December 21, 2023

Results of ALPS Treated Water Marine Monitoring:
Seawater survey (other related nuclides) (September, 2023)

1. Outline of survey

(1) Date of sampling

September 13-15, 2023

(2) Sampling points

3 sampling points on the coastal waters in the Fukushima Prefecture.

(3) Detail of the survey

・Measurements of radioactive material concentration (total 54 nuclides consisting of 11 alpha-emitting nuclides such as plutonium 238, 8 beta-emitting nuclides such as carbon 14, and 35 nuclides that emit gamma-ray or are evaluated assuming radioactive equilibrium) in seawater.

*1 Rhodium 103m, Rhodium 106, Tellurium 125m, Barium 137m, Praseodymium 144, Praseodymium 144m and Yttrium 90 are nuclides evaluated assuming radioactive equilibrium with the parent nuclides.

*2 Plutonium 239 and plutonium 240 are evaluated by the total value of plutonium 239 + 240 because alpha-ray energies are close to each other and alpha-ray peaks can not be separated.

*3 Americium 243, Curium 243 and Curium 244 are evaluated by total alpha measurement.

・The target lower limits of detection of each nuclide*4 are shown below.

Nuclides	Target lower limits of detection (Bq/L)
Barium 137m	0.001
Other gamma-ray emitting nuclides	- *5
Plutonium 238 Plutonium 239 + 240 Americium 241 Curium 242	0.00002
Americium 243 Curium 243 Curium 244 Uranium 234 Uranium 238 Neptunium 237	0.002
Iron 55	20
Strontium 89	0.005

Yttrium 90	0.001
Technetium 99	0.0004
Cadmium 113m	0.2
Nickel 63	20
Selenium 79	2
Carbon 14	0.0005

*4 A target lower limit of detection means a value that is set for quality control to assure at least the detection up to the value when analysis is conducted. Each actual lower limit of detection differs according to samples, and is equal to or lower than a target lower limit of detection.

*5 The target lower limits of detection of other gamma-ray emitting nuclides are obtained through simultaneous measurements under a condition of satisfying the target lower limits of detection (in parentheses) for the following nuclides:
Ruthenium 106 (<1.2 Bq/L), Antimony 125 (<0.5 Bq/L) and Cobalt 60 (<0.3 Bq/L)

2. Outline of results

（1）Seawater survey (3 sampling points [6 samples])

・Concentrations of Barium 137m range from 0.0072 Bq/L to 0.042 Bq/L.

*6 Barium 137m (half-life: approximately 2.6 minutes) is a daughter nuclide of Cesium 137 (half-life: approximately 30 years). Because the half-life of the parent nuclide is much longer than that of the daughter nuclide, it is evaluated on the assumption of being in the state of radioactive equilibrium (Barium 137m value is calculated based on the measurement of Cesium 137).

*7 The above result is determined to be within fluctuation range of Barium 137m that was calculated from Cesium 137 concentrations in seawater close to sampling points prior to the discharge of ALPS treated water into the sea.

・Concentrations of gamma-ray emitting nuclides excluding Barium 137m correspond to below the lower limit of detection in all samples.

・19 nuclides excluding gamma-ray emitting nuclides are under analysis and the results will be announced separately.

(Detailed are attached)

Attachement

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S3	2023/09/13	Surface layer	1.5	Ag-110m	< 0.08	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Ba-137m	0.042 ± 0.0029	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Ba-140	< 0.3	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Cd-115m	< 3	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Ce-141	< 0.08	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Ce-144	< 0.4	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Co-58	< 0.06	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Cs-136	< 0.05	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Eu-152	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Eu-154	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Eu-155	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Fe-59	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Gd-153	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Mn-54	< 0.06	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Nb-95	< 0.08	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Pm-146	< 0.07	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Pm-148	< 2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Pm-148m	< 0.07	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Pr-144	< 0.4	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Pr-144m	< 0.004	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Rb-86	< 0.8	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Rh-103m	< 0.06	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Rh-106	< 0.6	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Ru-103	< 0.06	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Sb-124	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Sn-123	< 10	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Sn-126	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Tb-160	< 0.2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Te-123m	< 0.06	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Te-125m	< 0.04	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Te-127	< 5	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Te-129	< 0.6	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Te-129m	< 2	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Y-91	< 30	Bq/L
E-S3	2023/09/13	Surface layer	1.5	Zn-65	< 0.2	Bq/L

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value below 10 Bq/L).

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S3	2023/09/13	Bottom layer	6.3	Ag-110m	< 0.09	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Ba-137m	0.016 ± 0.0012	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Ba-140	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Cd-115m	< 3	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Ce-141	< 0.08	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Ce-144	< 0.4	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Co-58	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Cs-136	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Eu-152	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Eu-154	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Eu-155	< 0.3	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Fe-59	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Gd-153	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Mn-54	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Nb-95	< 0.07	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Pm-146	< 0.08	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Pm-148	< 1	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Pm-148m	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Pr-144	< 0.4	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Pr-144m	< 0.004	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Rb-86	< 0.8	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Rh-103m	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Rh-106	< 0.5	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Ru-103	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Sb-124	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Sn-123	< 20	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Sn-126	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Tb-160	< 0.2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Te-123m	< 0.06	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Te-125m	< 0.04	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Te-127	< 5	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Te-129	< 0.6	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Te-129m	< 2	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Y-91	< 30	Bq/L
E-S3	2023/09/13	Bottom layer	6.3	Zn-65	< 0.2	Bq/L

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value lower than 10 Bq/L).

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S10	2023/09/14	Surface layer	1.5	Ag-110m	< 0.09	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Ba-137m	0.0097 ± 0.00074	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Ba-140	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Cd-115m	< 4	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Ce-141	< 0.08	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Ce-144	< 0.4	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Co-58	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Cs-136	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Eu-152	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Eu-154	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Eu-155	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Fe-59	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Gd-153	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Mn-54	< 0.05	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Nb-95	< 0.07	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Pm-146	< 0.08	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Pm-148	< 1	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Pm-148m	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Pr-144	< 0.4	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Pr-144m	< 0.004	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Rb-86	< 0.8	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Rh-103m	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Rh-106	< 0.6	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Ru-103	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Sb-124	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Sn-123	< 10	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Sn-126	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Tb-160	< 0.2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Te-123m	< 0.06	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Te-125m	< 0.04	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Te-127	< 5	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Te-129	< 0.6	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Te-129m	< 2	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Y-91	< 30	Bq/L
E-S10	2023/09/14	Surface layer	1.5	Zn-65	< 0.2	Bq/L

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*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value lower than 10 Bq/L).

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S10	2023/09/14	Bottom layer	11.7	Ag-110m	< 0.08	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Ba-137m	0.0072 ± 0.00057	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Ba-140	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Cd-115m	< 4	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Ce-141	< 0.08	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Ce-144	< 0.4	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Co-58	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Cs-136	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Eu-152	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Eu-154	< 0.3	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Eu-155	< 0.3	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Fe-59	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Gd-153	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Mn-54	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Nb-95	< 0.07	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Pm-146	< 0.08	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Pm-148	< 2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Pm-148m	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Pr-144	< 0.4	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Pr-144m	< 0.004	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Rb-86	< 0.8	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Rh-103m	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Rh-106	< 0.6	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Ru-103	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Sb-124	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Sn-123	< 20	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Sn-126	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Tb-160	< 0.2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Te-123m	< 0.06	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Te-125m	< 0.04	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Te-127	< 5	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Te-129	< 0.7	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Te-129m	< 2	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Y-91	< 30	Bq/L
E-S10	2023/09/14	Bottom layer	11.7	Zn-65	< 0.2	Bq/L

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value lower than 10 Bq/L).

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S15	2023/09/15	Surface layer	1.5	Ag-110m	< 0.08	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Ba-137m	0.021 ± 0.0015	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Ba-140	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Cd-115m	< 4	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Ce-141	< 0.08	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Ce-144	< 0.4	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Co-58	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Cs-136	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Eu-152	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Eu-154	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Eu-155	< 0.3	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Fe-59	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Gd-153	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Mn-54	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Nb-95	< 0.08	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Pm-146	< 0.08	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Pm-148	< 1	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Pm-148m	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Pr-144	< 0.4	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Pr-144m	< 0.004	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Rb-86	< 0.8	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Rh-103m	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Rh-106	< 0.5	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Ru-103	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Sb-124	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Sn-123	< 10	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Sn-126	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Tb-160	< 0.2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Te-123m	< 0.06	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Te-125m	< 0.04	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Te-127	< 5	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Te-129	< 0.6	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Te-129m	< 2	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Y-91	< 30	Bq/L
E-S15	2023/09/15	Surface layer	1.5	Zn-65	< 0.2	Bq/L

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value lower than 10 Bq/L).

Analysis results for other related nuclides (gamma-ray emitting nuclides) in seawater

Sampling point	Sampling date (yyyy/mm/dd)	Sampling layer	Sampling depth (m)	Nuclide	Radioactivity concentration *1*2	Unit
E-S15	2023/09/15	Bottom layer	6.0	Ag-110m	< 0.08	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Ba-137m	0.017 ± 0.0013	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Ba-140	< 0.3	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Cd-115m	< 4	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Ce-141	< 0.08	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Ce-144	< 0.4	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Co-58	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Cs-136	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Eu-152	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Eu-154	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Eu-155	< 0.3	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Fe-59	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Gd-153	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Mn-54	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Nb-95	< 0.08	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Pm-146	< 0.08	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Pm-148	< 1	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Pm-148m	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Pr-144	< 0.4	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Pr-144m	< 0.005	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Rb-86	< 0.8	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Rh-103m	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Rh-106	< 0.6	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Ru-103	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Sb-124	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Sn-123	< 20	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Sn-126	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Tb-160	< 0.2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Te-123m	< 0.06	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Te-125m	< 0.04	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Te-127	< 5	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Te-129	< 0.7	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Te-129m	< 2	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Y-91	< 30	Bq/L
E-S15	2023/09/15	Bottom layer	6.0	Zn-65	< 0.2	Bq/L

*1 Radioactivity concentrations are presented as radioactivity concentration ± combined standard uncertainty.

*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value lower than 10 Bq/L).

(Attachment)

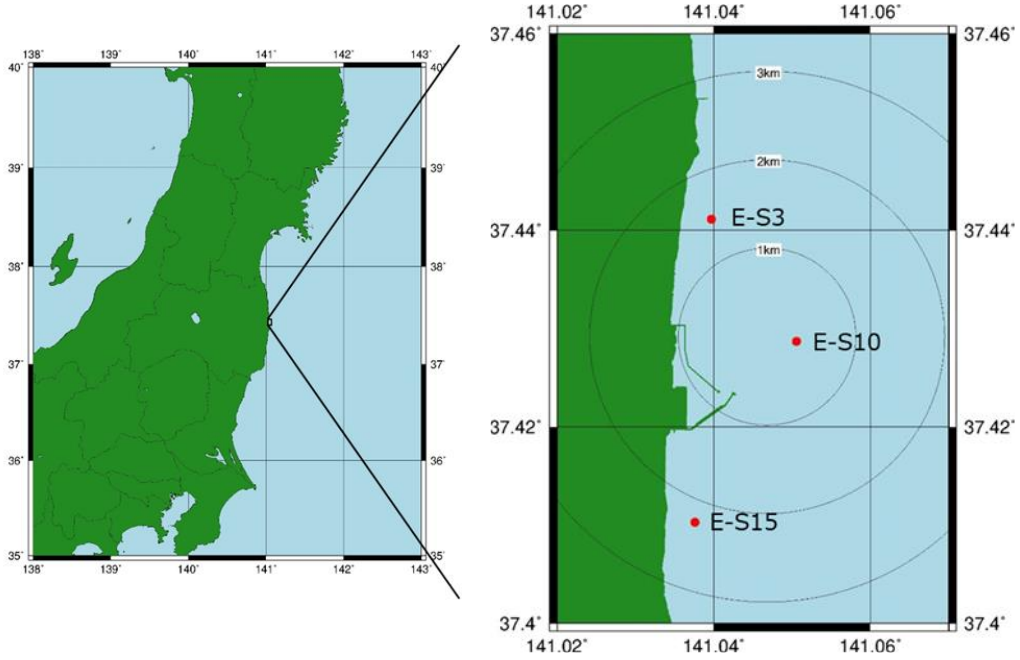

Fig. 1: Sampling points for other related nuclides in seawater