GA-A23811

GT-MHR COMMERCIALIZATION STUDY

Technical Progress and Cost Management Report for the Period
June 1 through June 30, 2003

by
GT-MHR Staff

Contact: A. S. Shenoy

Prepared under
Oakland Operations Office
Program DE-AC03-01SF22343
for the U.S. Department of Energy

General Atomics Project No. 30103
DATE PUBLISHED: July 2003

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**GT-MHR Commercialization Study
Monthly Technical Progress and Cost Management Report
for June 2003**

Contract No. DE-AC03-01SF22343
Submitted to: DOE - Oakland Operations Office
By: General Atomics

PART 1 – Technical Progress

Summary

- Petten was provided with irradiation dimensional change data for both fuel compacts and H-451 graphite for design of the graphite sleeves that hold the fuel compacts to be irradiated in HFR-EU2.
- The Fuel Sample Product Specification for the Fuel Performance Irradiation Test Capsule MHR-2 was completed and approved.
- A Work Breakdown Structure was prepared for the development and qualification of advanced coated-particle fuels capable of meeting anticipated fuel performance requirements and work was initiated on preparation of schedules and a cost estimates for the test matrices.

Task 1 – Fuel Irradiation

A letter was sent to Petten providing them with irradiation dimensional change data for both fuel compacts and H-451 graphite so that they can design the graphite sleeves that hold the fuel compacts to be irradiated in HFR-EU2 test (previously called MHR-1).

Several discussions were held with DOE-HQ and DOE-OAK on the need to fund HFR-EU2 beyond FY-2003.

Task 2 – Fuel Manufacturing Process Improvement

This task has been completed.

Task 3 – NRC Interaction

This task is not currently funded.

Task 4 – Plant Cost Evaluation

This task has been completed.

Task 5 – Waste Disposal Assessment

This task has been completed.

Task 6 – Project Management and Project Development

This task covers all of the commercialization study project management and project development activities. During June, routine reviews of project activities were performed and the monthly report for May was prepared.

Task 7 – DOE Fuel Plan

This task has been completed.

Task 8 – MHR-2 Fuel Specification

The Fuel Sample Product Specification for the Fuel Performance Irradiation Test Capsule MHR-2 was completed and approved. This task is now complete.

Task 9 – This task number not currently used

Task 10 – Advanced Fuel Studies

A Work Breakdown Structure was prepared for the development and qualification of advanced coated-particle fuels work being planned. Schedules and a cost estimates are being prepared for the test matrices (principally capsule irradiation tests, postirradiation examinations, and postirradiation heating tests) which were described last month. These test matrices, schedules and cost estimates constitute the "Plan for Screening Irradiations" which should be complete by July 31, 2003.

Task 11 – VHTR Materials Survey

This task has been completed.

Part 2 - Cost Management

Item	Total Expenditures, K\$	
	June 2003	Inception to Date ¹ , Totals
Task 1 – MHR-1 Fuel Irradiation	3.6	148.1
Task 2 – Fuel Manufacturing Process Improvement	0.0	204.0
Task 3 – NRC Interaction	0.0	143.8
Task 4 – Plant Cost Evaluation	0.0	87.3
Task 5 – Waste Disposal Assessment	0.0	103.2
Task 6 – Project Management and Development	0.4	139.6
Task 7 – DOE Fuel Plan	0.0	140.6
Task 8 – MHR-2 Fuel Specification	7.0	54.5
Task 10 – Advanced Fuel Plan	25.6	130.8
Task 11 – VHTR Materials Survey	0.0	22.8
Totals	31.4	1,174.7

Note:

1. Work started July 18, 2001.