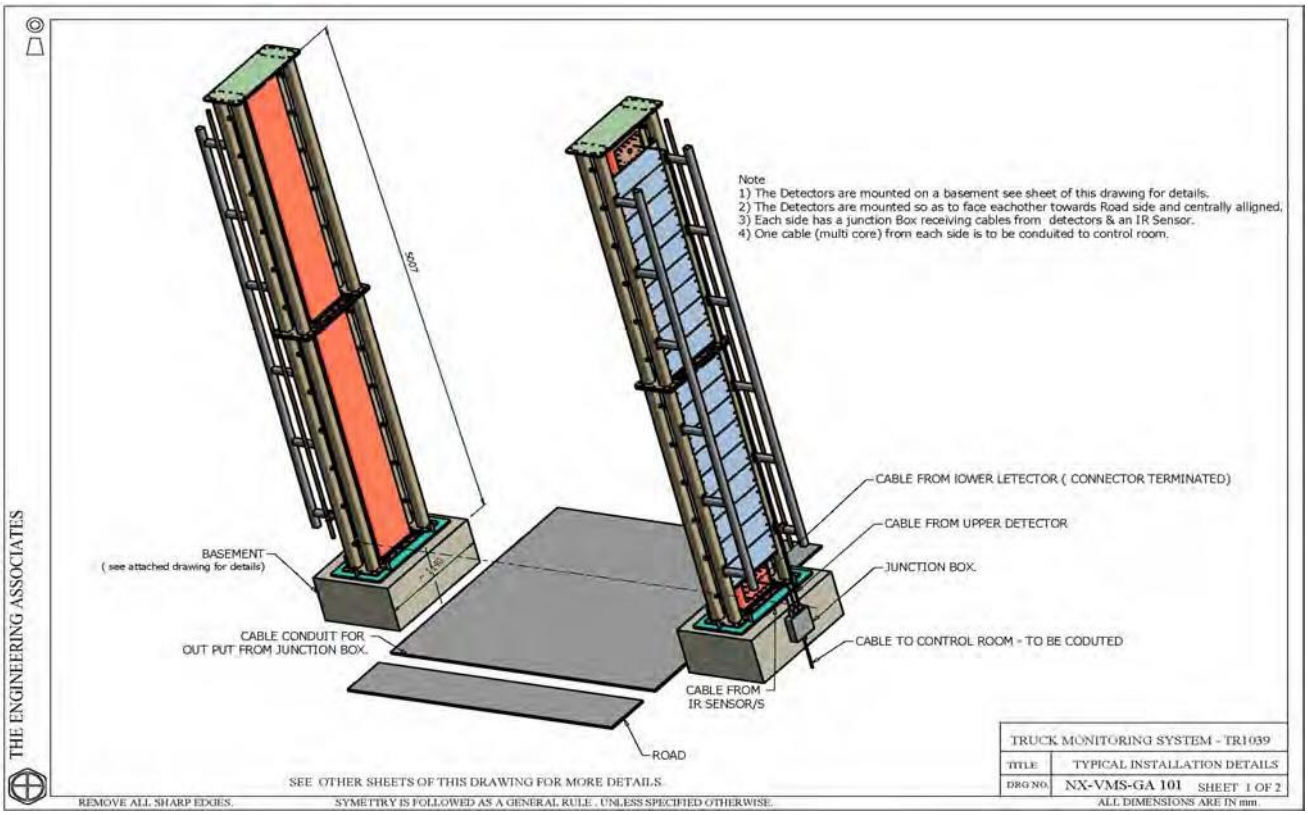
TRUCK / CONTAINER MONITORING SYSTEM CONTROL UNIT

Data acquisition and alarm unit

Vehicle with scrap metal at the PVT detector pillars under inspection



Note: Two such detector pillars are installed on both sides of the path way for the trucks carrying scrap metal or container with scrap metal.

SOFTWARE SPECIFICATIONS:

SYSTEM REQUIREMENTS:

PC (Minimum configuration): Intel i3 CPU or better, 2 GB RAM, 160 GB HDD.
OS: Windows 7 or higher version. (Windows Vista / XP is not supported)
Internet connectivity & Team viewer software: For remote trouble-shooting
COM port / USB to Serial convertor: For connecting Electronic Unit to PC.

INSTALLATION:

To install the software, execute TMS.bat in the installation CD. Click through the options, until you get the message that installation is completed successfully.
In case of any errors, please take a screen shot of the error message and email to Nucleonix Customer Support.

CALIBRATION:

After installation of the system, it is calibrated by Nucleonix Engineer by generating Profiles for trucks of various Models, Makes, Lengths and Heights. The data related to trucks are stored in a Calibration file. For every acquisition, TMS Software shows the available calibrated Truck profiles & asks the User to select the Truck profile. This data is used in reports to arrive at a logical conclusion on Contamination. Details are given in Appendix A. Re-Calibration is required every 1 year.

EXECUTING THE APPLICATION:

A separate TMS Software has been designed in such a way that it provides accurate results and this will be provided along with the Personal Computer

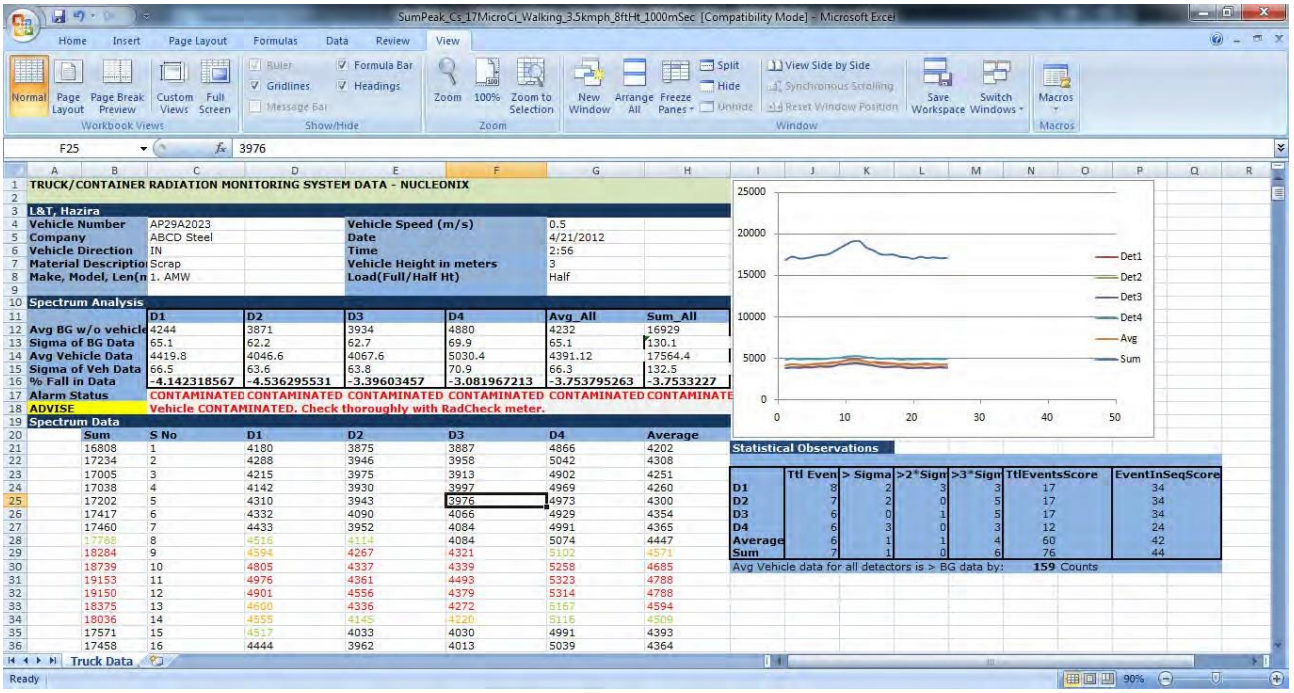
Report Generation Criteria

Interpretation of Reports

Given below is a sample report for a truck carrying steel scrap which is contaminated.

Notice the Alarm Status row, which shows that data from detectors D1, D2, D3, D4, 'Avg of all detectors', 'Sum of all detectors' - is contaminated.

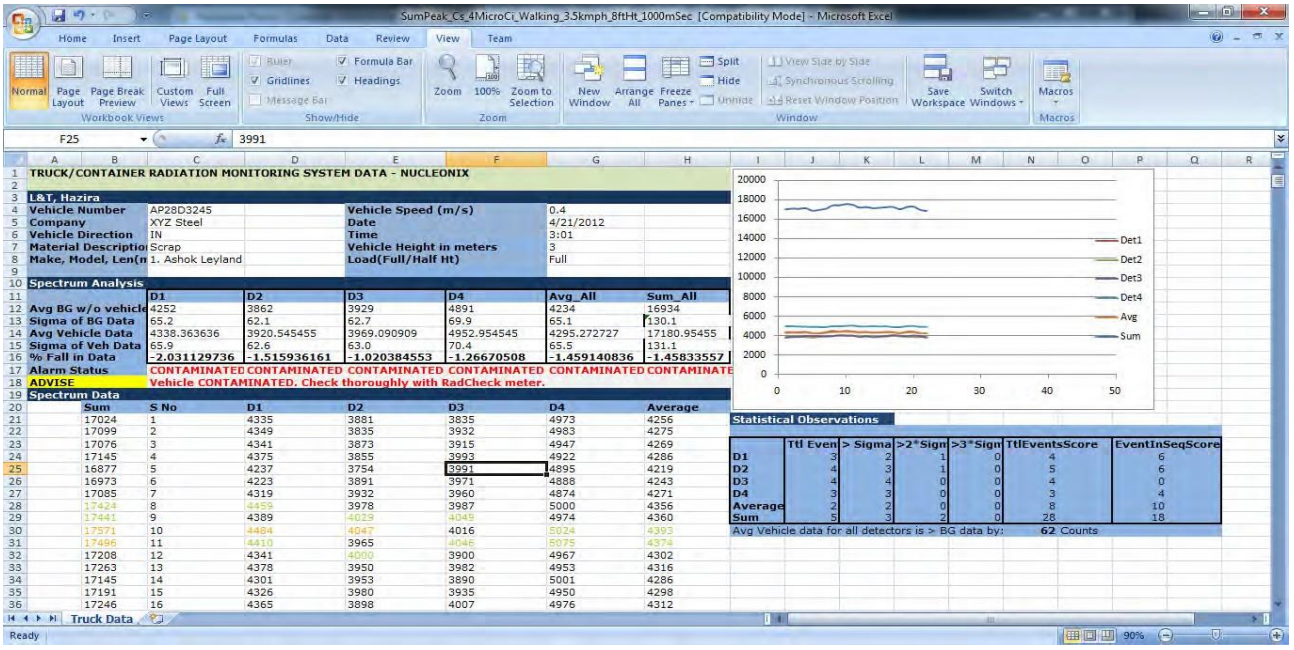
Notice the % Fall row, which shows that there is an increase of 3.75% in average readings from all detectors for this truck. This again implies that there is contamination. Now notice the Spectrum data Section - 'Sum' column. There are several continuous readings which have crossed statistical limits of 3 Sigma (indicated in RED), which again suggests Contamination. Look at the Statistical Observations section. The Sum row shows that 'Total Events Score' and 'Events in Sequence Score' are both high, which indicates contamination. (Event is the case when current data value exceeded Sigma or 2 Sigma or 3 Sigma.



Let us now analyze another report shown below, which has much lower contamination:

Notice the Alarm Status row, which shows that data from detectors D1, D2, D3, D4, 'Avg of all detectors', 'Sum of all detectors' - is contaminated. Notice the % Fall row, which shows that there is an increase of 1.45% in average readings from all detectors for this truck. This again implies that there is contamination.

Now notice the Spectrum data Section - 'Sum' column. There are 4 continuous readings which have crossed statistical limits of Sigma (indicated in GREEN) & 2 Sigma (ORANGE), which again suggests Contamination. Look at the Statistical Observations section. The Sum row shows that 'Total Events Score' and 'Events in Sequence Score' are both high, which indicates contamination. (Event is the case when current data value exceeded Sigma or 2 Sigma or 3 Sigma).



Help Menu

Clicking on this command this file is opened. In case there are any upgrades to the software, ask Nucleonix for the latest version of 'TMS Software User manual'. Copy it to the same folder as TMS application.

Maintenance and Customer Support

Periodic functional checks of system must be performed with Check source as frequently as possible, as per procedure given in Appendix B. This can be done by Customer's trained employees. Apart from this, PC must be kept free from Virus and backed up by UPS power.

Calibration must be performed every 1 year. You may contact us 1 month prior to completion of 1 year.

Customer must enter into Annual Maintenance Contract after Warranty. This will entitle them for preventive maintenance checks, software upgrades, Re-Calibration, etc.