

# CONTENTS

1.	INTRODUCTION .....	1
1.1.	Background .....	1
1.2.	Objective .....	2
1.3.	Scope .....	4
1.4.	structure .....	4
2.	BASIC FEATURES OF AMPs .....	6
2.1.	Objectives and background of accident management .....	6
2.2.	Preventive and mitigatory features of accident management .....	7
2.3.	Accident progression and degrees of severity .....	9
2.4.	Assessment of vulnerabilities and capabilities .....	10
2.5.	Accident management strategies .....	11
2.6.	Information needs .....	12
2.7.	Plant equipment performance and material support needs .....	14
2.8.	Procedures and guidelines .....	16
2.9.	Phases of the AMP .....	17
3.	PREPARATION OF THE ACCIDENT MANAGEMENT PROGRAMME .....	18
3.1.	Team formation .....	18
3.2.	Familiarization .....	20
3.3.	Selection and definition of an AMP .....	20
3.3.1.	Procedures versus guidelines and degree of proceduralization .....	21
3.3.2.	Symptom based procedures and guidelines .....	22
3.3.3.	Coverage .....	22
3.3.4.	Entry and exit bases and interfaces .....	23
3.4.	Review of available safety analyses and specification of further information needs .....	23
3.4.1.	General .....	23
3.4.2.	Analyses needed for AMP development .....	24
3.4.3.	Preliminary analysis for EOPs .....	25
3.4.4.	Preliminary analysis for mitigatory severe accident management actions .....	26

3.5.	Evaluation of the plant equipment and instrumentation performance .....	27
4.	DEVELOPMENT OF AN AMP .....	29
4.1.	Selection and development of severe accident management strategies..	29
4.1.1.	Selection of severe accident management strategies ..	29
4.1.2.	Development of severe accident management strategies ..	32
4.2.	Development of accident management procedures and guidelines .....	33
4.2.1.	Development and writing..	33
4.2.2.	Preparation of background material and documentation ..	35
4.3.	Supporting accident analysis for development of procedures and guidelines ..	36
4.3.1.	Development analysis of EOPs..	36
4.3.2.	Analysis for the development of severe accident management guidelines..	37
4.4.	Determination of the needs for plant instrumentation, equipment and material, and necessary upgrades..	38
4.5.	Integration of procedures, guidelines and the plant's emergency arrangements..	39
4.6.	Verification and validation of procedures and guidelines..	42
4.6.1.	Verification..	42
4.6.2.	Validation ..	42
4.6.3.	Supporting analysis ..	43
4.7.	Specification of training needs..	44
4.8.	Review of the AMP..	44
4.9.	Involvement of the regulatory body..	45
5	I M P L E M E N T A T I O N	45
5.1.	Overview of the plant's emergency organization. .	45
5.1.1.	General .....	45
5.1.2.	On-site emergency organization. . ..	46
5.1.3.	Organizational aspects of implementation.....	48
5.1.4.	Involvement of the regulatory body. .	48
5.2.	T r a i n i n g.....	48
5.2.1.	General .....	48

5.2.2. Scope and means	49
5.2.3. Skills of staff members	49
5.3. Staffing and qualification	51
5.4. Revisions to the AMP	52
APPENDIX I: PLANT DAMAGE STATES	53
APPENDIX II: CANDIDATE HIGH LEVEL ACTIONS	57
APPENDIX III: COMPUTATIONAL AIDS	61
APPENDIX IV: TYPICAL PARAMETERS AND MECHANISMS USED FOR INITIATION OF PREVENTIVE AND MITIGATORY ACTIONS..	64
APPENDIX V: PREVENTIVE ACCIDENT MANAGEMENT ACTIONS .....	67
APPENDIX VI: REVIEW OF AN AMP	75
APPENDIX VII: TRANSITION FROM THE EOP DOMAIN TO THE SEVERE ACCIDENT MANAGEMENT GUIDANCE DOMAIN	94
APPENDIX VIII: USE OF PSA IN SAMG DEVELOPMENT	97
REFERENCES .....	101
ANNEX I: SUMMARY OF INTERNATIONAL ACTIVITIES IN SEVERE ACCIDENT MANAGEMENT	103
ANNEX II: OVERVIEW OF THE SEVERE ACCIDENT MANAGEMENT GUIDANCE APPROACH AND IMPLEMENTATION IN SOME MEMBER STATES	105
ANNEX III: TYPICAL TSC ORGANIZATION AT A BWR IN THE USA .....	115
DEFINITIONS .....	117
CONTRIBUTORS TO DRAFTING AND REVIEW	121