

TECHNICAL PROGRESS REPORT
HEALY CLEAN COAL PROJECT

DOE COOPERATIVE AGREEMENT
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FOR THE PERIOD
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JULY 1994

ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY

Prepared by

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SECTION 1 - SUMMARY

Please refer to Quarterly Technical Progress Report No. 1, January to June 1991 for the project background and objectives. This report covers April to June Phase II activities.

Environmental efforts during this quarter concentrated on supporting the Alaska Department of Environmental Conservation's (ADEC) issuance of the Final Prevention of Significant Deterioration (PSD)/Permit to Operate, preparation of post-construction Air Quality Monitoring and Visibility Monitoring Plans, preparation of a General Wastewater Discharge Permit Application for disposal of wastewater from on-site excavations, review of a PreDraft National Pollutant Discharge Elimination System (NPDES) Permit and Fact Sheet and discussions with the Environmental Protection Agency (EPA) and ADEC on NPDES Permit limitations, and preparation of a draft Storm Water Pollution Prevention Plan for HCCP construction. The Final PSD/Permit to Operate No. 9431-AA001 and Technical Analysis Report (TAR) was issued on May 12, 1994.

Finalization of engineering and design continued on the boiler, combustors, flue gas desulfurization (FGD), and turbine/generator systems and balance of plant.

Project management activities including contracting, financing, and DOE reporting continued.

SECTION 2 - INTRODUCTION

Please refer to quarterly Technical Progress Report No. 1, January to June, 1991.

SECTION 3 - PROJECT STATUS

The following status is for Phase II work from April to June 1994.

Project Management

The HCCP team participants and their primary roles include:

- Alaska Industrial Development and Export Authority (AIDEA) - Ownership, overall project management and financing.
- Golden Valley Electric Association, Inc. (GVEA) - Design input and review, operator and purchaser of the HCCP electrical output.
- Usibelli Coal Mine, Inc. (UCM) - Design input and review, coal supplier and ash disposal.
- TRW, Inc. (TRW) - Entrained combustion system technology supplier.
- Joy Technologies, Inc. (JOY) - Spray dryer, fabric filter and ash recycle system technology supplier.
- Stone & Webster Engineering Corporation (SWEC) - Architect/Engineer.

In addition Foster Wheeler Energy Corporation (FWEC) has been contracted for design, supply and erection of the boiler. Sumitomo Corporation of America (SCA) has been contracted for design, supply, and erection of the turbine/generator.

Negotiations were completed with FWEC on the Phase II addendum to their contract addressing the boiler and combustors erection.

The required monthly reporting under the terms of the Cooperative Agreement, Article XV, reporting requirements were fulfilled during this reporting period.

Permitting/NEPA Compliance

The Alaska Department of Environmental Conservation (ADEC) issued the Public Comment Draft Amended PSD/Permit to Operate and amended TAR for public comment on March 14, 1994. Participants provided comments on the Draft Amended PSD Permit and TAR to ADEC on April 7, 1994. Participants prepared responses to U.S. Department of the Interior and Trustees for Alaska comments on the Public Comment Draft Amended PSD Permit/Permit to Operate and amended TAR. The responses were transmitted to ADEC on April 25, 1994. Proposed modified conditions to the Amended PSD Permit/Permit to Operate were prepared to accommodate the Agreement to be signed with the Trustees for Alaska and transmitted to ADEC on April 29, 1994.

ADEC issued the Final PSD/Permit to Operate No. 9431-AA001 and TAR on May 12, 1994.

Post-construction preliminary draft Air Quality Monitoring and Visibility Monitoring Plans were prepared for Participant review. Agency Review Draft Air Quality Monitoring and Visibility Monitoring Plans were prepared and submitted to ADEC on May 31, 1994 for their information in preparation for a June 7-8, 1994 site visit to Healy. The purpose of the site visit was to establish monitor locations and confirm instrumentation siting for both monitoring plans. Subsequent to the site visit and meetings, final monitoring plans have been in preparation.

A General Wastewater Discharge Permit Application for disposal of construction wastewater from HCCP building foundation, circulating water pipelines, intake structure, discharge structure, and intake pond modifications was prepared and submitted to ADEC on May 25, 1994.

The PreDraft NPDES Permit and Fact Sheet received from EPA on April 30, 1994 were reviewed and Participant comments compiled for submittal to EPA on May 13, 1994. Meetings were held in Seattle with EPA and in Fairbanks with ADEC to discuss issues outlined in the May 13, 1994 GVEA comment letter. GVEA requested from ADEC certification of mixing zone dimensions and 15 °C water quality criteria compliance temperature for the HCCP and Unit No. 1 combined discharges from Outfalls 001 and 002. Telephone conferences were held with ADEC, EPA, ADF&G, and GVEA to persuade ADEC to certify and EPA to permit acceptable mixing zone dimensions and 15 °C water quality criteria compliance temperature for the HCCP and Unit No. 1 combined discharges from Outfalls 001 and 002. ADEC issued a draft certification on June 30, 1994. EPA is expected to issue a public review draft NPDES Permit during July 1994.

A draft Storm Water Pollution Prevention Plan for HCCP construction required by NPDES Permit No. AKR10A066 was prepared for Participant review.

Engineering

TRW continued final engineering and design efforts on the combustors and coal feed system.

FWEC continued final engineering and design of the boiler and related auxiliary equipment.

Joy continued final engineering and design on the spray dryer absorber and ash recycle system.

SCA continued final engineering and design on the turbine generator.

Balance of plant design continued during this reporting period. The civil, structural, architectural, general arrangements, facility drawings, piping and instrumentation diagrams, electrical physical and one-line diagrams have been issued for construction. Efforts to construction issue the remaining mechanical and electrical drawings continued.

The General Construction specifications and documents are ready for bid issue. This contract has not been issued for bids pending further permitting progress. Also, no fabrication releases have been given on any equipment procurements pending permitting progress. The current schedule is to issue the General Construction Contract for bids on August 1, 1994 and begin equipment fabrication releases in July, 1994.

SECTION 4 PLANS FOR NEXT QUARTER (JULY- SEPTEMBER 1994)

The following highlights activities planned for next quarter:

Environmental

- Continue preparation of the draft Air Quality Monitoring Plan and draft Visibility Monitoring Plan.
- EPA to issue a public review draft NPDES Permit.
- Continue preparation of a draft Storm Water Pollution Prevention Plan for HCCP construction.
- Continue tracking of environmental permit applications in processing by federal and state agencies.

TRW

- Complete final engineering for the Combustor and Coal Feed Systems.
- Begin fabrication phase of contract.

FWEC

- Complete final engineering and design efforts for the boiler system.
- Begin fabrication phase of contract.

Joy

- Complete final engineering and design efforts on the spray dryer absorber and ash recycle system.

SCA

- Complete final engineering efforts on the turbine, turbine auxiliary and piping, generator, embedded materials, electrical equipment and instrumentation

SWEC

- Continue finalization of balance of plant engineering and design.
- Update construction drawings based on receipt of late vendor information.
- Issue the General Construction Contract for bids.