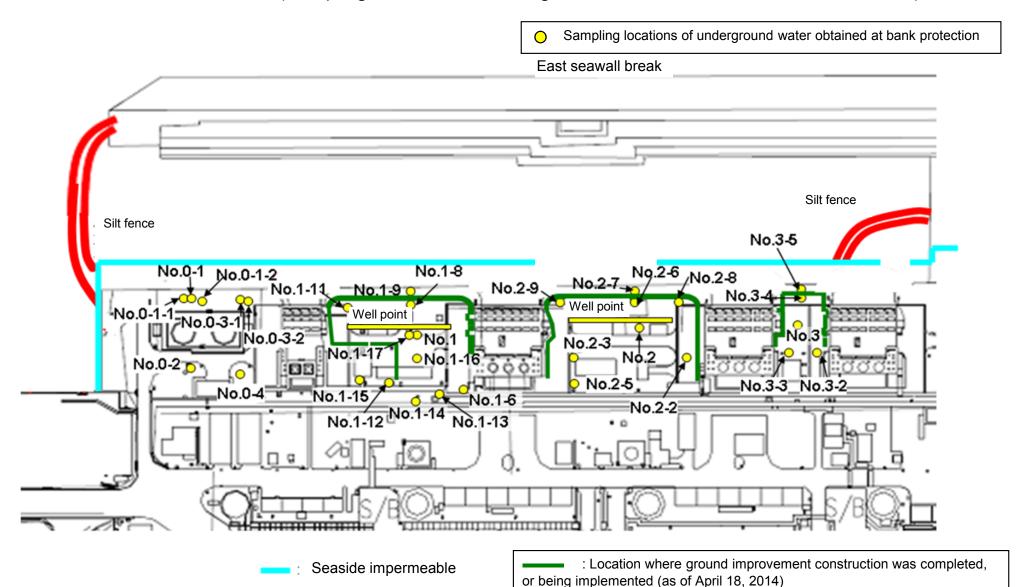
Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Underground Water Obtained at Bank Protection)



## Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

|         |                          | 1  |   |   |   |          |  | in . |   |  |  |   |   |   |   | L (exclude chloride                              |
|---------|--------------------------|--|---|---|---|----------|--|------|---|--|--|---|---|---|---|--|
|         |                          | Underground water observation hole No.0-1                                    | Underground water<br>observation hole<br>No.0-1-2 | Underground water<br>observation hole<br>No.0-2   |   |          | Underground wate<br>observation hole<br>No.0-4 |      | Underground water<br>observation hole<br>No.1-6 |  | Underground water<br>observation hole<br>No.1-9 (note) |   |   |   | Underground water<br>observation hole<br>No.1-16      | Underground water<br>observation hole<br>No.1-17 |
|         | Date of sampling         | /  | /   | /   | / | 1 /      | 1  | 1    | 1 /   | 1 /  | Nov 13   | / | 1 | 1 /                                       | Nov 13  | Nov 13   |
|         | Time of sampling         |  |   |   |   |          |  |      |   |  | 7:08 AM  |   | / |   | 9:50 AM   | 10:20 AM   |
|         | Chloride (unit: ppm)     |  |   |   |   |          |  |      |   |  | 20   |   |   |   | _   | -  |
| C       | s-134 (Approx. 2 years)  |  |   |   |   |          |  |      |   |  | _  |   |   |   | 1.2   | ND(0.59)   |
| С       | s-137 (Approx.30 years)  |  |   |   |   |          |  |      |   |  | _  |   |   |   | 2.4   | ND(0.56)   |
|         | Mn-54 (Approx. 310 days) |  |   |   |   |          | /  |      |   |  | _  |   |   |   | 3.7   | ND   |
| The     | Sb-125 (Approx. 3 years) |  |   |   |   |          |  |      |   |  | _  |   |   |   | 8   | ND   |
| other y |                          |  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
|         |                          |  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
|         | Gross β                  |  |   |   |   |          |  |      |   |  | ND(18)   |   |   |   | 630,000   | 280,000  |
|         | H-3 (Approx. 12 years)   |  |   |   |   |          |  |      |   |  | Under analysis   |   |   |   | Under analysis  | Under analysis                                   |
| S       | r-90 (Approx. 29 years)  | /  | /   | /   |   | /        | /  | /    | /   | /  | _  | / | / | /   | -   | -  |
|         |                          | Groundwater<br>pumped up from<br>the well point<br>(between Unit 1<br>and 2) | Underground water observation hole No.2           | r Underground water<br>observation hole<br>No.2-2 |   |          |  |      | Underground water<br>observation hole<br>No.2-8 | Groundwater pumped up from the well point (between Unit 2 and 3) | Underground water observation hole No.3                |   |   | Underground water observation hole No.3-4 | Underground water<br>observation hole<br>No.3-5(note) |  |
|         | Date of sampling         | Nov 13   | ,   | /   | / | /        | ,  | 1    | /   |  | /  | / | , | /   | /   |  |
|         | Time of sampling         | 10:00 AM   |   |   |   |          | /  |      |   |  |  |   | / |   |   |  |
|         | Chloride (unit: ppm)     | -  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
| С       | s-134 (Approx. 2 years)  | 920 * 1  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
| С       | s-137 (Approx.30 years)  | 3,000 * 1  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
|         | Mn-54 (Approx. 310 days) | 110 * 1  |   |   |   |          |  |      |   |  |  |   |   |   | /   |  |
| The     | Sb-125 (Approx. 3 years) | ND   |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
| other y |                          |  |   | 7   |   | <u> </u> |  |      |   |  | 7  | 7 |   | <u> </u>                                  | /   |  |
|         |                          |  | 1   | 7   | 7 | 7        | 7  | 1    | 7   | 7  | 7  | 7 | 7 | 7   | /   |  |
|         | Gross β                  | 3,200,000 * 1  |   |   |   |          |  |      |   |  |  |   |   |   |   |  |
|         | ·                        |  | I /   |   |   |          | I /  | I /  | 1 /   |  | 1 /  |   |   | I /                                       |   |  |
|         | H-3 (Approx. 12 years)   | Under analysis   | /   | 1/  | / |          |  | /    | /   |  |  | / | / | /   | /   |  |

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses, except "the other y".

(Note) As of No. 1-9, 2-5, and 3-5, ywas not measured because they are samlpled by sampler. Gross βwere measured after filtation for references.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

<sup>\*1</sup> The highest measurement value (compared to the previous values provided in the handouts published in 'Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection')

## <Reference> The Highest Dose Until the Previous Measurement (Groundwater Obtained at Bank Protection)

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|----|--|--|
|    |  |  |

|                          |                           |                                     |                  |                                       |        |                                       |                   |                                     |         |                                       |         |                                       |        |                                     |         |                                   |                 |                                      | Unit. B |                                      |        |                                      |                  |                                      |        |                                      |        |                                    |          |
|--------------------------|---------------------------|-------------------------------------|------------------|---------------------------------------|--------|---------------------------------------|-------------------|-------------------------------------|---------|---------------------------------------|---------|---------------------------------------|--------|-------------------------------------|---------|-----------------------------------|-----------------|--------------------------------------|---------|--------------------------------------|--------|--------------------------------------|------------------|--------------------------------------|--------|--------------------------------------|--------|------------------------------------|----------|
|                          |                           | Groundwater observation hole No.0-1 |                  | Groundwater observation hole No.0-1-1 |        | Groundwater observation hole No.0-1-2 |                   | Groundwater observation hole No.0-2 |         | Groundwater observation hole No.0-3-1 |         | Groundwater observation hole No.0-3-2 |        | Groundwater observation hole No.0-4 |         | Groundwater observation hole No.1 |                 | Groundwater observation hole No.1-1* |         | Groundwater observation hole No.1-2* |        | Groundwater observation hole No.1-3* |                  | Groundwater observation hole No.1-4* |        | Groundwater observation hole No.1-5° |        | Groundwater observation hol No.1-6 |          |
|                          | Cs-134 (Approx. 2 years)  | 29                                  | <5/25>           | ND                                    |        | 0.61                                  | <3/2>             | 0.61                                | [10/13] | 0.64                                  | <4/6>   | 1.3                                   | <9/25> | 0.70                                | <6/29>  | 13                                | [8/29]          | 1.9                                  | [7/8]   | 11,000                               | [7/9]  | 10                                   | [9/2]            | 1.5                                  | [7/8]  | 310                                  | [8/5]  | 67,000                             | <10/17>  |
| Cs-137 (Approx.30 years) |                           | 78                                  | <5/25>           | ND                                    |        | 1.5                                   | <3/2>             | 2.2                                 | <1/12>  | 1.1                                   | <4/6>   | 5.1                                   | <9/25> | 1.6                                 | <6/29>  | 31                                | [8/29]          | 3.6                                  | [7/8]   | 22,000                               | [7/9]  | 24                                   | [9/2]            | 3.6                                  | [7/8]  | 650                                  | [8/5]  | 200,000                            | <10/16>  |
|                          | Ru-106 (Approx. 370 days) | ND                                  |                  | ND                                    |        | ND                                    |                   | ND                                  |         | ND                                    |         | ND                                    |        | ND                                  |         | 26                                | [5/24]          | 7.9                                  | [7/8]   | 160                                  | [8/15] | 17                                   | [7/22]<br>[8/8]  | 3.1                                  | [8/8]  | ND                                   |        | ND                                 |          |
| The                      | Mn-54 (Approx. 310 days)  | ND                                  |                  | ND                                    |        | ND                                    |                   | ND                                  |         | ND                                    |         | 0.64                                  | <2/20> | ND                                  |         | ND                                |                 | 1.0                                  | [7/5]   | 62                                   | [7/5]  | ND                                   |                  | ND                                   |        | ND                                   |        | 700                                | <10/13>  |
| other                    | Co-60 (Approx. 5 years)   | ND                                  |                  | ND                                    |        | ND                                    |                   | ND                                  |         | ND                                    |         | ND                                    |        | ND                                  |         | 0.50                              | [7/19]          | ND                                   |         | 3.1                                  | [7/8]  | ND                                   |                  | ND                                   |        | ND                                   |        | 3600                               | <10/13>  |
|                          | Sb-125 (Approx. 3 years)  | ND                                  |                  | ND                                    |        | ND                                    |                   | ND                                  |         | ND                                    |         | ND                                    |        | ND                                  |         | 1.7                               | [7/11]          | ND                                   |         | 250                                  | [7/15] | 1.4                                  | [7/12]<br>[8/26] | ND                                   |        | 12                                   | [8/8]  | 34                                 | <5/19>   |
|                          | Gross β                   | 300                                 | [8/29]<br><5/18> | 21                                    | [12/7] | 24                                    | <6/22>            | 87                                  | [10/13] | ND                                    |         | 74                                    | <10/9> | 44                                  | <6/22>  | 1,900                             | [5/24]          | 4,400                                | [7/8]   | 9,300,000                            | [7/8]  | 160,000                              | [8/12]<br>[8/15] | 380                                  | [8/19] | 56,000                               | [8/5]  | 7,800,000                          | <10/13>  |
|                          | H-3 (Approx. 12 years)    | 45,000                              | [8/29]           | 18,000                                | [12/7] | 74,000                                | [12/15]<br><1/19> | 6,800                               | <2/16>  | ND                                    |         | 76,000                                | <2/6>  | 56,000                              | <2/23>  | 500,000                           | [5/24]<br>[6/7] | 630,000                              | [7/8]   | 430,000                              | [9/16] | 290,000                              | (7/12)           | 98,000                               | (7/11) | 72,000                               | (8/15) | *2<br>110,000                      | <2/6>    |
|                          | Sr-90(Approx. 29 years)   | 140                                 | [8/8]            | 7.9                                   | [12/7] | 2.6                                   | [11/10]           | 0.73                                | [9/2]   | 1.5                                   | [11/20] | 2.3                                   | [12/6] | ND(0.83)                            | [10/27] | 1,300                             | [8/22]          | 2,300                                | [6/28]  | 5,000,000                            | [7/5]  | 130,000                              | [8/8]            | 200                                  | [7/8]  | 5,100                                | [8/22] | 1,100,000                          | <8/4>    |
|                          |                           |                                     |                  |                                       |        |                                       |                   |                                     |         |                                       |         | •                                     |        |                                     |         |                                   |                 |                                      |         |                                      |        | •                                    |                  |                                      |        |                                      |        | •                                  | Unit: Bo |

|       | 0.424/(2.200) (2.200)     |        | dwater<br>ion hole<br>1-8 | Groundwater<br>observation hole<br>No.1-9 | Groundwater<br>observation hole<br>No.1-10 | Groundwater<br>observation hole<br>No.1-11 | Groundwater<br>observation hole<br>No.1-12 |         | Groundwater<br>observation hole<br>No.1-13 |                  | Groundwater<br>observation hole<br>No.1-14 |         | Groundwater<br>observation hole<br>No.1-15 |        | Groundwater observation hole No.1-16 |                        | Groundwater<br>observation hole<br>No.1-17 |                | Groundwater<br>pumped up from<br>the well point<br>(between Unit 1<br>and 2) |         | Groundwater observation hole No.2 |        | Groundwater<br>observation hole<br>No.2-1 |                 | Groundwater observation hole No.2-2 |         |
|-------|---------------------------|--------|---------------------------|---|--|--|--|---------|--|------------------|--|---------|--|--------|--------------------------------------|------------------------|--|----------------|--|---------|-----------------------------------|--------|---|-----------------|-------------------------------------|---------|
| (     | Cs-134 (Approx. 2 years)  | 47     | [11/25]                   | 170 [9/3]                                 | -  | 1.1 <1/13>                                 | 74   | [10/21] | 37,000                                     | <2/13>           | 130  | <10/18> | ND   |        | 30 <7                                | /28>                   | 1.4 <                                      | :7/7>          | 110  | [9/23]  | 0.88                              | <2/26> | 0.66                                      | [9/1]           | 15                                  | <2/12>  |
| (     | Cs-137 (Approx.30 years)  | 110    | [11/25]                   | 380 [9/3]                                 | -  | 3.4 <4/28>                                 | 170  | [10/21] | 93,000                                     | <2/13>           | 390  | <10/20> | 0.88                                       | <7/10> | 86 <7                                | 7/28>                  | 3.0 <                                      | 9/29>          | 250  | [9/23]  | 2.5                               | <2/26> | 1.1                                       | [8/29]<br>[9/1] | 38                                  | <2/12>  |
|       | Ru-106 (Approx. 370 days) | ND     |                           | ND  | =  | ND   | 5.4  | [10/28] | ND   |                  | ND   |         | ND   |        | 9.2 [10                              | 0/28]                  |  | 4/21><br>:5/1> | 25   | [9/2]   | ND                                |        | ND  |                 | ND                                  |         |
| The   | Mn-54 (Approx. 310 days)  | 12     | <2/3>                     | ND  | -  | ND   | ND   |         | ND   |                  | 2.1  | <9/8>   | ND   |        | 11 <8                                | /25>                   | ND   |                | 54   | <11/10> | ND                                |        | ND  |                 | ND                                  |         |
| other | Co-60 (Approx. 5 years)   | 1.3    | <2/3>                     | ND  | -  | ND   | 0.51                                       | [10/24] | ND   |                  | 0.44                                       | <5/29>  | ND   |        | 0.9 [1                               | 1/7]                   | 0.61 [1                                    | 1/25]          | 0.61   | <6/9>   | ND                                |        | ND  |                 | ND                                  |         |
|       | Sb-125 (Approx. 3 years)  | ND     |                           | ND  | -  | ND   | 61   | [10/21] | ND   |                  | ND   |         | ND   |        |                                      | /16>                   | 2.1 [1                                     | 1/25]          | ND   |         | ND                                |        | ND  |                 | ND                                  |         |
|       | Gross β                   | 59,000 | <2/3>                     | 2,100*2 [11/17]                           | 78 *2 <1/27>                               | 2,300 [12/26]                              | 1,100                                      | <5/5>   | 260,000                                    | <2/12><br><2/13> | 29,000                                     | <10/3>  | 110  | <7/10> | 3,100,000 <1                         | /20><br>/30> 1<br>2/3> |  |                | 2,100,000  | <11/10> | 1,700                             | [7/8]  | 380                                       | [7/29]          | 600                                 | <4/16>  |
|       | H-3 (Approx. 12 years)    | 33,000 | <6/2>                     | 860 *2 [11/14]                            | 270,000 <sup>*2</sup> <1/27>               | 85,000 [9/13]                              | 440,000                                    | [10/31] | 88,000                                     | <2/12>           | 23,000                                     | <2/13>  | 74,000                                     | <7/10> | 43,000 [9                            | /26]                   | 160,000 <1                                 | 0/16>          | 460,000  | [8/19]  | 1,000                             | <2/23> | 440                                       | [8/26]          | 660                                 | <1/8>   |
|       | Sr-90(Approx. 29 years)   | 35,000 | <2/17>                    | 300 [10/3]                                | -  | 170 <8/4>                                  | 290  | [10/21] | 160,000                                    | <2/12>           | 13,000                                     | <8/4>   | Under an                                   | alysis | 2,700,000 <2                         | /13>                   | 170,000 <                                  | :8/4>          | _  |         | 54                                | [5/31] | 5.9                                       | [7/25]          | 320                                 | [12/25] |

|                          |                           |   |                 |                          |        |   |                  |   |         |  |                          |                                   |                 |                                     |                               |                                     |                  |   |                 |                                     |                  |   |        |      |         |     | Unit: Bq/L |
|--------------------------|---------------------------|---|-----------------|--------------------------|--------|---|------------------|---|---------|--|--------------------------|-----------------------------------|-----------------|-------------------------------------|-------------------------------|-------------------------------------|------------------|---|-----------------|-------------------------------------|------------------|---|--------|------|---------|-----|------------|
| Cs 134 (Approx. 3 years) |                           | Groundwater observation hole No.2-3 Groundwater observation hole No.2-5 |                 | observation hole observa |        | Groundwater observation hole No.2-7 Groundwater observation hole No.2-8 |                  | Groundwater<br>observation hole<br>No.2-9 |         | Groundwater<br>pumped up from<br>the well point<br>(between Unit 2<br>and 3) |                          | Groundwater observation hole No.3 |                 | Groundwater observation hole No.3-1 |                               | Groundwater observation hole No.3-2 |                  | Groundwater<br>observation hole<br>No.3-3 |                 | Groundwater observation hole No.3-4 |                  | Groundwater<br>observation hole<br>No.3-5 |        |      |         |     |            |
| (                        | Cs-134 (Approx. 2 years)  | 2.2   | <2/26>          | 41                       | <5/7>  | 17  | <3/11>           | 3.5                                       | <2/23>  | 1.3  | <7/20>                   | ND                                |                 | 2.2                                 | <9/7>                         | 3.5                                 | [7/25]           | 1.2                                       | (7/25)<br>(8/8) | 23                                  | <8/27>           | 180                                       | <7/2>  | 5.1  | <7/23>  | 100 | <7/30>     |
| C                        | s-137 (Approx.30 years)   | 5.5   | <2/26>          | 110                      | <5/7>  | 50  | <3/11>           | 9.0                                       | <2/23>  | 3.4  | <7/20>                   | 0.58 <b>* 2</b>                   | <2/11>          | 5.7                                 | <9/7>                         | 5.9                                 | [8/8]            | 2.6                                       | [8/1]           | 68                                  | <9/3>            | 500                                       | <7/2>  | 16   | <8/27>  | 310 | <7/30>     |
|                          | Ru-106 (Approx. 370 days) | ND  |                 | ND                       |        | ND  |                  | ND  |         | ND   |                          | 6.5*2                             | <2/11>          | ND                                  |                               | ND                                  |                  | ND  |                 | ND                                  |                  | ND  |        | ND   |         |     |            |
| The                      | Mn-54 (Approx. 310 days)  | 0.29  | [12/6]          | 0.95                     | <6/4>  | ND  |                  | ND  |         | ND   |                          | ND                                |                 | ND                                  |                               | ND                                  |                  | ND  |                 | ND                                  |                  | ND  |        | 0.54 | [10/30] |     |            |
| other y                  | Co-60 (Approx. 5 years)   | ND  |                 | ND                       |        | ND  |                  | ND  |         | ND   |                          | ND                                |                 | ND                                  |                               | ND                                  |                  | ND  |                 | ND                                  |                  | ND  |        | ND   |         |     |            |
|                          | Sb-125 (Approx. 3 years)  | ND  |                 | 74                       | <5/7>  | ND  |                  | ND  |         | ND   |                          | ND                                |                 | ND                                  |                               | 1.6                                 | <1/1>            | ND  |                 | ND                                  |                  | ND  |        | ND   |         | -   |            |
|                          | Gross β                   | 1,500   | [12/6]<br><1/8> | 150,000                  | <2/12> | 3,200   | [12/5]<br><11/6> | 1,300                                     | <6/20>  | 5,800  | <7/23>                   | 1,700                             | <2/7>           | 240,000                             | [12/12]                       | 1,400                               | [7/11]           | 180                                       | [8/1]           | 3,100                               | <8/20><br><8/28> | 8,900                                     | <7/2>  | 46   | <8/13>  | 510 | <7/16>     |
|                          | H-3 (Approx. 12 years)    | 1,700   | [12/6]          | 7,900                    | <4/9>  | 1,900   | <8/10>           | 1,100                                     | <1/19>  | 1,700  | <4/6><br><8/6><br><8/13> | *2<br>13,000                      | <2/7><br><2/11> | 13,000                              | <10/19><br><10/26><br><10/29> | 3,200                               | [Dec<br>12,2012] | 460                                       | [8/1]           | 3,700                               | <7/9>            | 8,000                                     | <5/7>  | 170  | [9/18]  | 170 | <1/8>      |
| ;                        | Sr-90(Approx. 29 years)   | 1,200   | [12/6]          | 34,000                   | <5/7>  | Under   | analysis         | ND(1.4)                                   | [11/21] | 3,900  | <3/30>                   | 1,200°2                           | <2/11>          | -                                   |                               | 8.3                                 | [Dec<br>12,2012] | 4.4                                       | [7/23]          | 2000                                | <4/18>           | 3,600                                     | <4/30> | ND   |         | 200 | <5/28>     |

<sup>Since some samples are still under analysis, the highest dose of the Strontium-90 is among those previously announced.

1 Analysis result of pumped water.

2 The results are for a reference, since the water was highly turbid. (γ and Gross β were measured after filtration.)</sup> 

 $<sup>^{\</sup>star}$  "ND" indicates that the measurement result is below the detection limit.

<sup>\*</sup> Note of Sampling is provided in parentheses. (): 2013, <>: 2014

\* "\*" is provided next to the name of the holes where the sampling could not be performed due to the chemical injection of ground improvement.

(Note) As of No. 1-9, 2-5, and 3-5, since September 17, γwas not measured because they are samlpled by sampler. Gross βwere measured after filtation for references.