

(News Release)
The Results of Radioactive Material Monitoring of the Surface Water Bodies
within Tochigi Prefecture
(June-July Samples)

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In accordance with the Comprehensive Radiation Monitoring Plan determined by the Monitoring Coordination Meeting, the Ministry of the Environment (MOE) is continuing to monitor radioactive materials in water environments (surface water bodies (rivers, lakes and headwaters, and coasts), etc.).

Samples taken from the surface water bodies of Tochigi Prefecture during the period of June 1-July 31 have been measured as part of MOE's efforts to monitor radioactive materials; the results have recently been compiled and are released here.

The monitoring results of radioactive materials in surface water bodies carried out to date can be found at the following web page: <http://www.env.go.jp/jishin/rmp.html#monitoring>

1. Survey Overview

(1) Survey Locations

50 environmental reference points, etc. in the surface water bodies within Tochigi Prefecture
(Rivers: 49 locations, Lake and headwater: 1 location)

(2) Survey Method

- Measurement of concentrations of radioactive materials (radioactive cesium (Cs-134 and Cs-137), etc.) in water and sediment
- Measurement of concentrations of radioactive materials and spatial dose-rate in soil in the surrounding environment of water and sediment sample collection points (river terraces, etc.)

2. Outline of Results (* denotes the results of the previous survey (February))

(1) Water Quality (Lower detection limit: 1Bq/L)

Cs-134, Cs-137: Not detectable (ND) at any location (* ND at any location)

<Reference>

Specification and Standards for Food, Food Additives, etc. in accordance with the Food Sanitation Act (Drinking Water) (Ministry of Health, Labour and Welfare Public Notice No.130, March 15, 2012)
Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

Target value for radioactive materials in tap water (management target for water supply facilities) (March 5, 2012; 0305 Notice No.1 from the Director of the Water Supply Division, Health Service Bureau, Ministry of Health, Labour and Welfare)

Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

(2) Sediment (Lower detection limit: 10Bq/kg (dried mud))

(Rivers)

Cs-134: ND-180Bq/kg (dried mud)

Cs-137: ND-270Bq/kg (dried mud)

- (* Cs-134: ND-990Bq/kg (dried mud))
- (* Cs-137: ND-1,300Bq/kg (dried mud))

(Lakes and headwaters)

- Cs-134: 82Bq/kg (dried mud)
- Cs-137: 130Bq/kg (dried mud)
- (* Cs-134: 66-2,800Bq/kg (dried mud))
- (* Cs-137: 110-3,900Bq/kg (dried mud))

(3) Surrounding Environment (Lower detection limit: 10Bq/kg (dry))

(Rivers)

- Cs-134: ND-5,200Bq/kg (dry)
 - Cs-137: 13-8,100Bq/kg (dry)
 - (* Cs-134: 11-7,500Bq/kg (dry))
 - (* Cs-137: 21-10,000Bq/kg (dry))
- Spatial dose: 0.07-0.86 μ Sv/h

(Lakes and headwaters)

- Cs-134: 34Bq/kg (dry)
 - Cs-137: 58Bq/kg (dry)
 - (* Cs-134: 1900-5,400Bq/kg (dry))
 - (* Cs-137: 2,700-7,400Bq/kg (dry))
- Spatial dose: 0.08 μ Sv/h

(Annex for details)
(Map attached)

Future Plans

In coordination with relevant organizations, MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. in Fukushima Prefecture, its neighboring prefectures, etc.

ORiver: Water Quality Monitoring Results

(Annex)

Sampling point				Sampling date	Weather	Full depth m	General items				Concentration of radioactive material Bq/L			Remarks		
No.	Water body	Point	Municipality				Sampling depth m	Transparency cm	Electrical conductivity nS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134		Cs-137	
1	Nakagawa River	Komeibashi Bridge	Nasushoburashi City	2012/6/19	Rain	0.20	0.0	>100	12	<1	1	<1	<1	<1		
2		Takaomatagawa River	Takaomatagawa Bridge	Nasumachi Town	2012/6/20	Sunny	0.70	0.0	58	10	5	1	<1	<1	<1	
3		Yukawa River	Yukawabashi Bridge		2012/6/20	Sunny	0.30	0.0	68	15	9	3	<1	<1	<1	
4		Nakagawa River	Kamikuroiso	Nasushoburashi City	2012/6/21	Sunny	0.30	0.0	>100	17	2	1	<1	<1	<1	
5		Yosagawa River	Yosagabashi Bridge		2012/6/22	Cloudy	0.15	0.0	81	16	1	1	<1	<1	<1	
6		Kurokawa River	Shindenbashi Bridge	Nasumachi Town	2012/6/22	Cloudy	0.30	0.0	>100	12	<1	1	<1	<1	<1	
7		Yosagawa River	Kawadabashi Bridge		2012/6/4	Sunny	1.10	0.0	>100	10	<1	1	<1	<1	<1	
8		Nakagawa River	Kurobane	Otarawashi City	2012/6/4	Sunny	0.20	0.0	>100	34	<1	1	<1	<1	<1	
9		Matsubagawa River	Tributary		2012/6/26	Sunny	0.50	0.0	>100	11	<1	<1	<1	<1	<1	
10		Sahagawa River	Udagawabashi Bridge		2012/6/4	Sunny	0.20	0.0	>100	14	<1	1	<1	<1	<1	
11	Momragawa River	Momragawabashi Bridge		2012/6/26	Sunny	0.20	0.0	>100	13	<1	1	<1	<1	<1		
12	Hokigawa River	Iwabashi Bridge	Nasushoburashi City	2012/6/4	Sunny	0.60	0.0	>100	9	2	2	<1	<1	<1		
13	Hokigawa River	Hokigawabashi Bridge	Otarawashi City	2012/6/26	Sunny	0.70	0.0	>100	9	1	1	<1	<1	<1		
14	Nakagawa River	Shinnakabashi Bridge	Nakagawamachi Town	2012/6/5	Cloudy	0.40	0.0	>100	12	<1	1	<1	<1	<1		
15	Murogawa River	Koseibashi Bridge		2012/6/5	Cloudy	0.20	0.0	>100	17	2	1	<1	<1	<1		
16	Arakawa River	Saikachibashi Bridge	Shioyamachi Town	2012/6/22	Cloudy	0.80	0.0	>100	40	10	2	<1	<1	<1		
17	Uchikawa River	Asahibashi Bridge	Sakurashi City	2012/6/6	Cloudy	0.25	0.0	>100	18	<1	1	<1	<1	<1		
18	Arakawa River	Mukadabashi Bridge	Nasukarasuyamashi City	2012/6/5	Sunny	0.20	0.0	>100	15	2	1	<1	<1	<1		
19	Egawa River	Tributary		2012/6/5	Cloudy	0.40	0.0	>100	12	<1	1	<1	<1	<1		
20	Ihaagawa River	Tributary		2012/6/27	Sunny	0.20	0.0	>100	14	1	1	<1	<1	<1		
21	Dayagawa River	Shinkyo Bridge	Nikkoshi City	2012/6/5	Cloudy	0.60	0.0	>100	14	<1	1	<1	<1	<1		
22	Shidobuchigawa River	Sanchugabashi Bridge		2012/6/12	Cloudy	0.80	0.0	>100	6	<1	1	<1	<1	<1		
23	Dayagawa River	Kashinbashi Bridge (Harriga)		2012/6/13	Cloudy	0.30	0.0	>100	11	<1	1	<1	<1	<1		
24	Kingawa River	Samaki	Shioyamachi Town	2012/6/12	Cloudy	0.20	0.0	>100	9	<1	1	<1	<1	<1		
25	Nishikingawa River	Nishikingawabashi Bridge	Utsunomiya City	2012/6/6	Cloudy	0.70	0.0	>100	10	3	1	<1	<1	<1		
26	Kingawa River	Kingawabashi Bridge (Hoshakujji Temple)		2012/6/6	Cloudy	0.30	0.0	>100	10	1	2	<1	<1	<1		
27	Kingawa River	Kingawabashi Bridge		2012/6/6	Cloudy	0.40	0.0	>100	10	1	1	<1	<1	<1		
28	Egawa River	Dandozumbashi Bridge	Mookashi City	2012/6/7	Sunny	0.20	0.0	>100	15	2	1	<1	<1	<1		
29	Egawa River	Tributary	Shimotsukeshi City	2012/6/7	Sunny	0.80	0.0	>100	22	1	1	<1	<1	<1		
30	Ataborigawa River	Nikko City Hall, front	Nikkoshi City	2012/6/28	Cloudy	0.40	0.0	>100	53	2	2	<1	<1	<1		
31	Kiwadajima			2012/6/13	Cloudy	0.20	0.0	>100	11	<1	<1	<1	<1	<1		
32	Tagawa River	Ozobashi Bridge	Utsunomiya City	2012/6/13	Cloudy	0.60	0.0	>100	14	<1	<1	<1	<1	<1		
33	Tagawa River	Meijibashi Bridge	Kannokawamachi Town	2012/6/8	Sunny	0.60	0.0	>100	14	1	<1	<1	<1	<1		
34	Kanagawa River	Iakushibashi Bridge		2012/6/27	Sunny	0.40	0.0	>100	97	14	3	<1	<1	<1		
35	Tagawa River	Yanabashi Bridge	Oyamashi City	2012/6/8	Sunny	0.20	0.0	>100	23	3	1	<1	<1	<1		
36	Kurokawa River	Kajimabashi Bridge	Kanumashi City	2012/6/7	Sunny	0.20	0.0	>100	22	3	1	<1	<1	<1		
37	Omogigawa River	Omogigawabashi Bridge		2012/6/7	Sunny	0.70	0.0	>100	23	2	1	<1	<1	<1		
38	Omogigawa River	Akashibashi Bridge	Kanumashi City	2012/6/7	Sunny	0.30	0.0	>100	9	<1	<1	<1	<1	<1		
39	Koyabugawa River	Koyabubashi Bridge		2012/6/7	Sunny	0.50	0.0	>100	16	<1	1	<1	<1	<1		
40	Omogigawa River	Tanotobashi Bridge	Tochigashi City	2012/6/11	Cloudy	0.50	0.0	>100	15	1	<1	<1	<1	<1		
41	Omogigawa River	Otomochashi Bridge	Oyamashi City	2012/6/7	Sunny	0.60	0.0	>100	11	<1	<1	<1	<1	<1		
42	Uzumagawa River	Uzumabashi Bridge	Tochigashi City	2012/6/1	Sunny	0.50	0.0	>100	96	5	2	<1	<1	<1		
43	Uzumagawa River	Uzumabashi Bridge		2012/6/28	Cloudy	0.50	0.0	>100	14	2	1	<1	<1	<1		
44	Uzumagawa River	Uzumabashi Bridge		2012/6/1	Sunny	1.00	0.0	50	23	6	2	<1	<1	<1		
45	Watarasegawa River	Watarasegawa River intake weir at Sori Power Station	Nikkoshi City	2012/6/28	Cloudy	0.90	0.0	93	23	5	1	<1	<1	<1		
46	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City	2012/6/12	Cloudy	0.20	0.0	>100	10	<1	<1	<1	<1	<1		
47	Watarasegawa River	Nakabashi Bridge		2012/7/31	Sunny	0.30	0.0	>100	14	<1	<1	<1	<1	<1		
48	Watarasegawa River	Nakabashi Bridge		2012/6/14	Cloudy	0.75	0.0	>100	12	<1	<1	<1	<1	<1		
49	Watarasegawa River	Watarasegawabashi Bridge	Tatebayashashi City	2012/6/14	Cloudy	1.20	0.0	>100	12	<1	<1	<1	<1	<1		
50	Shinkabashi Bridge		Tochigashi City	2012/6/14	Cloudy	0.50	0.0	62	18	2	1	<1	<1	<1		
51				2012/6/1	Sunny	0.50	0.0	33	19	1	<1	<1	<1	<1		
52				2012/6/28	Cloudy	0.50	0.0	41	16	3	<1	<1	<1	<1		

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

ORiver: Sediment Monitoring Results

No.	Sampling point			Sampling date	Weather	Full depth m	General items			Concentration of radioactive material Bq/kg (dried mud)			Remarks	
	Water body	Point	Municipality				Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137			
1	N a k a g a w a	Nakagawa River	Komebashi Bridge	Nasushibarashi City	2012/6/19	Rain	0.20	3	88	Sand	<30	57	82	
2		Takamotogawa River	Takamotabashi Bridge	Nasumachi Town	2012/6/20	Sunny	0.70	3	86	Sand	<30	33	56	
3		Yakawa River	Yakawabashi Bridge	Nasumachi Town	2012/6/20	Sunny	0.30	3	85	Sand	<30	31	48	
4		Nakagawa River	Kamikuroso	Nasushibarashi City	2012/6/24	Sunny	0.30	5	92	Sand	<30	23	41	
5		Yosasagawa River	Yosasabashi Bridge	Nasumachi Town	2012/6/25	Cloudy	0.15	3	85	Sand	<30	33	54	
6		Kurokawa River	Shinderbashi Bridge	Nasumachi Town	2012/6/22	Cloudy	0.30	3	89	Sand	<30	27	46	
7		Yosasagawa River	Kawadabashi Bridge	Nasumachi Town	2012/6/4	Sunny	1.10	5	87	Sand	<30	65	110	
8		Nakagawa River	Kurubane	Otarashi City	2012/6/4	Sunny	0.20	5	92	Sand	<30	40	62	
9		Matsubagawa River	Tributary	Otarashi City	2012/6/26	Sunny	0.50	3	87	Sand	<30	43	59	
10		Sabuzawa River	Udagawabashi Bridge	Otarashi City	2012/6/4	Sunny	0.20	3	94	Sand	<30	17	23	
11		Momuragawa River	Momuranakabashi Bridge	Otarashi City	2012/6/26	Sunny	0.20	2	96	Sand	<30	14	21	
12		Momuragawa River	Seikibashi Bridge	Nasushibarashi City	2012/6/4	Sunny	0.60	5	92	Sand	<30	29	46	
13		Hokigawa River	Iwaibashi Bridge	Otarashi City	2012/6/26	Sunny	0.70	2	81	Sand	<30	120	200	
14		Nakagawa River	Shinnakabashi Bridge	Nakagawamachi Town	2012/6/5	Cloudy	0.40	5	91	Sand	<30	11	23	
15		Mumogawa River	Koseibashi Bridge	Nakagawamachi Town	2012/6/5	Cloudy	0.20	3	87	Sand	<30	110	180	
16		Arakawa River	Saikachibashi Bridge	Shoyamachi Town	2012/6/22	Cloudy	0.80	3	89	Sand	<30	32	44	
17		Uchikawa River	Yanabashi Bridge	Sakurashi City	2012/6/6	Cloudy	0.25	5	89	Sand	<30	24	42	
18		Uchikawa River	Asahabashi Bridge	Sakurashi City	2012/6/5	Cloudy	0.20	2	94	Sand	<30	10	20	
19		Arakawa River	Mukadabashi Bridge	Nasukarasuyamashi City	2012/6/6	Sunny	0.20	5	89	Sand	<30	27	45	
20		Egawa River	Tributary	Nasukarasuyamashi City	2012/6/26	Sunny	0.40	5	94	Sand	<30	21	30	
21		Egawa River	Tributary	Nasukarasuyamashi City	2012/6/5	Cloudy	0.90	5	88	Sand	<30	14	17	
22		Egawa River	Tributary	Nasukarasuyamashi City	2012/6/27	Sunny	0.20	1	89	Sand	<30	11	12	
23		Egawa River	Tributary	Nasukarasuyamashi City	2012/6/5	Cloudy	0.60	5	92	Sand	<30	10	12	
24	Egawa River	Tributary	Nasukarasuyamashi City	2012/6/27	Sunny	0.40	2	82	Sand	<30	31	54		
25	Daivagawa River	Shakyo Bridge	Nikkoshi City	2012/6/12	Cloudy	0.80	5	90	Sand	<30	46	74		
26	Daivagawa River	Suichigabashi Bridge	Nikkoshi City	2012/6/13	Cloudy	0.30	10	90	Sand	<30	23	35		
27	Daivagawa River	Kaishinbashi Bridge (Harigai)	Nikkoshi City	2012/6/13	Cloudy	0.20	3	94	Sand	<30	100	170		
28	Daivagawa River	Kaishinbashi Bridge (Harigai)	Nikkoshi City	2012/6/12	Rain	0.30	10	91	Sand	<30	15	30		
29	Kimugawa River	Samuki	Shoyamachi Town	2012/6/12	Cloudy	0.70	3	93	Sand	<30	11	<10		
30	Nishikimugawa River	Nishikimugawabashi Bridge	Utsunomiya City	2012/6/6	Cloudy	0.30	5	87	Sand	<30	55	71		
31	Kimugawa River	Kimugawabashi Bridge (Hoshakui Temple)	Utsunomiya City	2012/6/6	Cloudy	0.40	5	87	Sand	<30	<10	10		
32	Egawa River	Daidozumibashi Bridge	Mookashi City	2012/6/7	Sunny	0.20	5	81	Sand	<30	11	13		
33	Egawa River	Tributary	Shimotsukeshi City	2012/6/7	Sunny	0.80	5	86	Sand	<30	49	88		
34	Akaborigawa River	Nikko City Hall, front	Nikkoshi City	2012/6/28	Cloudy	0.40	1	84	Sand	<30	84	130		
35	Tagawa River	Ozobashi Bridge	Nikkoshi City	2012/6/13	Cloudy	0.20	1	90	Sand	<30	180	270		
36	Tagawa River	Ozobashi Bridge	Nikkoshi City	2012/6/13	Cloudy	0.60	5	85	Sand	<30	45	59		
37	Tagawa River	Ozobashi Bridge	Nikkoshi City	2012/6/8	Sunny	0.60	5	90	Sand	<30	13	15		
38	Kamagawa River	Fukushibashi Bridge	Utsunomiya City	2012/6/27	Sunny	0.40	2	83	Sand	<30	23	46		
39	Tagawa River	Meijibashi Bridge	Kaminokawamachi Town	2012/6/8	Sunny	0.20	3	89	Sand	<30	40	59		
40	Tagawa River	Yamabashi Bridge	Oyamashi City	2012/6/7	Sunny	0.20	3	89	Sand	<30	47	75		
41	Kurokawa River	Katjimabashi Bridge	Kanumashi City	2012/6/7	Sunny	0.70	5	90	Sand	<30	34	52		
42	Omoigawa River	Onabashi Bridge	Mibamachi Town	2012/6/7	Sunny	0.30	5	94	Sand	<30	11	<10		
43	Omoigawa River	Akashibashi Bridge	Kanumashi City	2012/6/7	Sunny	0.50	5	85	Sand	<30	33	42		
44	Omoigawa River	Kovabashi Bridge	Kanumashi City	2012/6/11	Cloudy	0.50	3	92	Sand	<30	<10	15		
45	Omoigawa River	Tamotsubashi Bridge	Tochigishi City	2012/6/11	Cloudy	0.20	2	92	Sand	<30	16	26		
46	Omoigawa River	Otomochashi Bridge	Oyamashi City	2012/6/7	Sunny	0.00	5	90	Sand	<30	<10	12		
47	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2012/6/1	Sunny	0.50	5	82	Sand	<30	66	88		
48	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2012/6/28	Cloudy	0.50	2	83	Sand	<30	12	22		
49	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2012/6/1	Sunny	1.00	0	82	Sand	<30	33	49		
50	Watarasegawa River	Watarasegawa River intake weir at Sori Water Station	Nikkoshi City	2012/6/28	Cloudy	0.90	2	76	Sand	<30	58	77		
51	Watarasegawa River	Watarasegawa River	Nikkoshi City	2012/6/12	Cloudy	0.20	15	94	Sand	<30	13	23		
52	Watarasegawa River	Watarasegawa River	Nikkoshi City	2012/7/31	Sunny	0.30	2	94	Sand	<30	<10	20		
53	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City	2012/6/14	Cloudy	0.75	3	92	Sand	<30	14	20		
54	Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2012/6/14	Cloudy	0.50	3	90	Sand	<30	16	21		
55	Watarasegawa River	Watarasegawashi Bridge	Tatebayashishi City	2012/6/14	Cloudy	1.20	5	71	Silt	<30	100	160		
56	Watarasegawa River	Watarasegawashi Bridge	Tatebayashishi City	2012/6/1	Sunny	0.50	5	94	Sand	<30	17	26		
57	Watarasegawa River	Shinkabashi Bridge	Tochigishi City	2012/6/28	Cloudy	0.50	2	77	Sand	<30	66	98		

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

ORiver: Surrounding Environment Monitoring Results

No.	Sampling point			Sampling date	Weather	Left bank				Right bank				Remarks				
	Water body	Point	Municipality			Property	Concentration of radioactive iodine		By lg (dry)		Air dose μ Sv/h	Property	Concentration of radioactive cesium		By lg (dry)		Air dose μ Sv/h	
							Radioactive iodine I-131	Cs-134	Cs-137	Cs-137			Radioactive iodine I-131		Cs-134	Cs-137		
1	Nakagawa River	Komechashi Bridge	Nasuohorashi City	2012/6/19	Rain	Loamy	<30	2,100	3,300	0.34	Loamy	<30	830	1,200	0.39			
2		Takamizumana River	Takamizumashi Bridge	Nasunomachi Town	2012/6/20	Sunny	Loamy	<30	660	900	0.21	Loamy	<30	1,200	2,300	0.56		
3		Yakawa River	Yakawabashi Bridge	Nasunomachi Town	2012/6/20	Sunny	Loamy	<30	1,600	1,000	0.33	Loamy	<30	600	970	0.31		
4		Nakagawa River	Kamukuroso	Nasunomachi Town	2012/6/4	Sunny	Loamy	<30	780	1,300	0.36	Loamy	<30	1,100	1,500	0.30		
5		Yosugawa River	Yosugabashi Bridge	Nasuohorashi City	2012/6/23	Cloudy	Loamy	<30	2,600	4,000	0.49	Loamy	<30	1,500	2,300	0.32		
6		Kurokawa River	Shundabashi Bridge	Nasunomachi Town	2012/6/22	Cloudy	Sandy/loamy	<30	1,800	2,400	0.51	Loamy	<30	1,200	1,800	0.32		
7		Yosugawa River	Kawadabashi Bridge	Okawarashi City	2012/6/4	Sunny	Sandy	<30	100	79	0.15	Loamy	<30	1,400	2,000	0.41		
8		Nakagawa River	Kurebane		2012/6/26	Sunny	Loamy	<30	1,900	3,000	0.40	Loamy	<30	2,300	3,500	0.48		
9		Matsubagawa River	Tributary		2012/6/4	Sunny	Loamy	<30	160	240	0.19	Loamy	<30	230	350	0.13		
10		Sabugawa River	Udagwabashi Bridge		2012/6/26	Sunny	Loamy/sandy	<30	610	920	0.18	Loamy	<30	660	1,000	0.18		
11	Momuragawa River	Momuranakabashi Bridge	Nasuohorashi City	2012/6/4	Sunny	Sandy	<30	190	300	0.18	Loamy	<30	350	620	0.17			
12	Hokigawa River	Hokigawabashi Bridge	Okawarashi City	2012/6/26	Sunny	Loamy	<30	160	230	0.18	Loamy	<30	350	620	0.17			
13		2012/6/5		Cloudy	Loamy	<30	270	420	0.14	Loamy	<30	280	430	0.11				
14		2012/6/5		Cloudy	Loamy	<30	280	430	0.14	Loamy	<30	280	430	0.11				
15		2012/6/22		Cloudy	Loamy	<30	280	430	0.14	Loamy	<30	280	430	0.11				
16	Nakagawa River	Shimkabashi Bridge	Nakagawamachi Town	2012/6/22	Cloudy	Loamy	<30	2,400	3,800	0.82	Loamy	<30	5,200	8,100	0.86			
17	Mumogawa River	Koziribashi Bridge	Nakagawamachi Town	2012/6/6	Cloudy	Loamy	<30	86	130	0.11	Loamy	<30	430	630	0.16			
18	2012/6/5	Sunny		Loamy	<30	470	710	0.15	Loamy	<30	65	94	0.14					
19	2012/6/26	Sunny		Loamy	<30	370	550	0.15	Loamy	<30	380	560	0.12					
20	2012/6/5	Cloudy		Loamy	<30	35	54	0.10	Loamy	<30	230	340	0.11					
21	Arakawa River	Sakachibashi Bridge	Shoyamachi Town	2012/6/26	Sunny	Loamy	<30	470	730	0.10	Loamy	<30	93	150	0.11			
22	Uchikawa River	Tanabashi Bridge	Sakurashi City	2012/6/5	Sunny	Loamy	<30	180	270	0.11	Loamy	<30	470	730	0.10			
23	Uchikawa River	Tanabashi Bridge	Yatanashi City	2012/6/23	Sunny	Loamy	<30	200	340	0.12	Loamy	<30	170	280	0.12			
24	Arakawa River	Renjohashi Bridge	Sakurashi City	2012/6/13	Cloudy	Loamy	<30	870	1,300	0.18	Loamy	<30	620	930	0.15			
25	Uchikawa River	Tanabashi Bridge	Sakurashi City	2012/6/6	Cloudy	Loamy	<30	330	500	0.10	Loamy	<30	190	300	0.10			
26	Arakawa River	Mukadabashi Bridge	Nasukaraiyama City	2012/6/6	Cloudy	Sandy	<30	270	410	0.12	Sandy	<30	62	98	0.09			
27	Egawa River	Tributary	Nasukaraiyama City	2012/6/5	Cloudy	Loamy	<30	84	130	0.09	Loamy	<30	210	320	0.09			
28	2012/6/27	Sunny		Loamy	<30	270	400	0.09	Loamy	<30	140	220	0.10					
29	2012/6/5	Cloudy		Loamy/sandy	<30	170	280	0.09	Loamy	<30	140	210	0.08					
30	2012/6/27	Sunny		Loamy	<30	130	170	0.10	Loamy	<30	160	230	0.08					
31	Hamagawa River	Tributary	Nikkoshi City	2012/6/12	Cloudy	Sandy/loamy	<30	380	1,200	0.31	Sandy	<30	1,100	1,600	0.28			
32	Daigawa River	Shankyo Bridge		2012/6/13	Cloudy	-	-	-	-	-	-	-	-	-	-			
33	Shindohchugawa River	Sutachibashi Bridge		2012/6/13	Cloudy	Loamy	<30	460	710	0.25	Loamy	<30	1,100	1,800	0.24			
34	Daigawa River	Kanabashi Bridge (Hanga)		2012/6/12	Rain	Loamy	<30	1,100	1,700	0.28	Loamy	<30	820	1,300	0.26			
35	Renjoh River	Sumaki	Shoyamachi Town	2012/6/12	Cloudy	Loamy	<30	540	950	0.23	Loamy	<30	950	1,500	0.24			
36	Nishikigawa River	Nishikigawabashi Bridge	Utsunomiyashi City	2012/6/6	Cloudy	Loamy	<30	84	130	0.10	Loamy	<30	85	140	0.09			
37	Knugawa River	Knugawabashi Bridge (Hosokuni Temple)	Mookashi City	2012/6/6	Cloudy	Loamy	<30	96	160	0.09	Loamy	<30	130	190	0.11			
38	Egawa River	Tributary	Shimotokeshi City	2012/6/7	Sunny	Loamy	<30	90	140	0.10	Loamy	<30	230	360	0.12			
39	Watarasegawa River	Watarasegawabashi Bridge	Nikkoshi City	2012/6/27	Sunny	Loamy	<30	86	130	0.09	Loamy	<30	240	370	0.10			
40	2012/6/28	Cloudy		Loamy	<30	92	140	0.11	Loamy	<30	83	110	0.10					
41	2012/6/13	Cloudy		Loamy	<30	450	680	0.12	Loamy	<30	910	1,400	0.18					
42	2012/6/13	Cloudy		Loamy	<30	450	680	0.12	Loamy	<30	280	430	0.13					
43	Fagawa River	Orobashi Bridge	Utsunomiyashi City	2012/6/8	Sunny	Loamy	<30	170	280	0.08	-	-	-	-				
44	2012/6/27	Sunny	Loamy	<30	210	320	0.07	Loamy	<30	260	440	0.09						
45	2012/6/8	Sunny	Loamy	<30	140	200	0.09	Loamy	<30	230	350	0.09						
46	2012/6/7	Sunny	Loamy	<30	130	200	0.07	Loamy	<30	180	280	0.09						
47	Fagawa River	Yanabashi Bridge	Oyamashi City	2012/6/7	Sunny	Loamy	<30	82	120	0.09	Loamy	<30	71	107	0.07			
48	Kurokawa River	Katimabashi Bridge	Kanamashi City	2012/6/7	Sunny	Loamy	<30	61	110	0.09	Loamy	<30	120	180	0.10			
49	Omogawa River	Omogawabashi Bridge	Mihumashi Town	2012/6/7	Sunny	Sandy	<30	76	120	0.11	Loamy	<30	63	113	0.08			
50	Omogawa River	Akashibashi Bridge	Kanamashi City	2012/6/11	Cloudy	Loamy	<30	140	200	0.10	Loamy	<30	630	930	0.11			
51	Omogawa River	Koyabashi Bridge	Kanamashi City	2012/6/11	Cloudy	Loamy	<30	160	220	0.10	Loamy	<30	220	350	0.11			
52	Omogawa River	Tanotobashi Bridge	Tochigishi City	2012/6/7	Sunny	Loamy	<30	130	190	0.09	Loamy	<30	240	360	0.10			
53	Omogawa River	Omogawabashi Bridge	Oyamashi City	2012/6/11	Sunny	Loamy	<30	300	320	0.11	Loamy	<30	110	160	0.10			
54	2012/6/28	Cloudy	Loamy	<30	300	470	0.13	Loamy	<30	160	270	0.10						
55	Uzumagawa River	Uzumagawa River	Tochigishi City	2012/6/1	Sunny	Loamy	<30	210	340	0.12	Loamy	<30	150	240	0.12			
56	2012/6/28	Cloudy	Loamy	<30	270	400	0.11	Loamy	<30	1,500	2,200	0.16						
57	2012/6/12	Cloudy	Sandy	<30	170	260	0.20	Sandy	<30	23	30	0.27						
58	2012/7/31	Sunny	Sandy	<30	17	25	0.19	Sandy	<30	340	540	0.30						
59	Watarasegawa River	Watarasegawa River intake weir at Sot Power Station	Nikkoshi City	2012/6/14	Cloudy	Loamy	<30	40	72	0.09	Loamy	<30	130	200	0.08			
60	2012/6/14	Cloudy	Loamy	<30	62	99	0.08	Loamy	<30	44	62	0.08						
61	2012/6/14	Cloudy	Loamy	<30	92	139	0.08	Loamy	<30	150	210	0.11						
62	2012/6/1	Sunny	Loamy	<30	140	230	0.11	Loamy	<30	100	140	0.10						
63	2012/6/28	Cloudy	Loamy	<30	260	420	0.10	Loamy	<30	1,600	2,300	0.12						

* Air dose was measured with a survey meter, TCS-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

