

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location L off Soma City)

<Location L off Soma City: Samples collected>

| Locations | General items | | Radioactive materials | | | |
|-----------|---------------|----------|-----------------------|------------|---------------|---------------|
| | Water | Sediment | Water (Cs) | Water (Sr) | Sediment (Cs) | Sediment (Sr) |
| L-1 | - | o | - | - | o | - |
| L-2 | o | o | o | o | o | o |
| L-3 | o | o | o | - | o | - |

<Location L off Soma City: Site measurement item>

| Locations | Latitude and longitude of the location | | Survey date and time | | | Water | | | | | 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) |
| L-1 | 37.8210° | 140.9610° | 2016/10/24 | - | 09:45 | - | 16.9 | Silt with sand | 7.5Y3/1 | None | - | - |
| L-2 | 37.8155° | 140.9763° | | 08:13 | 09:22 | 18.4 | 17.3 | Sand | 5Y3/2 | None | 1.7 | >1.7 |
| L-3 | 37.8217° | 140.9765° | | 08:30 | 09:36 | 18.3 | 18.2 | Sand with silt | 7.5Y3/1 | None | 1.5 | >1.5 |

<Location L off Soma City: General survey items/Analysis of radioactive materials Water>

| Locations | Latitude and longitude of the location | | Survey date and time | | pH | BOD (mg/L) | COD (mg/L) | DO (mg/L) | Electric conductivity (mS/m) | Salinity | TOC (mg/L) | SS (mg/L) | Turbidity (FNU) | Cs-134 (Bq/L) | Cs-137 (Bq/L) | Sr-90 (Bq/L) |
|-----------|--|-----------|----------------------|--------------|-----|------------|------------|-----------|------------------------------|----------|------------|-----------|-----------------|---------------|---------------|--------------|
| | Latitude | Longitude | Date | Time (water) | | | | | | | | | | | | |
| L-2 | 37.8155° | 140.9763° | 2016/10/24 | 08:13 | 8.1 | 0.8 | 2.2 | 7.8 | 4750 | 31.95 | 1.1 | 5 | 1.9 | 0.0024 | 0.013 | 0.00085 |
| L-3 | 37.8217° | 140.9765° | | 08:30 | 8.1 | 0.7 | 1.8 | 8.2 | 4840 | 31.90 | 1.1 | 3 | 1.8 | N.D.(0.0016) | 0.011 | - |

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

<Location L off Soma City: General survey items/Analysis of radioactive materials Sediment>

| Locations | Latitude and longitude of the location | | Survey date and time | | pH | Redox potential E _{SHE} (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) | | | |
| L-1 | 37.8210° | 140.9610° | 2016/10/24 | 09:45 | 7.8 | 252 | 30.1 | 2.8 | 9.3 | 2.652 | 5.0 | 15.1 | 47.1 | 19.9 | 6.0 | 6.9 | 0.39 | 9.5 | 11 | 88 | - |
| L-2 | 37.8155° | 140.9763° | | 09:22 | 7.8 | 271 | 28.5 | 2.3 | 7.0 | 2.659 | 0.0 | 0.3 | 30.6 | 61.1 | 3.8 | 4.2 | 0.20 | 4.8 | 8.2 | 49 | N.D.(0.14) |
| L-3 | 37.8217° | 140.9765° | | 09:36 | 7.9 | 280 | 26.7 | 1.7 | 5.0 | 2.679 | 0.0 | 0.3 | 39.7 | 53.6 | 3.0 | 3.4 | 0.22 | 2.0 | 6.9 | 40 | - |

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

<Location L off Soma City: 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 | | | |
| L-1 L-2 L-3 | Matsukawaura | 37.8210° 37.8155° 37.8217° | 140.9610° 140.9763° 140.9765° | 2016/10/24 | Algae/plant | - | - | - | - | Plankton (Planktonic algae) | - | 0.019 | - | - | - | 7.2 | N.D.(2.0) | 7.2 | - | | |
| | | | | | Algae/plant | Monocotyledoneae | Najadales | Zosteraceae | <i>Zostera marina</i> | Eel grass | - | 0.24 | - | - | - | - | 1.12 | 0.33 | 0.79 | - | |
| | | | | | Arthropoda | Malacostraca | Decapoda | Palaemonidae | <i>Palaemon sp.</i> | Palaemon | 110 | 0.015 | Imago | - | - | - | N.D. | N.D.(2.3) | N.D.(1.9) | - | |
| | | | | | Arthropoda | Malacostraca | Decapoda | Varunidae | <i>Hemigrapsus sp.</i> | Hemigrapsus | 146 | 0.25 | Imago | - | - | - | 4.17 | 0.57 | 3.6 | - | |
| | | | | | Mollusca | Bivalvia | Ostreoida | Ostreidae | <i>Crassostrea gigas</i> | Oyster | 15 | 0.46 | Imago | - | - | - | Molluscos part | 0.43 | N.D.(0.30) | 0.43 | - |
| | | | | | Mollusca | Bivalvia | Veneroida | Veneridae | <i>Ruditapes philippinarum</i> | Japanese littleneck | 113 | 0.35 | Imago | - | - | - | Molluscos part | 1.3 | N.D.(0.48) | 1.3 | - |
| | | | | | Vertebrata | Osteichthyes | Scorpaeniformes | Hexagrammidae | <i>Hexagrammos otakii</i> | Fat greenling | 4 | 0.13 | Immature fish | Shrimp, Crab | Viscera removed | 1.8 | N.D.(0.55) | 1.8 | - | | |
| | | | | | Vertebrata | Osteichthyes | Scorpaeniformes | Scorpaenidae | <i>Sebastes cheni</i> | Rockfish | 27 | 0.32 | Immature fish | Shrimp, Mysidacea | Viscera removed | 1.4 | N.D.(0.33) | 1.4 | - | | |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Sparidae | <i>Acanthopagrus schlegelii</i> | Japanese black porgy | 1 | 0.034 | Immature fish | Shellfish | Viscera removed | 1.7 | N.D.(0.99) | 1.7 | - | | |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Gobiidae | <i>Tridentiger obscurus</i> | Dusky tripletooth goby | 21 | 0.032 | Immature fish, Mature fish | | - | - | 2.4 | N.D.(1.1) | 2.4 | - | |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Gobiidae | <i>Gymnogobius breunigii</i> | Chestnut goby | | | | | | | | | | | |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Gobiidae | <i>Acanthogobius flavimanus</i> | Yellowfin Goby | | | | | | | | | | | |

*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.