Reference
September 1, 2011
Tokyo Electric Power Company

Sampling, Measurement Frequency and Nuclide Analysis Plan (September 1, 2011)

- Gamma Ray Radiation Measure(1/4)

Content	Sampling Spot		Original	Change	Note
Soil	1F	Playground (west-northwest approx. 500m)	1-time/week	Same as original	Sampling frequency is 2-time/week*.
		Forest of wild birds (west approx. 500m)			
		Adjacent to industrial waste disposal facility south-southwest approx. 500m)			
Air	1F	Around west gate	1-time/day	Same as original	
	2F	MP-1			
	1F	Top of the slope at north side of Unit 1	1-time/week	Same as original	
		Top of the slope at the west of Unit 1 and 2			
		Top of the slope at the west of Unit 3 and 4			
		Mountain side of Unit 1	1-time/month	Same as original	
		Mountain side of Unit 2			
		Mountain side of Unit 3			
		In front of the Environment Administration Office			
		In front of Water Treatment Building			
		In front of Switchyard of Unit 5 and 6			
		MP-1	1-time/week	Same as original	
		MP-3			
		MP-8			
Underground Water	1F	Subdrain around Unit 1 turbine building	3-time/week	Same as original	
		Subdrain around Unit 2 turbine building			
		Subdrain around Unit 3 turbine building			
		Subdrain around Unit 4 turbine building			
		Subdrain around Unit 5 turbine building			
		Subdrain around Unit 6 turbine building			
		Deep well			
	1F	Subdrain northeast of Process Main Building	1-time/day	Same as original	Expansion of Survey (Survey of Southeast Subdrain of On-site Bunker Building from August 2)
		Subdrain southeast of Process Main Building			
		Subdrain south of Miscellaneous Solid Waste Volume Reduction Treatment Building			
		Southwest Subdrain of On-site Bunker Building	1-time/week		
		Subdrain west of Incineration Workshop Building	1-time/day		
		Subdrain north of Miscellaneous Solid Waste Volume Reduction Treatment Building			
		Southeast Subdrain of On-site Bunker Building			

* Sampling is done twice a week. Out of which, one sample is measured. If it is recognized that the radioactivity concentration is changed, the remaining sample will be measured.

- Gamma Ray Radiation Measure(2/4）

Content	Sampling Spot		Original	Change	Note
Seawater (inside port)	1F	Front of Shallow Draft Quay	1-time/day	Same as original	
		Inside north water intake canal of Unit 1-4			
		Screen of Unit 1 (outside the silt fence)			
		Screen of Unit 1 (inside the silt fence)			
		Screen of Unit 2 (outside the silt fence)			
		Screen of Unit 2 (inside the silt fence)			
		Screen of Unit 3 (outside the silt fence)			
		Screen of Unit 3 (inside the silt fence)			
		Screen of Unit 4 (outside the silt fence)			
		Screen of Unit 4 (inside the silt fence)			
		Inside the south ofUnit 1-4 Water Intake Canal			
Seawater (ouside port)	Coast	North of Discharge Channel of 5-6u of 1F	1-time/day	Same as original	
		Around South Discharge Channel of 1F			
		Around North Discharge Channel of 2F			
		Around Iwasawa Shore of 2F			
	Within 20km of periphery	3km offshore of Haramachi district	1-time/2-day (Sampling 2 points - upper and lawer layers)	Same as original	
		3km offshore of Odaka district			
		3km offshore of Iwasawa coast			
		8km offshore of Odaka district			
		8km offshore of Iwasawa coast			
		15 km offshore of Ukedo-gawa			
		15 km offshore of Fukushima Daiichi			
		15 km offshore of Fukushima Daini			
	Within 30km of periphery	15 km offshore of MinamiSouma City	2-time/week (Sampling 2 points - upper and lawer layers)	1-time/week (Sampling 2 points - upper and lawer layers)	Chage of frequency
		15 km offshore of Iwasawa Shore			
		15 km offshore of Hirono-machi			
	Outside 30km of periphery	North Iwaki offshore 3km			
		Natsui-gawa offshore 3km			
		Onahama Port offshore 3km			
		Ena offshore 3km			
		Numanouchi offshore 3km			
		Toyoma offshore 3km			

- Gamma Ray Radiation Measure(3/4)

Content	Sampling Spot		Original	Change	Note
Seawater (ouside port)	Outside 30km of periphery	3 km offshore of Souma City	1-time/week (Sampling 2 points - upper and lawer layers)	Same as original	
		5 km offshore of Souma City			
		5 km offshore of Kashima			
		5 km offshore of Numanouchi			
		15km offshore of Numanouchi	1-time/week (Sampling 3 points - upper, middle and lawer layers)	Cancelled	Cancelled due to redundant survey by the government
		30km offshore of Numanouchi			
		30 km offshore of MinamiSouma City			
		30 km offshore of Ukedo-gawa			
Seawater (ouside port)	Offshore of Ibaraki prefecture	3 km offshore of Takadokobama shore	2-time/week (Sampling 2 points - upper and lawer layers)	1-time/week (Sampling 2 points - upper and lawer layers)	Chage of frequency
		3 km offshore of Kujihama shore			
		3 km offshore of Oarai shore			
		3 km offshore of Hirai shore			
		3 km offshore of Hasaki shore			
	Offshore of Miyagi prefecture	Ishinomaki Bay	1-time/2-week (Sampling 3 points - upper, middle and lawer layers)	Same as original	
		Offshore of Kinkasan east			
		Offshore of Kinkasan south			
		Offshore of Shichigahama			
		Sendai Bay center			
		Offshore of Abukuma River			
Marine soil	Within 20km of periphery	3km offshore of Odaka district	1-time/month	Same as original	
		3km offshore of Iwasawa coast			
	Coast	North of Discharge Channel of 5-6u of 1F	–	1-time/month	Expansion of Survey
		Around South Discharge Channel of 1F			
		Around North Discharge Channel of 2F			
		Around Iwasawa Shore of 2F			
	Within 20km of periphery	3km offshore of Haramachi district			
		8km offshore of Odaka district			
		8km offshore of Iwasawa coast			
		15 km offshore of Ukedo-gawa			
		15 km offshore of Fukushima Daiichi			
		15 km offshore of Fukushima Daini			

- Gamma Ray Radiation Measure(4/4)

Content	Sampling Spot		Original	Change	Note
Marine soil	Within 30km of periphery	15 km offshore of MinamiSouma City	–	1-time/month	Expansion of Survey
		15 km offshore of Iwasawa Shore			
		15 km offshore of Hirono-machi			
	Outside 30km of periphery	North Iwaki offshore 3km			
		Natsui-gawa offshore 3km			
		Onahama Port offshore 3km			
		Ena offshore 3km			
		Numanouchi offshore 3km			
		Toyoma offshore 3km			
		3 km offshore of Souma City			
		5 km offshore of Souma City			
		5 km offshore of Kashima			
		5 km offshore of Numanouchi			
Dropping	1F	Environment Administration Office of Fukushima Daiichi	–	1-time/month	Expansion of Survey
		Roof of Environment Administration Office of Fukushima Daiichi			
	Around 5km	Around 5km North			
		Around 5km Northwest			
		Around 5km West			
		Around 5km Southwest			
		Around 5km Southwest (roof)			
		Around 5km South			
	Around 10km	Around 10km North			
		Around 10km Northwest			
		Around 10km West			
		Around 10km Southwest			
		Around 10km Southwest (roof)			
		Around 10km South (roof)			
	2F	Administration Office Building			
		Roof of Administration Office Building			

- Plutonium et cetera

Content	Sampling Spot		Original	Change	Note
Soil	1F	Playground (west-northwest approx. 500m)	1-time/week (only PU)	Same as original	Sampling frequency is 2-time/week*.
		Forest of wild birds (west approx. 500m)			
		Adjacent to industrial waste disposal facility south-southwest approx. 500m)			
Air	1F	West Gate of Fukushima Daiichi	1-time/week	Same as original	
Underground Water	1F	Subdrain around Unit 2 turbine building	1-time/month	Same as original	Take a sample in turn at 1-time/month from the sampling points mentioned in the left column
		Subdrain around Unit 5 turbine building			
		Subdrain around Unit 1, 3, 4, 6 turbine buildings, and Deep well	1-time/month (Refer to Note)	Same as original	
Seawater (inside port)	1F	Inside north water intake canal of Unit 1-4	1-time/month	Same as original	
Seawater (ouside port)	Coast	North of Discharge Channel of 5-6u of 1F	1-time/month	Same as original	
		Around South Discharge Channel of 1F			
	Within 20km of periphery	15 km offshore of Fukushima Daiichi	1-time/month (Upper layer)	Same as original	
		15 km offshore of Fukushima Daini			
Marine soil	Within 20km of periphery	3km offshore of Odaka district	1-time/3-month (If Pu is detected, U, Am, Cm analysis is conducted)	1-time/2-month (If Pu is detected, U, Am, Cm analysis is conducted)	Chage of frequency
		3km offshore of Iwasawa coast			
		15 km offshore of Fukushima Daiichi	–	1-time/2-month (If Pu is detected, U, Am, Cm analysis is conducted)	Expansion of Survey
	Coast	North of Discharge Channel of 5-6u of 1F			
		Around South Discharge Channel of 1F			
	Within 20km of peripheryor Within 30km of periphery	Each one point of North and South of high Cs-137 level			
	Outside 30km of periphery	Each one point of North and South of high Cs-137 level			

* Sampling is done twice a week. Out of which, one sample is measured. If it is recognized that the radioactivity concentration is changed, the remaining sample will be measured.

- Strontium

Content	Sampling Spot		Original	Change	Note
Soil	1F	Playground (west-northwest approx. 500m)	1-time/month	Same as original	
		Forest of wild birds (west approx. 500m)			
		Adjacent to industrial waste disposal facility south-southwest approx. 500m)			
Air	1F	Around west gate	1-time/month	Same as original	
Underground Water	1F	Subdrain around Unit 2 turbine building	1-time/month	Same as original	
		Subdrain around Unit 5 turbine building			
		Subdrain around Unit 1, 3, 4, 6 turbine buildings, and Deep well	1-time/month (Refer to Note)	Same as original	Take a sample in turn at 1-time/month from the sampling points mentioned in the left column
Seawater (inside port)	1F	Inside north water intake canal of Unit 1-4	1-time/month	Same as original	Not listed in the announcement in July 2011
Seawater (ouside port)	Coast	North of Discharge Channel of 5-6u of 1F	1-time/month	Same as original	
		Around South Discharge Channel of 1F			
	Within 20km of periphery	15 km offshore of Fukushima Daiichi	1-time/month (Upper layer)	Same as original	
		15 km offshore of Fukushima Daini			
Marine soil	Within 20km of periphery	3km offshore of Odaka district	1-time/3-month	1-time/2-month	Chage of frequency
		3km offshore of Iwasawa coast			
		15 km offshore of Fukushima Daiichi	–	1-time/2-month	Expansion of Survey
	Coast	North of Discharge Channel of 5-6u of 1F			
		Around South Discharge Channel of 1F			
	Within 20km of peripheryor Within 30km of periphery	Each one point of North and South of high Cs-137 level			
	Outside 30km of periphery	Each one point of North and South of high Cs-137 level			

- Tritium, all alpha and beta radiation

Content	Sampling Spot		Original	Change	Note
Underground Water	1F	Subdrain around Unit 2 turbine building	1-time/month	Same as original	
		Subdrain around Unit 5 turbine building			
		Subdrain around Unit 1, 3, 4, 6 turbine buildings, and Deep well	1-time/month (Refer to Note)	Same as original	Take a sample in turn at 1-time/month from the sampling points mentioned in the left column
Seawater (inside port)	1F	Inside north water intake canal of Unit 1-4	1-time/month	1-time/month	Not listed in the announcement in July 2011
Seawater (ouside port)	Coast	North of Discharge Channel of 5-6u of 1F	1-time/month	Same as original	
		Around South Discharge Channel of 1F			
	Within 20km of periphery	15 km offshore of Fukushima Daiichi			
		15 km offshore of Fukushima Daini			