

CONTENTS

1.	INTRODUCTION	1
1.1.	Background	1
1.2.	Objective	3
1.3.	Scope	4
1.4.	Structure	5
2.	CLASSIFICATION OF INITIATING EVENTS	6
2.1.	Fundamental safety functions	6
2.2.	Categorization of initiating events	7
3.	ACCEPTANCE CRITERIA	11
4.	ANALYSIS METHODS	15
4.1.	Background	15
4.2.	Conservative analyses	18
4.3.	Best estimate analyses	21
4.4.	Sensitivity and uncertainty	22
4.5.	Probabilistic analysis	24
5.	TYPES OF ACCIDENT ANALYSIS	25
5.1.	Design analysis	25
5.2.	Licensing analysis	28
5.3.	Validation of emergency operating procedures and plant simulators	30
5.4.	Analysis related to probabilistic safety analysis	32
5.5.	Support for accident management and emergency planning	33
5.6.	Analysis of operational events	36
5.7.	Regulatory audit analysis	37
6.	COMPUTER CODES	37
6.1.	Types of computer codes	38
6.2.	Necessary code features	42
6.3.	Documentation	42

6.4.	Code verification	44
6.5.	Code validation	44
6.6.	Accuracy of codes	46
7.	USER EFFECTS ON THE ANALYSIS	49
7.1.	Sources of user effects	49
7.2.	Reduction of user effects	50
7.2.1.	Qualification and training of users	50
7.2.2.	Method of analysis	53
7.2.3.	Other ways to reduce user effects	54
8.	PREPARATION OF INPUT DATA	56
8.1.	Collection of plant data	56
8.2.	Engineering handbook and input deck	57
8.3.	Verification of input data	58
8.4.	Validation of input data	58
9.	PRESENTATION AND EVALUATION OF RESULTS	59
9.1.	Format and structure of accident analysis results	59
9.2.	Review of accident analysis results	61
10.	QUALITY OF ACCIDENT ANALYSIS	62
	REFERENCES	65
	LIST OF ABBREVIATIONS	69
	DEFINITIONS	71
	ANNEX I: PROCEDURE FOR PERFORMING AN ACCIDENT ANALYSIS	77
	ANNEX II: UNCERTAINTY ANALYSIS FOR DESIGN BASIS ACCIDENTS WITH BEST ESTIMATE ANALYSIS CODES	82
	ANNEX III: EXAMPLES ON THE DEVELOPMENT OF A SAFETY ANALYSIS DATABASE AND ENGINEERING HANDBOOK	93
	ANNEX IV: EXAMPLES OF COMPUTER CODES	116
	CONTRIBUTORS TO DRAFTING AND REVIEW	121