

CONTENTS

1.	INTRODUCTION	1
1.1.	Background	1
1.2.	Objective	4
1.3.	Scope	4
1.4.	Structure	5
2.	OVERVIEW OF NEAR SURFACE DISPOSAL SYSTEMS	5
2.1.	Multiple barrier concept	6
2.2.	Disposal systems	6
2.3.	Repository development	8
2.4.	Monitoring and surveillance	9
2.5.	Safety assessment methodology	11
3.	CORRECTIVE ACTION PROCESS	12
3.1.	Initiating events	13
3.2.	Examples of initiating events	15
3.2.1.	Change in regulatory standards and requirements	15
3.2.2.	Releases predicted to exceed, or exceeding, standards	16
3.2.3.	Stakeholder concerns	18
3.3.	Identification of root causes	18
3.4.	Identification of potential corrective actions	20
3.5.	Assessment of options and selection of corrective actions	20
3.6.	Development of a corrective action plan	26
3.7.	Implementation of the corrective action plan	27
3.8.	Verification of corrective action objectives having been met	28
4.	EXAMPLES OF CORRECTIVE ACTION APPROACHES AND TECHNOLOGIES	28
4.1.	Engineered features	29
4.1.1.	Repair or installation of surface caps	29
4.1.2.	Installation of vertical hydraulic conduits	30
4.1.3.	Installation of cut-off walls	30
4.2.	Waste retrieval	30
4.3.	In situ waste stabilization	31

4.4. Water collection and extraction	32
5. CONCLUSIONS	32
APPENDIX: EXAMPLES OF CORRECTIVE ACTIONS IMPLEMENTED AT REPOSITORIES IN MEMBER STATES.....	35
REFERENCES.....	129
CONTRIBUTORS TO DRAFTING AND REVIEW.....	137