Outdoor Air Quality Analysis

You've received raw data from air sampling across a region in Ontario and should analyze and interpret that data for local district communities and stakeholders.

You should review one years' worth of data from an air monitoring station in a high profile area. This area has significant interest from local community members, industry, and government who are concerned that the air quality is affecting their health. The provided raw data for your analysis and interpretation is for ozone, fine particulate matter, and benzene.

You have been asked to deliver a 20-page report and a 10-minute-max video explaining the results of the air monitoring over the past year and how the results relate to the relevant ambient air comparison values, standards, or guidelines (e.g. Canadian Ambient Air Quality Standards, Air Quality Reports in Ontario by MOECC, and Operations manual for air quality monitoring in Ontario). The audience for your presentation includes community members, the municipality, and industry representatives. Your report should accurately represent the data analysis & interpretation and present your findings in a clear, understandable way for the target audience.

The evaluation will be based on your presentation style & communication skills, and demonstrated understanding of the issue in terms of why it is an issue, what are the causes, and what are the possible preventions. For the data analysis, you can use any software or programming languages (e.g. Excel, MATLAB, C++, Fortran, Python, etc.). Your analysis spreadsheet/code must be submitted along with your group report and video.