Sampling, Measurement Frequency and Nuclide Analysis Plan (October 24, 2011)

- Gamma Ray Radiation Measure(1/4)

- Gamma Ray I Content		Sampling Spot	Original	Change	Note
		Playground (west-northwest approx. 500m)		Ŭ	
Soil	1F	Forest of wild birds (west approx. 500m)	1-time/week	Same as original	Sampling frequency is 2-time/week*.
		Adjacent to industrial waste disposal facility south-southwest approx. 500m)			
	1F	Around west gate		Como os original	
	2F	MP-1	1-time/day	Same as original	
		Top of the slope at north side of Unit 1			
		Top of the slope at the west of Unit 1 and 2	1-time/week	Same as original	
		Top of the slope at the west of Unit 3 and 4			
		Mountain side of Unit 1			
A :-		Mountain side of Unit 2			
Air	1F	Mountain side of Unit 3			
	16	In front of the Environment Administration Office	1-time/month	Same as original	
		In front of Water Treatment Building		Same as original	
		In front of Switchyard of Unit 5 and 6			
		MP-1			
		MP-3	1-time/week		
		MP-8			
		Subdrain around Unit 1 turbine building			
		Subdrain around Unit 2 turbine building			
		Subdrain around Unit 3 turbine building			
	1F	Subdrain around Unit 4 turbine building	3-time/week	Same as original	
		Subdrain around Unit 5 turbine building			
		Subdrain around Unit 6 turbine building			
Underground		Deep well			
Water		Subdrain northeast of Process Main Building			
		Subdrain southeast of Process Main Building	1-time/day		
		Subdrain south of Miscellaneous Solid Waste Volume Reduction Treatment Building			
	1F	Southwest Subdrain of On-site Bunker Building	1-time/week	Same as original	
		Subdrain west of Incineration Workshop Building			
		Subdrain north of Miscellaneous Solid Waste Volume Reduction Treatment Building	1-time/day		
		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
		Front of Shallow Draft Quay			
		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)	1-time/day Same as d		
Seawater (inside port)	1F	Screen of Unit 2 (inside the silt fence)		Same as original	
(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 of Unit 1-4 Water Intake Canal			

		North of Discharge Channel of 5-6u of 1F			
	Coast	Around South Discharge Channel of 1F	1-time/day	Same as original	
		Around North Discharge Channel of 2F			
		Around Iwasawa Shore of 2F			
		3 km offshore of Haramachi district			
		3 km offshore of Odaka district			
	Within 20km of periphery	3 km offshore of Iwasawa coast	1 time /2 day	Same as original	
		8 km offshore of Odaka district	1-time/2-day (Sampling 2 points - upper and lower layers)		
		8 km offshore of Iwasawa coast			
Seawater		15 km offshore of Ukedo-gawa			
(outside port)		15 km offshore of Fukushima Daiichi			
		15 km offshore of Fukushima Daini			
		15 km offshore of MinamiSouma City			
	Within 30km of periphery	15 km offshore of Iwasawa Shore			
		15 km offshore of Hirono-machi			
		3 km offshore of North Iwaki	1-time/week		
		3 km offshore of Natsui-gawa	(Sampling 2 points - upper and lower	Same as original	
		3 km offshore of Onahama Port	layers)		
	of periphery	3 km offshore of Ena			
		3 km offshore of Numanouchi			
		3 km offshore of Toyoma			

- Gamma Ray Radiation Measure(3/4)

Content		Sampling Spot	Original	Change	Note
		3 km offshore of Souma City			
Seawater (outside port)	of periphery	5 km offshore of Souma City	1-time/week (Sampling 2 points	Same as original	
		5 km offshore of Kashima	 upper and lower layers) 		
		5 km offshore of Numanouchi	layers)		
		3 km offshore of Takadokobama shore			
	Offshore of	3 km offshore of Kujihama shore	1-time/week		
	Ibaraki	3 km offshore of Oarai shore	(Sampling 2 points - upper and lower	Same as original	
	prefecture	3 km offshore of Hirai shore	layers)		
		3 km offshore of Hasaki shore			
Seawater (outside port)		Ishinomaki Bay		Same as original	
(Offshore of Miyagi prefecture	Offshore of Kinkasan east	1-time/2-week (Sampling 3 points - upper, middle and lower layers)		
		Offshore of Kinkasan south			
		Offshore of Shichigahama			
		Sendai Bay center			
		Offshore of Abukuma River			
	Within 20km	3 km offshore of Odaka district	1 times (meanth		
	of periphery	3 km offshore of Iwasawa coast	1-time/month	Same as original	
		North of Discharge Channel of 5-6u of 1F			
	Coast	Around South Discharge Channel of 1F			
	COASI	Around North Discharge Channel of 2F			
Marine soil		Around Iwasawa Shore of 2F			
Manne Son		3 km offshore of Haramachi district	1-time/month	Same as original	
		8 km offshore of Odaka district			
	of poriphory	8 km 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
		15 km offshore of MinamiSouma City			
	Within 30km of periphery	15 km offshore of Iwasawa Shore			
		15 km offshore of Hirono-machi			
		North Iwaki offshore 3km			
		Natsui-gawa offshore 3km			
		Onahama Port offshore 3km			
Marine soil		Ena offshore 3km	1-time/month	Same as original	
	Outside 30km	Numanouchi offshore 3km			
	of periphery	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			
	1F	Environment Administration Office of Fukushima Daiichi		Some co original	
	11	Roof of Environment Administration Office of Fukushima Daiichi			
		Around 5km North			
		Around 5km Northwest		Same as onginai	I Hard to access
	Around 5km	Around 5km West			
	Albunu Skin	Around 5km Southwest			
		Around 5km Southwest (roof)		Cancelled	
Dropping		Around 5km South	1-time/month		
Dropping		Around 10km North			
		Around 10km Northwest			Hard to access
	Around 10km	Around 10km West			
	Albunu Tokin	Around 10km Southwest		Same as original	
		Around 10km Southwest (roof)			
		Around 10km South (roof)			
	2F	Administration Office Building			
	21	Roof of Administration Office Building			

Content		Sampling Spot	Original	Change	Note
		Playground (west-northwest approx. 500m)	1-time/week (only UP)	Same as original	Sampling frequency is 2-time/week*.
Soil	1F	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	
		Subdrain around Unit 2 turbine building	1-time/month	Same as original	Take a sample in
Underground		Subdrain around Unit 5 turbine building	r-ume/monur	Same as original	turn at 1-time/month
Water	1F	Subdrain around Unit 1, 3, 4, 6 turbine buildings, and Deep well	1-time/month (Refer to Note)	Same as original	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	
	Coast	North of Discharge Channel of 5-6u of 1F	1-time/month	1-time/month (If Pu 238 is detected, U, Am,	Adjustment with how to lead sea
Seawater	coust	Around South Discharge Channel of 1F		Cm analysis is conducted)	area monitoring in future
(outside port)	Within 20km	15 km offshore of Fukushima Daiichi	1-time/month	1-time/month (If Pu 238 is detected, U, Am, Cm analysis is conducted) Adjustmer how to lea area monito future 1-time/month (Upper layer) (If Pu 238 is detected, U, Am, Cm analysis is conducted) Adjustmer how to lea area monito future 1-time/cmonth (Upper layer) (If Pu 238 is detected, U, Am, Cm analysis is conducted) Adjustmer how to lea area monito future 1-time/2-month (If Pu 238 is detected, U, Am, Cm analysis is Adjustmer how to lea area monito	Adjustment with how to lead sea
	of periphery	15 km offshore of Fukushima Daini	(Upper layer)		area monitoring in future
		3km offshore of Odaka district	1-time/2-month (If Pu is detected,	(If Pu 238 is	Adjustment with how to lead sea
	Within 20km of periphery	3km offshore of Iwasawa coast	U, Am, Cm analysis is conducted)	Cm analysis is	area monitoring in future
		15 km offshore of Fukushima Daiichi			
	Coast	North of Discharge Channel of 5-6u of 1F	1-time/2-month (If Pu is detected, U, Am, Cm analysis is conducted)	1-time/2-month (If Pu 238 is detected, U, Am, Cm analysis is conducted)	Adjustment with how to lead sea area monitoring in future
Marine soil	COasi	Around South Discharge Channel of 1F			
	Within 20km of periphery or 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.

Content		Sampling Spot	Original	Change	Note
		Playground (west-northwest approx. 500m)	1-time/month		
Soil	1F	Forest of wild birds (west approx. 500m)		Same as original	
		Adjacent to industrial waste disposal facility south-southwest approx. 500m)			
Air	1F	Around west gate	1-time/month	Same as original	
		Subdrain around Unit 2 turbine building	4 times (manually		
		Subdrain around Unit 5 turbine building	1-time/month	Same as original	
Underground Water	1F	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)	<u>1F</u>	Inside north water intake canal of Unit 1-4	1-time/month	Same as original	
		North of Discharge Channel of 5-6u of 1F			
	Coast	Around South Discharge Channel of 1F	1-time/month	Same as original	
	Within 20km	15 km offshore of Fukushima Daiichi	1-time/month	Same as original	
Seawater	of periphery	15 km offshore of Fukushima Daini	(Upper layer)		
(outside port)	Outside 30km	Middle of Sendai Bay		1-time/2-month	
		5 km offshore of Souma city			
	of periphery	3 km offshore of Ena	-	(Upper layer)	
		3 km offshore of Oarai shore			
		3 km offshore of Odaka district	1-time/2-month	Same as original	
	Within 20km of periphery	3 km offshore of Iwasawa coast	T uno/2 monut	<u>oane as originar</u>	turn at 1-time/month from the sampling points mentioned in the left column
		15 km offshore of Fukushima Daiichi			
	Coast	North of Discharge Channel of 5-6u of 1F		<u>Same as original</u>	
Marine soil	COUST	Around South Discharge Channel of 1F	1-time/2-month		
	Within 20km of periphery or 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
		Subdrain around Unit 2 turbine building	1-time/month	Same as original	
		Subdrain around Unit 5 turbine building	r-une/monur		
Underground Water	1F	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	
	Coast	North of Discharge Channel of 5-6u of 1F			
Seawater	Coasi	Around South Discharge Channel of 1F	1-time/month		
(outside port)	Within 20km	15 km offshore of Fukushima Daiichi		Same as original	
	of periphery	15 km offshore of Fukushima Daini			