

# **CONTAMINATION OF SR90**

## **1.1. Case description**

### **1.1.1 Description of the working area**

Home of a family in a rural farm.

### **1.1.2 Characteristics of work**

Breeding and cultivation.

#### **1.1.2.1 Reasons for monitoring; initiating event**

Following a nuclear accident a radioactive cloud invests a rural farm.

The rains cause delays in warning and evacuation of the family that is taken away only three days after the event. Ambient check reveals radioactivity on vegetables.

#### **1.1.2.2 Actions taken**

The family is immediately evacuated and the medical follow up is activated due to an extremely probable internal contamination of Sr-90.

## **1.2. Additional information**

### **1.2.1.1 Chemical form**

Sr-90 in an unknown chemical form.

### **1.2.1.2 Physical characteristics, particle size, further informations**

Particle size distribution totally unknown.

### **1.2.1.3 Nose swab, bronchial slime or similar**

Nose swab present a high asymmetry between nostrils.

### **1.2.1.4 Any intervention used (blocking, chelating, etc.)**

Nose, hairs and skin decontamination.

## **1.3. Body monitoring data**

### **1.3.1 Partial body data – Organ Counting**

None available

### **1.3.2 Whole body data**

None available

## **1.4. Excretion monitoring data**

### **1.4.1 Urine and faeces activity measurements**

Urine were fully collected under strictly medical observation over 24h starting at days 3 and 6.

Faeces were fully collected under strictly medical observation over 24h starting at days 6 and 13.

Type of Monitoring	Date	<sup>90</sup> Sr urinary daily excretion (Bq/l)
Special	3 day after	637,5 ± 14%
Special	6 days after	356,2 ± 14%

Type of Monitoring	Date	<sup>90</sup> Sr faecal daily excretion (Bq/g)
Special	6 day after	3,7 ± 16%
Special	13 days after	0,6 ± 16%

## 1.5. Personal Data

### 1.5.1 Sex

Male, 40 y old

*Provide the estimate of intake/intakes and effective dose/doses E(50)*