

**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-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) | 37.7321°                               | 140.8127° | 2017/10/20           | 11:05        | 11:04           | 17.5                          | 14.3                             | Sand sediment | 7.5Y 3/1 | Plant pieces | 4.5             | 3.0                   |
| G-1(Bottom layer)  |  |           |                      |              |                 | 17.6                          |                                  |               |          |              |                 |                       |
| G-4                | 37.7382°                               | 140.8035° |                      | 12:15        | 12:25           | 11.5                          | 13.5                             | Sand          | 7.5Y 4/2 | Plant pieces | 0.5             | >0.5                  |

<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) | 37.7321°                               | 140.8127° | 2017/10/20           | 11:05        | 7.2    | 1.5    | 3.7    | 8.6    | 7.0                   | 0.04     | 1.7    | 2     | 1.9       | 0.0071 | 0.053  | -      |
| G-1(Bottom layer)  |  |           |                      |              | 7.2    | 2.0    | 3.6    | 8.2    | 7.0                   | 0.04     | 1.6    | 2     | 1.7       | 0.0057 | 0.044  | 0.0010 |
| G-4                | 37.7382°                               | 140.8035° |                      | 12:15        | 7.4    | 1.5    | 4.7    | 10.8   | 7.4                   | 0.04     | 2.1    | 10    | 4.0       | 0.010  | 0.079  | -      |

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 <sub>h</sub> (mV) | Water content (%) | IL (%) | TOC (mg/g-dry) | Soil particle density (g/cm <sup>3</sup> ) | 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       | 37.7321°                               | 140.8127° | 2017/10/20           | 11:04           | 7.0 | 281                                 | 40.1              | 7.4    | 11.7           | 2.662                                      | 13.3                    | 11.7                       | 27.8                          | 24.1                         | 14.8                     | 8.3                          | 0.28                       | 27                          | 270                | 2100               | 2.7               |
| G-4       | 37.7382°                               | 140.8035° |                      | 12:25           | 7.1 | 301                                 | 50.1              | 7.4    | 14.0           | 2.654                                      | 5.4                     | 1.3                        | 30.5                          | 36.0                         | 15.9                     | 10.9                         | 0.19                       | 19                          | 120                | 970                | -                 |

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<br>G-2<br>G-3                 | In the lake      | 37.7321°<br>37.7267°<br>37.7302°       | 140.8127°<br>140.8223°<br>140.8307° | 2017/10/20<br><br>2017/11/7 | Algae/plant          | -            | -             | -                 | -                                   | Plankton (Planktonic algae)           | -          | 0.019                  | -                       | -                | -                | 3.7                            | N.D.(2.0) | 3.7    | -                 |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Cypriniformes | Cyprinidae        | <i>Tribolodon hakonensis</i>        | Japanese dace                         | 2          | 0.23                   | Mature fish             | Obscure digesta  | Viscera removed  | 43.7                           | 5.7       | 38     | -                 |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Cypriniformes | Cyprinidae        | <i>Carassius auratus</i>            | <i>Carassius auratus langsdorffii</i> | 2          | 2.5                    | Mature fish             | Obscure digesta  | Viscera removed  | 83.6                           | 8.6       | 75     | 1.1               |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Perciformes   | Centrarchidae     | <i>Micropterus salmoides</i>        | Largemouth bass                       | 3          | 0.14                   | Immature fish           | Fish             | Viscera removed  | 55.9                           | 5.9       | 50     | -                 |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Perciformes   | Centrarchidae     | <i>Micropterus dolomieu</i>         | Small mouth bass                      | 2          | 1.1                    | Mature fish             | Fish             | Viscera removed  | 121                            | 11        | 110    | -                 |
| G-4                               | Inflowing rivers | 37.7382°                               | 140.8035°                           | 2017/10/20                  | Algae/plant          | -            | -             | -                 | -                                   | Riverbed Deposits (Include algae)     | -          | 0.0062                 | -                       | -                | -                | 508                            | 48        | 460    | -                 |
|                                   |                  |  |                                     |                             | Arthropoda           | Insecta      | Odonata       | Corduliidae       | <i>Macromia amphigena amphigena</i> | Macromia amphigena                    | 51         | 0.0096                 | Larva (Dragonfly larva) | -                | -                | 20                             | N.D.(5.1) | 20     | -                 |
|                                   |                  |  |                                     |                             | Arthropoda           | Insecta      | Odonata       | Cordulegastriidae | <i>Anotogaster sieboldii</i>        | <i>Anotogaster sieboldii</i>          |            |                        |                         |                  |                  |                                |           |        |                   |
|                                   |                  |  |                                     |                             | Arthropoda           | Insecta      | Odonata       | Gomphidae         | <i>Davidius sp.</i>                 | <i>Davidius</i>                       |            |                        |                         |                  |                  |                                |           |        |                   |
|                                   |                  |  |                                     |                             | Arthropoda           | Insecta      | Odonata       | Aeshnidae         | <i>Boyeria maclachlani</i>          | Boyeria maclachlani                   | 7          | 0.019                  | Immature fish           | -                | -                | 21.8                           | 3.8       | 18     | -                 |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Cypriniformes | Cyprinidae        | <i>Tribolodon hakonensis</i>        | Japanese dace                         |            |                        |                         |                  |                  |                                |           |        |                   |
|                                   |                  |  |                                     |                             | Vertebrata           | Osteichthyes | Perciformes   | Gobiidae          | <i>Rhinogobius flumineus</i>        | Rhinogobius flumineus                 | 47         | 0.017                  | Immature fish           | -                | -                | 6.2                            | N.D.(2.7) | 6.2    | -                 |
| Coarse Particulate Organic Matter | -                | -                                      | -                                   | -                           | Bottom fallen leaves | -            | 0.23          | -                 | -                                   | -                                     | 57.1       | 7.1                    | 50                      | -                |                  |                                |           |        |                   |

\*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.