

A

PMC-FF2a

(20102)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: Massachusetts Institute of Technology

STATE: MA

PROJECT TITLE : DECISION ANALYSIS FOR ENHANCED GEOTHERMAL SYSTEMS

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|--|--------------------------------------|----------------------------|-------------------|
| 81.087 | DE-EE0002743 | GFO-10-111 | GO2743 |

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

Rational for determination:

Massachusetts Institute of Technology (MIT) would develop a modeling system for Enhanced Geothermal Systems (EGS). The project would produce an analysis tool, with which the uncertainties associated with exploration for, as well as development and operation of enhanced geothermal systems can be assessed in terms of distribution of cost and time. The project would be divided into seven tasks:

- Task 1.0 Fracture Pattern Model for EGS
- Task 2.0 Drill Cost and Time Model Considering Uncertainties
- Task 3.0 Circulation Model for EGS
- Task 4.0 Subsurface Time/Cost Model
- Task 5.0 Exploration Decision Model for EGS
- Task 6.0 Complete Systems Model
- Task 7.0 Project Management and Reporting

MIT claims no additional permits are needed and there would be no generation of air emissions, hazardous and/or toxic waste associated with this work. All work would be done using computer models.

This proposal comprises data analysis and actions to promote the research and development of more efficient geothermal technologies; therefore this project is categorized as CX A9.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.