NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Picarro G2307 Analyzer Updates

Peter Furdyna and Dirk Felton

New York State Department of Environmental Conservation
Division of Air Resources - Bureau of Air Quality Surveillance

NESCAUM and NYSERDA

LISTOS Workshop
October 14, 2021

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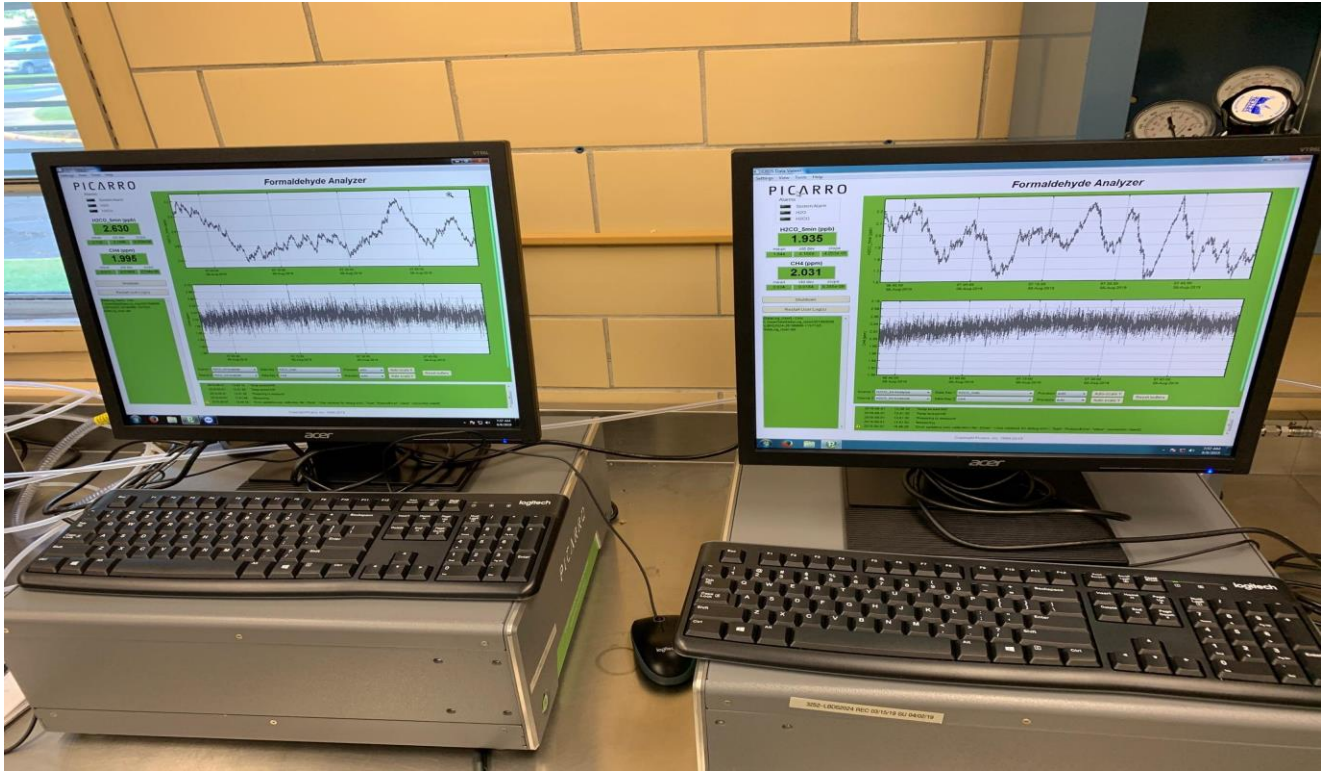
Method Issues – Drift / Precision / Accuracy



2.5 vs 1.9 ppbV CH2O Collocation – Lab Air

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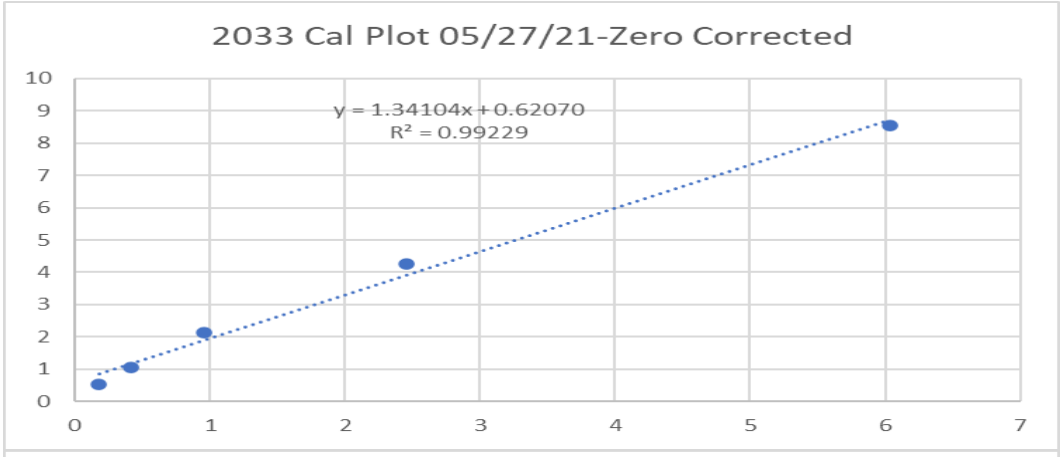
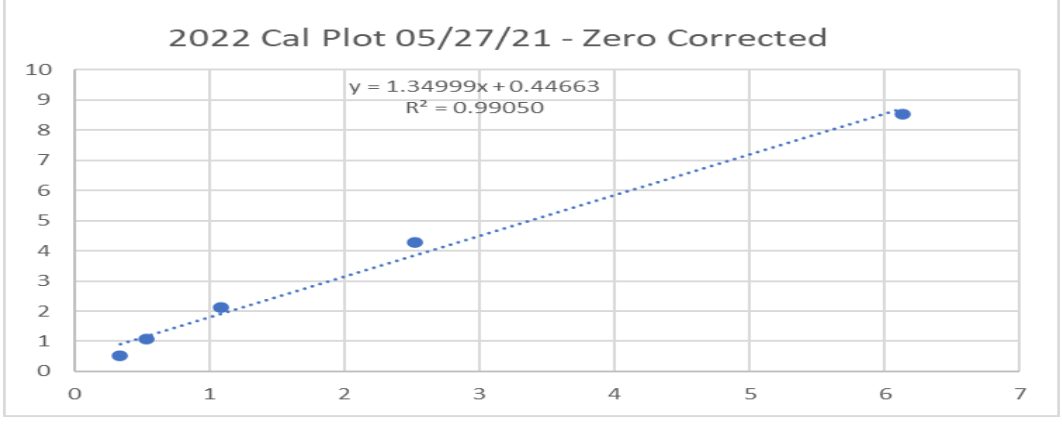
Hourly Zero Correction – Saves the Day!





Unit 2033
Rec 11/2020

Final Calibration Comparisons
05/27/21

0.5 – 8.5 ppbv

Unit 2022
Rec 03/2019

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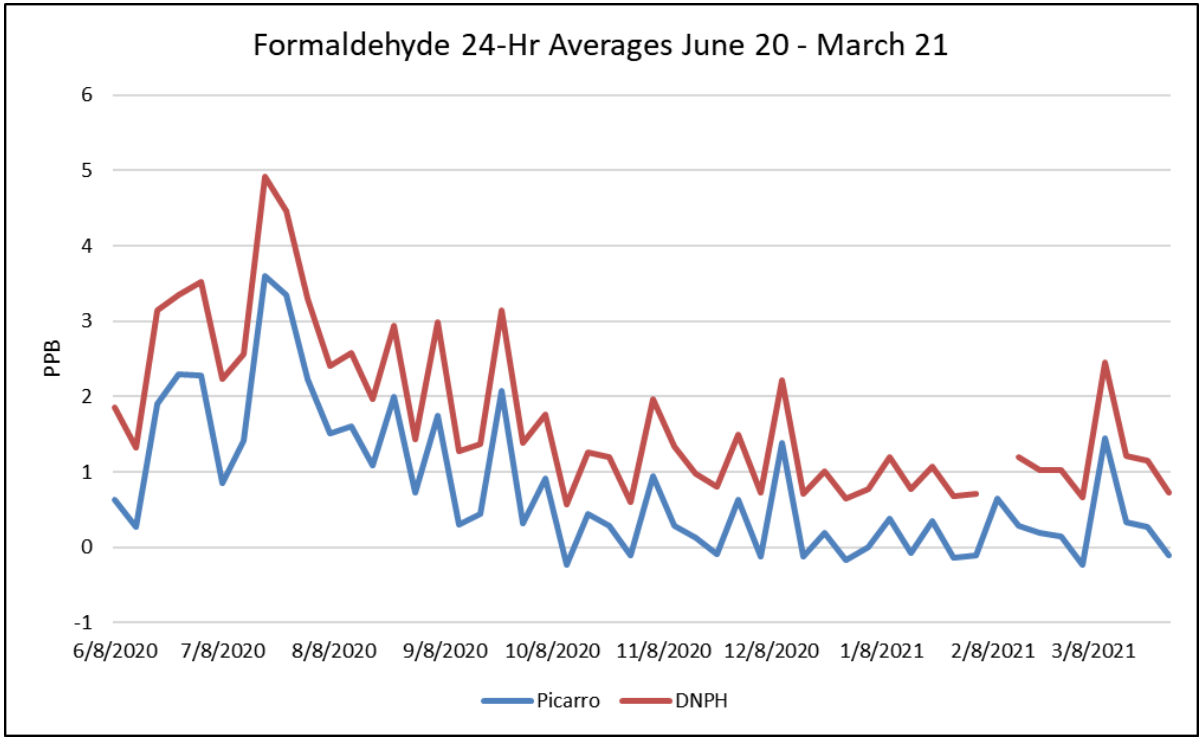
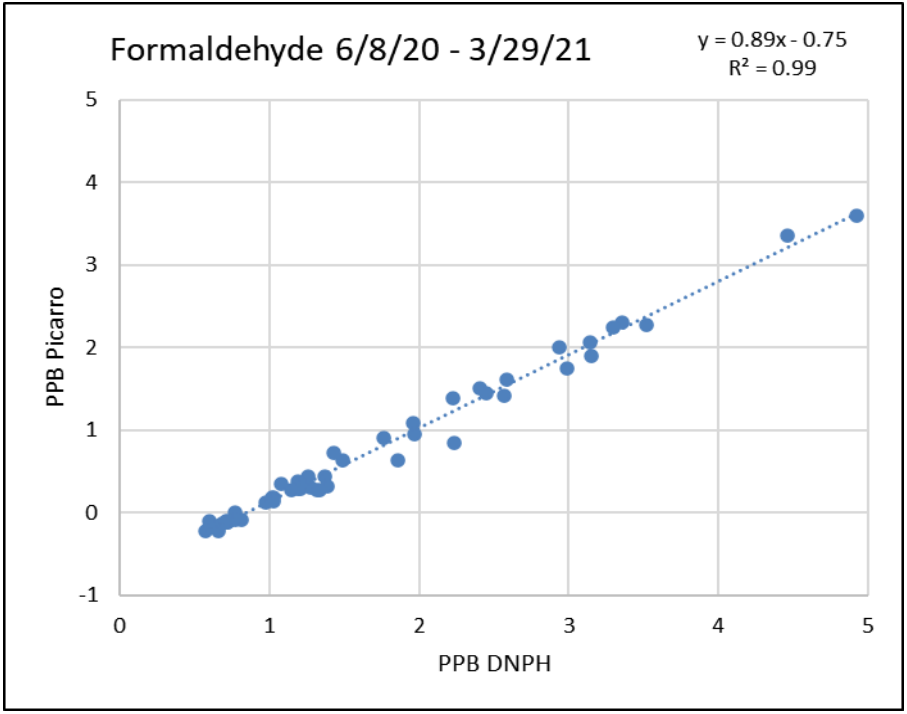
Comparison to DNPH



DNPH and the Picarro track extremely well

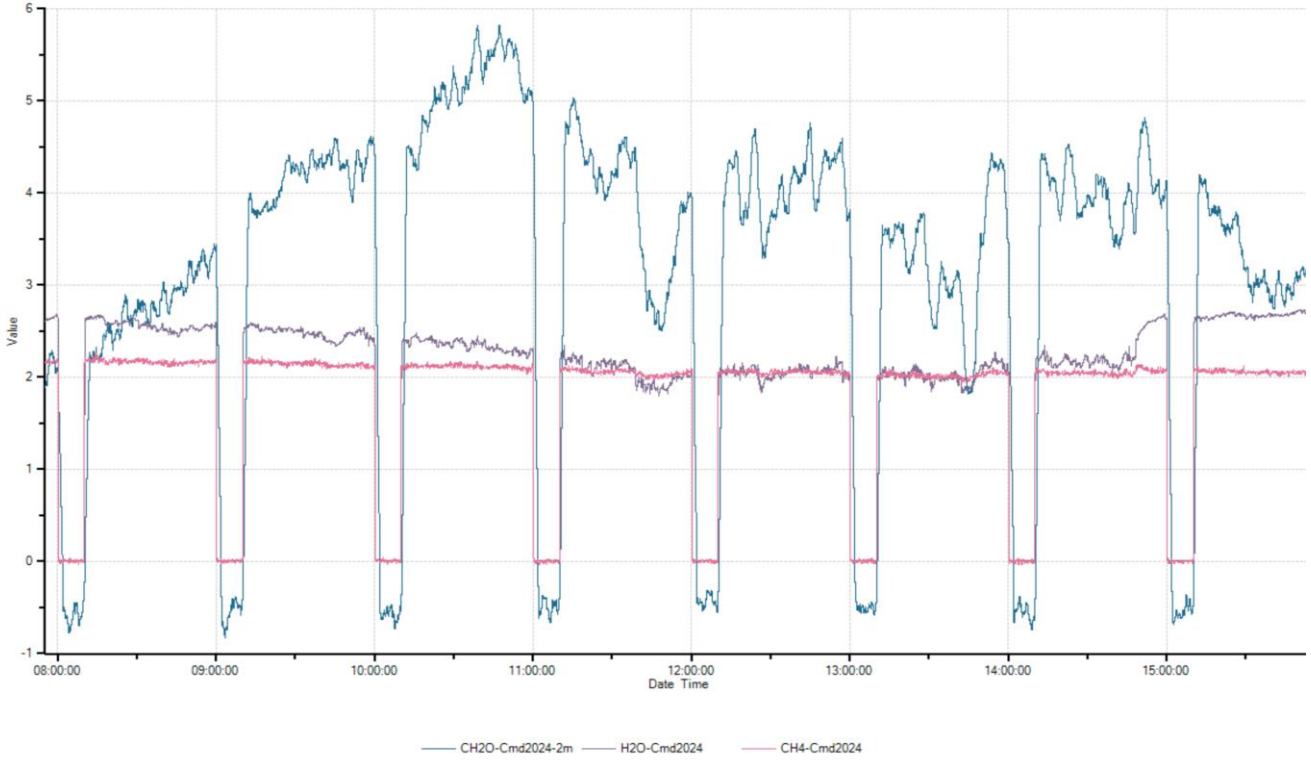
Comparison to DNPH (24-Hr 1in6 Day)



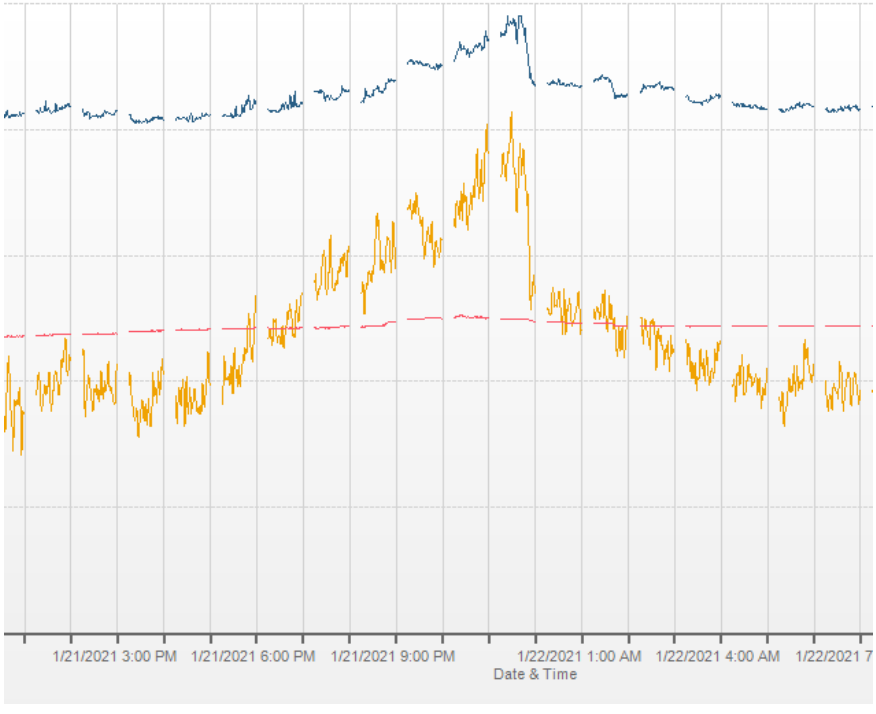
DNPH does not drop below 0.57

The lowest Picarro value is -0.23

Drift / Precision - Resolution

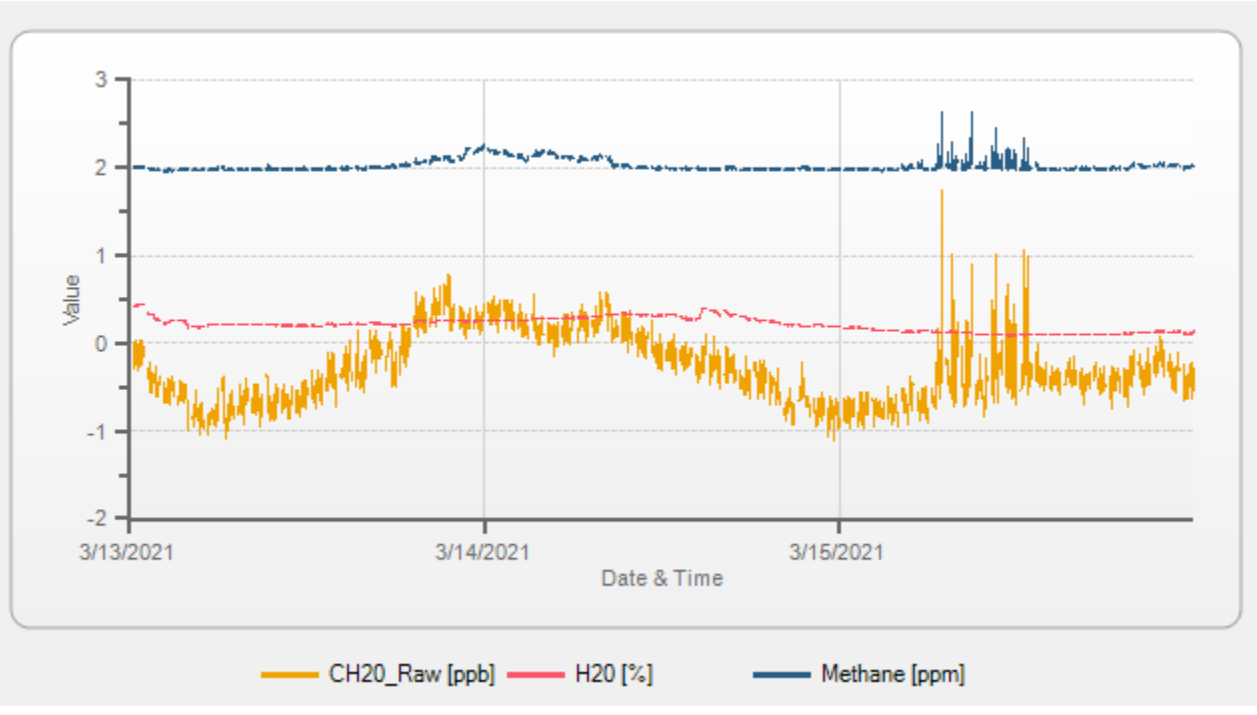


Data Review

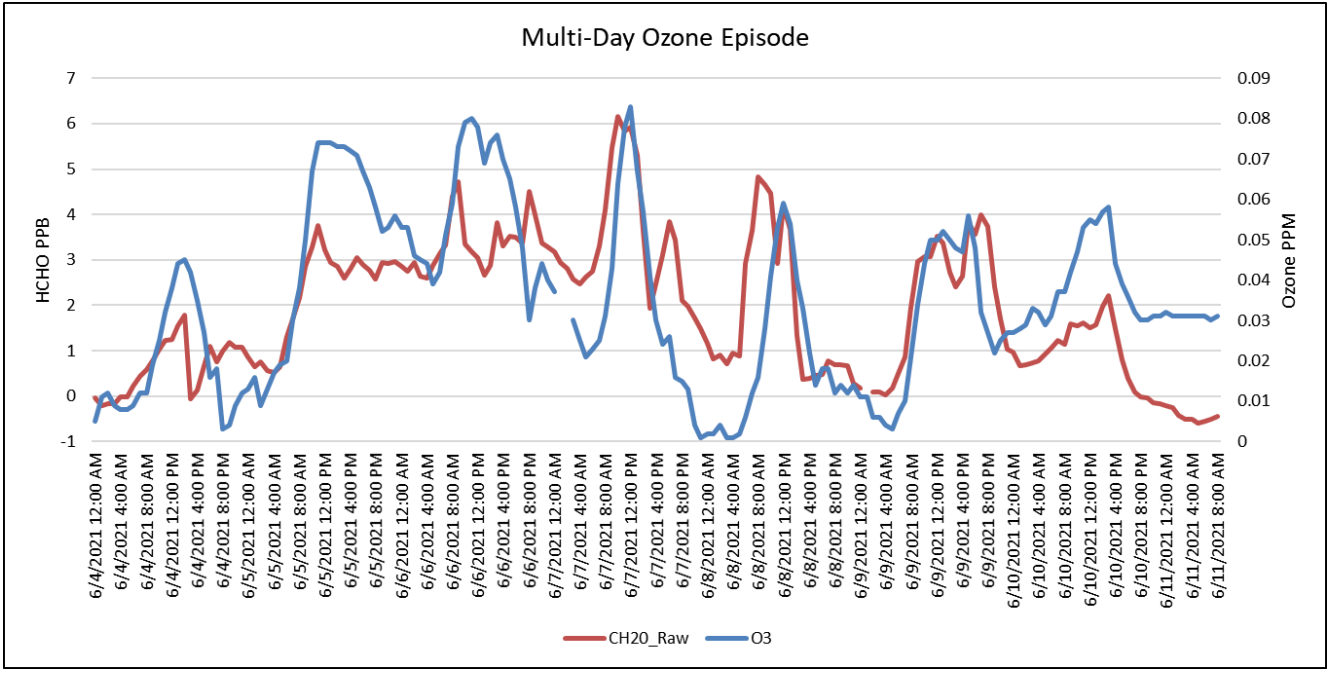


- The HCHO (yellow trace) dropped but was matched by a drop in methane (blue trace)
- Water (red trace) did not change

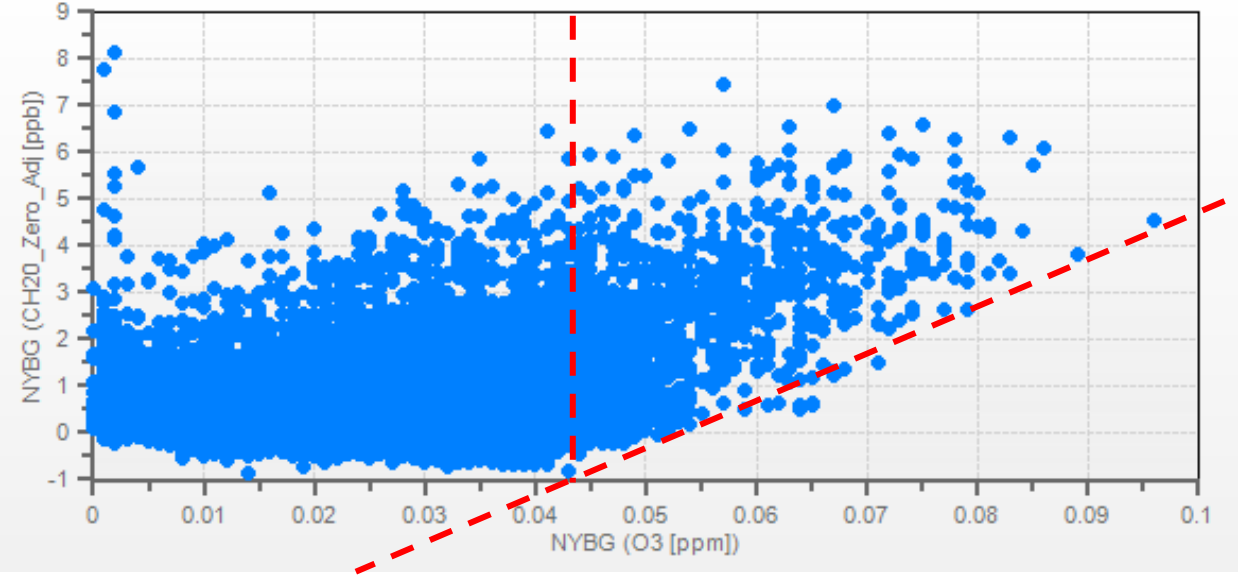
Regional vs Local



HCHO does interact with Ozone

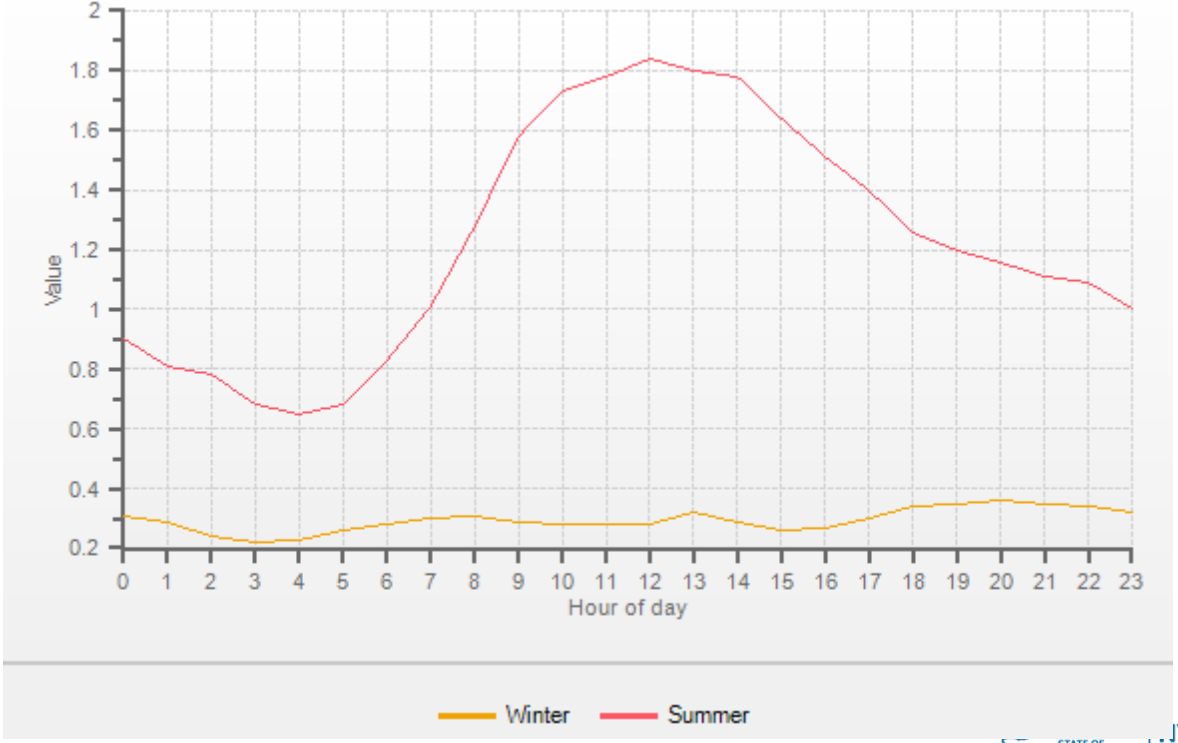


You can have Ozone without HCHO but you can't have a lot of Ozone without HCHO

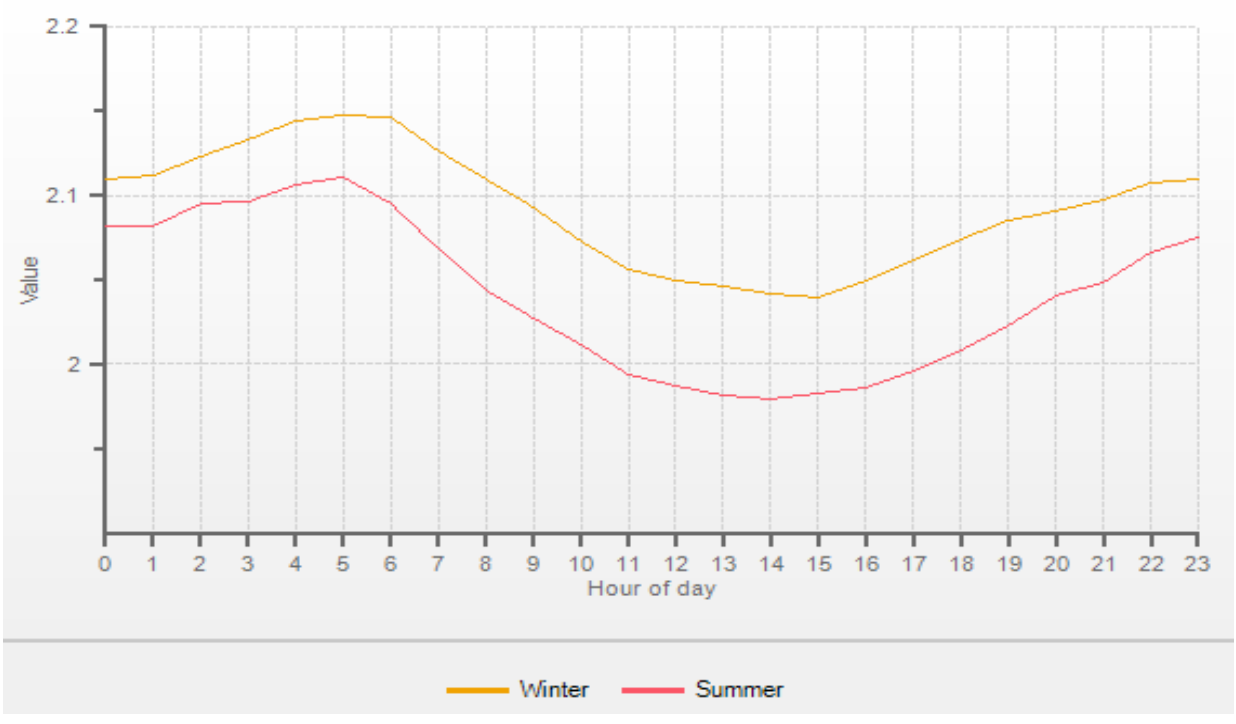


NYBG 1-Hr Data 6/1/20 – 9/27/21

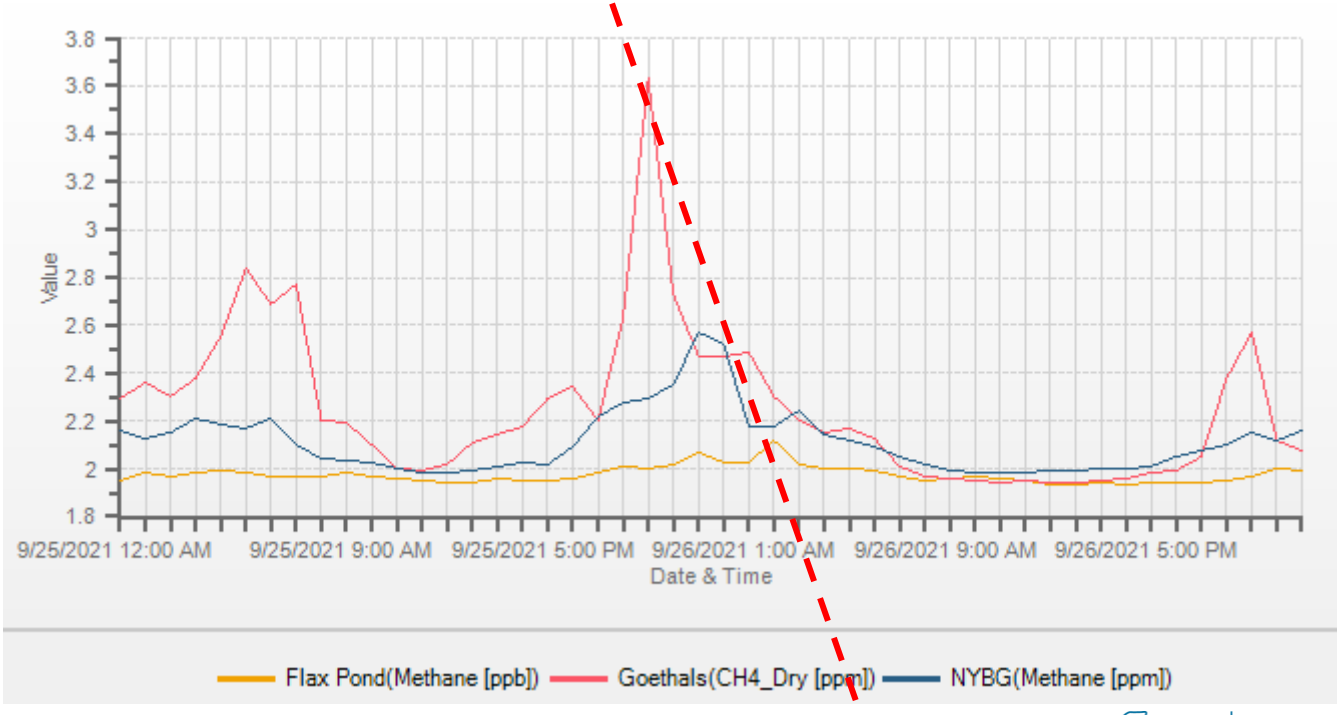
Diurnal Seasonal HCHO

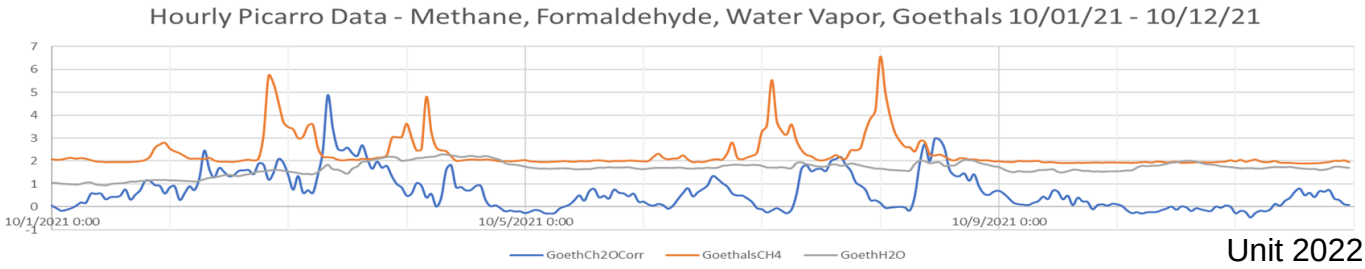


Diurnal Seasonal Methane

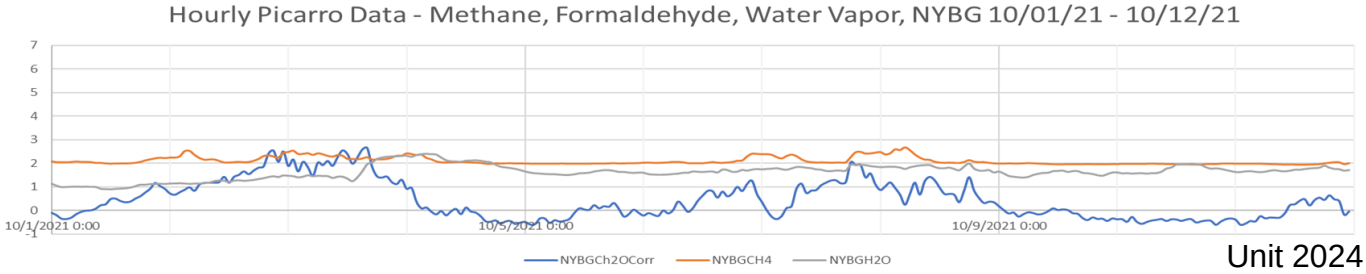


Methane Time Series: 2 Days

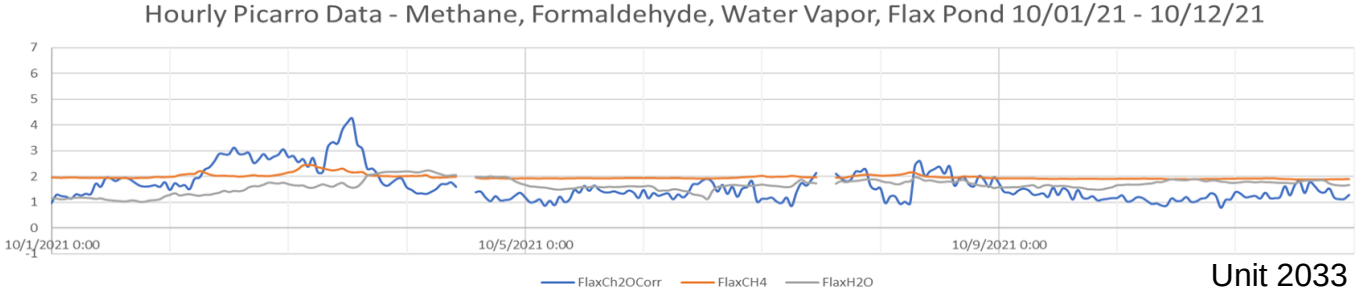




Unit 2022



Unit 2024



Unit 2033

Thanks and Acknowledgements

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