CEMForm – *Quick guide* – *Overview and troubleshooting*

Envirosoft

CEMForm is CEMSuite's primary application for viewing instantaneous and historical data, consisting of the Live page, Trends page and the Data grid. The application also handles most of the data processing such as normalisation and the application of QAL2 factors.

- **'Live'** tab displays instantaneous readings, viewable through the Custom Screen (once configured), Normal (showing two groups at a time) and Overview (Displaying only the desired channels, configured in 'Configuration + Diag.')
- **'Trend'** tab displays historic data on a graph, with time span selections of 24 hours up to a year. For more info, see *page 3*
- **'Data Grid'** tab displays the required averages throughout the day
- **'Configuration + Diag.'** tab allows for advanced configuration of the program e.g. custom displays. Also shows any error information

VALIDITY BOXES:
YELLOW and **RED** boxes indicate either invalid data or no communications to the sensor and should be investigated further

Ensure this time is updating regularly. The time shown is the last read of data. This will be highlighted in **RED** if no data is being received

- **'Sys Diag.'** displays the status of CEMSocket (real time) and CEMSync (historic) data, see bottom left
- **'Login'** opens protected features; passwords issued on request
- **'Profiles'** numerous profiles may be defined with different views of how the data is displayed
- **'Reports'** opens the applicable reporting program: CEMPort, LCPD or WID
- **'Help'** displays software version info and support contact details

If DSU comms are interrupted, an error message will appear here. For more details on the error, go to the 'Configuration + Diag.' tab and examine the bottom right box for errors

The time at the end of the graph(s) should be within the last couple of minutes

Sys Diag:
If instantaneous and historic data are not updating, ensure that CEMSocket and CEMSync are running by clicking 'sys diag'. Each program's status will be displayed, with the option of starting them.
Remote control of the Systems DSU/s can be established here by clicking 'DSU' and entering the password 'ems'.
If the Custom Screens panels are not displaying correctly then they can be 'Respawned' here, by clicking the button.

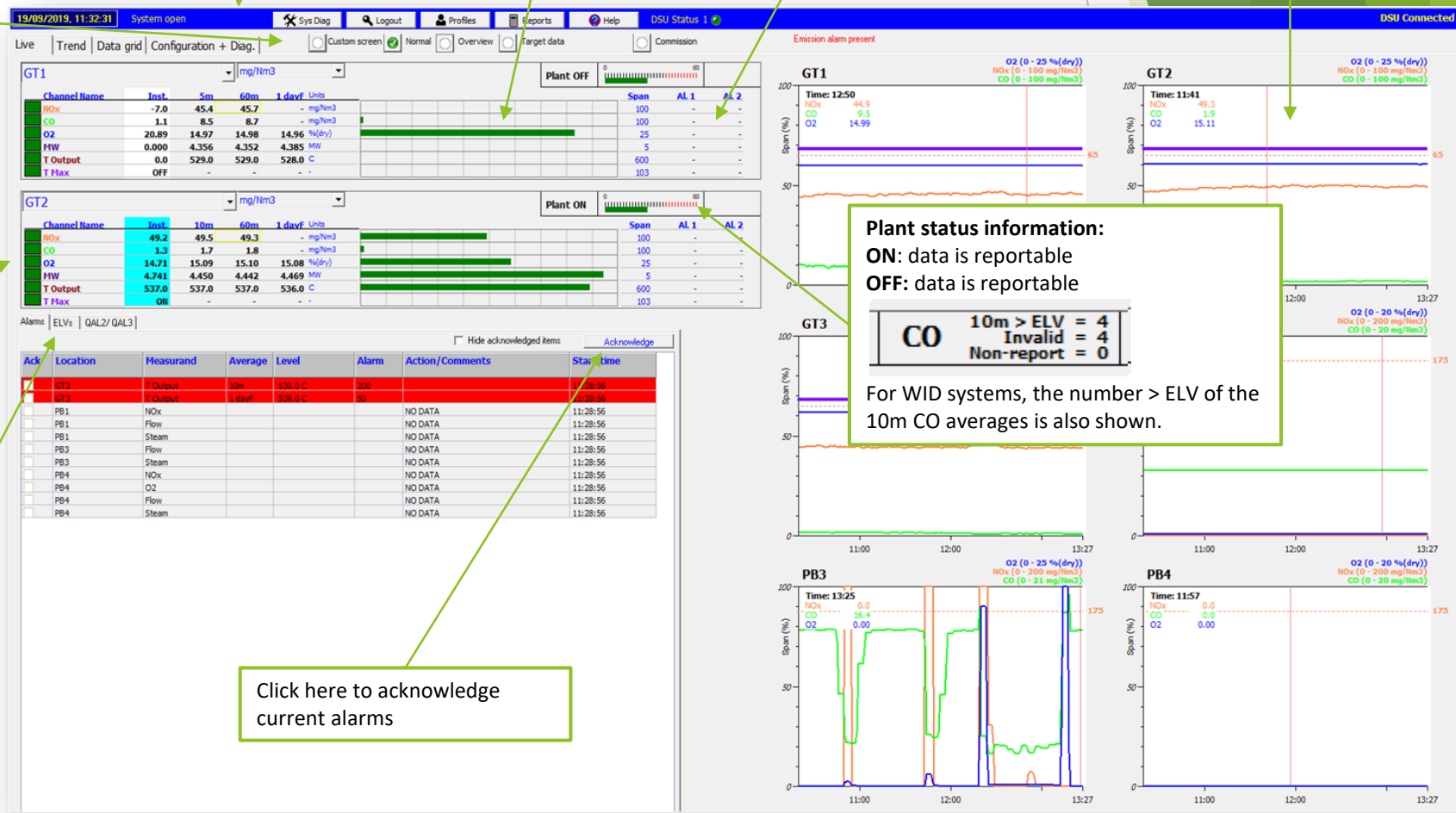Illustrated is the 'Normal' live display. Custom, overview and target data options are also available.

Live tab view options:
Custom: custom screens may be defined for specific site and operator needs. The may include data grids, trends and alarms
Normal: as illustrated here
Overview: selected channels are displayed across data groups, selection is password protected
Target data: replaces the alarm level data with target information: the level required for the remainder of the average to avoid an ELV breach
Commission: displays the different calculations between measurement units

VALIDITY BOXES:
DARK GREEN- No measurement faults
LIGHT GREEN- Maintenance request active
YELLOW- Fault or Calibration in progress
RED- No data is being received

The **CYAN** and **WHITE** highlight of the values in the grid indicate reportable and non-reportable data

Alarm/ELV/QAL2-3 information
Alarms: highlights current alarms and data invalidities
ELV: presents the ELV info for all measurements for short term and daily averages
QAL2/ QAL3: displays the current QAL2 factors and the latest QAL3 information

Drop down selection of groups and measurement units

Displays reading in relation to spas.

Set the alarm levels here for each measurement. Protected by password

Trend Screens displaying desired groups and channels, these are fully configurable once logged in

Plant status information:
ON: data is reportable
OFF: data is reportable

For WID systems, the number > ELV of the 10m CO averages is also shown.

Click here to acknowledge current alarms

Select data display range: from 1 day to 1 quarter, zoom features available. Note that trends > 24hrs are from the main short term average: usually 30 or 60 mins.

When 'Latest' is selected, the trend will update and illustrate the last rolling 24 hours

Select the data group, measurement units and the average time

Displays level, validity and span information.at the left cursor position. Measurements may be displayed or hidden as required. Colours and span values may be edited after password entry

TOP BAR- Data Security & switch info (if used):
GREEN: Secure & DUTY data, **BLUE**: Secure & standby
MIDDLE BAR- Plant Status
GREEN: Plant on, YELLOW: ON NO REPORT, WHITE: OFF
BOTTOM BAR- Data Validity for displayed measurements
GREEN: valid, YELLOW: invalid, **RED**: No data
Note: The purple bar shown represents a logic signal

Select between cursor level, average between cursors, average within window or the live readings

Display options:
Use marks: draw a mark at each sample, size and shape adjusted from the configuration page
Cont. trend: if not checked, any data that is either not reportable or invalid is not drawn
Comments: hide or display any comments

Add comments to a time on the trend e.g. '11:30 Dust spike due to filter bypass'. Note that comments are associated with the selected group of data and are at the left cursor time

Scroll through each sample within the trend. **Note** that it is the last cursor placed that is moved. Cursor time also shown

When displaying the latest data, the time window may be reduced while maintaining the most current info

Select 'Info' to display QAL2 factors applied, normalisation reference levels, plant status criteria, reporting criteria etc.

Expand the vertical axis span : x4, x2, x1, x½ and x¼

Use the left and right mouse buttons to draw left and right cursors positions.

When displaying >24hr trends, holding down the shift key and left clicking will zoom to a 24 hr trend for that day

Zoom functions: press Zoom in to expand the display between the left and right cursors, track back and revert to the entire selected trend period.

- **'Location'** allows the user to decide which measurement group to display
- **'Selected Pages'** shows the groups selected from the 'configuration and Diag.'
- **'All Measurements'** displays all groups and may need to be scrolled to show them
- **'ELV only'** shows only the channels with a set ELV (Exceedance limit value)
- **'Extra Info'** includes data such as '10 mins > ELV' (number of 10m averages > ELV today)and 'kg today

Adjust the number of decimal places for all readings on the Data grid (Advanced decimal place control can be performed in 'Configuration + Diag.'

Prints the Data grid as it is currently setup

Exports the current Data grid to an excel document

Data in **BROWN** is not reportable
Data in **BLUE** has been switched from a standby analyser
Data in **RED** has exceeded the set ELV, note for a percentile analysis, this may not be an actual breach

Each row shows the 30 or 60 minute averages, and if 'More info' is selected, for WID sites, the 10m averages for each half hour will be shown.

The **bold** line shows the start of this day