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Dear Sir or Madam,

NPL ENVIRONMENTAL RADIOACTIVITY PROFICIENCY TEST EXERCISE 2009

Environmental radioactivity proficiency test exercises aim to contribute to the improvement of the quality of environmental radioactivity measurements and regular participation in these exercises is a requirement for laboratory accreditation to ISO 17025:2005. Since the late 1980s, the National Physical Laboratory (NPL) has organised 14 environmental radioactivity proficiency test exercises for a range of radionuclides.

I am pleased to inform you that the 2009 NPL Environmental Radioactivity Proficiency Test Exercise will begin shortly. If you decide to participate, it would be helpful if you could send in your order as early as possible in order to avoid any delays in getting the samples to you. To minimise delays, please note:

For all participants please complete and return the Order Form no later than 1 May 2009.

Non-UK participants ordering 'Alpha' samples (which contain fissile material) may require an export licence. To smooth the progress of the export licence application, we will prepare and part complete an 'End-User Undertaking' form on your behalf. This document will be emailed to you for completion, signing and dating.

The participation fee for this exercise is £150 plus £295 for each sample ordered. This covers the cost of providing the sample(s), the exercise report (in pdf format) and attendance at the follow-up Workshop. Despatch costs will be an additional charge, which we will advise on request or on receipt of your completed order form.

Any queries should be emailed to radioactivity@npl.co.uk or by telephone on +44 (0)20 8943 8600.

The timetable for the exercise is as follows:

Dispatch of samples	September 2009
Deadline for submission of results	1 December 2009
Workshop at NPL	20 January 2010
Report to be issued	March 2010

Types of Samples Available

There will be seven sample types available, and they are listed below.

Alpha High (AH): 20 g aqueous sample in HDPE bottle, nuclides 1-20 Bq/g

^{226}Ra, ^{237}Np, ^{238}Pu, ^{239}Pu, ^{241}Am and ^{244}Cm

Alpha Low (AL): 500 g aqueous sample in HDPE bottle, nuclides 1-20 Bq/kg

^{232}Th, ^{237}Np, ^{238}U, ^{239}Pu, ^{241}Am and ^{244}Cm

Beta One (B1): 500 g aqueous sample in HDPE bottle, nuclides 0.1-2 Bq/g

^{3}H, ^{14}C, ^{99}Tc and ^{129}I

Beta Two (B2): 500 g aqueous sample in HDPE bottle, nuclides 0.1-2 Bq/g

^{3}H, ^{55}Fe, ^{89}Sr and ^{90}Sr

Gamma High (GH): 100 g aqueous sample in HDPE bottle, nuclides 1-20 Bq/g
Gamma Low (GL): 500 g aqueous sample in HDPE bottle, nuclides 1-20 Bq/kg

Mixture of at least six γ-emitting radionuclides from the following candidate list:

^{7}Be, ^{22}Na, ^{40}K, ^{46}Sc, ^{51}Cr, ^{54}Mn, ^{59}Fe, ^{56}Co, ^{57}Co, ^{58}Co, ^{60}Co, ^{65}Zn, ^{85}Sr, ^{88}Y, ^{91}Y, ^{95}Zr, ^{95}Nb, ^{103}Ru, ^{106}Ru, ^{109}Cd, ^{110m}Ag, ^{111}Ag, ^{113}Sn, ^{123m}Te, ^{124}Sb, ^{125}Sb, ^{125}I, ^{129}I, ^{134}Cs, ^{137}Cs, ^{133}Ba, ^{140}Ba, ^{139}Ce, ^{141}Ce, ^{144}Ce, ^{147}Nd, ^{152}Eu, ^{154}Eu, ^{155}Eu, ^{153}Gd, ^{160}Tb, ^{166m}Ho, ^{170}Tm, ^{192}Ir, ^{203}Hg and ^{207}Bi

Synthetic Sand (S): 50 g synthetic sand sample, nuclides 0.1-20 Bq/g

^{55}Fe, ^{90}Sr, ^{134}Cs, ^{137}Cs, ^{133}Ba and ^{152}Eu

I hope you will decide to participate and I look forward to another valuable exercise.

Yours faithfully,

CHRIS GILLIGAN
(Coordinator for the NPL Environmental Radioactivity PTE 2009)