DOE/ET/10815--T74

MR-10815-178

**CONTRACT STATUS REPORT
FOR
MHD RESEARCH AND DEVELOPMENT
AND
OPERATION OF THE MHD
COAL FIRED FLOW FACILITY**

For The Month Ending

June 30, 1995

Work Performed Under Contract No. DE-AC02-79ET10815

**Prepared by
The University of Tennessee
Space Institute
Energy Conversion Research & Development Programs**

For

The United States Department of Energy

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PROJECT STATUS REPORT

1. **CONTRACT OBJECTIVE** - No change since last report.
2. **TECHNICAL APPROACH CHANGES** - None
3. **CONTRACT TASKS** - In this report, UTSI reports on the status/progress by program tasks identified in Chapter 3 (Work Plan) of the draft Contract Management Plan for the FY95 period, which was submitted to DOE February 17, 1995.

TASK I - CONTRACT MANAGEMENT AND CLOSEOUT

The 33rd Symposium on Engineering Aspects of Magnetohydrodynamics hosted by UTSI and ERC, Inc. was held June 12-15, 1995.

In response to a DOE/PETC letter of 5/23/95, work continued on the development of a contract proposal package for "UTSI/CFFF MHD Program Completion and Related Activity."

The contract status report for May 1995 was issued to DOE.

Personnel staffing for the month was 20.2 equivalent full-time (EFT) personnel versus a planned level of 26.3 EFT.

TASK II - FACILITY AND PROPERTY DISPOSITION

Facility activities this month were confined to the continuation of preventative maintenance and repairs required to maintain the Coal-Fired Flow Facility (CFFF) in a standby condition.

The reconditioning of the CFFF process water cooling tower continued. An interior protective polyurethane coating was applied on the bottom of each cooling tower quadrant.

Semi-annual maintenance on the fire protection system was initiated.

Control of government property and the maintenance of records were continuing.

TASK III - DATA REPORTING AND ARCHIVING

Preparation of topical reports pertaining to the MHD POC test program continued.

Measurements and evaluations of corrosion from superheater test module tube samples from test section 1 and 2 were completed and preparation of a topical report on the findings is underway.

All data and documentation developed thus far on the MHD/CFFF project and identified for archiving are continuing to be maintained for archiving storage.

TASK IV - SITE ENVIRONMENTAL COMPLIANCE AND REMEDIATION

Under a subcontract for the first round of groundwater samples which will be used as a screening technique to verify what parameters must be analyzed in the other six wells that will be installed. This technique will save funds by eliminating all groundwater pollutants except those detected above drinking water standards.

Groundwater compliance monitoring work has basically come to a halt due to severe funding limitations.

Monitoring of the holding pond effluent continued in order to comply with the UTSI water discharge permit. Water is checked for pH, temperature, flow rate, oil and grease content, total dissolved solids, and total suspended solids. All parameters continue to be measured by the UTSI chemistry lab. Any changes in CFFF operation might require monitoring of additional parameters.

4. OPEN ITEMS

A. DOE: The following reports/documents were in DOE review for comments and/or approval as of June 30, 1995.

FY1995 Management Plan

UTSI ltr 02/17/95

B. UTSI: The following actions were in process or preparation as of June 30, 1995.

Superheater/Air Heater Tube Corrosion Studies

Est. Completion 09/30/95

NO_x Formation and Control, Topical Report

Est. Completion 07/30/95

Western Coal Processing System, Topical Report

Est. Completion 07/30/95

Western Coal 1,000 Hr POC & Final Summary Report

Est. Completion 07/30/95

5. SUMMARY STATUS ASSESSMENT AND FORECAST

The CFFF continues in standby condition as preventive maintenance and repairs are accomplished as needed.

Efforts on the preparation of topical reports continued. Work has been extended on these reports due to limited manpower resources available.

Milestone Schedule and Status Report

1. Contract Identification OPERATION OF THE COAL-FIRED FLOW FACILITY	2. Reporting Period June 1, 1995 - June 30, 1995	3. Contract Number DE - AC02 - 79ET10815
4. Contractor: Name, Address THE UNIVERSITY OF TENNESSEE SPACE INSTITUTE TULLAHOMA, TENNESSEE 37388	5. Contract Start Date 10 - 01 - 78	6. Contract Completion Date September 30, 1995

7. T A S K	Reporting Category - Contract Line Item or Work Breakdown Structure Element	FY 95												FY95 Costs*	
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Accrued	EAC**
I	Contract Management and Close Out		B▼	B▼	B▼C▼	A▼ B▼	B▼	B▼C▼	B▼	B▼	B▼ C▼	B▼	B▼	180	290
II	Facility and Property Disposition		A▼	B▼ C▼										456	250
III	Data Reporting and Archiving		A▼			B▼	C▼	D▼E▼	F▼					463	860
IV	Site Environmental Compliance and Remediation	C▼	C▼	C▼	C▼	C▼	A▼ C▼	C▼	B▼ C▼	C▼	D▼E▼F▼	C▼	C▼	304	600
						A♦					B♦				
Total Costs:														1403	2000

11. Remarks: *Costs Appear in Thousands based on MIS Reporting System, and are cumulative for the FY'95 Program. **EAC - Estimate at Completion of September 30, 1995.		▼ PLANNED ▼ COMPLETED ♦ RESCHEDULED
12. Signature of Contractor's Project Manager & Date <div style="text-align: center;"> 7/18/98 </div>	13. Signature of Government Representative & Date <div style="text-align: center;"> _____ </div>	

MILESTONE LOG

I.D. NO.	DESCRIPTION	ACTUAL COMPLETION DATE	PLANNED COMPLETION DATE	EXPECTED COMPLETION DATE	COMMENTS
I A	Issue Management Plan for FY95	Feb 95	Feb 95		Completed
I B	Issue Monthly Reports	Apr 95	As Indicated		Completed April '95 report
I C	Issue Quarterly Reports	Apr 95	As Indicated		Completed Jan-Mar 95 report
TASK II - FACILITY & PROPERTY DISPOSITION					
II A	Semi-Annual Government-Owned Property Report	Oct 94	Oct 94		Completed
II B	Complete all Engineering Drawings	Dec 94	Dec 94		All drawings completed/updated
II C	Annual Government Property Inventory	Dec 94	Dec 94		Completed
TASK III - DATA REPORTING & ARCHIVING					
III A	Identify Data for Archiving	Nov 94	Nov 94		Completed
III B	Prepare data/documentation for archiving	Feb 95	Feb 95		Completed
III C	Issue Superheater/Air Heater Tube Corrosion Studies		Mar 95	Sep 95	
III D	Issue Topical Report - Western Coal Processing System		Apr 95	Jul 95	Limited resources
III E	Issue Topical Report - NO _x /SO _x Formation & Control		Apr 95	Jul 95	Limited resources
III F	Issue Western Coal 1000 Hr POC & Final Program Summary Report		May 95	Jul 95	Limited resources
TASK IV - SITE ENVIRONMENTAL COMPLIANCE & REMEDIATION					
IV A	Complete Removal of Asbestos in the CFFF Cooling Tower	Feb 95	Mar 95		Completed
IV B	Install additional groundwater wells for monitoring		May 95	Jul 95	Postponed due to analytical screening
IV C	Issue Monthly Water Discharge Monitoring Reports		As Indicated		

PRELIMINARY

1. Contract Identification Operation of the MHD Coal-Fired Flow Facility				2. Reporting Period June 1 through June 30, 1995				3. Contract Number DE-AC02-79ET10815								
4. Contractor (Name and Address) The University of Tennessee Space Institute B. H. Goethert Parkway Tullahoma, Tennessee 37388-8897				5. Cost Plan Date February 1995				6. Contract Start Date October 1, 1978								
								7. Contract Completion Date September 30, 1995								
8. Government Funding \$105,842,540.00		9. Contractor Funding -0-		10. Number of Invoices Billed Letter of Credit		11. Frequency N/A		12. Number of Invoices Paid N/A		13. Total Invoice Amounts Billed \$105,524,827.79		14. Total Payment Received				
15. Identification Number		16. Reporting Category (e.g., contract line item or work breakdown structure element)		17. Accrued Cost Cash Basis**				18. Estimated Accrued Costs			19. Total Contract Value		20. Variance		21. Unfilled Orders Outstanding	
				During Reporting Period		Cumulative to Date		a. Subsequent Reporting Period		b. Balance of Fiscal Year		c. Total*** Contract				
				a. Actual	b. Planned	c. Actual	d. Planned	Jul 95		thru 9/30/95						
		DIRECT LABOR		116,124.77	110	54,087,528.87	54,167	102	222	54,515	54,170				104	
		FRINGE BENEFITS		26,610.52	26	10,768,708.89	10,791	25	54	10,875	10,792				27	
		EQUIPMENT		175.00	0	6,038,121.54	6,038	0	0	6,038	6,038				0	
		EXPENDABLE MATERIAL		6,924.41	6	9,589,968.32	9,710	6	12	9,644	9,710				36	
		OUTSIDE CONTRACTS		28,457.99	8	7,446,295.74	7,484	5	12	7,469	7,485				6	
		TRAVEL		270.00	1	1,018,734.94	1,023	1	3	1,023	1,023				0	
		COMPUTER USAGE		212.26	0	2,127,940.87	2,129	0	0	2,128	2,129				0	
		TOTAL DIRECT COSTS		178,774.95	151	91,077,299.17	91,342	139	303	91,692	91,347				173	
		OVERHEAD *		29,771.99	26	14,447,528.62	14,494	24	53	14,555	14,495				30	
		GRAND TOTAL		208,546.94	177	105,524,827.79	105,836	163	356	106,247	105,842				203	
B&R		AA701030		0	0	65,787,381.00	65,787	0	0	65,787	65,787				0	
B&R		AA701035		0	0	516,868.00	517	0	0	517	517				0	
B&R		AA701010		0	0	9,187,000.00	9,187	0	0	9,187	9,187				0	
B&R		AA701020		0	0	179,000.00	179	0	0	179	179				0	
B&R		AA7010105		0	0	26,425,000.00	26,425	0	0	26,425	26,425				0	
B&R		AA7010251		0	0	2,000,000.00	2,000	0	0	2,000	2,000				0	
B&R		AW01		0	0	65,000.00	65	0	0	65	65				0	
B&R		AW02		0	0	195,000.00	195	0	0	195	195				0	
B&R		AW05		208,546.94	177	1,169,578.79	1,481	163	356	1,892	1,487				203	
23. REMARKS: * Overhead rate effective 7/1/94 is 18% of TDC less capital equipment, outside contracts over \$25,000, and GRA maintenance fees. ** Actual costs are on cash basis and do not include outstanding costs listed in column 21. *** Includes orders outstanding costs listed in column 21.																
THIS IS A PRELIMINARY REPORT PENDING FINAL CERTIFICATION OF COSTS BY THE CONTROLLER'S OFFICE FOR THE UNIVERSITY'S ACCOUNTING YEAR ENDING JUNE 30, 1995.																
24. Dollars Expressed In: THOUSANDS																
25. Signature of Contractor's Project Manager and Date J. W. Muehlhauser, PhD, Administrator				26. Signature of Contractor's Authorized Financial Representative & Date				27. Signature of Government Technical Representative and Date								

[illegible]