SECTION 9: OPTIONAL SAMPLES

9.1 INTRODUCTION

After the first and main phase of FIRI, which focused on routinely measured materials, an optional series of samples were also made available to participating laboratories. This second list included archaeological samples, mammoth tusks, and modern cellulose. Not all samples were available in sufficient quantity for radiometric measurement (in particular, the mammoth tusks). The samples are briefly described in Table 9.1 below.

Table 9.1 Description of optional samples

Sample	Description
K	Cambridge cellulose
L	Dogee Barrow wood
M	whole peat
N	mammoth tusk
O	mammoth tusk
P	mammoth tusk

9.2 SAMPLE DESCRIPTION

For Sample K, the dendro-age is known. Sample M had been previously pretested and came from the same site as Sample E. The Dogee Barrow site had been extensively dated, as had the mammoth tusks.

Sample K came from a tree that was planted around AD 1722 and material corresponding to the period AD 1820–1880 (a relatively flat area on the calibration curve) provided the sample. It has been homogeneity tested (approximately 98 pMC).

The 3 mammoth tusks had been previously dated with results for Sample N (T-13440, 28,075 ± 255 and LU-3983, 29,170 ± 340), Sample O (Lu-4170, age 39,320 ± 960), and Sample P (Lu-1967, age 12,820 ± 60).

Sample L came from the burial mound of Dogee Barrow, grave 8 (the Tuva king barrows). The approximate age was 2300–2400 BP.

Only a limited number of laboratories measured the optional samples and the summary statistics are shown below (the full table of results is given in Appendix 2).

Table 9.2 Descriptive statistics for the optional samples (in yr BP)

Sample	N	Mean	Median	StDev	Minimum	Maximum	Q1	Q3
K	6	126.2	76.5	104	40	310	58	220
L	10	2505	2500	123	2386	2790	2406	2548
M	15	11,139	11,120	191	10,710	11,413	11,070	11,300
N	5	28,100	28,574	1177	26,000	28,746	27,265	28,698
O	5	37,815	37,980	2143	34,700	40,504	35,910	39,639
P	5	12,558	12,600	151	12,300	12,696	12,443	12,653

Table 9.3 Descriptive statistics for the optional samples (in pMC)

Sample	N	Mean	Median	StDev	Minimum	Maximum	Q1	Q3
K	7	98.737	99.1	1.407	96.2	100.482	97.7	99.727
L	8	73.514	73.644	0.752	72.333	74.29	72.918	74.203
M	11	24.849	24.79	0.603	24.14	26.3	24.4	25.16
N	5	3.048	2.85	0.477	2.79	3.9	2.81	3.385
O	5	0.922	0.88	0.243	0.65	1.3	0.725	1.14
P	5	20.94	20.84	0.385	20.59	21.6	20.695	21.235

9.2.1 Comments

We can see that the results are in general agreement with the previous dating results and the known-age dendro date. No further analysis of the results for these materials has been undertaken. Given the small number of results, consensus values have not been calculated, but there still remains a sufficient archive to allow laboratories to measure these materials as part of their in-house QA procedures.