AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

1 of 1

2

DOE/PC/89908--T.31
3
MR-1

DATE 04 1993

TECHNICAL PROGRESS REPORT NO. 29

MARCH 1993

ENGINEERING DESIGN AND ANALYSIS OF ADVANCED PHYSICAL FINE COAL CLEANING TECHNOLOGIES

for

U.S. DEPARTMENT OF ENERGY
PITTSBURGH ENERGY TECHNOLOGY CENTER
PITTSBURGH, PA

CONTRACT NO. DE-AC22-89PC89908

SUBMITTED BY

P.W. GALLIER
PROJECT MANAGER

ASPEN TECHNOLOGY, INC.
TEN CANAL PARK
CAMBRIDGE, MA 02141

APRIL 20, 1993

MASTER

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

I. SUMMARY OF IMPORTANT RESULTS FROM PREVIOUS REPORTING PERIOD

Due to the fact that work was slowed down on the project, there were no major items to be reported.

II. SUMMARY OF WORK PLAN FOR THIS PERIOD

The work plan for this period was to continue progress towards the completion of the project and the delivery of CCS with ModelManager to DOE.

III. SUMMARY OF RESULTS FOR CURRENT PERIOD

Coal Cleaning Simulator Developments

New Implementations. Work was begun for allowing input washability mixing in CCS. For the specification of coal washability, the user has the option of retrieving a coal from the Coal Property Databank, or of entering the complete coal washability matrix using component attributes. The CCS washability routines were modified to allow mixing of multiple washability coals, or of databank coals with user input washability. This would provide the user with greater flexibility in specifying this information. In light of latest development in the project and due to the fact that the remaining work had to be prioritized, it was decided that this capability was not critical and would not be made available for the first CCS version to be delivered to DOE.

The stream molecular weight calculations in CCS UOS models were modified. In the previous work period, modifications were made to allow the specification of multiple conventional components, such as water plus solvents, in the flowsheet feed streams. The UOS models output stream calculations had to be modified to ensure the correct calculation of output stream mixture molecular weight.

ModelManager Interface. The CCS ModelManager Interface was updated with the addition of new on-line help and prompts, and the addition of new limit checks on UOS model input parameters.

Documentation. The CCS User Guide was updated with the addition of a special appendix for equipment costing. A draft equipment costing manual is available for CCS. It was decided that efforts were to be focused on completing the main User Guide, therefore this manual will not be delivered. The necessary information for costing the CCS models was included in an appendix to the main User Guide.

Testing. Testing of CCS with ModelManager continued during the work period.

Administrative Issues

Upon being informed that some DCAA adjustments would be made to previous project expenditures, it was found that the project budget was already exceeded. Subcontractors to AspenTech were notified to stop their work as of March 15, 1993.

IV. COMPARISON OF RESULTS WITH PLAN

The necessary steps are being taken to deliver the Coal Cleaning Simulator with a full range of capabilities by the completion date of June 30, 1993 given in the revised project work plan.

V. SUMMARY OF SIGNIFICANT FINDINGS AND RESULTS FOR CURRENT PERIOD

- Changes to the simulator input washability mixing were started.
- Modifications were made to the UOS models output stream mixture molecular weight calculations.
- Updates were made to the CCS ModelManager Interface.
- Updates were made to the CCS User Guide with the addition of an equipment costing appendix. This appendix replaces the Costing Manual which was to be delivered.

VI. WORK PLAN FOR NEXT REPORTING PERIOD

- Continue progress towards the completion of the project and the delivery of CCS to DOE.
- Prepare for the PETC training course.

**DATE
FILMED**

8 / 20 / 93

END