Field Project: Waste Management

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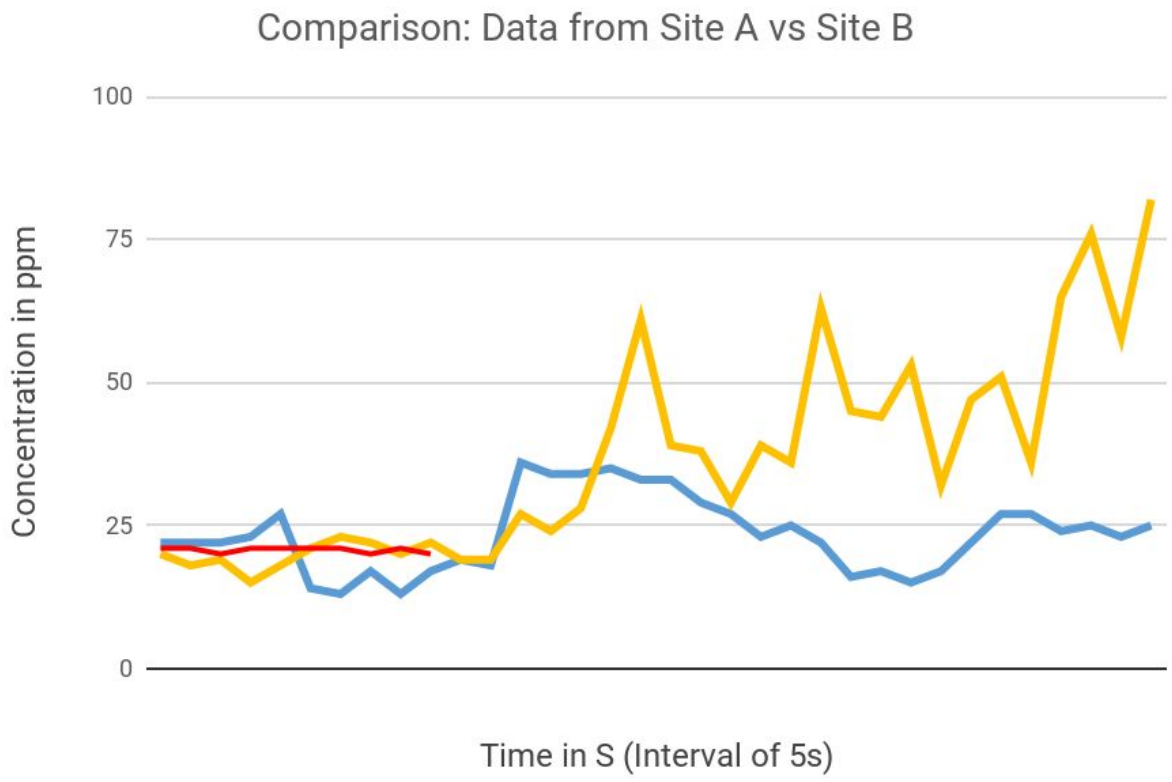
In this field study we were given the task of measuring the VOC concentrations in the ambient air at Parkietenbos, the landfill (dump) on Aruba. The following is a spreadsheet with our measurements at two different sites on the dump premises.

https://docs.google.com/spreadsheets/d/1g-SIfwbGPy4zgmC3sAZk3RjZSYoa6V1n9qHqHi_SKuU/edit?usp=sharing



Above is the link to the spreadsheet with our findings as well as a visual aid for to help conceptualize our findings.
The red line represents our measurements at UA.
The blue line represents our measurements in the heart of the dump.
The yellow line represents our measurements at the oceanside of the dump.

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On the oceanside we see dramatic spikes in comparison to the UA and in the middle of the dump, this can be caused by air pollution overseas making its way to us. At the UA we see a relatively steady reading at an avg. of 20.7 ppm of VOC's. In the middle of the dump we see a single dramatic spike in the middle of our measurement. This could be caused by the wind picking up and blowing away readable ambient air.

These findings cannot be compared with standardized models as the the sensor we used can not tell you which specific gas is being picked up, only the concentration of total VOC's in the ambient air. This can be viewed as a flaw in the experiment.

Observations:
While we were taking our measurements the weather seemed to be slightly overcast, little to no wind and no burning piles of trash, as well as the garbage near us seemed to be uniform and not of particular notice. After a while it began to rain and further measurements could not be taken.