Round 22 Sample Details

BACKGROUND
This report covers Round 22 of the Asbestos in Soils Scheme (AISS). Round 22 was open to laboratories worldwide. Laboratory participation was as follows: 27 UK, 30 Rest of Europe and 5 Rest of the World.

SAMPLES
Two samples were circulated as follows:

Sample S043 – This sample contained no asbestos fibres and consisted of leather fibres in a topsoil matrix..
Sample S044 – This sample contained chrysotile free fibre (0.08% by dry weight) in a matrix consisting of topsoil and cat litter (sepiolite).

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 were validated by 4 independent laboratories.

INFORMATION SUBMITTED BY LABORATORIES
Sixty-two laboratories submitted results for AISS Round 22. 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 AC-M's, as loose fibres and the total % asbestos.

AISS QUALITATIVE RESULTS
Sample 1 (S043)
Sixty-one laboratories correctly reported no asbestos
One laboratory reported amosite

Sample 2 (S044)
Sixty laboratories correctly reported chrysotile
One laboratory reported chrysotile and amosite
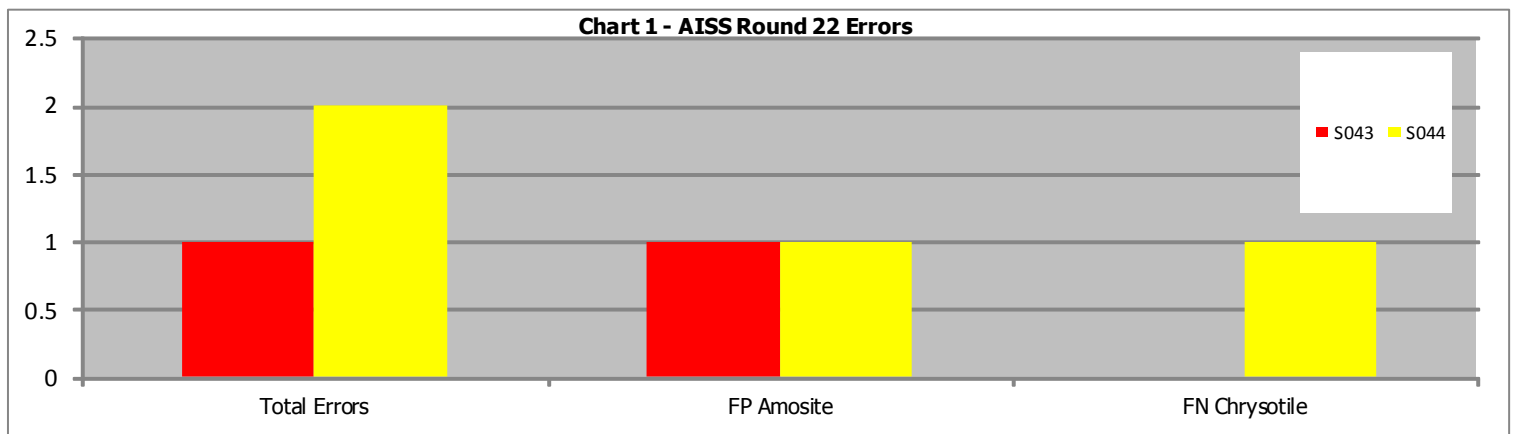One laboratory reported no asbestos

AISS QUANTITATIVE RESULTS
The median of quantitative results submitted was 0.07. For the purposes of the z score we are using 40% of the median - 0.028.
Forty-nine laboratories submitted quantitative results for S044;
• 38 (78%) laboratories achieved a z-score of < ± 2, Satisfactory
• 6 (12%) laboratory achieved a z-score of between ± 2 - ± 3, Questionable
• 5 (10%) laboratories achieved a z-score of > ± 3, Unsatisfactory
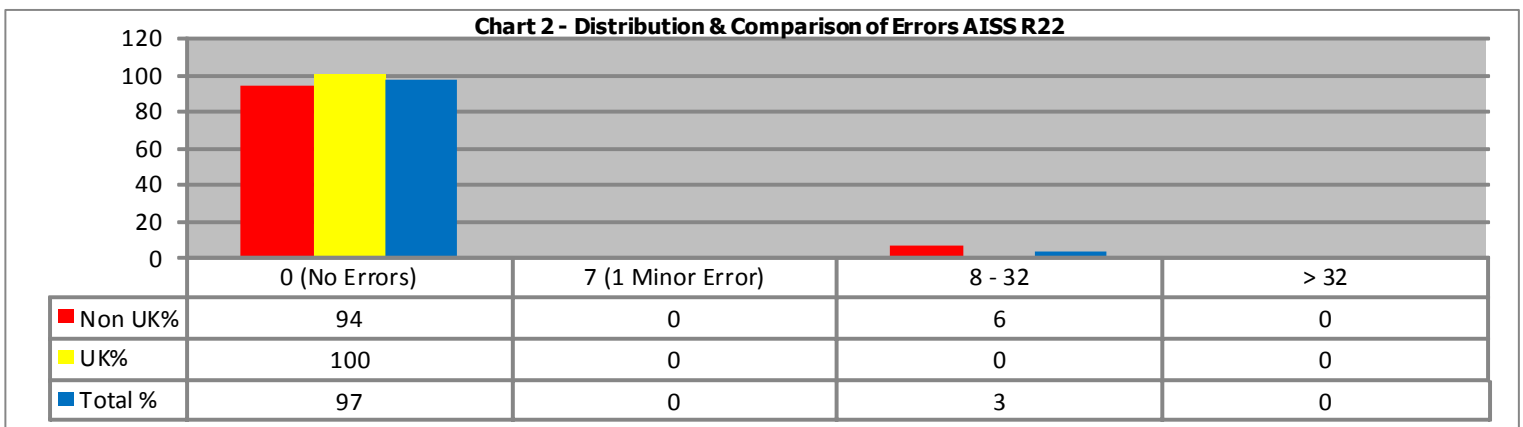
1. Type Of Errors Obtained

Chart 1 illustrates the errors made by participating laboratories. One error was made by a laboratory on sample S043 identifying amosite. Two errors were made on sample S044 with one laboratory identifying amosite along with chrysotile, and one laboratory failing to report chrysotile.

Chart 1 - AISS Round 22 Errors

False Negative = Component has been missed. False Positive = Component has been incorrectly identified as present.

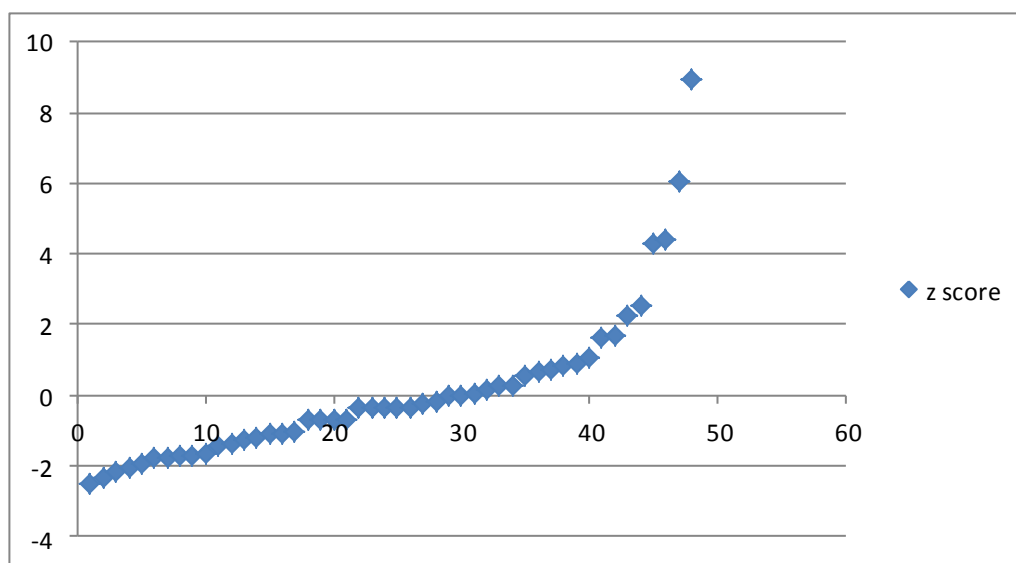## 2. Errors for UK & Non-UK Laboratories

Chart 2 illustrates the distribution of scores for all participating laboratories. 60 (97%) 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; 27 (100%) UK laboratories and 33 (94%) Non-UK laboratories obtained a score of zero for the round.

Chart 2 - Distribution & Comparison of Errors AISS R22

	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	94	0	6	0
UK%	100	0	0	0
Total %	97	0	3	0

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Issued By: Matthew Jackson/ Melanie Clunas, HSE, Buxton, SK17 9JN

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3. Quantitative Results - z scores

Chart 3 - scatter graph of z scores (one z score of 32.86 removed as an outlier) for the forty-nine labs who submitted a quantification result for sample S044.

4. Quantitative Results

Chart 4 illustrates of the forty-nine labs who submitted a quantification result for sample S044, 38 labs (78%) achieved a satisfactory result i.e. a z score of < ± 2. 6 labs (12%) achieved a questionable result with a z score of between ± 2 and ± 3. 5 labs (12%) achieved an unsatisfactory result with a z score of > ± 3.