

Fukushima Daiichi Nuclear Power Station

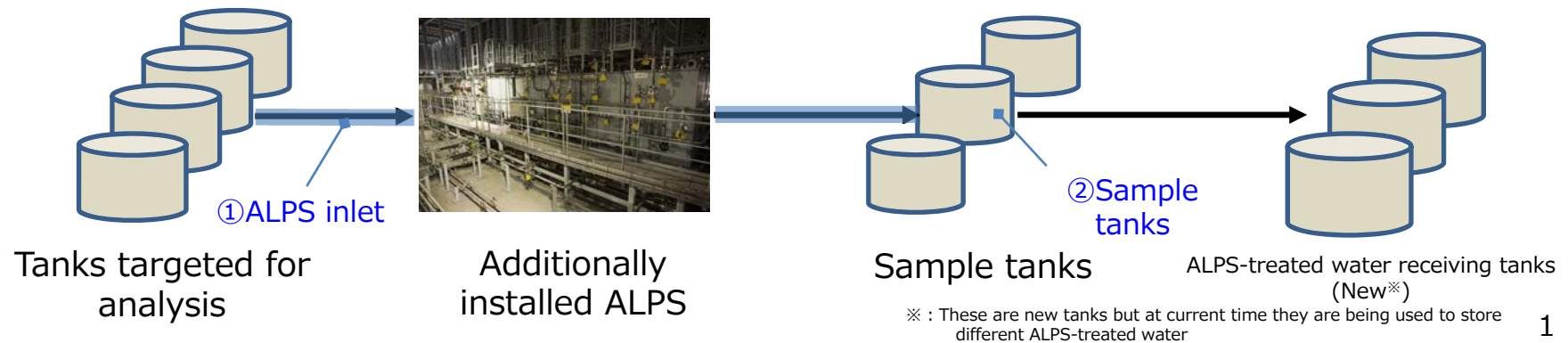
Results of tests to confirm the performance of secondary treatment of water treated with multi-nuclide removal equipment (Update)

<Reference document>
 October 15, 2020
 Tokyo Electric Power Company Holdings, Inc.
 Fukushima Daiichi D & D Engineering Company

- The sum of the ratios of legally required concentrations of radioactive substances ^{※1}, with the exception of tritium, for some of the water treated with multi-nuclide removal equipment (hereinafter referred to as, "ALPS-treated water") being stored on site at the Fukushima Daiichi Nuclear Power Station equals or exceeds 1. This treated water is being subjected to secondary treatment until the sum of the ratios of legally required concentrations of radioactive substances falls below 1.
 <[Announced on March 24 2020](#)>
- Since September 15, 2020, approximately 1,000m³ of water (Total: Approx. 2,000m³) has been taken for secondary treatment from the J1-C tank group (sum of ratios of concentrations required by law for the primary seven nuclides: 3,791 (J1-C1)), and the J1-G tank group (sum of ratios of concentrations required by law for the primary seven nuclides: 153 (J1-G1)), for which the sum of the ratios of legally required concentrations of radioactive substances equals or exceeds 100.
 <[Announced on September 10 2020](#)>
- Water from the J1-C tank group that was sampled after secondary treatment was subjected to analysis for the primary seven nuclides + Strontium-89^{※2}. This analysis has been completed and the results showed that compared with prior to secondary treatment (samples taken from ALPS inlet), the concentration of radioactive substances after secondary treatment (sample tanks) has been reduced.
(Sum of the ratios of legally required concentrations for the primary seven nuclides + strontium-89: [Prior to secondary treatment] 2,188 → [After secondary treatment] 0.15)
- We will continue to analyze and assess the concentrations of the remaining nuclide targets (54 nuclides) as well as radioactive carbon and tritium. And, we will perform the same analyses and assessments for the J1-G tank group.

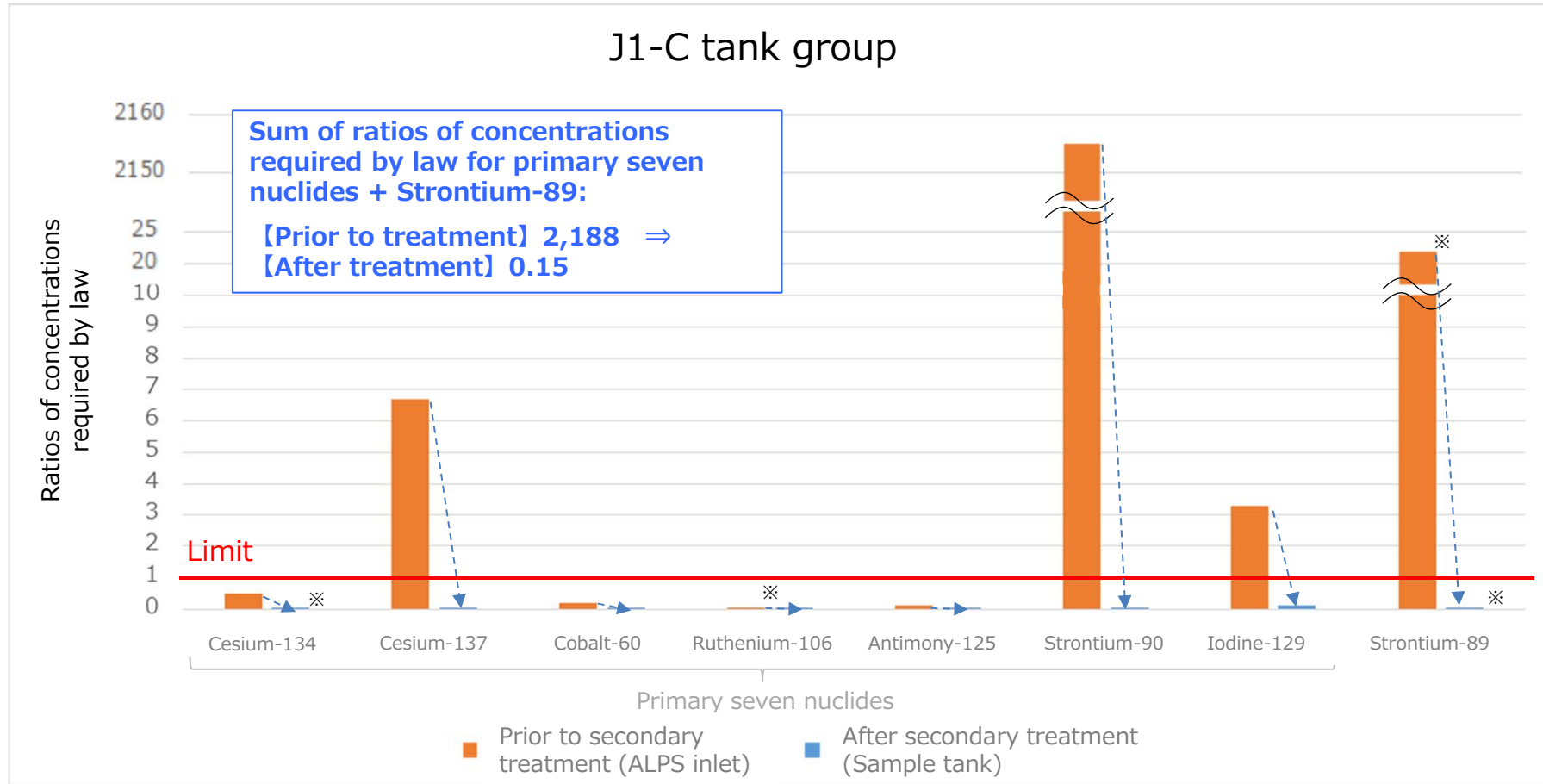
※1: A total of the concentration ratios of the legally allowed concentrations of radioactive materials stipulated by law for each substance.

※2: Strontium-89 analysis can be conducted simultaneously



<Reference> Comparison of radioactive substance concentrations prior to and after secondary treatment

【J1-C tank group (primary seven nuclides + Strontium-89)】



※ Detectable limits were used when calculating the concentrations of nuclides for which analysis results showed concentrations to be below detectable limits.

<Reference> Secondary Treatment Performance Confirmation Test Results (J1-C tank group (primary seven nuclides + Strontium-89))

	Legally required concentrations 【Bq/l】	Prior to secondary treatment (ALPS inlet) ※1		After secondary treatment (Sample tank) ※2	
		Analysis results 【Bq/l】 ※3	Legally required concentration ratio ※4	Analysis results 【Bq/l】 ※3	Legally required concentration ratio ※4
Cesium-134	60	29.3	0.49	ND (0.0760)	0.0013
Cesium-137	90	599	6.7	0.185	0.0021
Cobalt-60	200	36.3	0.18	0.333	0.0017
Ruthenium-106	100	ND (5.00)	0.050	1.43	0.014
Antimony-125	800	83.0	0.10	0.226	0.00028
Strontium-90	30	64,640	2,155	0.0357	0.0012
Iodine-129	9	29.9	3.3	1.16	0.13
Strontium-89	300	ND (6,720)	22	ND (0.0537)	0.00018
Sum of the ratios of legally required concentrations			2,188		0.15

※1 Specimens sampled on September 19, 20 and 21 were agitated/mixed and analyzed.

※2 Specimens sampled on September 27 were analyzed

※3 If concentrations were below detectable limits, the letters "ND" are noted along with the detectable limit in parenthesis

※4 Detectable limits were used when calculating the concentrations of nuclides for which analysis results showed concentrations to be below detectable limits

<Reference> Secondary Treatment Performance Confirmation Test General Schedule

