

4. British Nuclear Fuels plc

Table 4.3. Transuranic radioactivity in fish and shellfish from the Irish Sea vicinity and further afield, 1998

| Location ^a | Material | No. of sampling observations ^b | Mean radioactivity concentration (wet), Bq kg ⁻¹ | | | | | | |
|----------------------------------|------------------------|---|---|-------------------|---|-------------------|-------------------|-------------------|---|
| | | | ²³⁷ Np | ²³⁸ Pu | ²³⁹ Pu+ ²⁴⁰ Pu | ²⁴¹ Pu | ²⁴¹ Am | ²⁴² Cm | ²⁴³ Cm+ ²⁴⁴ Cm |
| Sellafield coastal area | Cod | 2 | | 0.0028 | 0.013 | | 0.035 | * | 0.000064 |
| Sellafield coastal area | Plaice | 1 | | 0.0015 | 0.0067 | | 0.015 | * | 0.000028 |
| Sellafield coastal area | Grey mullet | 1 | | | | | <0.31 | | |
| Sellafield coastal area | Bass | 1 | | | | | <0.14 | | |
| Sellafield coastal area | Crabs | 2 | 0.0062 | 0.071 | 0.34 | 4.5 | 1.5 | * | 0.0027 |
| Sellafield coastal area | Lobsters | 2 | 0.027 | 0.067 | 0.30 | 3.3 | 4.2 | * | 0.0095 |
| Sellafield coastal area | Winkles ^c | 1 | 0.032 | 2.3 | 11 | 130 | 20 | 0.039 | 0.040 |
| Sellafield coastal area | Mussels ^c | 1 | | 1.4 | 6.7 | 85 | 16 | * | 0.025 |
| Sellafield coastal area | Limpets ^c | 1 | | 3.2 | 16 | 190 | 28 | 0.053 | 0.041 |
| Sellafield coastal area | Whelks | 1 | | 0.25 | 1.1 | 15 | 2.3 | * | 0.0056 |
| Sellafield offshore area | Cod | 1 | | 0.0016 | 0.0081 | | 0.013 | * | * |
| Sellafield offshore area | Plaice | 1 | 0.00029 | 0.0035 | 0.017 | | 0.029 | 0.00013 | 0.0056 |
| Sellafield offshore area | Dab | 1 | | | | | <0.51 | | |
| Sellafield offshore area | Whiting | 2 | | | | | <0.47 | | |
| Sellafield offshore area | Haddock | 1 | | | | | <0.35 | | |
| Sellafield offshore area | Whelks | 1 | | 0.42 | 2.1 | 25 | 5.5 | * | 0.0077 |
| Sellafield offshore area | Sea mouse ^d | 1 | | 7.6 | 37 | | 110 | * | 0.38 |
| St Bees | Winkles | 1 | 0.053 | 3.9 | 19 | 230 | 34 | * | 0.063 |
| St Bees | Mussels | 2 | | 2.8 | 13 | 170 | 23 | 0.036 | 0.039 |
| St Bees | Limpets | 1 | | 2.6 | 12 | | 21 | 0.059 | 0.043 |
| Nether town | Winkles | 4 | 0.048 | 3.4 | 17 | 200 | 31 | <0.030 | 0.054 |
| Nether town | Mussels | 4 | | 2.1 | 10 | | 18 | <0.018 | 0.053 |
| Whitriggs | Shrimps | 1 | | | | | <0.50 | | |
| Drigg | Winkles | 4 | 0.054 | 3.8 | 18 | 210 | 32 | <0.049 | 0.072 |
| Ravenglass | Cod | 1 | | 0.0011 | 0.0052 | | 0.0068 | 0.000029 | 0.000021 |
| Ravenglass | Plaice | 1 | | 0.0010 | 0.0045 | | 0.012 | * | 0.000034 |
| Ravenglass | Salmon | 1 | | | | | <0.18 | | |
| Ravenglass | Crabs | 1 | | 0.046 | 0.23 | 2.8 | 1.0 | * | 0.0026 |
| Ravenglass | Lobsters | 1 | | 0.059 | 0.29 | 3.5 | 5.0 | * | 0.013 |
| Ravenglass | Winkles | 2 | | | | | 21 | | |
| Ravenglass | Mussels | 1 | | 1.5 | 7.3 | 89 | 15 | 0.025 | 0.029 |
| Ravenglass | Cockles | 1 | | 2.1 | 10 | 130 | 29 | * | 0.083 |
| Tarn Bay | Winkles | 1 | | 2.7 | 13 | 150 | 24 | 0.030 | 0.060 |
| Salton Bay | Winkles | 4 | | | | | 14 | | |
| Whitehaven | Cod | 1 | | 0.00045 | 0.0024 | | 0.0049 | * | 0.000018 |
| Whitehaven | Plaice | 1 | | 0.0011 | 0.0051 | | 0.0096 | * | 0.00013 |
| Whitehaven | Ray | 1 | | 0.00075 | 0.0040 | | 0.0070 | * | 0.000017 |
| Whitehaven | <i>Nephtys</i> | 1 | | 0.023 | 0.12 | | 0.41 | * | 0.00078 |
| Whitehaven | Whelks | 1 | | 0.17 | 0.89 | 10 | 1.3 | * | 0.0029 |
| Silloth | Mussels | 1 | | 0.69 | 3.7 | | 6.4 | * | 0.0066 |
| Parton | Cod | 4 | | | | | <0.21 | | |
| Parton | Crabs | 4 | | | | | 1.0 | | |
| Parton | Lobsters | 4 | | | | | 1.3 | | |
| Parton | Winkles | 1 | | 2.3 | 12 | 140 | 20 | 0.044 | 0.040 |
| Haverigg | Cockles | 1 | | 2.1 | 10 | | 19 | * | 0.029 |
| Millom | Mussels | 2 | | | | | 6.2 | | |
| Roosebeck | Pacific oysters | 1 | | 0.14 | 0.82 | | 0.61 | * | 0.0013 |
| Morecambe Bay (Flookburgh) | Flounder | 1 | | 0.00031 | 0.0019 | | 0.0034 | 0.000041 | * |
| Morecambe Bay (Morecambe) | Plaice | 4 | | | | | <0.29 | | |
| Morecambe Bay (Morecambe) | Bass | 2 | | | | | <0.25 | | |
| Morecambe Bay (Sunderland Point) | Whitebait | 1 | | 0.048 | 0.26 | 2.8 | 0.41 | * | 0.00067 |