

### 5.1.5 Processing of High Level Waste and Spent Nuclear Fuel declared as Waste

This NE Series document will integrate safety and technical information on technologies for processing of high level waste and spent nuclear fuel declared as waste to include vitrification, packaging and spent fuel encapsulation. The new publication will supersede 12 IAEA technical documents, namely TRS-435, TRS-345, TRS-339, TRS-326, TECDOC-582, TRS-321, TRS-320, TRS-258, TRS-257, TRS-214, TECDOC-239, TRS-187, and TRS-176 published in period from 1977 to 2004 into one consistent handbook on the subject matter for designers, operators and regulators. The objective of this document is to provide state of the art guidance to MS, to align technical information with safety assessment needs, to provide operating experience and lessons learned and to have adequate basis for development of training material required for technology transfer to less developed Member States.

The new publication should be prepared in period from 2010-12 and implemented to Member States as training material for technology transfer in 2012/13. The responsible officers are Mr. Zoran Drace ([Z.Drace@iaea.org](mailto:Z.Drace@iaea.org)) and Mr. Susanta Kumar Samanta ([S.K.Samanta@iaea.org](mailto:S.K.Samanta@iaea.org)).

The following documents (titles and numbers in the table below) are proposed to be consolidated, updated and organized as a NE Series document:

Sl. no.	Report No.	Yr	Report Title
1	TECDOC-1563	2008	Spent Fuel and High Level Waste: Chemical Durability and Performance under Simulated Repository Conditions
2	TRS-435	2004	Implications of partitioning and transmutation in radioactive waste management
3	TRS-345	1992	Concepts for the conditioning of spent nuclear fuel for final waste disposal
4	TRS-339	1992	Design and operation of high level waste vitrification and storage facilities
5	TRS-326	1991	Conditioning of alpha bearing wastes
6	TECDOC-582	1991	Performance of high level waste forms and engineered barriers under repository conditions (Final Report of Co-ordinated Research Programme, 1984-1989)
7	TRS-321	1991	Management of severely damaged nuclear fuel and related waste
8	TRS-320	1991	Evaluation of spent fuel as a final waste form
9	TRS-258	1985	Management of cladding hulls and fuel hardware
10	TRS-257	1985	Chemical durability and related properties of solidified high-level waste forms
11	TRS-214	1982	Evaluation of actinide partitioning and transmutation
12	TECDOC-239	1981	Evaluation of solidified high-level waste forms
13	TRS-187	1979	Characteristics of solidified high-level waste products
14	TRS-176	1977	Techniques for the solidification of high-level wastes