

IAA Study Group Status Report

Responsible Commission: IAA Commission 3 - Space Technology & System Development

Study Number and Title: Study Group 3.21, Space Disposal of Radioactive Waste

Short Study Description (repeat from Study Group Proposal):

Analysis of ecological situation on the Earth related to the increasing volume of waste from nuclear power plants (NPP), shows that the issue of processing and safe management of spent nuclear fuel and radioactive waste (RW) will be increasingly serious for mankind in near future.

Traditional approach of resolving the issue of RW storage is burial of the RW in stable geological formations, but it has certain major limitations: *first*, the approach proved to be very costly; *second*, it does not guarantee safe storage since any place on the Earth can not be stable in the course of many thousands of years. In addition, irrespectively of the way of processing the used nuclear fuel, small volume of extremely long half life high radio-activity elements remains, and it presents a great threat to the Earth biosphere.

This Study will focus on a possible solution suggesting that those elements might be stored in space with the help of a Launch Vehicle (LV) systems. This approach would allow to constantly free the Earth's biosphere from the most harmful part of RW.

Progress in past six months: The Commission 3 pre-review results have been received earlier. Revision of the draft report taking into account the reviewers' comments has been made up to 90%. The main goal of the Study is achieved and conclusions are drawn.

Website Study Information up to date? (please give any update regarding Study Group Membership, documents, Study Plan and Schedule): None

Issues requiring resolution? (recommend approach): None

Product Deliveries on Schedule? (If modified explain rationale): The report will be updated addressing the rest of the reviewers' remarks by October 2019 with the aim to be published by March 2020.

Study Team Member Changes? (List any Study Team Members that you wish to discontinue, and provide names plus contact coordinates of any Members you wish to add on the second page of this Study Update form.) Note: Complete contact information including email, tel. and fax must be provided for all additions. Only Members with complete contact information will be listed and receive formal appointment letters from the IAA Secretariat.

None

Name of person providing Study Group Status (Study Group Chair or Co-Chair): Degtyarev Olexandr, Study Group Chair

Status Report Date:
2019, February 27