

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location G in Lake Hayama)

<Location G in Lake Hayama: Samples collected>

| Locations | General items | | Radioactive materials | | | |
|-----------|---------------|----------|-----------------------|------------|---------------|---------------|
| | Water | Sediment | Water (Cs) | Water (Sr) | Sediment (Cs) | Sediment (Sr) |
| G-1 | ○ | ○ | ○ | ○ | ○ | ○ |
| G-2 | ○ | ○ | ○ | - | ○ | - |
| G-4 | ○ | ○ | ○ | - | ○ | - |

<Location G in Lake Hayama: Site measurement item>

| Locations | Latitude and longitude of the location | | Survey date and time | | Water | Sediment | | | | Other | | |
|--------------------|--|-----------|----------------------|--------------|-----------------|-------------------------------|----------------------------------|---------------|---------|--------------|-----------------|-----------------------|
| | Latitude | Longitude | Date | Time (water) | Time (sediment) | Water temperature (degrees C) | Sediment temperature (degrees C) | Property | Color | Contaminants | Water depth (m) | Secchi disk depth (m) |
| G-1(Surface layer) | 37.7348° | 140.8102° | 2021/12/4 | 10:30 | 10:50 | 11.6 | 8.3 | Sand sediment | 7.5Y2/2 | Plant pieces | 5.4 | 3.5 |
| G-1(Bottom layer) | | | | | | 10.9 | | | | | | |
| G-2(Surface layer) | 37.7267° | 140.8223° | | 09:40 | 09:50 | 11.5 | 11.6 | Sediment | 7.5Y3/2 | Plant pieces | 10.7 | 4.0 |
| G-2(Bottom layer) | | | | | | 11.4 | | | | | | |
| G-4 | 37.7382° | 140.8035° | 13:40 | 13:40 | 6.1 | 6.2 | Sand | 7.5Y6/3 | None | 0.3 | >1.0 | |

<Location G in Lake Hayama: General survey items/Analysis of radioactive materials Water>

| Locations | Latitude and longitude of the location | | Survey date and time | | pH | BOD | COD | DO | Electric conductivity | Salinity | TOC | SS | Turbidity | Cs-134 | Cs-137 | Sr-90 |
|--------------------|--|-----------|----------------------|--------------|--------|--------|--------|--------|-----------------------|----------|-------|--------|--------------|--------------|--------|---------|
| | Latitude | Longitude | Date | Time (water) | (mg/L) | (mg/L) | (mg/L) | (mS/m) | (mg/L) | (mg/L) | (FNU) | (Bq/L) | (Bq/L) | (Bq/L) | | |
| G-1(Surface layer) | 37.7348° | 140.8102° | 2021/12/4 | 10:30 | 7.2 | 0.6 | 3.6 | 10.0 | 7.8 | 0.04 | 1.4 | 2 | 1.3 | N.D.(0.0015) | 0.026 | - |
| G-1(Bottom layer) | | | | | 7.3 | <0.5 | 3.3 | 9.7 | 7.8 | 0.04 | 1.5 | 1 | 1.2 | N.D.(0.0016) | 0.028 | 0.00075 |
| G-2(Surface layer) | 37.7267° | 140.8223° | | 09:40 | 7.4 | <0.5 | 3.2 | 9.4 | 7.8 | 0.04 | 1.4 | 1 | 1.3 | N.D.(0.0014) | 0.0097 | - |
| G-2(Bottom layer) | | | | | 7.3 | <0.5 | 3.2 | 9.5 | 7.8 | 0.04 | 1.4 | 1 | 1.4 | N.D.(0.0014) | 0.011 | - |
| G-4 | 37.7382° | 140.8035° | 13:40 | 7.4 | <0.5 | 2.7 | 11.5 | 7.7 | 0.04 | 1.4 | <1 | 1.0 | N.D.(0.0017) | 0.017 | - | |

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location G in Lake Hayama: General survey items/Analysis of radioactive materials Sediment>

| Locations | Latitude and longitude of the location | | Survey date and time | | pH | Redox potential E _{NHE} (mV) | Water content (%) | IL (%) | TOC (mg/g-dry) | Soil particle density (g/cm ³) | Grain size distribution | | | | | | | | Cs-134 (Bq/kg-dry) | Cs-137 (Bq/kg-dry) | Sr-90 (Bq/kg-dry) |
|-----------|--|-----------|----------------------|-----------------|-----|---------------------------------------|-------------------|--------|----------------|--|-------------------------|----------------------------|-------------------------------|------------------------------|--------------------------|------------------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
| | Latitude | Longitude | Date | Time (sediment) | | | | | | | Gravel (2-75mm) (%) | Coarse sand (0.85-2mm) (%) | Medium sand (0.25-0.85mm) (%) | Fine sand (0.075-0.25mm) (%) | Silt (0.005-0.075mm) (%) | Clay (Less than 0.005mm) (%) | Median grain diameter (mm) | Maximum grain diameter (mm) | | | |
| G-1 | 37.7348° | 140.8102° | 2021/12/4 | 10:50 | 7.3 | 208 | 34.1 | 5.0 | 13.3 | 2.680 | 4.1 | 5.8 | 35.1 | 21.5 | 21.9 | 11.6 | 0.20 | 9.5 | 20 | 570 | 1.7 |
| G-2 | 37.7267° | 140.8223° | | 09:50 | 7.0 | 128 | 51.5 | 12.0 | 33.2 | 2.570 | 0.1 | 0.1 | 0.5 | 4.4 | 56.2 | 38.7 | 0.0095 | 4.8 | 86 | 2300 | - |
| G-4 | 37.7382° | 140.8035° | | 13:40 | 7.6 | 338 | 23.0 | 2.6 | 1.6 | 2.720 | 1.7 | 4.9 | 37.7 | 39.9 | 8.6 | 7.2 | 0.22 | 9.5 | 7.4 | 250 | - |

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location G in Lake Hayama: Analysis items Aquatic organisms>

| Locations | Sampling point | Latitude and longitude of the location | | Sampling date | Division | Class | Order | Family | Scientific name | English name | Population | Sample weight (kg-wet) | Note | | | Radioactive cesium (Bq/kg-wet) | | | Sr-90 (Bq/kg-wet) |
|-------------------|------------------|--|-------------------------------------|---------------|-----------------------------|------------------|----------------|------------------------------|------------------------------|-----------------------------------|-----------------|------------------------|---------------|------------------|------------------|--------------------------------|-----------|-----------|-------------------|
| | | Latitude | Longitude | | | | | | | | | | Growth stage | Stomach contents | Measurement site | Total | Cs-134 | Cs-137 | |
| G-1 G-2 G-3 | In the lake | 37.7348° 37.7267° 37.7302° | 140.8102° 140.8223° 140.8307° | 2021/12/4 | Algae/plant | - | - | - | - | Plankton (Planktonic algae) | - | 0.020 | - | - | - | N.D. | N.D.(1.8) | N.D.(1.5) | - |
| | | | | 2021/12/1 | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Tribolodon hakonensis</i> | Japanese dace | 2 | 0.65 | Mature fish | Obscure digesta | Viscera removed | 50.7 | 1.7 | 49 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Carassius auratus</i> | Carassius auratus langsdorffii | Mature fish | Obscure digesta | 24 | N.D.(1.4) | 24 | - | | | |
| | | | | 2021/12/4 | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Cyprinus carpio</i> | Common carp | 1 | 1.3 | Mature fish | Obscure digesta | Viscera removed | 27 | N.D.(1.5) | 27 | - |
| | | | | | Vertebrata | Osteichthyes | Salmoniformes | Osmeridae | <i>Hypomesus nipponensis</i> | Japanese smelt | 25 | 0.012 | Immature fish | - | - | 14 | N.D.(5.6) | 14 | - |
| 2021/12/1 | Vertebrata | Osteichthyes | Perciformes | Centrarchidae | <i>Micropterus dolomieu</i> | Small mouth bass | 1 | 1.1 | Mature fish | Obscure digesta | Viscera removed | 103.5 | 3.5 | 100 | - | | | | |
| G-4 | Inflowing rivers | 37.7382° | 140.8035° | 2021/12/4 | Algae/plant | - | - | - | - | Riverbed Deposits (Include algae) | - | 0.0030 | - | - | - | 120 | N.D.(12) | 120 | - |
| | | | | Arthropoda | Insecta | Ephemeroptera | Isonychiidae | <i>Isonychia valida</i> | <i>Isonychia valida</i> | 159 | 0.0051 | Larva | - | - | 29 | N.D.(6.1) | 29 | - | |
| | | | | Arthropoda | Insecta | Ephemeroptera | Ephemeridae | <i>Ephemeria strigata</i> | Mont mayfly | - | - | - | - | - | - | - | - | - | |
| | | | | Arthropoda | Insecta | Trichoptera | Stenopsychidae | <i>Stenopsyche marmorata</i> | Stenopsyche marmorata | 127 | 0.0093 | Larva | - | - | 63 | N.D.(6.1) | 63 | - | |
| | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Tribolodon hakonensis</i> | Japanese dace | 84 | 0.19 | Immature fish | - | - | 9.8 | N.D.(1.4) | 9.8 | - | |

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.