

Results of ALPS Treated Water Marine Monitoring: Seawater Survey (tritium) (August, 2023)

1 Outline of survey

(1) Date of sampling

August 25, 2023

*The present survey (the precise analysis for tritium in seawater) is set to be executed four times a year at a total of 29 sampling points. Water samples were collected at 11 sampling points (mainly from surface layer) on August 25, and water samples at the other points were collected between September 5 and 15.

*Additionally, for the time being, precise analysis is set to be executed monthly at 3 sampling points after the discharge of ALPS treated water.

(2) Sampling points

11 sampling points on coastal waters in the Fukushima Prefecture.

*1 Water samples were collected from surface layer at 10 sampling points and from surface layer and bottom layer at a sampling point (E-S10) closest to discharge outlet on August 25.

*2 The remaining samples collected in September are currently under analysis.

(3) Detail of the survey

- The measurement of radioactive material concentrations in seawater. (tritium)

Analysis with target lower limit of detection of 0.1 Bq/L.

*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.

2 Outline of results

(1) Seawater survey (11 sampling points (12 samples))

Concentrations of tritium in seawater range from below the lower limit of detection to 5.0 Bq/L.

*The samples used in analysis this time were collected at the same time as the samples subject to rapid analysis (analysis with the target lower limit of detection of 10 Bq/L) announced on August 27, 2023. The results of this analysis are consistent with the results announced on August 27 (below the lower limit of detection (7-8 Bq/L)).

(Detailed are attached)

(Maps attached)

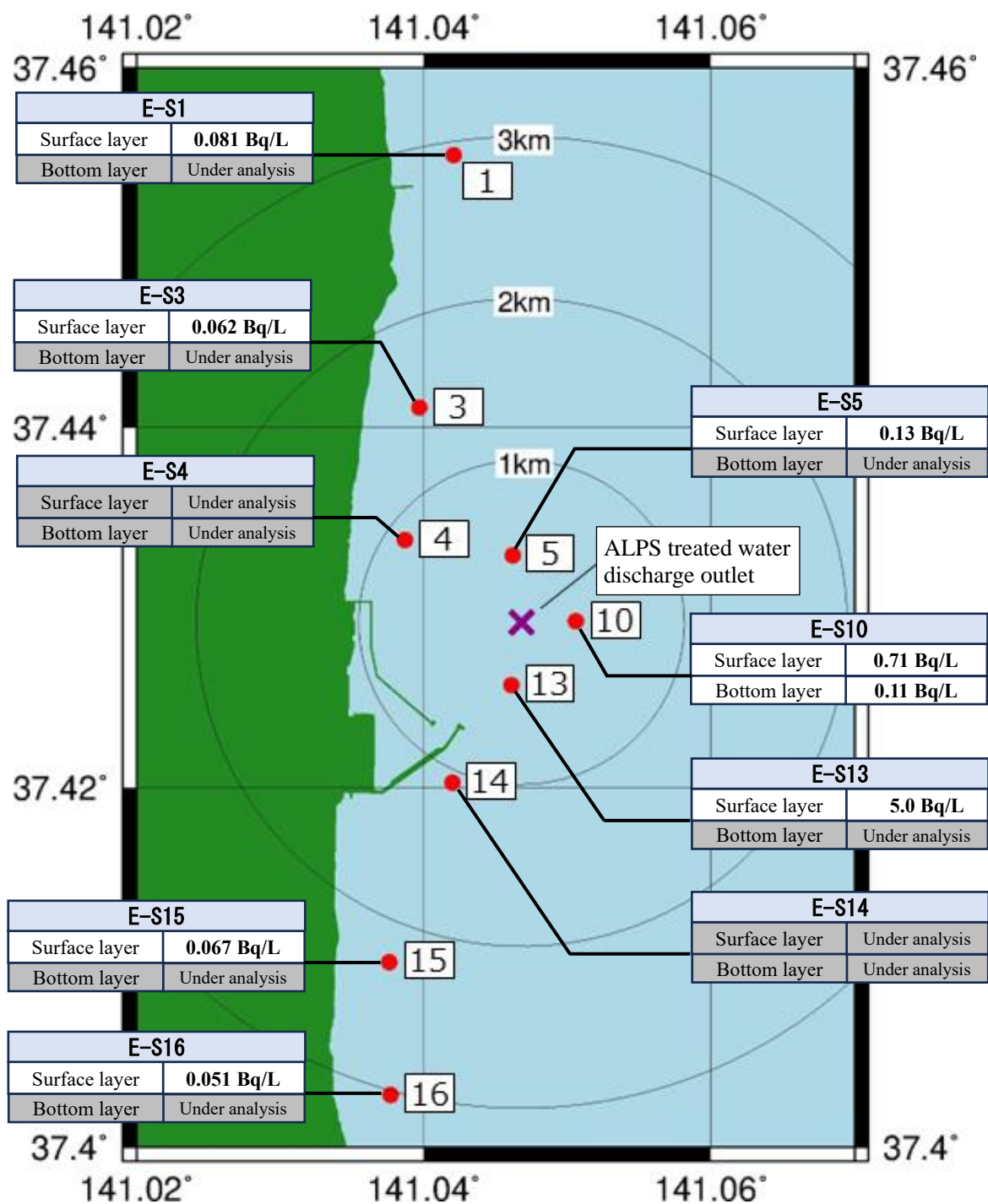
Analysis result for tritium in seawater

| Sampling point | Sampling date | Sampling layer | Sampling depth (m) | Nuclide | Radioactivity concentration ^{*1*2} | | | Unit |
|----------------|---------------|----------------|--------------------|---------|---|---|--------|------|
| E-S1 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.081 | ± | 0.0087 | Bq/L |
| E-S3 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.062 | ± | 0.017 | Bq/L |
| E-S5 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.13 | ± | 0.026 | Bq/L |
| E-S10 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.71 | ± | 0.038 | Bq/L |
| E-S10 | 2023/08/25 | Bottom layer | 12.6 | H-3 | 0.11 | ± | 0.020 | Bq/L |
| E-S13 | 2023/08/25 | Surface layer | 1.5 | H-3 | 5.0 | ± | 0.21 | Bq/L |
| E-S15 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.067 | ± | 0.017 | Bq/L |
| E-S16 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.051 | ± | 0.017 | Bq/L |
| E-S20 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.075 | ± | 0.011 | Bq/L |
| E-S29 | 2023/08/25 | Surface layer | 1.5 | H-3 | 0.077 | ± | 0.011 | Bq/L |
| E-S33 | 2023/08/25 | Surface layer | 1.5 | H-3 | < 0.05 | | | Bq/L |
| E-S36 | 2023/08/25 | Surface layer | 1.5 | H-3 | < 0.06 | | | Bq/L |

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

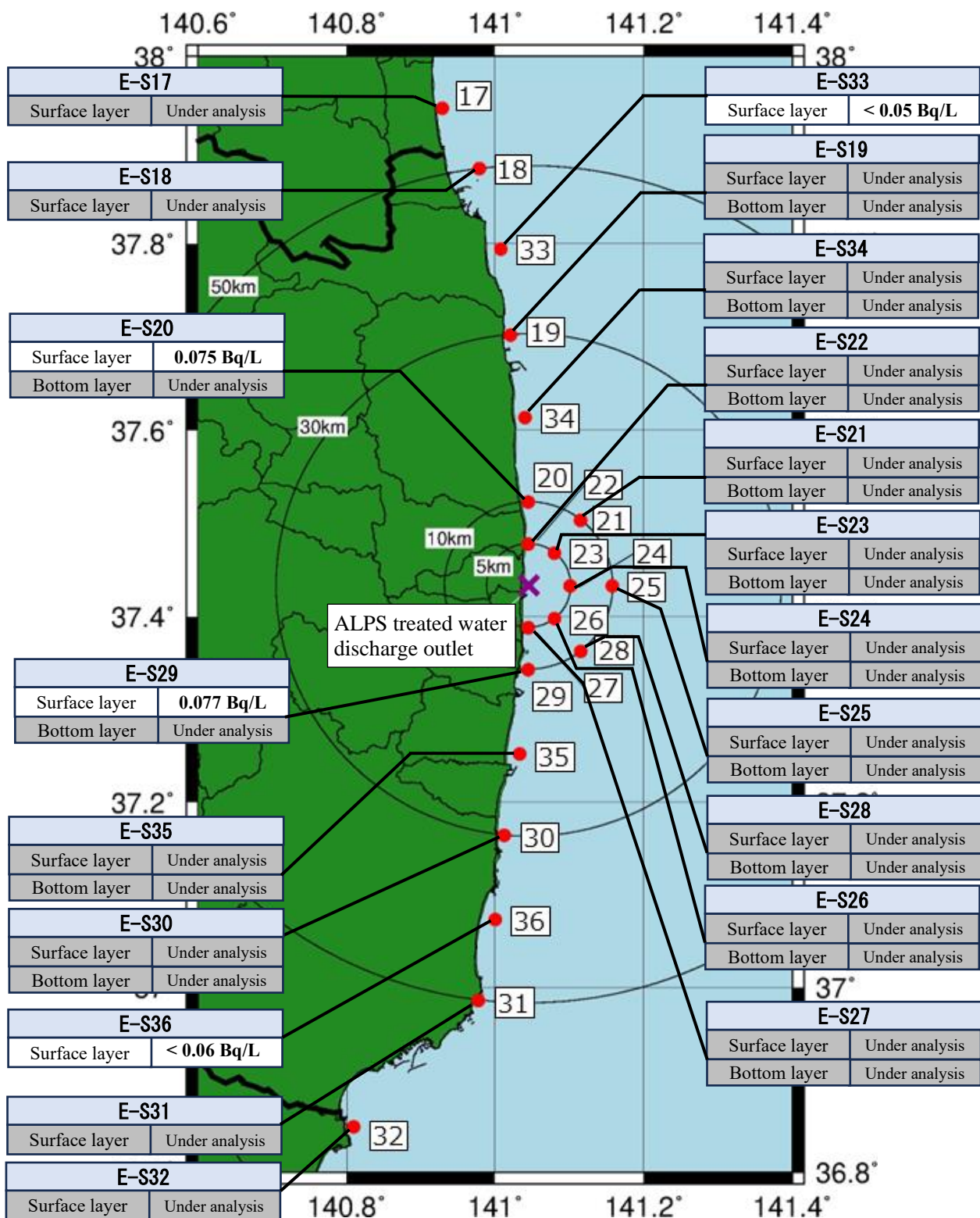
*2 Values below detection limit are shown by lower limit of detection (e.g., “<10 Bq/L” indicates a value below 10 Bq/L).

*3 The present survey (the precise analysis for tritium in seawater) is set to be executed four times a year at a total of 29 sampling points. Analysis result at 11 sampling points (mainly from surface layer) on August 25 is reported at present. The remaining samples collected in September are currently under analysis.



※ Numbers in the map are shown with “E-S” omitted from labels in the map (e.g., E-S1 is marked as 1).

Fig. 1 Sampling points within 3 km of ALPS treated water discharge outlet



※ Numbers in the map are shown with “E-S” omitted from labels in the map (e.g., E-S20 is marked as 20).

Fig. 2 Sampling points beyond 3 km of ALPS treated water discharge outlet