

Analysis Results of Soil Samples Taken inside 20 km Zone of Fukushima Dai-ichi NPP

May 19, 2011

Ministry of Education, Culture, Sports, Science and Technology

1. Analysis results

Location Number	Soil Sample Sampling Location	Sampling Date	Radioactive Concentration (Bq/kg)											Notes
			¹³¹ I	¹³⁴ Cs	¹³⁶ Cs	¹³⁷ Cs	^{129m} Te	²³⁴ U	²³⁵ U	²³⁸ U	²³⁸ Pu	²³⁹⁺²⁴⁰ Pu	Other Detected Nuclides	
6	Okuma Town Oaza Kumagawa (About 4km South/South/West)	30-Apr	9,500	18,000	250	17,000	8,800	6.2	0.21	5.8	Not detectable (0.00089±0.00089)	Not detectable (0.0067±0.0026)	None	
41	Okuma Town Oaza Ottozawa (About 3km West/South/West)	29-Apr	11,000	52,000	760	49,000	23,000	18.0	0.82	17.0	Not detectable (0.0051±0.0023)	0.05	None	
A13	Okuma Town Oaza Ottozawa (About 2km West/South/West)	1-May	110,000	270,000	3,400	270,000	180,000	11.0	0.47	10.0	Not detectable (0.0029±0.0021)	0.027	None	
A14	Futaba Town Oaza Yamada (About 7km West)	1-May	7,200	5,000	87	5,000	7,300	5.2	0.22	5.9	Not detectable (0.0009±0.0015)	0.020	None	

□ : Data that was added in this row

2. Evaluation

Regarding the concentration of plutonium in the soil, the Pu-238 / Pu-239+240 radioactivity concentration ratio was about 1 or higher, when plutonium assumed to have been released in the accident was recently detected within the site of Fukushima Dai-ichi NPP. In this analysis, no Pu-238 was detected, although Pu-239+240 was detected. From these results, it is considered that no plutonium has been released onto the soil of the sampling points from the recent nuclear accident, and the detected plutonium is caused by the past nuclear tests in the atmosphere. Regarding the radioactive concentration of uranium, since the radioactive concentration of U-238 and U-234 are comparable level, it is considered that detected uranium was already present in nature, which supports the assumption that uranium that was detected was already present in nature.

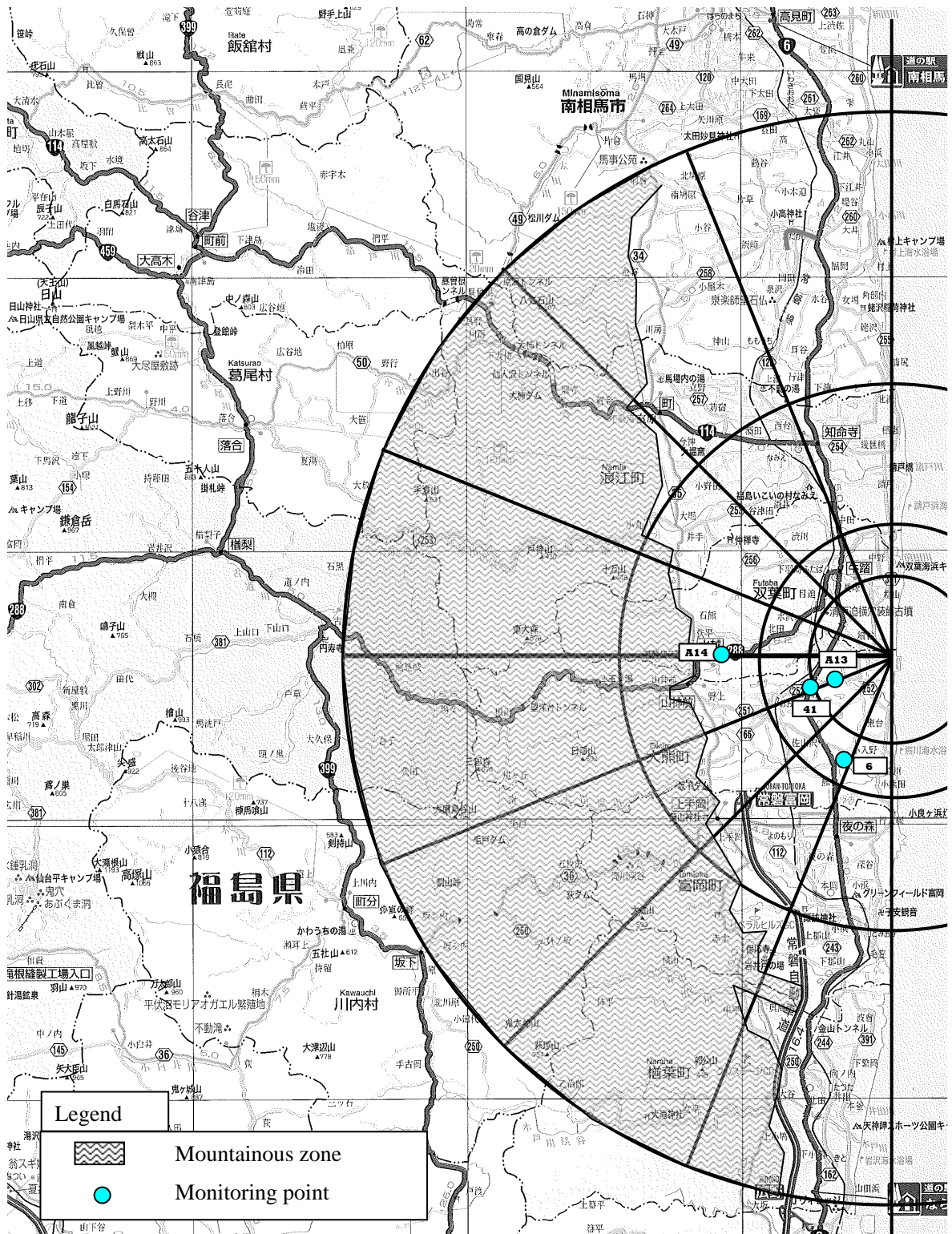
3. Date of Analysis Start

May 3, 2011

(Reference 1) The concentration ratio indicated as the effect of past nuclear tests in the atmosphere is 0.026

(Reference 2) For the detection standards, it is deemed to have been detected if A is at least three times larger than B in $A \pm B$.

(Reference 3) Analysis was conducted by the Japan Chemical Analysis Center



Monitoring points for the radioactive concentration of nuclides in the soil
within 20 km of Fukushima Dai-ichi NPP

(Sample collection dates: April 29-May 1, 2011)

* Figures in boxes are monitoring point numbers.