

## APPENDIX 4

### Luminescence dates (OSL) for the Volochysk samples – Lublin laboratory (2014)

Sample	No. lab. Lub-	$^{40}\text{K}$ [Bq/kg]	$^{226}\text{Ra}$ [Bq/kg]	$^{228}\text{Th}$ [Bq/kg]	Dose rate $d_r$ [Gy/ka]	Equivalent dose OSL $d_e$ [Gy]	OSL age [ky]
W-1	6108	$454 \pm 7$	$32.9 \pm 2.0$	$36.5 \pm 0.8$	$2.87 \pm 0.17$	$45.58 \pm 1.15$	$15.9 \pm 1.0$
W-2	6109	$446 \pm 9$	$26.8 \pm 1.9$	$38.8 \pm 1.1$	$2.70 \pm 0.23$	$50.44 \pm 1.24$	$18.7 \pm 1.7$
W-3	6110	$491 \pm 6$	$32.9 \pm 1.5$	$38.0 \pm 0.8$	$3.00 \pm 0.13$	$51.81 \pm 1.33$	$17.3 \pm 0.9$
W-5	6111	$517 \pm 7$	$27.0 \pm 1.8$	$42. \pm 0.9$	$3.03 \pm 0.17$	$57.69 \pm 1.40$	$19.0 \pm 2.1$
W-6	6112	$495 \pm 5$	$30.1 \pm 1.5$	$43.3 \pm 0.7$	$3.04 \pm 0.13$	$104.62 \pm 2.88$	$41.3 \pm 2.1$
W-7	6113	$499 \pm 8$	$26.6 \pm 2.1$	$45.8 \pm 0.9$	$3.00 \pm 0.18$	$110.61 \pm 2.96$	$44.2 \pm 2.9$
W-8	6114	$470 \pm 6$	$30.0 \pm 1.4$	$42.8 \pm 0.7$	$2.94 \pm 0.12$	$158.56 \pm 3.83$	$53.9 \pm 2.7$
W-9	6115	$463 \pm 6$	$31.1 \pm 1.7$	$42.3 \pm 0.8$	$2.93 \pm 0.14$	$169.55 \pm 5.40$	$57.9 \pm 3.3$
W-10	6116	$463 \pm 5$	$28.3 \pm 1.4$	$42.1 \pm 0.7$	$2.86 \pm 0.12$	$188.26 \pm 6.07$	$65.8 \pm 3.5$
W-11	6117	$502 \pm 6$	$27.4 \pm 1.8$	$44.1 \pm 0.8$	$2.99 \pm 0.16$	$244.43 \pm 7.34$	$81.7 \pm 5.0$
W-12	6118	$377 \pm 6$	$25.7 \pm 1.5$	$32.0 \pm 0.8$	$2.35 \pm 0.14$	$216.99 \pm 6.57$	$92.3 \pm 6.2$
W-13	6119	$421 \pm 7$	$25.8 \pm 1.4$	$38.9 \pm 0.9$	$2.60 \pm 0.16$	$222.79 \pm 6.87$	$85.7 \pm 6.4$
W-14	6120	$394 \pm 6$	$29.8 \pm 1.5$	$34.3 \pm 0.7$	$2.52 \pm 0.12$	$214.14 \pm 10.48$	$85.0 \pm 5.0$
W-15	6121	$458 \pm 7$	$30.2 \pm 1.2$	$37.0 \pm 0.8$	$2.81 \pm 0.12$	$55.01 \pm 1.36$	$19.6 \pm 1.0$
W-16	6122	$478 \pm 6$	$30.0 \pm 1.4$	$35.8 \pm 0.8$	$2.83 \pm 0.13$	$43.70 \pm 0.89$	$15.4 \pm 0.8$
W-17	6123	$500 \pm 7$	$28.8 \pm 1.4$	$40.4 \pm 0.9$	$2.95 \pm 0.14$	$42.77 \pm 1.03$	$17.4 \pm 0.9$
W-18	6124	$465 \pm 7$	$29.7 \pm 1.4$	$39.8 \pm 0.8$	$2.84 \pm 0.13$	$38.20 \pm 1.04$	$16.1 \pm 0.9$