



U.S. Department of Energy Categorical Exclusion Determination Form



Program or Field Office: Office of Energy Efficiency and Renewable Energy:
Phase III Xlerator Program

Funding Opportunity Number DE-FOA-0000397

Applicant Name: Analysis and Measurement Services Corp (2)

Location: Knoxville, TN

Project Title Online Monitoring Implementation in Boiling Water
Reactors

Proposed Action or Project Description American Recovery and Reinvestment Act:

Analysis and Measurement Services Corporation proposes to develop and commercialize an on-line condition monitoring system for Boiling Water Reactors (BWRs). An online monitoring (OLM) system was developed in Phase I and Phase II projects for pressurized water reactors (PWRs). It helps measure the performance of PWR equipment and monitors the health of the plant. In Phase III, the system would be adapted to boiling water reactors (BWRs) through a research and development (R&D) effort involving analytical work, laboratory measurements, and in-plant demonstrations. From an OLM point of view, BWRs are more complex than PWRs because of in-situ boiling in the core, two phase flow, and different types of sensors. Therefore, a comprehensive R&D effort is needed to adapt the existing OLM technologies to BWRs. This R&D would be done in Phase III and a commercial version of the OLM system would be developed and marketed to all BWR and PWR plants in the U.S. and abroad. The term on-line monitoring refers to the process of measuring the output of existing sensors remotely in an active plant and correlating the data to the condition of the equipment, material, or process from which the measurement originated. To date, almost all OLM developments have been directed towards PWRs, presumably because there are more PWRs in the world than BWRs (PWR-264 versus BWR-94). However, BWR plants stand to benefit much more from OLM technologies than PWRs. For example, many of the important BWR equipment are in the radiation areas of the plant and can benefit greatly from remote monitoring that is offered by OLM.

Conditions: None

Categorical Exclusion(s) Applied: B3.6, B5.1

*-For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, see Subpart D of 10 CFR 10 21

This action would not: threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders; require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities; disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or adversely affect environmentally sensitive resources (including but not limited to those listed in paragraph B.(4)) of Appendix B to Subpart D of 10 CFR 1021). Furthermore, there are no extraordinary circumstances related to this action that may affect the significance of the environmental effects of the action; this action is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

ORO NEPA Compliance Officer

James L. Elmore

Date Determined:

9/17/2010