



## ENCLOSURE 2

### Basis for Submittal of the QAPD as a Topical Report

The submittal of the Atomic Alchemy QAPD as a Topical Report (TR) takes exception to the NRC LIC-500, Basic Requirements 4.2, Criteria B for submittal of a TR based on the following:

#### Public Interest

Atomic Alchemy intends to design, procure, construct, and operate a Non-Power Production or Utilization Facility (NPUF) that will result in a domestic supply of  $^{99}\text{Mo}$ . Deployment of NPUF will accomplish three significant objectives that are considered national priorities and of great interest and concern to the public.

First, it will help alleviate  $^{99}\text{Tc}$  (diagnostic isotope resulting from  $^{99}\text{Mo}$  supply) supply crisis that has resulted from operational interruptions at current international reactors that produce  $^{99}\text{Mo}$ ; second, it will result in a long-term domestic supply of  $^{99}\text{Mo}$  to reduce the U.S. dependency on foreign suppliers; and third, it will result in a  $^{99}\text{Mo}$  supply that does not rely on the use of highly enriched uranium.

#### Precedent

The NRC has accepted other similar QAPD topical reports for similarly designed facilities, e.g. B&W Medical Isotope Production System (MIPS) submittal of Quality Assurance Program Description (QAPD) Topical Report dated 6/4/2010.

#### Increase Efficiency

The prior approval of the Atomic Alchemy QAPD will facilitate increase efficiency of the review of the Atomic Alchemy construction application and PSAR Submittal under 10 CFR Part 50. The application of the Quality Assurance Program Description (QAPD) to the preliminary design is extremely important to providing appropriate quality to the safety-related aspects of the design.

An early NRC review and approval of these concepts will result in a greater degree of regulatory certainty and will ensure that the construction application review process can proceed in an efficient and timely manner with alignment to the quality program.