Status of seawater monitoring within the port (comparison between the highest values in 2013 and the latest values)

"The highest value" → "the latest value (sampled during July 15-23)"; unit (Bq/L); ND represents a value below the detection limit

Source: TEPCO website Analysis results on nuclides of radioactive materials around Fukushima Daiichi Nuclear Power Station http://www.tepco.co.jp/nu/fukushima-np/f1/smp/index-j.html

Sea side impermeable wall

Silt fence

Cesium-134: 3.3 (2013/10/17) →ND(0.34) Below 1/9
Cesium-137: 9.0 (2013/10/17) → 0.50 Below 1/10
Gross β: 74 (2013/ 8/19) →ND(15) Below 1/4
Tritium: 67 (2013/ 8/19) →ND(1.9) Below 1/30

Cesium-134: 4.4 (2013/12/24) →ND(0.34) Below 1/10
Cesium-137: 10 (2013/12/24) →ND(0.38) Below 1/20
Gross β: 60 (2013/ 7/ 4) →ND(15) Below 1/4
Tritium: 59 (2013/ 8/19) → 2.5 Below 1/20

Cesium-134: 5.0 (2013/12/2) → ND(0.35) Below 1/10
Cesium-137: 8.4 (2013/12/2) → 0.41 Below 1/20
Gross β: 69 (2013/8/19) → 18 Below 1/3
Tritium: 52 (2013/8/19) → ND(1.9) Below 1/20

Cesium-134: 2.8 (2013/12/2) → ND(0.37) Below 1/7
Cesium-137: 5.8 (2013/12/2) → ND(0.58) Below 1/10
Gross β: 46 (2013/8/19) → ND(17) Below 1/2
Tritium: 24 (2013/8/19) → ND(2.0) Below 1/10

Cesium-134: ND(0.53)
Cesium-137: 0.60
Gross β: 15
Tritium: ND(1.6) *1

Cesium-134: 3.3 (2013/12/24) → ND(0.47) Below 1/7
Cesium-137: 7.3 (2013/10/11) → 0.56 Below 1/10
Gross β: 69 (2013/ 8/19) → 18 Below 1/3
Tritium: 68 (2013/ 8/19) → ND(1.6) Below 1/40

Cesium-134: 3.5 (2013/10/17) → ND(0.34) Below 1/10
Cesium-137: 7.8 (2013/10/17) → 0.67 Below 1/10
Gross β: 79 (2013/ 8/19) → ND(15) Below 1/5
Tritium: 60 (2013/ 8/19) → 2.0 Below 1/30

Cesium-134: 32 (2013/10/11) → ND(0.52) Below 1/60
Cesium-137: 73 (2013/10/11) → 2.1 Below 1/30
Gross β: 320 (2013/ 8/12) → ND(17) Below 1/10
Tritium: 510 (2013/ 9/ 2) → 9.5 Below 1/50
From February 11, 2017, the location of the sampling point was shifted approx. 50 m south of the previous point due to the location shift of the silt fence.

Cesium-134: 0.93
Cesium-137: 14
Gross β: 21
Tritium: 29 *1

【Port entrance】
【South side in the port】
【East side in the port】
【Port center】
【West side in the port】
【North side in the port 】
【In front of shallow draft quay】
【In front of Unit 6 intake】
*4
*2
*3
Unit 1
Unit 2
Unit 3
Unit 4

*1: Monitoring commenced in or after March 2014. Monitoring inside the sea-side impermeable walls was finished because of the landfill.
*2: For the point, monitoring was finished from December 12, 2018 due to preparatory work for transfer of mega float.
*3: For the point, monitoring point was moved from February 6, 2019 due to preparatory work for transfer of mega float.
*4: For the point, monitoring was finished from April 3, 2019 due to preparatory work for transfer of mega float.

	Legal discharge limit	WHO Guidelines for Drinking Water Quality
Cesium-134	60	10
Cesium-137	90	10
Strontium-90 (strongly correlate with Gross β)	30	10
Tritium	60,000	10,000

Cesium-134: 5.3 (2013/8/ 5) → ND(0.51) Below 1/10
Cesium-137: 8.6 (2013/8/ 5) → ND(0.63) Below 1/10
Gross β: 40 (2013/7/ 3) → ND(17) Below 1/2
Tritium: 340 (2013/6/26) → ND(1.6) Below 1/200

Summary of TEPCO data as of July 24, 2019

Note: The gross β measurement values include natural potassium 40 (approx. 12 Bq/L). They also include the contribution of yttrium 90, which radioactively balance strontium 90.

Status of seawater monitoring around outside of the port
(comparison between the highest values in 2013 and the latest values)

(The latest values sampled during July 15-23)

Unit (Bq/L); ND represents a value below the detection limit; values in ( ) represent the detection limit; ND (2013) represents ND throughout 2013

	Legal discharge limit	WHO Guidelines for Drinking Water Quality
Cesium-134	60	10
Cesium-137	90	10
Strontium-90 (strongly correlate with Gross β)	30	10
Tritium	60,000	10,000

【Northeast side of port entrance(offshore 1km)】

Cesium-134: ND (2013) → ND (0.65)
Cesium-137: ND (2013) → ND (0.60)
Gross β: ND (2013) → ND (16)
Tritium: ND (2013) → ND (0.86)

【East side of port entrance (offshore 1km)】

Cesium-134: ND (2013) → ND (0.70)
Cesium-137: 1.6 (2013/10/18) → ND (0.64) Below 1/2
Gross β: ND (2013) → ND (16)
Tritium: 6.4 (2013/10/18) → ND (0.86) Below 1/7

【Southeast side of port entrance(offshore 1km)】

Cesium-134: ND (2013) → ND (0.83)
Cesium-137: ND (2013) → ND (0.68)
Gross β: ND (2013) → ND (16)
Tritium: ND (2013) → ND (0.85)

Cesium-134: ND (2013) → ND (0.79)
Cesium-137: ND (2013) → ND (0.60)
Gross β: ND (2013) → ND (16)
Tritium: 4.7 (2013/ 8/18) → 1.1 Below 1/4

【North side of north breakwater(offshore 0.5km)】

【Port entrance】

Cesium-134: 3.3 (2013/12/24) →ND (0.47) Below 1/7
Cesium-137: 7.3 (2013/10/11) → 0.56 Below 1/10
Gross β: 69 (2013/ 8/19) → 18 Below 1/3
Tritium: 68 (2013/ 8/19) →ND (1.6) Below 1/40

【South side of south breakwater(offshore 0.5km)】

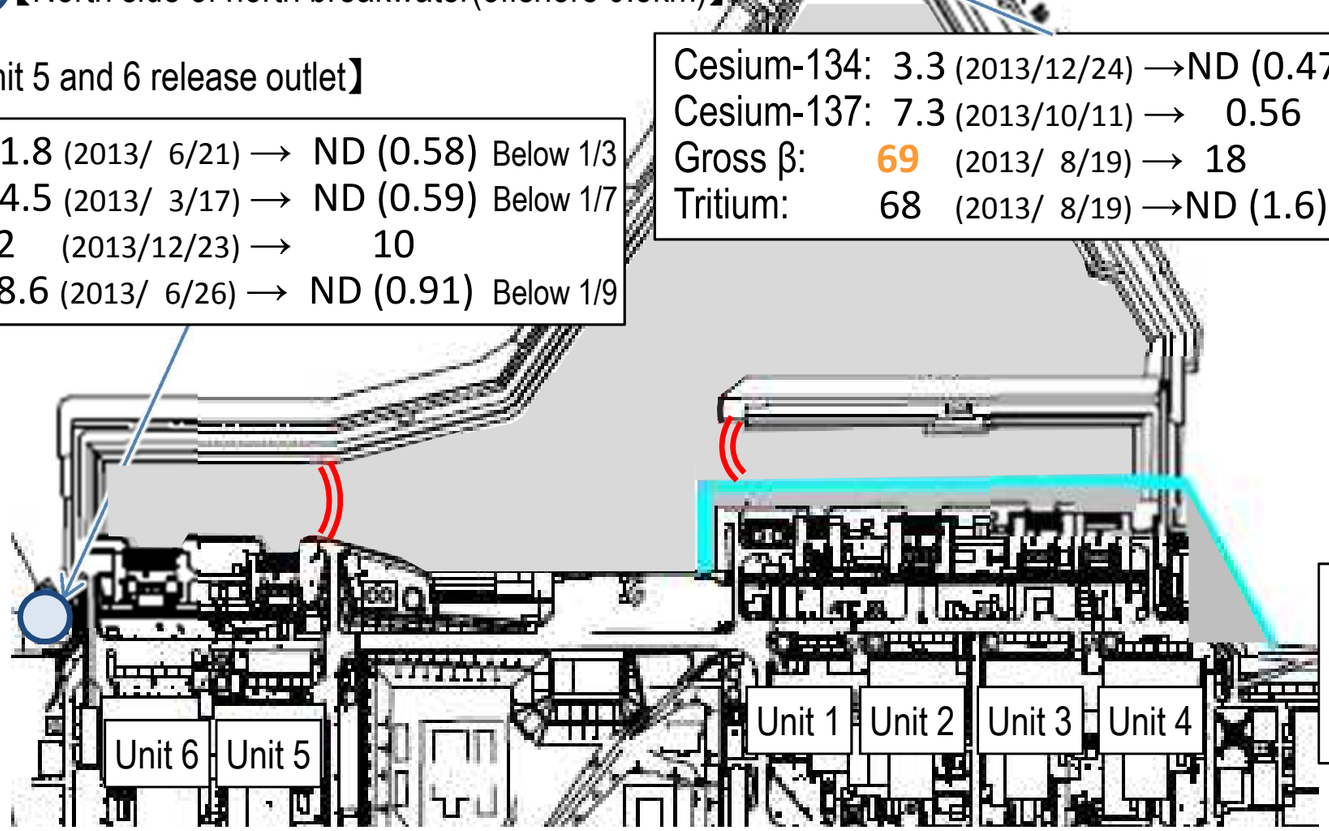
Cesium-134: ND (2013) → ND (0.65)
Cesium-137: ND (2013) → ND (0.58)
Gross β: ND (2013) → ND (16)
Tritium: ND (2013) → 0.87

【North side of Unit 5 and 6 release outlet】

Cesium-134: 1.8 (2013/ 6/21) → ND (0.58) Below 1/3
Cesium-137: 4.5 (2013/ 3/17) → ND (0.59) Below 1/7
Gross β: 12 (2013/12/23) → 10
Tritium: 8.6 (2013/ 6/26) → ND (0.91) Below 1/9

Cesium-134: ND (2013) → ND (0.57)
Cesium-137: 3.0 (2013/ 7/15) → ND (0.46) Below 1/6
Gross β: 15 (2013/12/23) → 9.8
Tritium: 1.9 (2013/11/25) → ND (0.90) Below 1/2

【Near south release outlet】



Note: The gross β measurement values include natural potassium 40 (approx. 12 Bq/L).
They also include the contribution of yttrium 90, which radioactively balance strontium 90.

Note: Because safety of the sampling points was unassured due to the influence of Typhoon No. 10 in 2016, samples were taken from approx. 330 m south of the Unit 1-4 release outlet. Samples were also taken from a point approx. 280m south from the same release outlet from January 27, 2017 and approx. 320m from March 23, 2018

Summary of TEPCO data as of July 24, 2019

Source: TEPCO website, Analysis results on nuclides of radioactive materials around Fukushima Daiichi Nuclear Power Station, http://www.tepco.co.jp/nu/fukushima-np/f1/smp/index-j.html