

CONTENTS

SECTION I. OPENING ADDRESSES	3
SECTION II. REVIEW OF THE SOURCES OF RADIONUCLIDES IN THE ENVIRONMENT	17
Sources and nature of environmental radioactive contamination	19
SECTION III. MECHANISMS OF TRANSFER OF RADIONUCLIDES FROM THE ENVIRONMENT THROUGH FOOD, AIR AND WATER, TO MAN	35
Mechanisms of radioactive contamination via air and water	37
Transfer of radionuclides from the environment through aquatic food products to man	43
On the radioactive contamination of soils and crops	68
Metabolism of some fission products by farm animals	92
Metabolism of radionuclides in man	116
Influence of dietary composition on radionuclide intake	123
SECTION IV. RADIATION PROTECTION STANDARDS AND CRITERIA	135
Biological bases for standards and maximum radiation levels under normal conditions	137
Maximum permissible levels under emergency conditions	149
Panel session on the problems of establishing permissible levels in food and of applying them from the standpoint of public health and food and agriculture administrations	160
Establishment and application of acceptable levels of radioactive contamination of foodstuffs	161
Some considerations in the establishment and application of guidance levels of radioactivity in Food	166
Outline for discussion on the derivation of maximum permissible concentrations for human diet	173
SECTION V. TYPES AND OBJECTIVES OF GENERAL AND LOCAL MONITORING PROGRAMS	189
Types and objectives of general and local monitoring programs: air and water	191
Monitoring programs in food and agriculture	228
Design and development of marine monitoring programs	239
SECTION VI. EMERGENCY SITUATIONS	245
United States Atomic Energy Commission experience from past incidents	247
General assessment of possible fission product releases from reactor accidents and the ensuing Environmental hazards	260
Monitoring programs in emergency situations	270
Remedial measures for environmental radioactive contamination	299
SECTION VII. RESPONSIBILITIES AND INTERRELATIONS OF PUBLIC HEALTH, AGRICULTURAL AND ATOMIC ENERGY ADMINISTRATIONS	311
Impact of legal control of discharge of radioactive materials on the responsible departments	313
Legal controls in the United States to protect the public from exposure to radioactive material	330
Impact of legal control of discharge of radioactive materials on the responsible departments	345

Co-operation in the preparation and evaluation of health and safety measures for radiological Protection	367
Collaboration between public health and other agencies in the United States	379
United States Atomic Energy Commission radiological assistance program and allied activities	383
Mutual international emergency assistance plan	401
SECTION VIII. CLOSING ADDRESSES	405
APPENDIX	
Participants in the seminar	411