Round 20 Sample Details

BACKGROUND
This report covers Round 20 of the Asbestos in Soils Scheme (AISS). Round 20 was open to laboratories worldwide. Laboratory participation was as follows: 35 UK, 34 Rest of Europe and 3 Rest of the World.

SAMPLES
Two samples were circulated as follows:

Sample S039 – This sample contained non-asbestos polypropylene fibres added, the matrix contained top soil, sand, plaster, cement and postcrete.

Sample S040 – This sample contained anthophyllite free fibre (0.06% by weight) with the matrix containing top soil, sand, plaster and postcrete. Polypropylene fibres were also added.

SCREENING & VALIDATOR INFORMATION
Both samples were prepared for circulation following our normal internal screening process of samples with representative sub-samples scanned using stereo-zoom microscopy to assess homogeneity and suitability. Approximately 10% of the total number of samples despatched were validated by 4 independent laboratories.

INFORMATION SUBMITTED BY LABORATORIES
69 laboratories submitted results for AISS Round 20. Laboratories used the PT online data entry system to submit their results for this round. Results were submitted as asbestos type(s) present and for the Quantitative option, the % asbestos in ACM's, as loose fibres and the total % asbestos.

AISS QUALITATIVE RESULTS
Sample 1 (S039)
Sixty-seven laboratories correctly reported no asbestos
One laboratory reported chrysotile
One laboratory reported chrysotile, tremolite and anthophyllite

Sample 2 (S040)
Sixty-one laboratories correctly reported anthophyllite (or tremolite) asbestos
Three laboratories reported amosite only
One lab reported amosite and anthophyllite
Two laboratories reported chrysotile and anthophyllite/tremolite
One laboratory reported crocidolite and anthophyllite
One laboratory reported amosite, chrysotile and actinolite asbestos

AISS QUANTITATIVE RESULTS
The median of quantitative results submitted was 0.0525. For the purposes of the z score we are using 40% of the median - 0.0216. Fifty-eight laboratories submitted quantitative results for S040;
- 44 (76%) laboratories achieved a z-score of < ± 2, Satisfactory
- 3 (5%) laboratory achieved a z-score of between ± 2 - ± 3, Questionable
- 11 (19%) laboratories achieved a z-score of > ± 3, Unsatisfactory
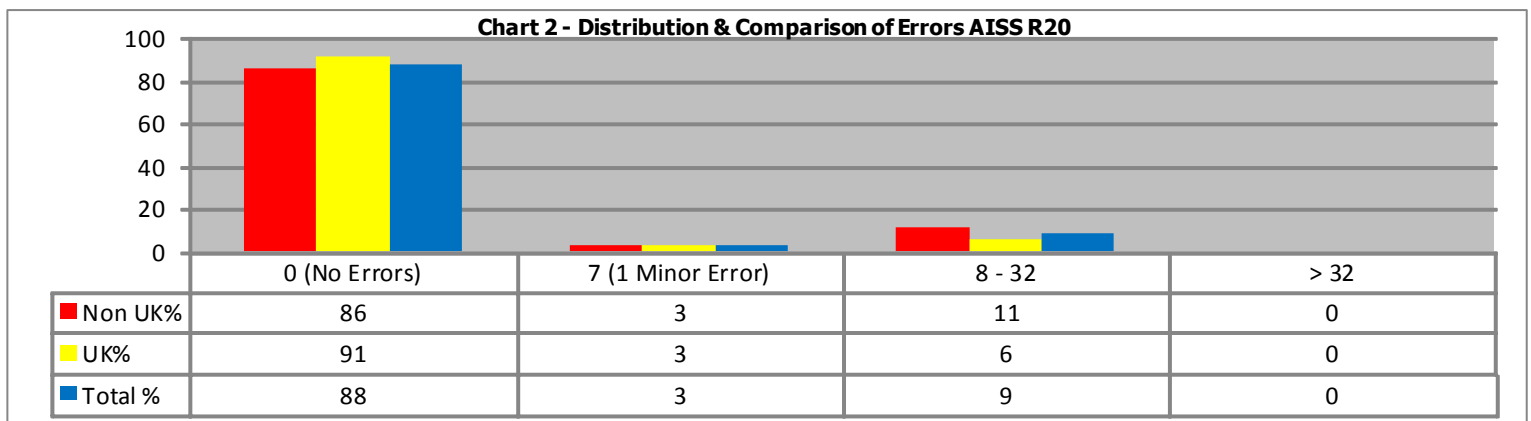
1. Type Of Errors Obtained

Chart 1 illustrates the errors made by participating laboratories. Two errors were made by laboratories on sample S039 with one lab identifying chrysotile and another identifying chrysotile, tremolite and anthophyllite. Ten errors were made by laboratories on sample S040 with three labs reported amosite only, one lab reported amosite as well as anthophyllite, two labs reported chrysotile along with anthophyllite/tremolite, one laboratory reported crocidolite as well as anthophyllite and one laboratory reported amosite, chrysotile and actinolite asbestos.

Chart 1 - AISS Round 20 Errors
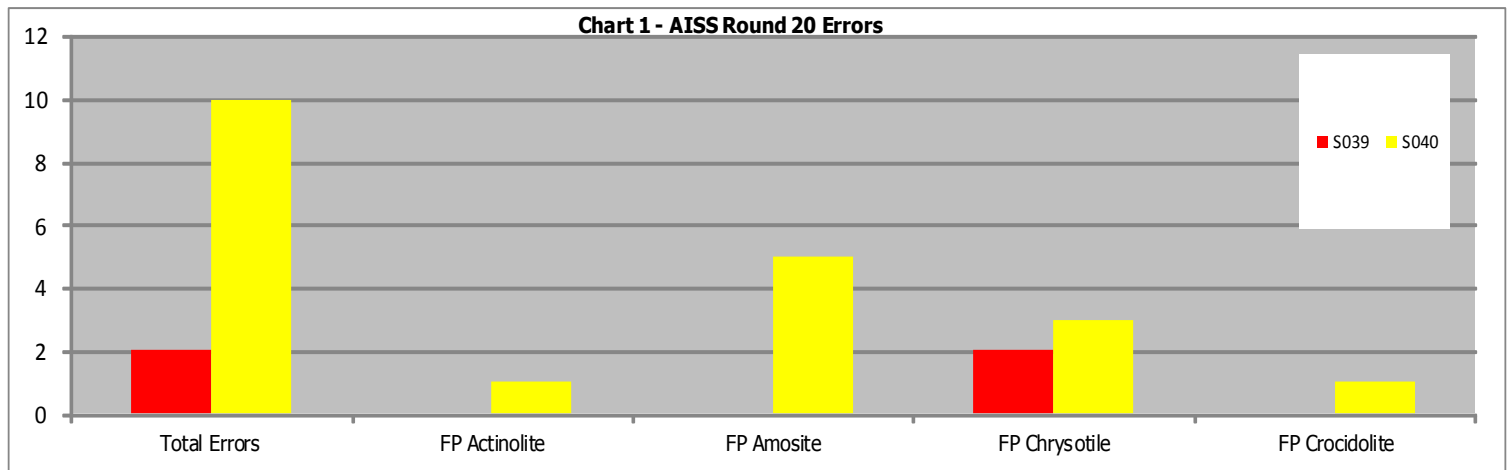
False Negative = Component has been missed. False Positive = Component has been incorrectly identified as present.

2. Errors for UK & Non-UK Laboratories

Chart 2 illustrates the distribution of scores for all participating laboratories. 61 (88%) laboratories obtained a score of zero in this round, indicating that these laboratories had not made any errors. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 31 (91%) UK laboratories and 30 (86%) Non-UK laboratories obtained a score of zero for the round.

Chart 2 - Distribution & Comparison of Errors AISS R20

	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	86	3	11	0
UK%	91	3	6	0
Total %	88	3	9	0

3. Quantitative Results - z scores

Chart 3 - scatter graph of z scores (seven z scores between 15.74 and 43.52 removed as outliers) for the fifty eight labs who submitted a quantification result for sample S040.
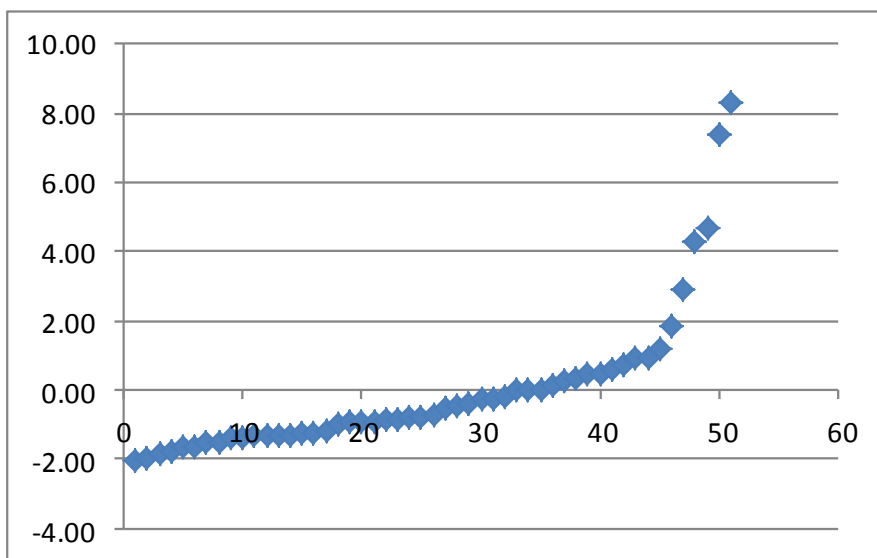
4. Quantitative Results

Chart 4 illustrates of the fifty-eight labs who submitted a quantification result for sample S040, 44 labs (76%) achieved a satisfactory result i.e. a z score of < ± 2. 3 labs (5%) achieved a questionable result with a z score of between ± 2 and ± 3. 11 labs (19%) achieved an unsatisfactory result with a z score of > ± 3.