

Contents

First Words	1
Introduction	3
The Illusion of Security	7
Reactor Risk	10
Command and Control	18
Fundamentals — Nuclear Science Explained	26
Index of key terms, Symbols	50
Abbreviations and Units of Measurements	51
Maps	52
1940s	
Trinity Test, New Mexico	60
Louis Slotin	63
Hiroshima and Nagasaki	74
US Nuclear Tests, Part 1	76
Hanford, Part 1, The Green Run	81
1950s	
US Nuclear Tests, Part 2	86
British Nuclear Tests	92
Chalk River Reactor, Ontario, Canada	100
US Nuclear Tests, Part 3	104
Broken Arrow 1, Lakenheath AFB, UK	109
Broken Arrow 2, Kirtland AFB, New Mexico	110
Rocky Flats, Colorado	111
Windscale, Sellafield, UK, Part 1	113
Chelyabinsk-40, USSR	119
Broken Arrow 3, Florence, South Carolina	123
Additional Stories	125
1960s	
French Nuclear Tests, Part 1	132
BOMARC Missile Fire, New Jersey	136
SL-1 Reactor, Idaho Falls, Idaho	136
Broken Arrow 4, Goldsboro, North Carolina	140
Nukey Poo Reactor, Antarctica	141
USS <i>Thresher</i> , North Atlantic	142
Chinese Nuclear Tests	144
Operation Hat, the Himalayas	145
USS <i>Ticonderoga</i> , North Pacific	147
Broken Arrow 5, Palomares, Spain	148
Fermi Reactor, Detroit	155
Nuclear Powered Ships	158
Broken Arrow 6, Thule, Greenland	162

USS <i>Scorpion</i> , North Atlantic	168
Operation Holystone	171
Additional Stories	173
1970s	
French Nuclear Tests, Part 2	182
US Nuclear Tests, Part 4	184
Windscale, Sellafield, UK, Part 2	188
Karen Silkwood	190
Project Jennifer, North Pacific	196
Browns Ferry Fire, Alabama	200
USS <i>Belknap</i> /USS <i>J F Kennedy</i>	202
Hanford, Part 2, 'Atomic Man'	204
Cosmos 954, Canada	206
Beloyarsk Reactor, USSR	213
Three Mile Island, Pennsylvania	215
Additional Stories	230
1980s	
French Nuclear Tests, Part 3	246
The Indian Nuclear Programme	249
NORAD Computer Glitches, Colorado	254
Titan II Missile Fire, Arkansas	258
Cap La Hague, France	261
LX-09 Explosive	264
Ginna Reactor Leak, New York State	265
Radioactive Scrap, Mexico	267
Sellafield, UK, Part 3	269
<i>Mont Louis</i> Sinking, North Sea	275
HERO Accident, West Germany	277
Gore, Oklahoma	278
Chernobyl, USSR	280
Soviet Submarine Fire, North Atlantic	292
Nuclear Transporter Crash, UK	293
Goiânia, Brazil	294
Biblis-A Reactor, West Germany	298
US Weapons Production Complex	301
Additional Stories	309
The End of the Nuclear Dream	337
Stop Press	348
Acknowledgements	351
Sources	352
Index	369