＜Reference materials＞

May 18, 2020

Tokyo Electric Power Company Holdings, Inc.

Construction to Return J Village and the Naraha Municipal Parking Lot to their Original Condition, and Dose Reduction Measures

An announcement regarding “Construction to Return the Naraha Municipal Multipurpose Parking Lot (hereinafter referred to as, “Naraha municipal parking lot”) to its Original Condition and Dose Reduction Measures” was previously released on March 26, 2020. This announcement gives an update of the construction details.

＜Overview of construction to return the parking lot to its original condition and decontamination measures＞

・Upon consulting with officials, such as the Ministry of the Environment, it was decided that TEPCO would return the areas that it used as a base of operations to contain the Fukushima Daiichi Nuclear Power Station Accident (playing field, stadium, Naraha municipal parking lot, etc.) to their original condition before handing J Village back over to the town.
・The Ministry of the Environment has decontaminated all of the areas that were not used by TEPCO as a base of operations to contain the accident.
・The construction to return these areas to their original conditions that was implemented by TEPCO refers to construction to be done before handing these areas back over to the town, and includes dose reduction measures on par with the decontamination performed by the Ministry of the Environment.
・It was not required that the decontamination-related guidelines* be followed when engaging in construction to return these areas to their original condition. However, TEPCO employed decontamination methods that are equal to, or superior, to the content of the aforementioned guidelines from the perspective of dose reduction.
・In particular, we have removed the surface soil and grass, cleaned surfaces with high-pressure water cleaners, and relayed asphalt, etc., which are equal in terms of dose reduction effectiveness to the decontamination methods used by the Ministry of the Environment.

＜Construction plan, etc.＞

■Contractor: Maeda Corporation

■Plan details: Construction to restore the playing field, stadium, and Naraha municipal parking lot to their original conditions

・Structure construction (construction to restore interiors and facilities to their original condition, renovations to add on a restaurant and kitchen, etc.)

■Number of workers: Construction to restore the playing field/stadium/Naraha municipal parking lot to their original condition: Approximately 41,000 workers/day

・Structure construction: approximately 33,000 workers/day

＜Waste disposal method＞

Total amount: 52,818m^3 (soil, asphalt/concrete rubble, tennis court mats/ball containment nets, etc.)

Handling: TEPCO (contractor) shall collect and dispose of waste. Officials shall deliberate disposal methods upon implementing measures necessary to prevent the waste from having an impact on people or the surrounding environment, such as by surrounding the accumulated waste with a fence to prevent unauthorized access and reduce dose levels.

＜Dose management during construction＞

When engaging in construction work at the J village site, air dose rates were measured in accordance with “Exposure Dose Management Requirements and Methods, and Measures for Reducing Exposure” stipulated in the radiation hazard prevention guidelines for workers engaged in decontamination, etc. The air dose rate measurement results showed that exposure dose management was not necessary, so it is our understanding that a dose management was not necessary.

※The decontamination–related guidelines were created in order to give a detailed explanation of ministerial orders given by the Ministry of the Environment that stipulate criteria for soil decontamination measures and the disposal of removed soil in accordance with the “Act on Special Measures concerning the Handling of Environmental Contamination from Radioactive Materials discharged during the Nuclear Power Station Accident that occurred in conjunction with the Great East Japan Earthquake and Tsunami on March 11, 2011 (Act on Special Measures concerning the Handling of Contamination from Radioactive Materials).” (December 2011)

<Overview of the construction done at the Naraha municipal parking lot>

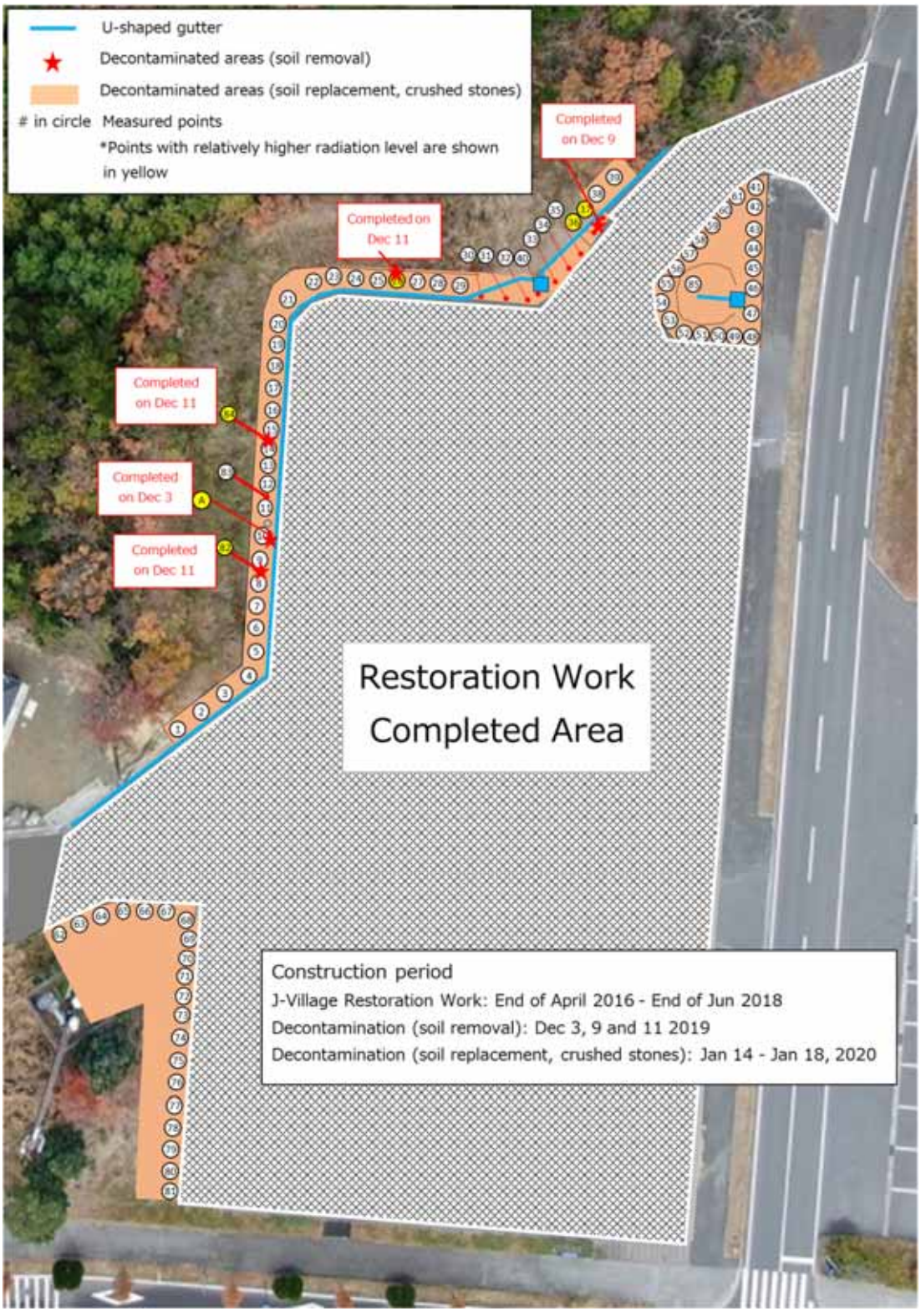
・The Naraha municipal parking lot is not an area that was subject to decontamination by the Ministry of the Environment, but it is an area that TEPCO restored to its original condition.
・As noted in the announcement released on March 26, the construction consisted of relaying asphalt, and also laying new asphalt over old asphalt after it was cleaned with high-pressure water cleaners.
・The surface dose levels of removed asphalt were measured, and it was confirmed that the asphalt could be disposed of by industrial waste disposal contractors as general industrial waste. Upon making this determination the waste was disposed of in this manner.
・As with construction done in other areas, air dose rates were measured prior to beginning construction and it was confirmed that the work would not conform to "decontamination or other work performed in specific dose environments." However, post-construction monitoring stipulated in the decontamination-related guidelines was not conducted for the Naraha municipal parking lot.
・Prior to handing J Village back over to the town, air dose rates were measured and it was confirmed that levels fell between 0.03~0.24μSv/h.
・The J village site and the Naraha municipal parking lot are regularly monitored by TEPCO as per a request by J Village. We will continue initiatives to ensure that J Village users can rest assured that the area is safe.

・Areas near the Naraha municipal parking lot where relatively high dose levels were measured are extremely close to areas where TEPCO engaged in construction to restore the areas to their original conditions. Therefore, in hindsight, TEPCO should have made this connection. And, when TEPCO engaged in construction to restore these areas to their original condition, it should have given ample consideration to performing post-construction monitoring.

TEPCO would like to sincerely apologize for any concern or inconvenience that it has caused regional residents and society as a whole.

<Reference>
March 26, 2020
Tokyo Electric Power Company Holdings, Inc.

Restoration and decontamination work at Naraha town-managed parking lot



Air dose rate before/after decontamination (soil removal)

Area	Before decontamination		After decontamination		Date of decontamination (MM/DD)
	(1m above ground)	(1cm above ground)	(1m above ground)	(1cm above ground)	
A	1.79μSv/h	70.2μSv/h	0.39μSv/h	0.44μSv/h	12/3
NO36	1.42μSv/h	11.20μSv/h	0.24μSv/h	0.19μSv/h	12/9
NO37	1.10μSv/h	7.57μSv/h	0.28μSv/h	0.28μSv/h	
NO26	0.46μSv/h	27.50μSv/h	0.23μSv/h	0.17μSv/h	12/11
NO82	0.57μSv/h	1.10μSv/h	0.22μSv/h	0.16μSv/h	12/11
NO84	0.45μSv/h	0.46μSv/h	0.30μSv/h	0.20μSv/h	12/11

[Reference] Radioactive materials analysis results of removed soil

Area	Cesium 134 Cesium 137	Total	Date of decontamination / analysis (MM/DD)
A	5.87×10^{4}Bq/kg 9.71×10^{5} Bq/kg	1.03×10^{6} Bq/kg	12/3 12/3
NO36	1.18×10^{3} Bq/kg 1.76×10^{4} Bq/kg	1.88×10^{4} Bq/kg	12/9 12/10
NO37			
NO26	5.39×10^{2} Bq/kg 8.73×10^{3} Bq/kg	9.26×10^{3} Bq/kg	12/11 12/12
NO82			
NO84			

[Analysis method]
Measured and analyzed the weight, volume, and density by using Germanium semiconductor detector after enclosing the soil samples into specially-designed container. (measurement time: 300 seconds)
* Only Cesium 134 and Cesium 137 (other gamma nuclides are below detection limit)

Air dose rate before/after decontamination (soil replacement, crushed stones)

No.	Before decontamination (unit: μSv/h)			After decontamination (unit: μSv/h)		
	1m above ground	1cm above ground	Date of measurement (YYYY/MM/DD)	1m above ground	1cm above ground	Date of measurement (YYYY/MM/DD)
1	0.31	0.77	20191210	0.21	0.19	20200117
2	0.38	0.87	20191210	0.19	0.16	20200117
3	0.31	0.84	20191210	0.18	0.14	20200117
4	0.29	0.78	20191210	0.16	0.15	20200117
5	0.28	0.68	20191210	0.16	0.15	20200117
6	0.25	0.43	20191210	0.16	0.16	20200117
7	0.28	0.78	20191210	0.16	0.15	20200117
8	0.38	0.94	20191210	0.14	0.14	20200117
9	0.47	0.90	20191210	0.15	0.13	20200117
10	0.34	0.82	20191210	0.15	0.13	20200117
11	0.32	0.93	20191210	0.14	0.13	20200117
12	0.36	0.73	20191210	0.16	0.13	20200117
13	0.36	1.13	20191210	0.16	0.15	20200117
14	0.40	1.54	20191210	0.16	0.14	20200117
15	0.35	0.84	20191210	0.16	0.16	20200117
16	0.32	0.88	20191210	0.16	0.15	20200117
17	0.28	0.99	20191210	0.15	0.17	20200117
18	0.25	0.60	20191210	0.16	0.15	20200117
19	0.26	0.53	20191210	0.16	0.14	20200117
20	0.25	0.51	20191210	0.16	0.16	20200117
21	0.28	0.52	20191210	0.17	0.16	20200117
22	0.28	0.51	20191210	0.17	0.15	20200117
23	0.27	0.70	20191210	0.17	0.15	20200117
24	0.29	1.01	20191210	0.18	0.15	20200117
25	0.29	0.84	20191210	0.18	0.21	20200117
26	0.46	27.50	20191210	0.18	0.23	20200117
27	0.31	0.72	20191210	0.17	0.17	20200117
28	0.30	0.63	20191210	0.17	0.16	20200117
29	0.42	1.84	20191210	0.17	0.15	20200117
30	0.64	2.43	20191210	0.21	0.20	20200117
31	0.56	1.40	20191210	0.25	0.17	20200117
32	0.55	1.55	20191210	0.26	0.18	20200117
33	0.35	0.84	20191210	0.18	0.14	20200117
34	0.32	0.51	20191210	0.15	0.15	20200117
35	0.27	0.75	20191210	0.18	0.17	20200117
36	1.42	11.20	20191209	0.21	0.19	20200117
37	1.10	7.57	20191209	0.23	0.26	20200117
38	0.30	0.61	20191210	0.22	0.27	20200117
39	0.25	0.35	20191210	0.20	0.23	20200117
40	0.42	0.45	20191210	0.23	0.15	20200117
41	0.22	1.06	20191210	0.15	0.16	20200118
42	0.22	0.32	20191210	0.13	0.14	20200118
43	0.20	0.36	20191210	0.13	0.15	20200118
44	0.21	0.29	20191210	0.12	0.12	20200118
45	0.23	0.33	20191210	0.13	0.12	20200118
46	0.26	0.54	20191210	0.16	0.16	20200118
47	0.26	0.31	20191210	0.14	0.13	20200117
48	0.22	0.34	20191210	0.14	0.14	20200117
49	0.18	0.23	20191210	0.14	0.11	20200117
50	0.19	0.22	20191210	0.13	0.13	20200117
51	0.20	0.21	20191210	0.11	0.12	20200117
52	0.20	0.30	20191210	0.11	0.13	20200117
53	0.20	0.24	20191210	0.13	0.12	20200117
54	0.20	0.31	20191210	0.12	0.14	20200117
55	0.22	0.38	20191210	0.13	0.16	20200117
56	0.25	0.32	20191210	0.13	0.13	20200118
57	0.35	1.13	20191210	0.17	0.25	20200118
58	0.23	0.28	20191210	0.12	0.13	20200118
59	0.21	0.32	20191210	0.14	0.13	20200118
60	0.21	0.29	20191210	0.13	0.14	20200118
61	0.20	0.59	20191210	0.13	0.19	20200118
62	0.24	0.41	20191210	0.16	0.17	20200114
63	0.22	0.38	20191210	0.12	0.13	20200114
64	0.18	0.26	20191210	0.10	0.10	20200114
65	0.16	0.24	20191210	0.11	0.11	20200114
66	0.15	0.23	20191210	0.12	0.12	20200114
67	0.14	0.24	20191210	0.12	0.11	20200114
68	0.18	0.44	20191210	0.13	0.16	20200114
69	0.20	0.41	20191210	0.14	0.14	20200114
70	0.19	0.86	20191210	0.14	0.17	20200114
71	0.21	0.40	20191210	0.13	0.14	20200114
72	0.19	0.38	20191210	0.13	0.15	20200114
73	0.18	0.32	20191210	0.14	0.13	20200114
74	0.17	0.33	20191210	0.13	0.14	20200114
75	0.17	0.26	20191210	0.14	0.12	20200114
76	0.22	0.69	20191210	0.15	0.24	20200114
77	0.24	0.88	20191210	0.15	0.18	20200114
78	0.25	0.69	20191210	0.12	0.17	20200114
79	0.24	0.53	20191210	0.12	0.12	20200114
80	0.21	0.44	20191210	0.11	0.13	20200114
81	0.17	0.31	20191210	0.10	0.11	20200114
82	0.57	11.00	20191210	0.15	0.14	20200118
83	0.40	1.70	20191210	0.15	0.13	20200118
84	0.45	12.00	20191210	0.16	0.14	20200118
85	0.90	3.25	20191210	0.20	0.19	20200118

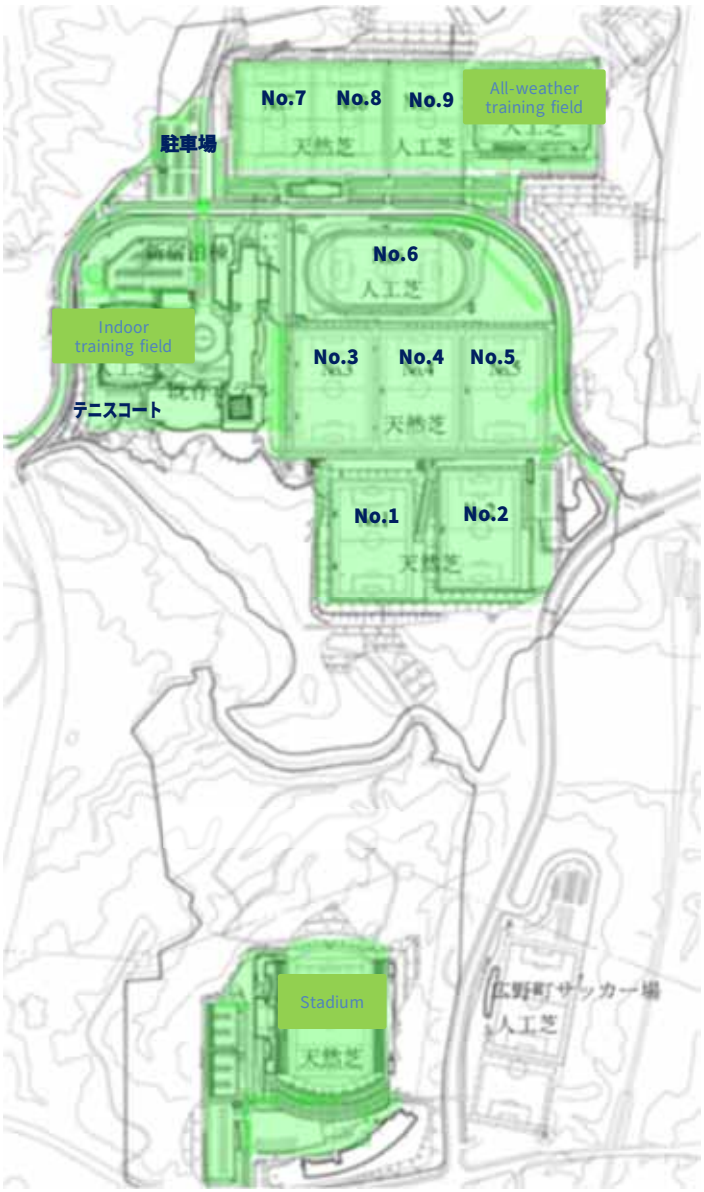
Relatively higher radiation level detected

Restoration work at J-Village and its surrounding areas

■Restoration work

- TEPCO restituted J-Village after restoration work such as soil removal and asphalt repaving at its ground, football stadium field, and Naraha town-managed parking lot, as J-Village reopens its business.
- The restoration work follows the same procedure and achieves the same level of decontamination effects as general decontamination work.

Areas	Details
No. 1-2 fields	Removal and restoration of turf floor (depth: Approx. 60 cm) and drainage culvert, natural grass covering
No. 3-5, No. 7-8, football stadium fields	Removal of crushed stones*, removal and restoration of turf floor and drainage culvert, natural grass covering * Laid for use as a parking lot after the earthquake, Approx. 20 cm thick
No. 6 Indoor training field	Removal and restoration of artificial turf and asphalt pavement
No. 9 All-weather training field	Removal and leveling of turf floor and drainage culvert, asphalt pavement, artificial turf covering (construction of the building was ordered by Fukushima Prefecture)
Parking lot (Naraha town-managed parking lot)	Removal and restoration of asphalt pavement
Tennis court	Removed surface pavement and developed as a gravel-paved parking lot
Roads (town roads, in-site roads)	Removal and restoration of surface layer, repair of damaged areas



Areas where the restoration works have been implemented

[Reference] Air dose rate of J-Village and its surrounding areas

	Fields and stadium of J-Village (Date of measurement: Feb 6, 7)	Surrounding areas of J-Village *1 (Date of measurement: Feb 6, 7)
Number of measured areas	Fixed point monitoring *2	Walk monitoring *3
	58	9,386
Air dose rate at 1 m above ground (μSv/h)	0.04-0.07 (0.05) *4	0.03-0.43 (0.11) *4

*1 Surrounding areas of the field, stadium and other facilities of J-Village, as well as its neighboring roads and facilities

*2 Fixed point monitoring: Measurement of air dose rate at a height of 1 m above the ground using a NaI scintillation survey meter

*3 Walk monitoring: Measurement of air dose rate at a height of 1 m above the ground using walk monitoring system

*4 Minimum value - Maximum value (average)

* Reference: 3.8 μSv/h: Standard of the air dose rate to lift the evacuation order (annual exposure dose is 20 mSv or less)