

<b><u>U.S. DEPARTMENT OF COMMERCE</u></b> Bureau of Industry and Security <b><u>U.S. NUCLEAR REGULATORY COMMISSION</u></b> Office of Nuclear Materials Safety and Safeguards		Date Received (Leave Blank)
<b>ADDITIONAL PROTOCOL REPORT</b>		
<b>FORM AP-4: NUCLEAR FUEL CYCLE-RELATED RESEARCH &amp; DEVELOPMENT (NOT INVOLVING NUCLEAR MATERIAL) WITHOUT U.S. GOVERNMENT INVOLVMENT</b>		
Submit a separate form for each R&D project at your site that is <u>not</u> funded, specifically authorized or controlled by, or carried out on behalf of the government of the United States.		
4.1	Reporting Code (once assigned):	
4.2	Project Number or ID:	
4.3	Project Title:	
4.4	Activity Reporting Status <input type="checkbox"/> New activity <input type="checkbox"/> Activity with no changes <input type="checkbox"/> Activity with changes <input type="checkbox"/> Ceased Activity	
4.5	Identify building name(s)/number(s) and any additional information that more precisely defines where the reported activity occurs(e.g. room numbers):	
4.6	Project Time Line: Start Date: _____ (Estimated) End Date: _____	
4.7	<b>Project Category (Fuel Cycle Stage):</b> <input type="checkbox"/> Enrichment of Nuclear Materials: <input type="checkbox"/> Aerodynamic <input type="checkbox"/> Chemical/Ion Exchange <input type="checkbox"/> Electromagnetic <input type="checkbox"/> Gas Centrifuge <input type="checkbox"/> Gaseous Diffusion <input type="checkbox"/> Laser <input type="checkbox"/> Plasma Separation <input type="checkbox"/> Other: _____ <input type="checkbox"/> Reprocessing of Nuclear Fuel <input type="checkbox"/> Processing of Intermediate or High-Level Waste Containing Pu, U-233 or HEU	
4.8	<b>Project Level (Check only one box):</b> <input type="checkbox"/> Theoretical Analysis <input type="checkbox"/> Experiment <input type="checkbox"/> Conceptual Design <input type="checkbox"/> Proof of Concept <input type="checkbox"/> Demonstration <input type="checkbox"/> Feasibility Study <input type="checkbox"/> Prototype	
4.9	Briefly Describe the R&D Activities:	



## **FORM AP-4: Nuclear Fuel Cycle-Related R&D (Not Involving Nuclear Material) Without U.S. Government Involvement**

Reporting requirements are set forth in 15 CFR Part 783 of the U.S. Department of Commerce (DOC) Regulations and 10 CFR Parts 75 and 110 of the U.S. Nuclear Regulatory Commission (NRC) Regulations.

### **INSTRUCTIONS:**

Submit a separate Form AP-4 for each reportable nuclear fuel cycle-related R&D activity not involving nuclear material at your location that is **not** funded by, authorized by, controlled by, or carried out on behalf of the U.S. Government. Reportable R&D activities include those related to enrichment of nuclear materials, reprocessing of nuclear fuel, and processing of intermediate or high-level waste containing Pu, U-233 or HEU, that extend knowledge resulting from theoretical or basic scientific research into a nuclear fuel cycle-related application. Reportable R&D activities do not include theoretical or basic scientific research; industrial radioisotope applications; medical, hydrological, and agricultural applications; health and environmental effects; or improved maintenance.

**Question 4.1 Reporting Code:** A unique reporting code will be assigned and reported to each location by BIS once an Initial Report has been submitted. The Reporting Code must appear on all future forms pertaining to the location after it is assigned.

**Questions 4.2 and 4.3 Project Number or ID and Project Title:** Provide the R&D project number or ID assigned by the project sponsor or organization conducting the activity, and the R&D project title.

**Question 4.4 Activity Reporting Status:** Indicate the current reporting status by checking the appropriate box (i.e., “New Activity” to report an activity for the first time, “Activity with changes” or “Activity with no changes” if a report for this activity was previously submitted, or “Ceased Activity” for an activity that ended during the reporting year and will not be reported in future years). If the information previously reported for this specific activity has not changed, you are not required to complete the rest of the form, instead check the “Activity with no changes” box and submit along with

Forms AP-1, AP-2 and any other required activity forms.

**Question 4.5 Place Where Activity Take Place:** Identify building name(s)/number(s) and any additional information that more precisely defines where the activity occurs (e.g. room numbers). If many rooms are used, you may describe areas within the building (e.g. 1<sup>st</sup> floor of the north wing).

**Question 4.6 Project Time Line:** Provide start and projected end dates for this project.

**Question 4.7 Project Category (Fuel Cycle Stage):** Indicate the appropriate fuel cycle stage category and, if applicable, sub-category pertaining to this particular project by checking the appropriate box. Each fuel cycle stage category and subcategory identifies reportable R&D activities. If there is a question about whether or not certain information is reportable, contact BIS or NRC for clarification.

**Question 4.8 Project Level:** Indicate the project level that best describes the stage of development of the technology in the R&D project by checking the appropriate box.

**Question 4.9 Description of R&D Activities:** Briefly describe the work that is being performed (e.g. design and testing of an induction-coil nuclear fuel pellet sintering oven). Where the work is part of a larger program, please identify that larger program.

**Question 4.10 Project Objective:** Briefly describe the objective of the R&D project in the space provided (e.g., design of a sintering oven that meets a variety of specified temperature control requirements).

**FORM AP-4 Nuclear Fuel Cycle-Related Research and Development (Not Involving Nuclear Material) without U.S. Government Involvement (Continued)**

**Questions 4.11.x Non-U.S. Government Sponsors:** Provide the name and address of all non-U.S. Government sponsors and collaborators (both foreign and domestic) of the program, including any foreign governments or organizations. If this location is wholly or partially owned by a foreign organization, that foreign organization should also be listed. If this R&D project is funded by, authorized by, controlled by, or carried out on behalf of the U.S. Government, use Form AP-3 to report this project instead of this form (Form AP-4). Use Form AP-16 as a continuation form for additional

non-U.S. Government sponsors and collaborators.

**Question 4.12 NRC License:** Check the box if this activity occurs within a location subject to a NRC or a NRC Agreement State license or is otherwise subject to inspection under NRC Regulations (10 CFR).

**Question 4.13 Continuation Form:** Check this box if a Continuation Form, Form AP-16, has been used to provide additional information for any of the questions on Form AP-4.