landscaping.

In order to meet an accelerated schedule for construction of the Remedial Action, the project has been divided into several phases of construction. Each phase of construction is briefly described as follows:

Phase IA Construction - Building 891 foundation.

Phase IB Construction -

- Erection of a pre-engineered Building 891.
- Erection of influent storage tanks.
- Construction of influent tank foundations and containment structures.
- Construction of water supply pipeline, sewer pipeline, natural gas service pipeline, electrical service and telephone service to Building 891.
- Construction of Building 891 HVAC, plumbing and electrical.

Phase IIA Construction -

- Process treatment system, including electrical and controls.
- Indoor and outdoor transfer piping.
- Tank electrical and controls.
- Chemical storage and transfer facilities.
- Completion of Building 891 electrical and outdoor lighting.

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ADMIN RECORD

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- Installation of treatment system and influent storage tanks.

Phase IIB Construction -

- Influent collection gallery, sumps, wells, pipeline, and electrical.
- Effluent discharge line and structure.
- Building 891 truck loading dock.
- Site cleanup, final grading, and landscaping.

In addition, the following facilities which are part of the 881 Hillside Remedial Action will be procured under separate contracts as Government Furnished Equipment:

- Pre-engineered Building 891 to be erected during Phase IB construction.
- A UV/peroxide treatment system.
- An ion exchange treatment system.
- Four 15,000 gallon horizontal cylindrical influent storage tanks.
- Three 159,000 gallon effluent storage tanks and foundations to be designed and constructed as a separate contract.

Phase IA and IB construction is currently underway. Phase IIA Construction Specifications and Drawings have been submitted to EG&G. Phase IIB construction is addressed herein.

This report expands upon information developed in the Title I, Preliminary Design Basis Document for the 881 Remedial Action Plan, June 1988. The scope of this Title II report covers the design development of contract drawings and specifications for Phase IIB of the project. A detailed cost estimate is presented under separate cover.

01002 PURPOSE OF PROJECT

The primary objective of the Building 881 Hillside Remedial Action Plan (Project) is to collect contaminated ground water from the 881 Hillside and treat it to acceptable levels for surface discharge. A conceptual design for the project has been developed as a result of Remedial Investigation/Feasibility Study (RI/FS) procedures. A Health Risk Assessment performed in conjunction with the RI/FS concluded that a small identifiable health risk to the public would occur in the future if no remedial action was performed at the site. Implementation of the recommended remedial action will eliminate the future risk and

result in the removal of the contaminants identified as contributing to the risk.

Preliminary process design and selection for volatile organics removal was performed as a part of the RI/FS and subsequently verified through independent treatability studies initiated by Rockwell International, as operators of Rocky Flats Plant, and performed by a manufacturer of the selected system. The selected process for treatment of the volatile organics is an ultraviolet light (UV)/hydrogen peroxide (H2O2) system and is discussed in detail in the referenced RI/FS. In addition, Rockwell subsequently directed that the treatment plant be expanded to include ion exchange for metals and radioactive contaminant removal.

The Title I report included preliminary design of a ground water collection system, sumps and sump pumps, installation of a collection well, influent piping, modification of existing Building 830 (subsequently deleted from the project) to accommodate the treatment unit, erection of influent storage tanks, and an effluent re-injection system.

This Phase IIB, Title II report completes the design of the Phase IIB facilities and presents drawings and specifications suitable for bidding by qualified contractors.

01003 LOCATION OF WORK

The location of this work is the 881 Hillside area and is shown on the Area Plot Plan in the Drawings. This area lies immediately south and east of the Building 881 near the perimeter of the plant site. The collection gallery extends from a location south of Building 854 and along the South Interceptor Ditch to a location approximately 2,000 feet east. The influent and effluent pipelines will extend from the collection gallery to Building 891. The collection well will be located approximately 1,000 feet east of Building 881. The outfall of the Building 881 footing drain is located just south of Building 881. The truck loading dock will be located adjacent to Building 891.

01004 DESIGN CRITERIA

The Title II Design Document for Phase IIB construction conforms to all preliminary requirements as stated in the Preliminary Design Basis Document, June 1988, the RI/FS Volume I, March 1988, and the Design Criteria for Remedial Action 881 Hillside, Volume 3, May 1988. Several subsequent modifications to the preliminary design were made due to regulatory agency requirements and during further design of facilities. The Basis of Design Report for Ion Exchange System, December 1989, the Phase IB Title II Design Document, the Phase IIA Title II document and this Phase IIB Title II document incorporate these changes. The design information contained in this document is intended to meet the

requirements of the Design Criteria Manual for the Rocky Flats Plant (Vol. 1 and 2).

01005 WORK INCLUDED

Work covered in this Phase IIB, Title II Document includes:

- Construction of a ground water collection gallery with associated drain pipe, sumps, and pumps.
- Installation of influent piping from collection points to the Building 891 process treatment system.
- Installation and development of a ground water collection well.
- Construction of a collection system for water from the Building 881 foundation drain.
- Installation of effluent piping from Building 891 to a surface water discharge location.
- Construction of a truck loading dock and door aprons adjacent to Building 891.
- Installation of collection/delivery instrumentation and controls.
- Installation of electric power hookup and control center for Phase IIB equipment.
- Final site grading, landscaping, gravel driveways and parking areas, and site cleanup.

01006 REGULATORY COMPLIANCE

The contract specifications for construction are consistent with Federal Statutes, Regulations and Interpretative Rules, and specifically reference the Contractor's responsibilities to participate in components of the Remedial Action Process, as described in Superfund Remedial Design and Remedial Action Guidance, OSWER Directive 9355.0-4A, June 1986. Upon completion of construction the Contractor shall be required to participate in required activities including: the Prefinal Construction Conference, the Prefinal Inspection and Final Inspection and Certification.

The Buyer will provide a full time on-site inspector with expertise in federal construction projects and proceedings.