

11. Description of Attachments. Form EIA-459E, Technical Progress Report.

MONTHLY TECHNICAL PROGRESS REPORT

DOE CONTRACT: DE-FC21-95MC31184--35

TITLE: MCFC Product Design Improvement

DATE: April 2000

INTRODUCTION

This contract is supported by DOE and DOD/DARPA funds. The objective of the DOE program is to advance the direct carbonate fuel cell technology to a level suitable for commercial entry. The specific objectives of the DOD's initiative on 2 MW Fuel Cell Fixed Base Power Plant are:

A. To provide a detailed engineering design, development and cost estimate of the 2 MW fuel cell fixed base dual fuel power plant for DOD applications. Installation and operational support systems will also be developed.

B. To construct a full-size MW-class dual fuel power plant simulator.

These objectives are planned to be achieved in the program coordinated with the Department of Energy, which has been funding a multiyear natural gas fueled direct fuel cell power plant program (DE-FC21-95MC31184) for civilian applications. Because many DARPA and DOE objectives are similar, the coordinated program activities are considered the most cost-effective for accomplishment of the program objectives. The DARPA/DOE joint program was launched in 1994. The DOE part of the program is expected to continue to Year 2000. The final output of this DOE program is to construct and operate a 2 MW power plant on an East Coast site. The site will be accessible to DOD energy/environmental systems base planners and logistics personnel as well as mission and policy planners to refine deployment configurations of this new power generation system for fixed base applications.

A dual fuel fixed base design for military fuels operation, as well as support system logistics, will be the key deliverables for the DARPA part of the program. The DARPA-sponsored program accomplishments are printed in italics in this technical progress report and identified by an encircled "A" at the right hand margin.

TASK 1 NEPA INFORMATION. This task is designed to develop environmental information for NEPA review. The NEPA review was