



Excellence through measurement



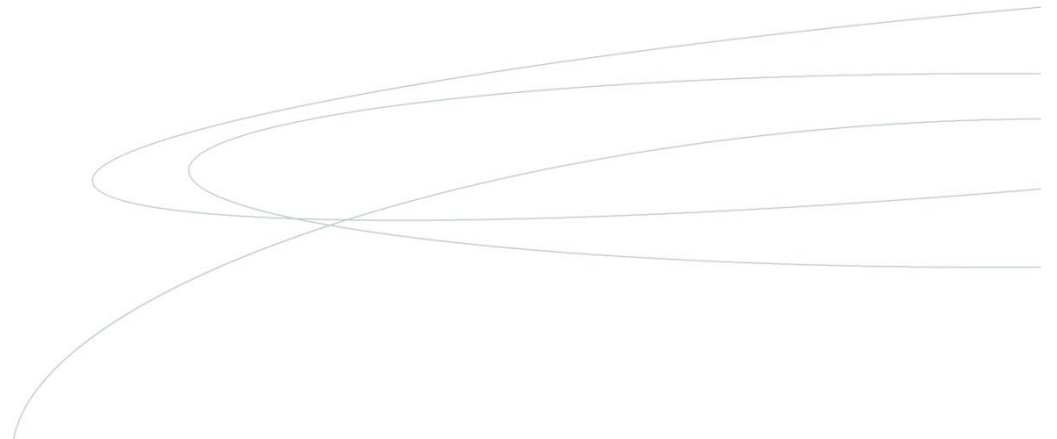
LGC Standards, Proficiency Testing

Aquacheck: Review of 2011/12 Scheme

Helen Finch, Technical Coordinator

Introduction

- Introducing the Aquacheck Team
- Scheme Changes
- Technical Investigations
- Scheme Developments



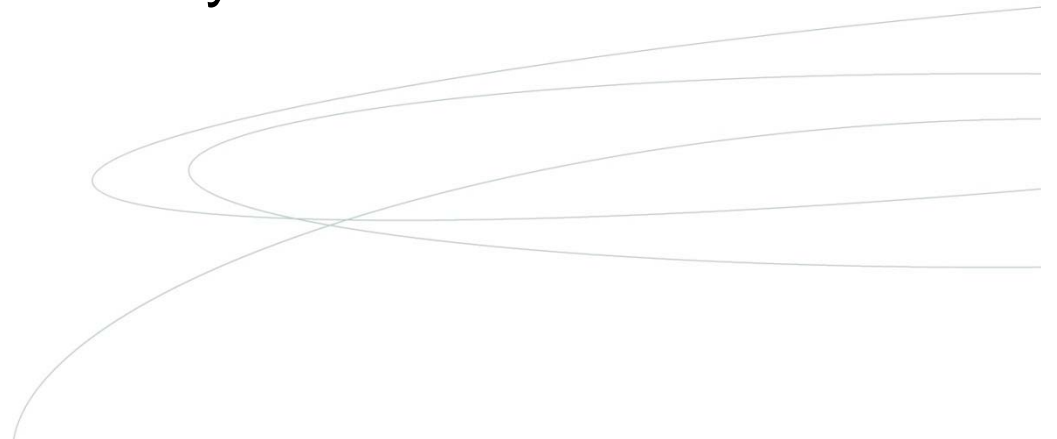
The Team



- Matthew Whetton – Head of Chemistry
- Helen Finch – Technical Coordinator
- Adele McCarthy – Customer Services Coordinator
- Donna Hilton – Report Coordinator
- Paul Fagan – Chemistry Production Manager

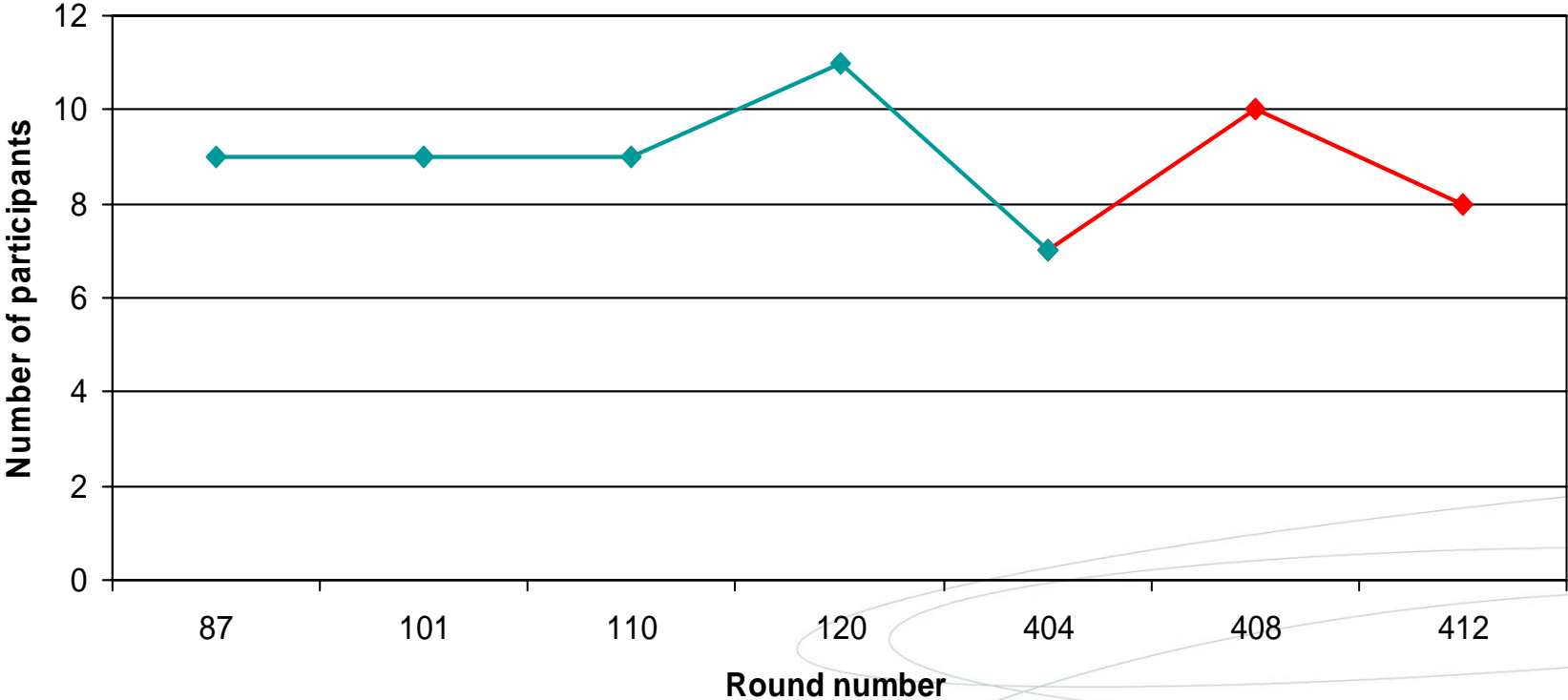
Scheme Changes 2011/12

- Metaldehyde included in Samples 8 and 20
 - Sample 8 – 24-120ng/L
 - Sample 20 – 240-1200ng/L
- Combined Chlorine (Sample 3C)
- Deliberate non-inclusion of analytes



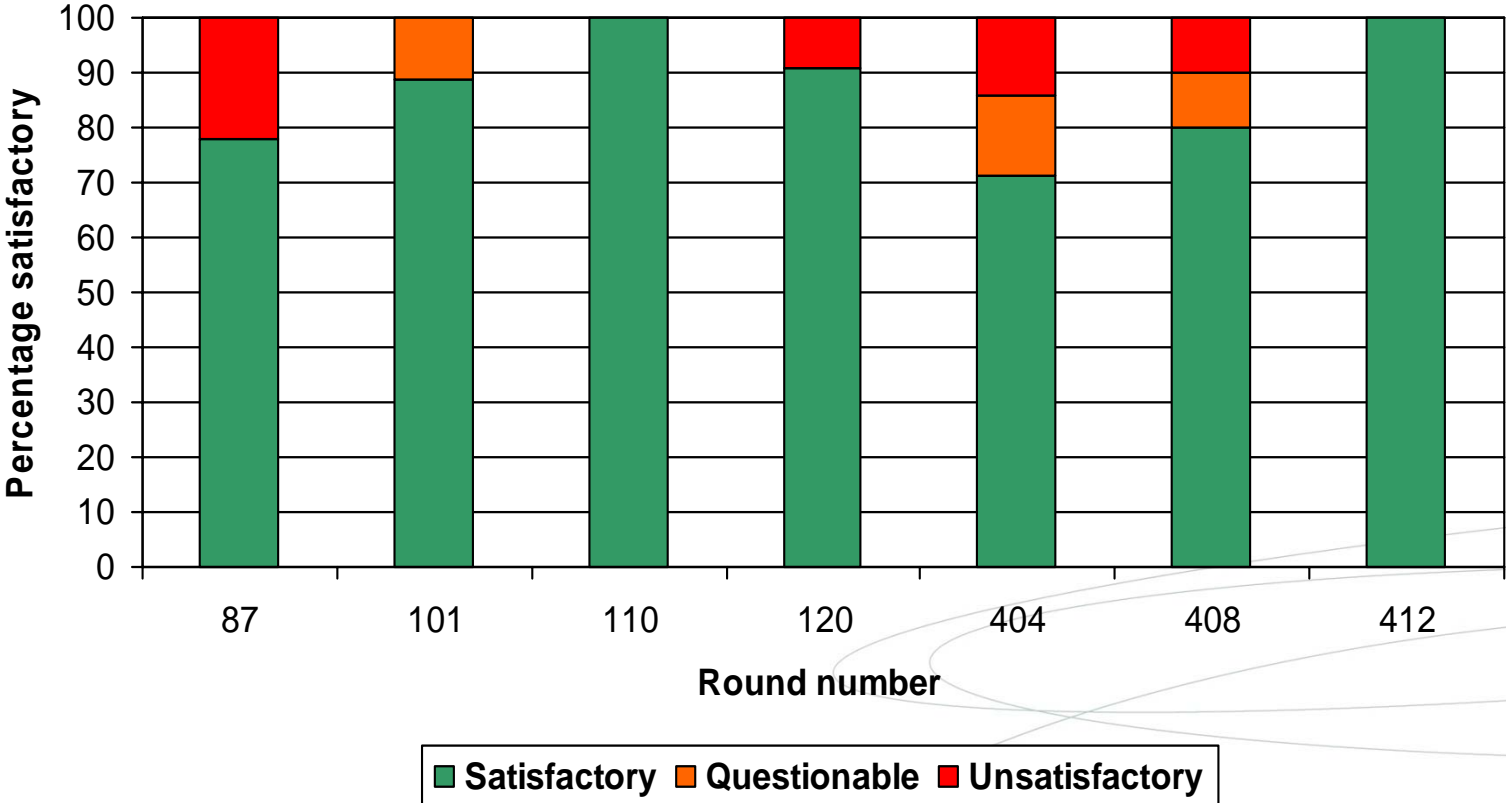
Participation numbers

Sample 8 - Metaldehyde



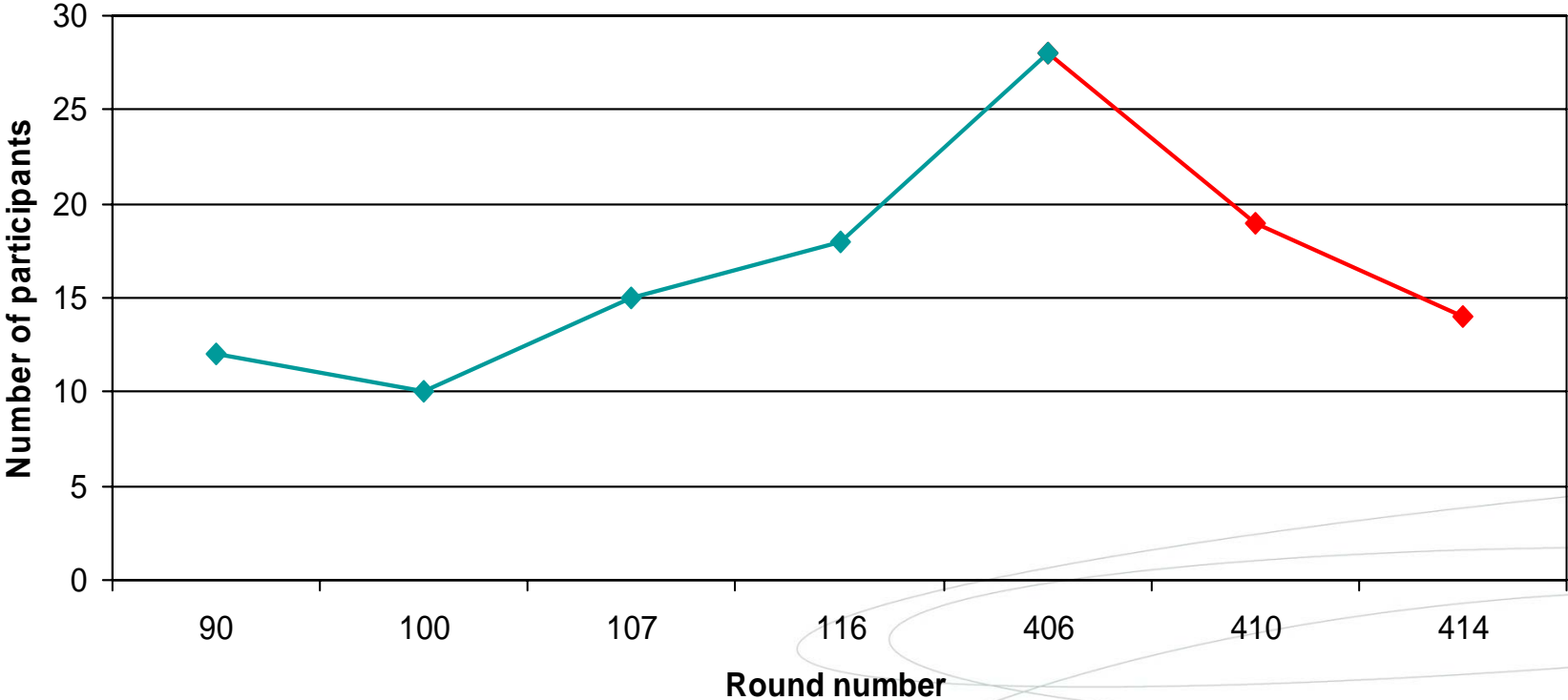
Performance

Sample 8 - Metaldehyde



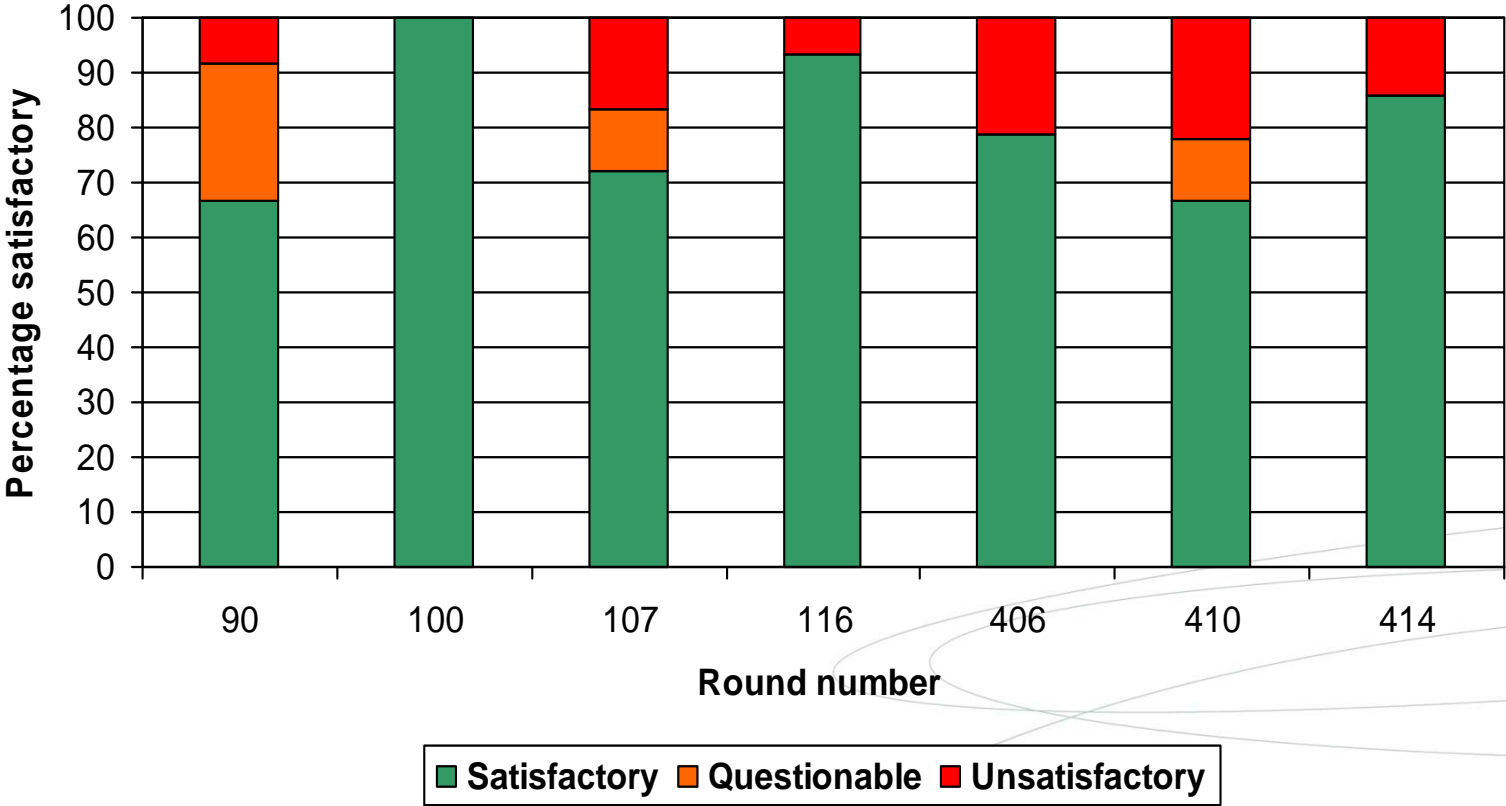
Participation numbers

Sample 3c - Combined Chlorine



Performance

Sample 3C - Combined Chlorine

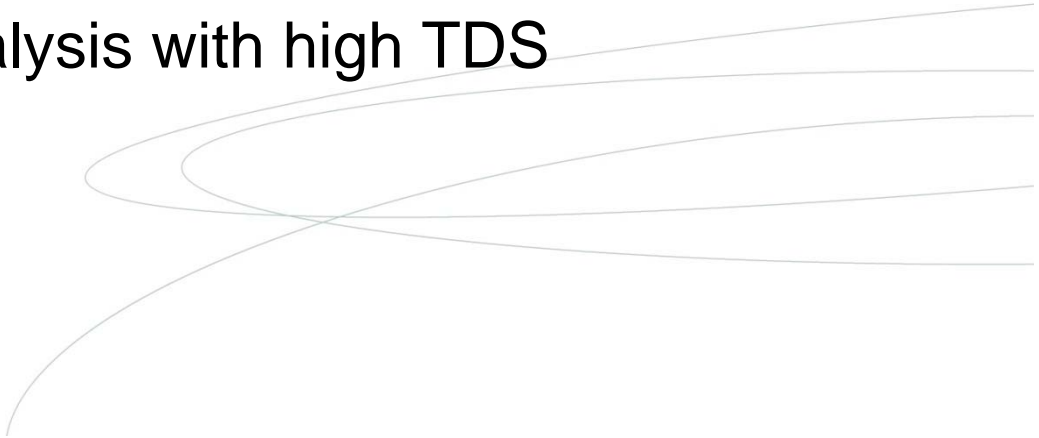


Non-inclusion of analytes

- R412, Sample 7A, Dieldrin

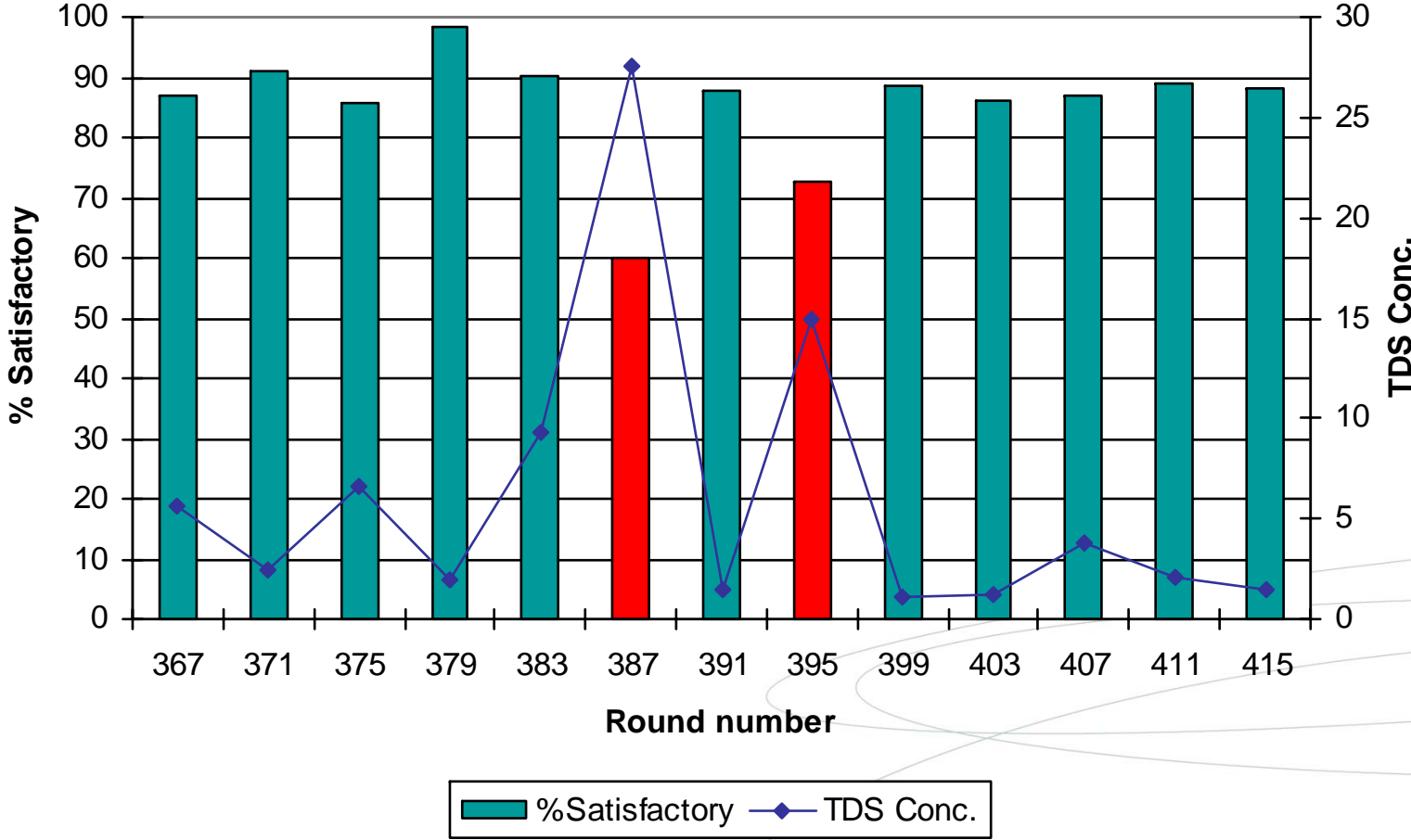
Lab ID	Method	Result (ng/L)	z score
AQ0008	Liquid-liquid extraction GC	<0.4	
AQ0015	Solid phase extraction GC	0.0	
AQ0023	Other	<2.0	
AQ0038	Liquid-liquid extraction GC	0.0	
AQ0050	Solid phase extraction GC	<0.0	
AQ0332	Liquid-liquid extraction GC	0.0	
AQ0419	Solid phase extraction GC	<4.0	
AQ0422	Liquid-liquid extraction GC	<3.0	
AQ0424	Liquid-liquid extraction GC	<2.0	
AQ0497	Other	10.0	
AQ0552	Liquid-liquid extraction GC	<15.0	
AQ1935	Liquid-liquid extraction GC	0.0	
AQ2028	Liquid-liquid extraction GC	0.0	
AQ2240	Liquid-liquid extraction GC	10.5	
AQ2738	Liquid-liquid extraction GC	32.1	
AQ2865	Solid phase extraction GC	67.0	
AQ2905	Solid phase extraction GC	0.0	
AQ2906	Other	<0.002	

Technical Investigations – 17A

- Pre Environmental Day 2010
 - Coagulation of sample
 - Microbial contamination
 - Procedure amended
 - Difficulties with COD analysis with high TDS
 - TDS level kept low
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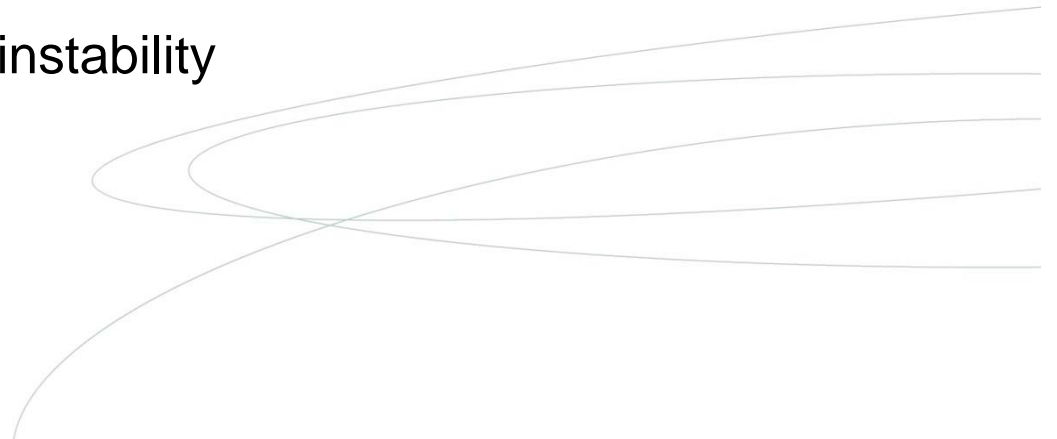
Participation

TDS Conc. Vs. %Sat for Total COD

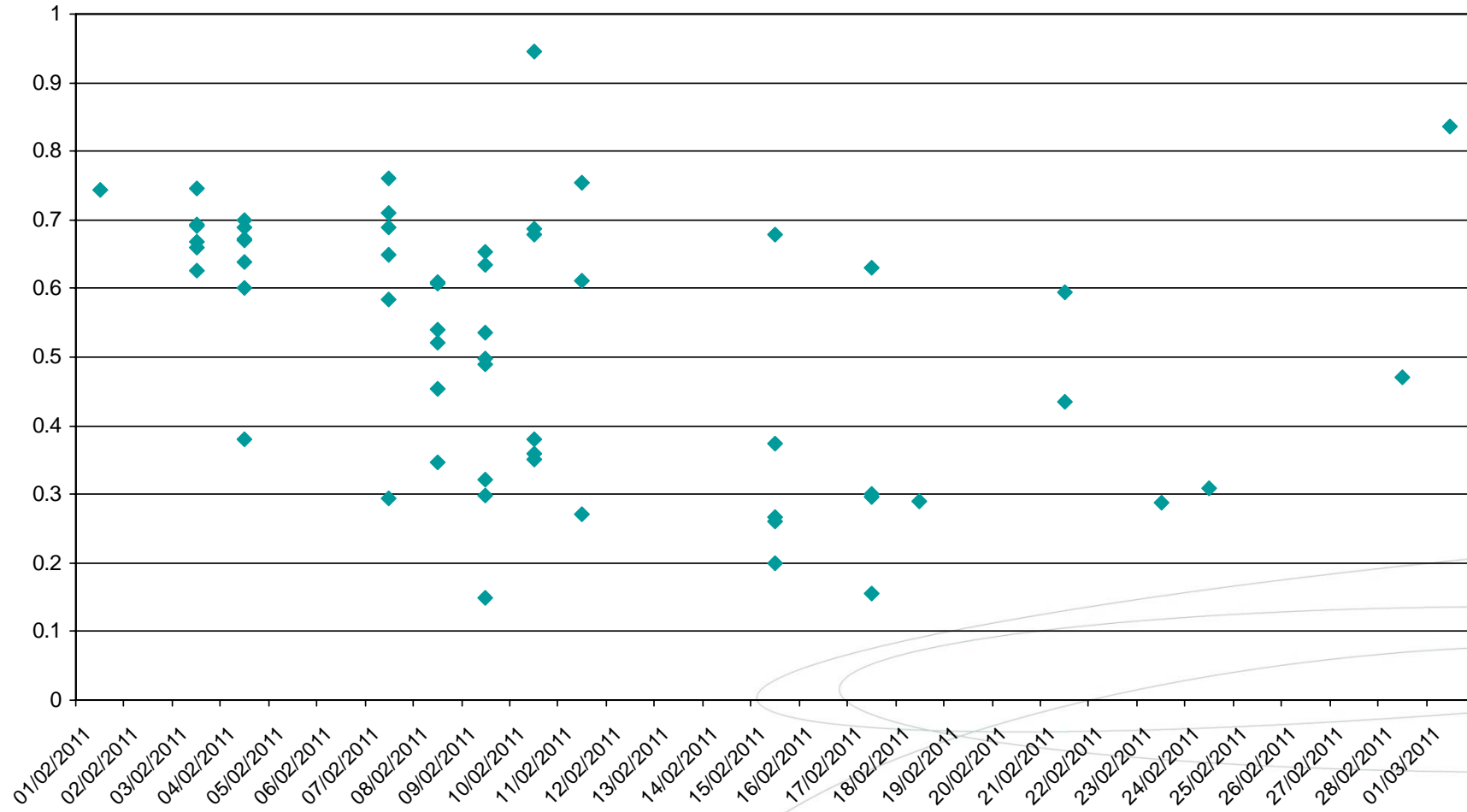


Technical Investigations – NH₄

- R401, Sample 2S
 - Majority reported 0.6-0.66mg/L
 - Formulation value 0.29mg/L
- External analysis showed little ammonia contribution
- Dates of analysis compared to results
 - Showed possible sample instability

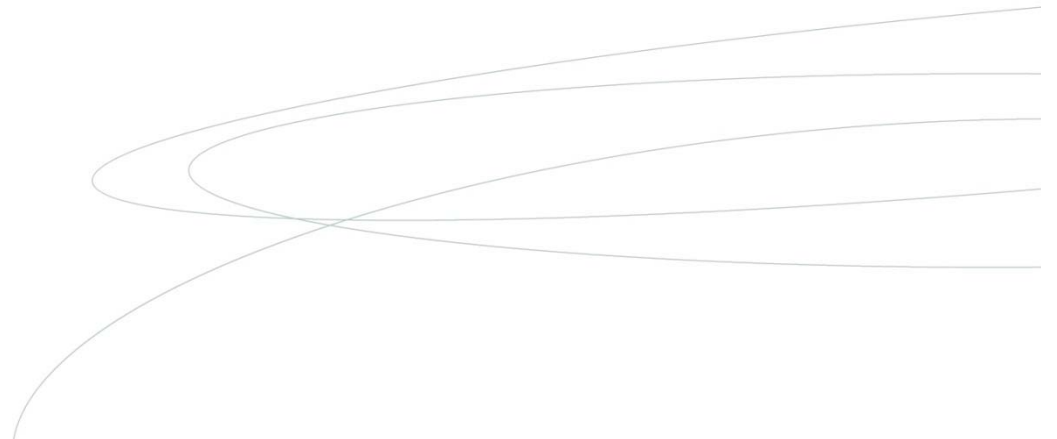


Technical Investigations – NH₄

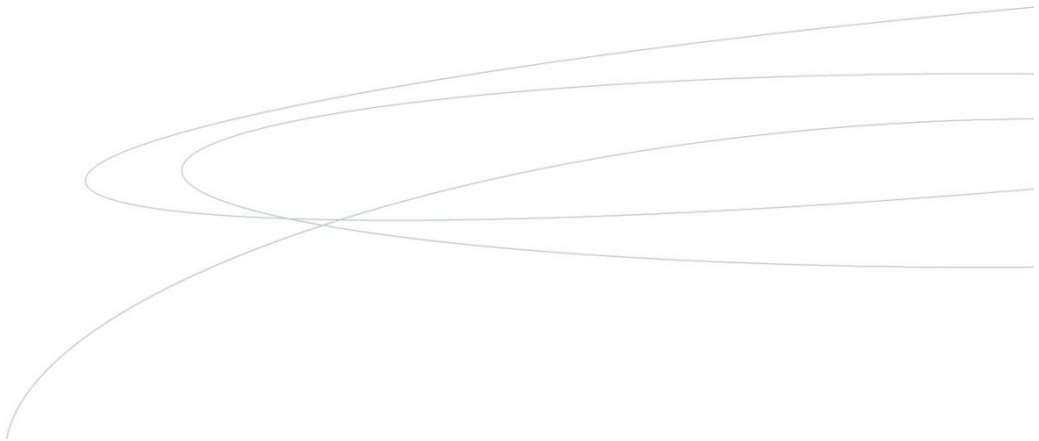


Conclusions

- Performance scores removed and report reissued
- New collection site
- Procedure for selection of collection sites refined



Scheme 2012/13

- Addition of phenol index to 6B/18B (new analyte)
 - Ash content in suspended solids
 - Use of formulation values in 5A
 - Alteration of ranges
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Range Alterations

- Feedback required
- Sample 17C Silver (max 0.5mg/L)
 - Two levels required for trade and final effluents
 - Reduce maximum or include in Sample 12 at lower level
- Sample 7B 1,2-Dichloroethane (max 400ng/L)
 - DWI PCV 3ug/L
 - Current levels near to LOD
- Sample 7B/19B Trichlorobenzenes and hexachlorobutadiene (max 400ng/L)
 - Labs analysing concentrations much lower due to WFD
 - Reduce to similar max to OCPs (120ng/L) or lower

Scheme 2012/13 – Trials

- Introduction of trial samples
 - High and low COD
 - Formaldehyde
 - Settleable solids
- Regenerated water trial (grey water)
 - ‘Depurated waste water that has undergone an additional process to make it suitable for a determined purpose’
 - Urban, agricultural and industrial purposes
 - Suspended solids and turbidity

Thank-you for listening



Any questions!