

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: Enhancement of the Extraction of Uranium from Seawater – University of Maryland

SECTION B. Project Description

The University of Maryland proposes to identify and characterize ligands that will have advantageous properties with respect to capacity and selectivity for recovery of uranium from seawater, amenability to grafting onto polymeric supports from “green” aqueous media without for post-grafting reactions such as amidoximation, and high multi-cycle regenerability without significant loss of capacity for uranium adsorption.

SECTION C. Environmental Aspects / Potential Sources of Impact

Radioactive Material Use – Involves only Cobalt-60 in the form of sealed sources in a shielded gamma irradiation facility. Sources are not handled directly by personnel and no radioactive waste is generated. The safe operation of the Cobalt-60 irradiator adheres to all applicable regulations, licenses, policies, and procedures.

SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B; give the appropriate justification, and the approval date.

Note: For Categorical Exclusions (CXs) the proposed action must not: 1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) 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; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not “connected” nor “related” (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

References: B3.6 Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial development.

Justification: The activity consists of university-scale research aimed at investigating extraction of uranium from seawater.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jason Sturm, DOE-ID Deputy NEPA Compliance Officer on 06/09/2015