CEMQual – *Quick guide – Results Page*

Envirosoft

NOTE: For further details on the Configuration, Advanced and Manual Data Entry tabs, please see the full CEMQual manual (Found on our website)

Once a QAL3 test has been performed, select 'New Data' to analyse the data

Double click the Group or Channel to select another measurement. Select 'Span' or 'Zero' to examine the QAL3's results

'Print all' print all measurement results.
'Print this' print only the page selected.
'Copy Data' allows the user to select which components they wish to export (JPEG Screenshots, Excel spreadsheets, QAL Data or Charts).
'Save JPEG' take a screen shot
'Save as XL' export results to Excel.

Select a standard data date range for the latest data, or a custom date range from the calendar

'Analyse data' examines the QAL3 results and sorts them into a report format, stating PASS, WARN or FAIL results for each channel – illustrated on the next page

Select control chart type

Configure the appearance of the graph

Analyse the selected measurement results and displays the calculated Sams (Standard Deviation), exportable to a spreadsheet
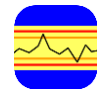
Analyse all results and display Sams as set and as calculated, also provides an assessment of their suitability.

Left click on a comments box to write any relevant details e.g. Faulty O2 Cell. Right click to cycle between 'RESET QAL3' & 'NO QAL3'. Note: 'Show comments' must be checked – bottom left

When the 'Graph' button is selected, the results are shown over the selected display range (top left). The ORANGE horizontal line usually represents the warning, while the Red line represents a failure. These limits vary between different control charts

Report of any errors over the analysis period

Each result is assessed and the PASS, FAIL or WARN results are indicated at the bottom of the chart

An overall report is generated when 'Analyse Data' is selected. QAL3 Analysis Report shows the results of the QAL3 tests. In the example shown, Line 1 Duty SO2 is nearing a failure (**WARN**), while all other channels are within drift tolerances (**PASS**). When a test's results do exceed the limits, the result will '**FAIL**'

Note: the analysis is conducted over the selected display range at the top left

Note: the results are taken from the final result in the analysis period, and will not indicate earlier problems

Required control charts may be selected in the 'Advanced' tab. Once a control method is selected in the 'A' column, it's result (PASS, FAIL or WARN) will show in the report. If it has been selected in the 'P' column, this chart will be printed.

When displaying this report, 'Save all' replaces the print all function, and when pressed will save all charts and data for all selected measurements, for zero and span results as images.

'Print' or 'Save' the generated report

Ensure that the 'Latest QAL3 date' is correct

Click on a **PASS**, **FAIL** or **WARN** message to go to the relevant control chart

QAL3 Auto Settings — Span data, Zero data

Selection	P	A
CUSUM Drift	☐	☐
CUSUM Precision	☐	☐
Shewhart	☑	☑
EWMA	☐	☐
VCR	☐	☐
Spreadsheet	☑	☑

QAL3 Analysis Report

Compiled by: rg

Date range: 09/04/2019 - 07/04/2020

Control chart

Location	Measurand	Test	CUSUM Drift	CUSUM Precision	Shewhart	EWMA	VCR	Latest QAL3 date
GT1	NOx	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	NOx	ZERO	FAIL	PASS	PASS	PASS	-	17/03/2020
	CO	SPAN	FAIL	PASS	PASS	PASS	PASS	17/03/2020
	CO	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
	O2	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	O2	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
GT2	NOx	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	NOx	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
	CO	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	CO	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
	O2	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	O2	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
GT3	NOx	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	NOx	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
	CO	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	CO	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020
	O2	SPAN	PASS	PASS	PASS	PASS	PASS	17/03/2020
	O2	ZERO	PASS	PASS	PASS	PASS	-	17/03/2020

Drift factors
hx/ Sams 2.85
kx/ Sams 0.501
Precision factors
hs/ Sams 6.90
ks/ Sams 1.85
Standard Deviation
S ams 2.00