MEMORANDUM OF UNDERSTANDING

between

LAWRENCE LIVERMORE NATIONAL LABORATORY

and

OSAKA UNIVERSITY

Lawrence Livermore National Laboratory¹ (LLNL) and Osaka University (OU), hereafter referred to as the Participants, agree to conclude the following Memorandum of Understanding (MOU). The purpose of this MOU is for the Participants to conduct academic exchange in mutually agreed areas of basic science and technology consistent with the 1988 US-Japan Agreement on Science and Technology, US Policy and Japan's 5th Science and Technology Basic Plan.

Academic exchange conducted within the scope of this MOU will be targeted toward new scientific knowledge acquisition and results will be made publicly available consistent with each Participant's internal policies. Programmatic work performed under this MOU shall be managed separately from stockpile stewardship and other defense related activities.

Article 1

Both Participants intend to promote the following activities so as to enhance their education and academic research in the necessary fields:

- (1) Activities such as collaborative research, lectures, symposiums, etc., and the exchange of researchers pertaining thereto;
- (2) The exchange of information and materials in those fields, which are of interest to both Participants.

Article 2

Specific matters pertaining to the implementation of the exchanges between both Participants shall be negotiated and agreed upon between those concerned in each specific case and will be stipulated in writing. **Article 3**

Both Participants intend to resolve any matters arising from activities between them amicably.

Article 4

This MOU begins on the date of its signing by the representatives of both Participants and shall continue for five years.

Article 5

This MOU is subject to revisions by mutual written consent.

Article 6

Either Participant may withdraw from this MOU by giving six months' written notice to the other Participant. However, the withdrawal of this MOU shall not affect the completion of ongoing activities.

Article 7

In the absence of any such early withdrawal, the renewal of this MOU shall be discussed by both Participants at least 6 months prior to the natural expiration of the current MOU.

Article 8

This MOU is to be executed in English and each Participant shall retain an original copy.

Date: April 10, 2017

William H. Goldstein

Director

Lawrence Livermore National Laboratory

Livermore, California USA

Shojiro Nishio

President

Osaka University

Osaka, Japan

¹ Lawrence Livermore National Laboratory is managed and operated by Lawrence Livermore National Security LLC for the Department of Energy's National Nuclear Security Administration.