

Basic Statistics for Contaminated Land

A One-Day Course

Date and venue

This course will be held on **15th May 2008** at our offices in Beeston, **Nottingham**. This one-day course will run from approximately 9am to 5pm. Full joining instructions will be sent to each delegate prior to each course.

Do statistics matter?

Statistics are ways of summarising large quantities of data so we can better understand those data. They are a form of mathematical shorthand that can greatly enhance understanding of a site but, if misused, can confound or confuse. Site investigations and sample analysis involve a considerable cost in time and money for all concerned. This commitment of resources warrants effective interpretation to extract the maximum benefit from the SI data. A variety of techniques are available, from simple analysis using spreadsheets to more advanced methods involving more specialist software, to allow important trends in contaminant concentrations to be identified that will provide a more-detailed understanding of the significant pollutant linkages.

Course content

The course will teach delegates:

- how to examine and interpret the spatial distribution of contaminants;
- how to generate and interpret summary statistics of a dataset (what do the mean, median, mode and standard deviation tell us?);
- how to use graphs (e.g. normal and cumulative histograms) to explore datasets;
- how to determine spatial distribution and correlations;
- what some commercial and freeware software packages have to offer;
- the basis for the CLR7 statistical tests and the use, and potential misuse, of these techniques; and
- the role of composite sampling.

How will you benefit from this course?

By the end of the course you should be better able to:

- produce spatial plots enabling the visualisation of contaminant distributions;
- use spreadsheets to produce summary statistics of your data and understand what they mean; and
- conduct CLR7 statistical tests correctly and know whether they are appropriate or not.

All delegates will be issued with a **Certificate of Attendance** – which should be retained and used to provide evidence of CPD activity when required by employers or professional bodies.

Who should attend?

The courses will be of relevance to:

- local authority contaminated land officers;
- consultants;
- problem holders and developers needing a more in-depth understanding of contaminated land issues; and

- authors and reviewers of contaminated land reports.

Tutors

Land Quality Management courses are renowned for their relevance and quality. This comes from our belief that training should be interesting, relevant and make a difference to the way our delegates go about their normal contaminated land related business. We always select top quality tutors with both the experience to communicate and the knowledge to share – as well as the enthusiasm to improve the way land contamination issues are tackled.

Course tutors include Paul Nathanail, Caroline McCaffrey, Judith Nathanail, Richard Ogden, Andy Gillett and Duncan Scott

Cost

Private Sector rate: £270 per day (excluding VAT)

Public Sector Rate*: £135 per day (excluding VAT)

VAT is chargeable at the prevailing rate.

** Applies to Local Authority, Health Authority, Environment Agency and SEPA staff etc.*

Discounts: We offer a 5% discount for 3 delegates; 10% discount for 4 delegates and 15% discount for 5 or more delegates. Discounts apply only where full (private sector) rates are paid and when payment of delegate fees is undertaken in one transaction (e.g. one invoice issued). In addition, we offer a 10% discount to Geological Society members on provision of proof of membership.

Please note: Payment must be received before commencement of the course. Cancellations will only be accepted up to 1 week before the course runs and an administration charge of 25% of the daily rate will apply. Personnel may be substituted at any time.

LQM reserve the right to cancel a course; at least 7 days notice will be given. LQM cannot accept any liability for costs incurred as a result of such cancellation (e.g. train tickets) although of course any fees already paid for the course would be returned in full.

All courses are undertaken in accordance with our terms and conditions. These can be viewed at www.lqm.co.uk

Booking

To book a place(s) on this course, please complete and return the booking form at the back of this brochure. Please note that our QA system requires all bookings on an official LQM booking form. Unfortunately, we cannot accept bookings by email or telephone.

For more information:

More information about these and other courses run by LQM is available on our website at www.lqm.co.uk/training. Alternatively, contact our Administrator at:

Land Quality Management Ltd, Unit 8, The Business Park, Technology Drive, Beeston, Nottingham, NG9 2ND.

Tel: 0115 951 8030

Fax: 0115 967 8798

E-mail: administrator@lqm.co.uk



Publications available from LQM Press

Contaminated Land Ready Reference

For all professionals working with contaminated sites who need to have up-to-date key data at their fingertips. The Ready Reference is designed to provide an easy to use source of key technical information about the investigation, characterization and remediation of contaminated land.

This book is presented in a concise, tabular format. Each table addresses a specific topic and provides decision support by means of checklists, flow charts and option screening grids. Each table is also supported by full references to key documents.

The book is in loose-leaf format and updates will be issued to take account of the latest developments in legislation, guidance and technology. Release 2 incorporating the first series of updates was published in July 2007.

Usual Price: £129.00 (inc P&P); £29.00 for updates only (inc P&P)

Delegates on LQM courses can pre purchase copies for collection during the course of the Ready Reference Guide at the reduced price of £100-00 and £25.00 for the updates only for collection during the course. This reduced price does not apply to copies ordered after completion of the course when postage and packaging will be required. Copies can be reserved on the attached booking form.

LQM/CIEH GAC Publication

In July 2006 LQM and CIEH facilitated a unique workshop at the University of Nottingham which resulted in the development of generic assessment criteria (GAC) compliant with UK policy and guidance for use in generic quantitative human health risk assessment.

The workshop brought together a number of practitioners from both the public and private sector who sourced contaminant specific toxicological and physico-chemical input data for use in the derivation of the GAC using the CLEA-UK (beta) risk assessment tool.

The delegates were guided in their preparation and during the workshop by LQM staff, who have also subjected the workshop outputs to rigorous review and prepared them for publication.

The joint LQM and CIEH GAC values for over 30 substances together with the underlying basis for their derivation including the fate and transport and toxicity input values are contained within this publication. It is hoped that this publication will assist the wider contaminated land community in fulfilling their roles and responsibilities in their day-to-day work in the management of land contamination.

Usual Price: £106.50 (inc P&P)

Delegates on LQM courses can pre purchase copies for collection during the course of the LQM/CIEH GAC Publication at the reduced price of £100-00 for collection during the course. This reduced price does not apply to copies ordered after completion of the course when postage and packaging will be required. Copies can be reserved on the attached booking form.

Chemical Analysis of Contaminated Land

This book is edited by K. Clive Thompson of Alcontrol Laboratories and Paul Nathanail of LQM and provides a one-stop reference for the analysis and delivery of contaminated land samples and subsequent presentation of the data. Problems of analysis and solutions are provided, along with a chapter on the new techniques of ecotoxicity measurement. This book is suitable for environmental consultants, analytical chemists, environmental chemists, laboratory managers, ecotoxicologists and environmental regulators.

Usual Price: £92.25 (inc P&P)

Ordering

Copies of any of these titles and several others can be ordered through LQM Press. Please see our website at www.lqm.co.uk/lqmpress/ for more details and ordering information.

However, delegates on LQM courses can pre purchase copies for collection during the course of the Contaminated Land Ready Reference Guide and/or the LQM/CIEH GAC Publication at reduced prices by completing the attached course booking form.

For more information:

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Tel: 0115 951 8030

Fax: 0115 967 8798

E-mail: administrator@lqm.co.uk

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Basic Statistics for Contaminated Land: 15th May 2008

I wish to book places on 'Basic Statistics for Contaminated Land' course as follows:

Date	No of delegates	Delegate Rate	Company/Organisation and Address
Pre purchase Ready Reference @ £100.00 per copy			
Ready Reference Updates only @ £25.00 per copy			
Pre-purchase GAC publication @ £100.00 per copy			
Total (excl. VAT)			

Delegate Name(s)	Delegate(s) Email & Telephone No.

I will be paying by credit card / please invoice me / cheque enclosed *(Delete as appropriate)*

Cheques should be payable to "Land Quality Management Ltd", Unit 8, The Business Park, Technology Drive, Beeston, Nottingham. NG9 2ND

Invoicing details (if applicable):		Credit card details (if applicable) <i>Sorry no American Express cards:</i>	
Purchase Order No.		Card Number:	
Contact Name:		Expiry Date:	
Telephone:		Name on Card:	
Invoicing Address:		Card Billing Address:	

Please indicate any special requirements (e.g. dietary or physical):

Please note: 1. All courses are offered under LQM's Terms & Conditions (see www.lqm.co.uk). 2. Payment must be received before commencement of the course. 3. Cancellations will be accepted up to 1 week before the course, an administration charge of 25% of the daily rate will apply. Personnel may be substituted at any time. 4. LQM reserve the right to cancel a course; at least 7 days notice will be given. LQM cannot accept any liability for costs incurred as a result of such cancellation although all course fees will be returned in full.

For office use only		Date
	Acknowledgement sent: <input type="checkbox"/>	
	Draft invoice sent <input type="checkbox"/>	
	Paid: <input type="checkbox"/>	