

Annex 2. Data tables for discharges from the nuclear sector

Table A2.1. Data table for the nuclear fuel production and enrichment sub-sector.

Contracting Party	Indicator	Baseline value (TBq)	Lower baseline bracket (TBq)	Upper baseline bracket (TBq)	Assessment value (TBq)	Student's t Welch-Aspin test (P value)	Mann-Whitney test (P value)
Germany	Total alpha	1.98E-04	7.03E-05	3.26E-04	3.28E-09	1.99E-04	1.17E-03
Netherlands	Total alpha	2.44E-06	9.64E-07	3.92E-06	7.00E-07	4.42E-04	5.83E-04
	Total beta (excl. tritium)	1.24E-05	3.89E-06	2.10E-05	3.33E-06	1.11E-03	1.17E-03
Spain	Total alpha	2.44E-05	6.69E-06	4.21E-05	1.92E-05	2.19E-01	3.18E-01
United Kingdom	Total alpha	1.62E-01	7.34E-02	2.51E-01	2.12E-02	1.66E-04	5.83E-04
	Total beta (excl. tritium)	1.19E+02	5.79E+01	1.81E+02	3.99E+00	6.71E-05	5.83E-04
	Tc-99	2.91E-02	3.81E-03	5.44E-02	6.48E-02	1.20E-01	1.28E-01

Overall for the sub-sector							
	Total alpha	1.63E-01	7.36E-02	2.51E-01	2.12E-02	1.64E-04	5.83E-04
	Total beta (excl. tritium)	1.19E+02	5.79E+01	1.81E+02	3.99E+00	6.71E-05	5.83E-04

Table A2.2. Data table for the nuclear power sub-sector.

Contracting Party	Indicator	Baseline value (TBq)	Lower baseline bracket (TBq)	Upper baseline bracket (TBq)	Assessment value (TBq)	Student's t Welch-Aspin test (P value)	Mann-Whitney test (P value)
Belgium	Total alpha	1.94E-06	0	6.55E-06	4.60E-06	3.40E-01	6.20E-01
	Total beta (excl. tritium)	4.69E-02	1.89E-02	7.50E-02	1.40E-02	5.71E-04	5.83E-04
	Cs-137	7.90E-03	9.64E-04	1.48E-02	1.14E-03	2.10E-03	5.83E-04
France	Total beta (excl. tritium)	5.07E-02	6.07E-03	9.53E-02	9.10E-03	2.85E-03	5.83E-04
	Cs-137	4.92E-03	0	1.18E-02	6.78E-04	1.85E-02	5.83E-04
Germany	Total alpha	2.00E-06	0	5.79E-06	3.36E-07	6.26E-02	9.73E-02
	Total beta (excl. tritium)	2.82E-03	8.19E-04	4.81E-03	1.03E-03	4.78E-03	6.99E-03
	Cs-137	2.69E-04	3.37E-05	5.04E-04	4.48E-05	2.27E-03	5.83E-04
Netherlands	Total beta (excl. tritium)	4.12E-03	0	1.04E-02	1.81E-04	1.76E-02	5.83E-04
	Cs-137	2.71E-04	0	8.95E-04	9.98E-06	7.34E-02	9.91E-03
Spain	Total beta (excl. tritium)	1.47E-02	4.94E-03	2.45E-02	6.68E-03	4.54E-03	2.33E-03
	Cs-137	1.56E-03	5.86E-04	2.53E-03	3.25E-04	2.72E-04	1.17E-03
Sweden	Total alpha	7.00E-06	0	1.63E-05	4.41E-06	3.27E-01	1.65E-01
	Total beta (excl. tritium)	8.65E-02	6.38E-03	1.67E-01	2.31E-03	1.58E-03	5.83E-04
	Cs-137	4.04E-03	0	1.11E-02	1.75E-04	3.01E-02	5.83E-04
Switzerland	Total alpha	8.98E-07	3.86E-07	1.41E-06	8.17E-07	7.63E-01	3.66E-01
	Total beta (excl. tritium)	4.49E-02	7.33E-03	8.26E-02	5.47E-03	1.49E-03	5.83E-04
	Cs-137	5.65E-03	0	1.22E-02	1.52E-03	1.65E-02	4.08E-03

United Kingdom	Total alpha	2.49E-03	1.65E-03	3.33E-03	7.52E-04	6.34E-03	1.52E-02
	Total beta (excl. tritium)	8.09E+00	5.93E+00	1.02E+01	7.08E-01	2.08E-07	5.83E-04
	Cs-137	1.66E+00	9.19E-01	2.40E+00	5.10E-01	4.57E-05	5.83E-04

Overall for the sub-sector							
	Total alpha	2.15E-03	1.48E-04	4.14E-03	6.55E-04	1.56E-02	5.01E-02
	Total beta (excl. tritium)	8.34E+00	6.10E+00	1.06E+01	7.47E-01	2.61E-07	5.83E-04
	Cs-137	1.68E+00	9.45E-01	2.42E+00	5.14E-01	3.88E-05	5.83E-04

Table A2.3. Data table for the nuclear fuel reprocessing sub-sector.

Contracting Party	Indicator	Baseline value (TBq)	Lower baseline bracket (TBq)	Upper baseline bracket (TBq)	Assessment value (TBq)	Student's t Welch-Aspin test (P value)	Mann-Whitney test (P value)
France	Total alpha	4.84E-02	2.73E-02	6.94E-02	2.08E-02	2.79E-04	5.83E-04
	Total beta (excl. tritium)	2.72E+01	3.07E+00	5.14E+01	4.18E+00	2.51E-03	5.83E-04
	Tc-99	2.33E-01	0	4.90E-01	2.65E-01	8.46E-01	2.59E-01
	Cs-137	2.24E+00	0	4.66E+00	8.02E-01	2.15E-02	4.08E-03
	Pu-239,240	4.57E-03	2.50E-03	6.64E-03	1.56E-03	2.08E-04	5.83E-04
United Kingdom	Total alpha	2.11E-01	2.16E-02	4.00E-01	1.37E-01	8.88E-02	7.28E-02
	Total beta (excl. tritium)	1.23E+02	4.83E+01	1.98E+02	1.46E+01	2.50E-04	5.83E-04
	Tc-99	9.55E+01	0	2.01E+02	2.20E+00	3.80E-03	5.83E-04
	Cs-137	9.01E+00	5.60E+00	1.24E+01	4.84E+00	3.46E-04	1.17E-03
	Pu-239,240	1.71E-01	3.57E-02	3.06E-01	1.24E-01	1.24E-01	6.76E-02
Overall for the sub-sector							
	Total alpha	2.59E-01	5.04E-02	4.68E-01	1.57E-01	4.47E-02	1.11E-02
	Total beta (excl. tritium)	1.50E+02	5.53E+01	2.46E+02	1.87E+01	3.37E-04	5.83E-04
	Tc-99	9.57E+01	0	2.01E+02	2.46E+00	3.78E-03	5.83E-04
	Cs-137	1.12E+01	5.86E+00	1.66E+01	5.64E+00	1.01E-03	5.83E-04
	Pu-239,240	1.76E-01	3.93E-02	3.12E-01	1.25E-01	1.07E-01	5.30E-02

Table A2.4. Data table for the nuclear research and development sub-sector.

Contracting Party	Indicator	Baseline value (TBq)	Lower baseline bracket (TBq)	Upper baseline bracket (TBq)	Assessment value (TBq)	Student's t Welch-Aspin test (P value)	Mann-Whitney test (P value)
Belgium	Total alpha	4.13E-05	0	1.08E-04	1.97E-05	1.57E-01	1.76E-01
	Total beta (excl. tritium)	4.20E-03	0	1.12E-02	1.65E-04	2.47E-02	5.83E-04
Denmark	Total beta (excl. tritium)	1.08E-04	4.37E-05	1.73E-04	1.21E-04	6.85E-01	6.28E-01
France	Total alpha	1.47E-04	9.61E-05	1.97E-04	6.39E-05	2.05E-04	1.17E-03
	Total beta (excl. tritium)	2.45E-03	0	6.52E-03	2.70E-05	2.15E-02	5.83E-04
Germany	Total beta (excl. tritium)	8.00E-04	0	1.64E-03	2.59E-04	1.63E-02	6.99E-03
Netherlands	Total alpha	2.76E-06	0	7.91E-06	2.71E-06	9.62E-01	8.76E-01
	Total beta (excl. tritium)	8.76E-02	9.07E-03	1.66E-01	3.45E-02	4.47E-02	5.30E-02
Norway	Total alpha	2.98E-06	0	1.43E-05	4.72E-06	7.39E-01	6.28E-01
	Total beta (excl. tritium)	2.57E-03	9.16E-04	4.22E-03	2.74E-04	2.74E-04	5.83E-04
Portugal	Total beta (excl. tritium)	7.67E-04	2.67E-04	1.27E-03	3.12E-04	4.43E-03	1.21E-02
Switzerland	Total alpha	1.38E-05	0	3.49E-05	2.22E-07	1.55E-02	5.83E-04
	Total beta (excl. tritium)	3.56E-04	0	1.02E-03	1.03E-04	9.94E-02	2.80E-02
United Kingdom	Total alpha	2.95E-02	0	1.01E-01	5.04E-04	7.89E-02	5.83E-04
	Total beta (excl. tritium)	2.26E+00	0	8.19E+00	2.15E-02	9.73E-02	5.83E-04

Overall for the sub-sector							
	Total alpha	2.97E-02	0	1.01E-01	5.94E-04	7.78E-02	5.83E-04

Total beta (excl. tritium)	2.36E+00	0	8.36E+00	5.72E-02	9.35E-02	5.83E-04
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Table A2.5. Data table for the nuclear sector.

Indicator	Baseline value (TBq)	Lower baseline bracket (TBq)	Upper baseline bracket (TBq)	Assessment value (TBq)	Student's t Welch-Aspin test (P value)	Mann-Whitney test (P value)
Total alpha	4.54E-01	2.31E-01	6.77E-01	1.80E-01	6.73E-04	5.83E-04
Total beta (excl. tritium)	2.81E+02	1.51E+02	4.10E+02	2.36E+01	4.51E-05	5.83E-04
Tc-99	9.58E+01	0	2.01E+02	2.52E+00	3.78E-03	5.83E-04
Cs-137	1.29E+01	7.10E+00	1.88E+01	6.20E+00	4.87E-04	5.83E-04
Pu-239,240	1.76E-01	3.93E-02	3.12E-01	1.25E-01	1.07E-01	5.30E-02