Data Tool CO2 Reference Guide

The Data Tool is an online excel spreadsheet report creator developed by Thomas Trebacz (BASC Electrical Eng.) Its interface offers access to process variable metrics from which specific points of interest or 'data sources' are selected as input for subsequent report creation. This reference guide provides a tutorials with examples focused on a ventilation validation use case as well as an introduction to its newest and easiest to use feature: the single click Building CO2 report creator.

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INTRODUCTION

The Data Tool is an online excel spreadsheet report creator developed by Thomas Trebacz (BASC Electrical Eng.) Its interface offers access to process variable metrics from which specific points of interest or 'data sources' are selected as input for subsequent report creation. This reference guide provides a tutorials with examples focused on a ventilation validation use case as well as an introduction to its newest and easiest to use feature: the single click Building CO2 report creator.

This document provides procedures with example queries that:

a) Provide procedure to easily download CO2 sensor data for a specified campus building with a single click.
b) Provide the system CO_2 input as measured by CO_2 sensors located inside supply air plenums of air handlers.
c) Provide the system CO_2 output as measured by individual room air CO_2 sensors
d) Provide procedure to easily craft their own reusable custom filter based on the points of interest discovered in the table

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DOWNLOAD CO2 REPORT FOR CAMPUS BUILDING WITH A SINGLE CLICK

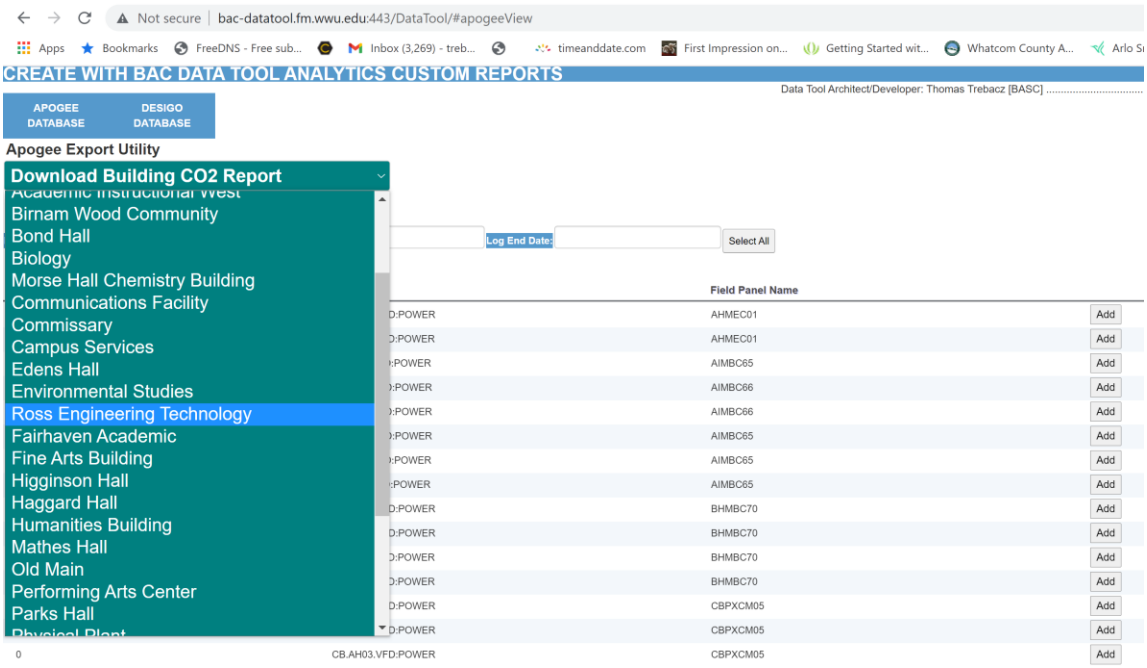
APOGEE- (MOST BUILDINGS)

The building CO_2 report is built out of data collected from remotely located CO2 sensors over the span of one week and is only available for the Apogee system.

a) Navigate to the Data Tool in your default browser by clicking this link: http://bac-datatool.fm.wwu.edu:443/DataTool/#apogeeView

b) Left select the "Download Building CO2 Report" drop-down

c) Scroll the menu using mouse wheel until you see your building name appear



d) Left click your building name and wait while your report is downloaded.

   i. The download operation typically requires no more than 10s to complete however could take longer if the building selected has an extremely large data point population

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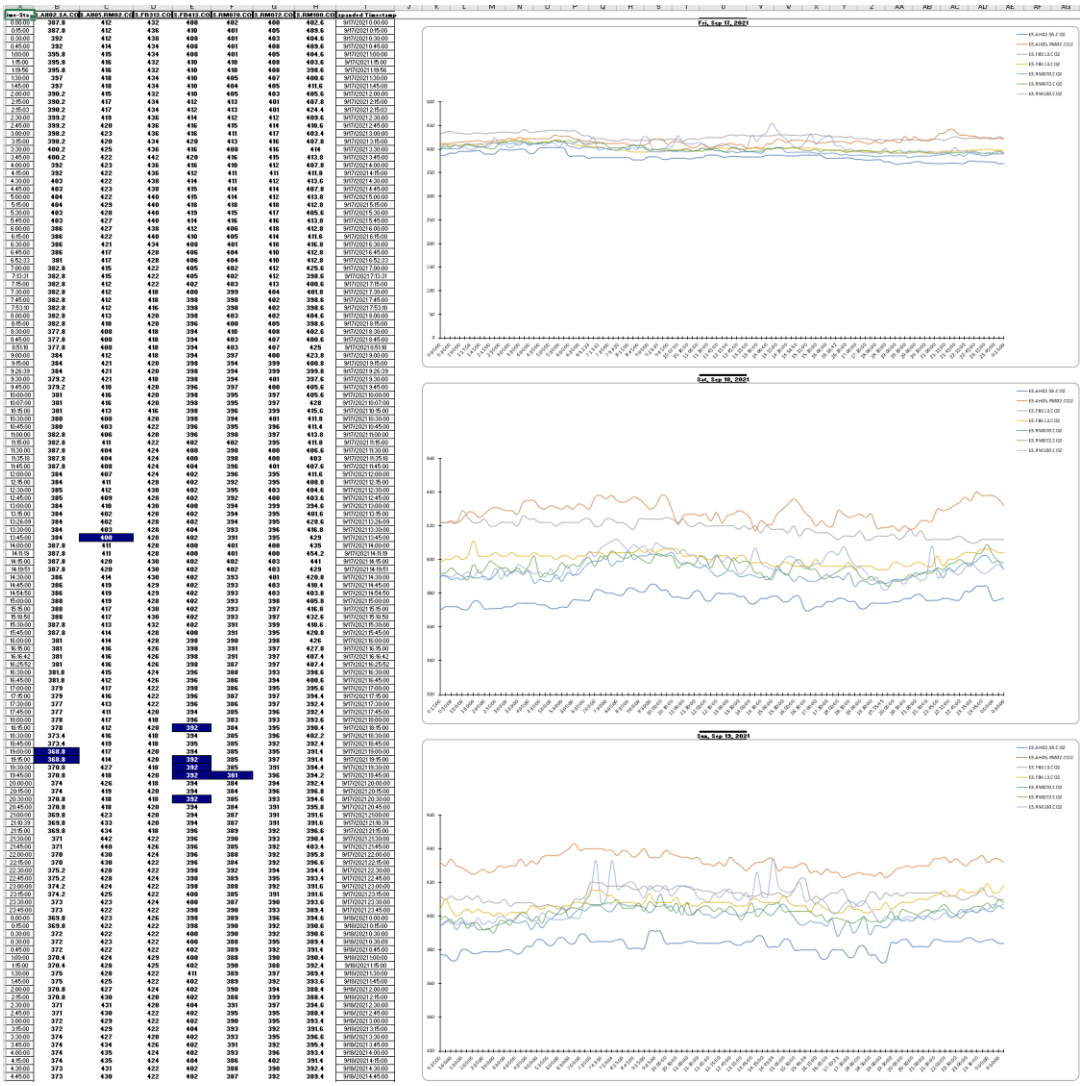
e) Open your downloaded report in Excel and pan to the right, there you should see a series of daily charts ordered chronologically from oldest on top, to present on bottom.



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AIR HANDLER SUPPLY AIR CO_2 FILTER

APOGEE- (MOST BUILDINGS)

The system CO_2 input is measured by CO_2sensors located inside supply air plenums of air handlers. To see all air handler supply air CO_2measurements do the following:

f) Navigate to the Data Tool in your default browser by clicking this link: http://bac-datatool.fm.wwu.edu:443/DataTool/#apogeeView

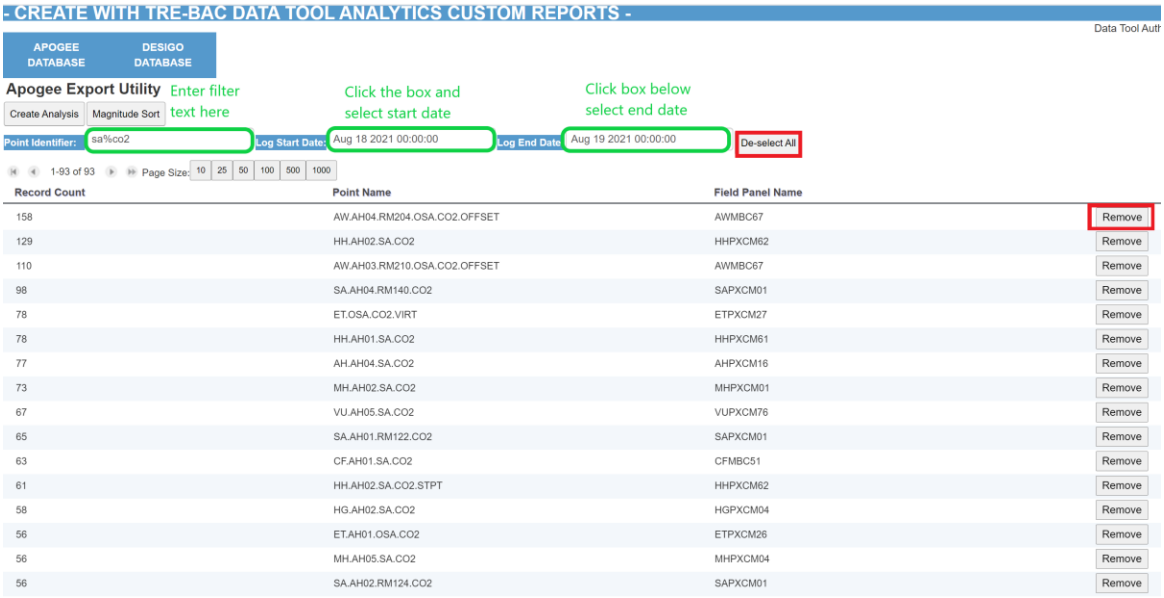
g) Copy and paste "**SA%CO2***" without quotation marks into the Point Identifier box.
   i. "SA" stands for system supply air.
   ii. "%" is a wild card stand-in that accepts any character string between "SA" and "CO2".
   iii. "*" is an end of name terminator which filters only for point names that end with "CO2".
   iv. To filter supply air by building add building designator followed by "%" for example:
      i. For Viking Union use: "**VU.%SA%CO2***".

h) Select the date range by either entering or clicking on the date using the calendar widget.

i) Push the "Select All" button to select all visible data sources identified in the table or for individual data source selection push the add button next to the Point name of your choice.

j) Once you have all data sources selected push the "Create Analysis" button.

k) To select new data sources simply right click on the Point identifier box and choose "Select All" from the menu then start typing or paste your new query.
   i. Alternatively if you prefer to add additional data sources to the data sources presented in the table then add comma (',') then the text of the desired sub query.



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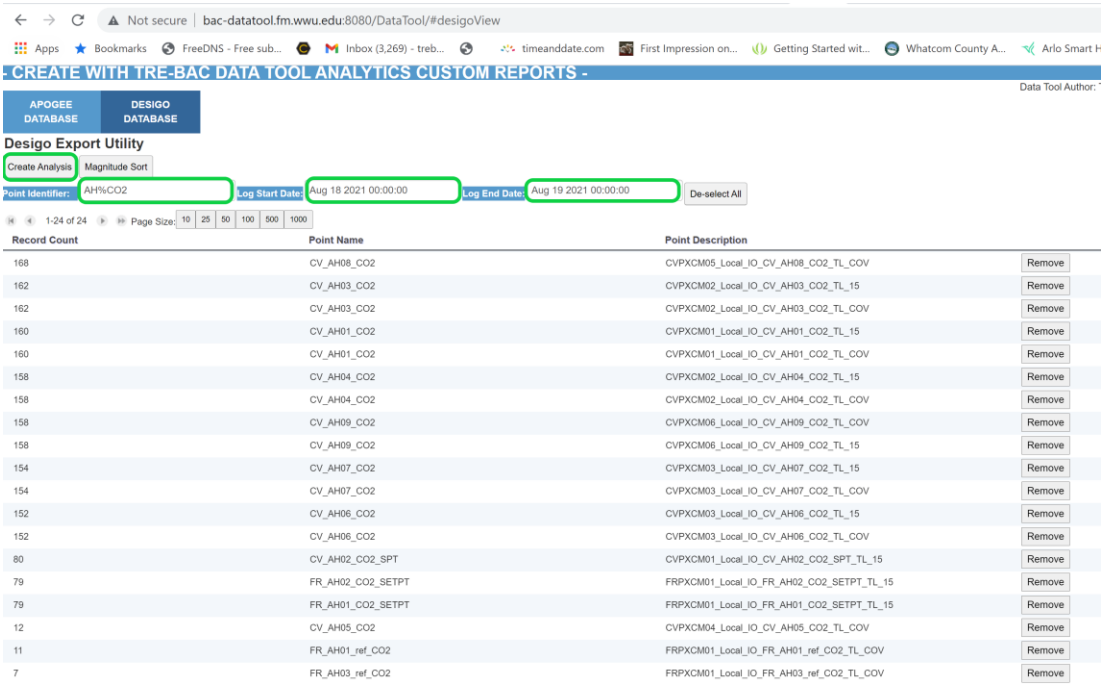
DESIGO- (CARVER AND FRASER HALL)

The system supply air CO_2 input is measured by CO_2 sensors located inside supply air plenums of air handlers. To see all air handler system supply air CO_2 measurements including setpoints do the following:

a) Navigate to http://bac-datatool.fm.wwu.edu:443/DataTool/#desigoView
b) Copy and paste "**AH%CO2**" without quotation marks into the Point Identifier box.
    a. "AH" stands for Air Handler.
    b. To filter system supply air by building add building designator followed by "%" for example:
        i. For Carver use: "**CV%AH%CO2**".
c) Select the date range by either entering or clicking on the date using the calendar widget.
d) Push the "Select All" button to select all visible data sources identified in the table or for individual data source selection push the add button next to the Point name of your choice.
e) Once you have all data sources selected push the "Create Analysis" button.



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ROOM AIR CO_2 PPM FILTER

APOGEE- (MOST BUILDINGS)

a) Navigate to the Data Tool in your default browser by clicking this link: http://bac-datatool.fm.wwu.edu:443/DataTool/#apogeeView

b) Copy and paste "**RM%CO2***" without quotation marks into the Point Identifier box.

   i. To filter room air by building add building designator followed by "%" for example:

      a) For Viking Union use: "**VU%RM%CO2*".**

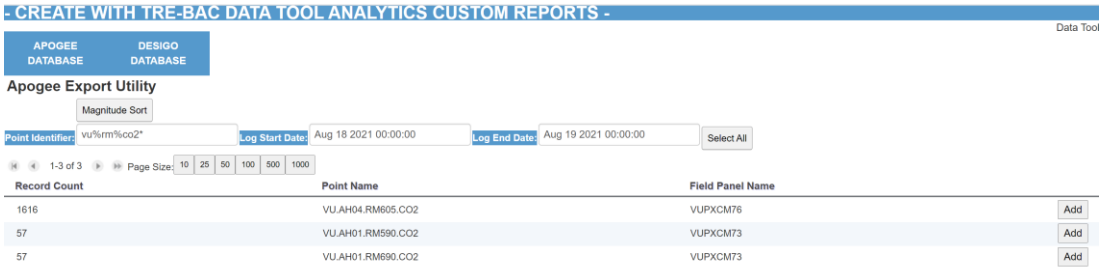
c) Select the date range by either entering or clicking on the date using the calendar widget.

d) Push the "Select All" button to select all visible data sources identified in the table or for individual data source selection push the add button next to the Point name of your choice.

e) Once you have all data sources selected push the "Create Analysis" button.

f) To select new data sources simply right click on the Point identifier box and choose "Select All" from the menu then start typing or paste your new query.

   i. Alternatively if you prefer to add additional data sources to the data sources presented in the table then add comma (',') then the text of the desired sub query.



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DESIGO- (CARVER AND FRASER HALL)

a) Navigate to http://bac-datatool.fm.wwu.edu:443/DataTool/#desigoView

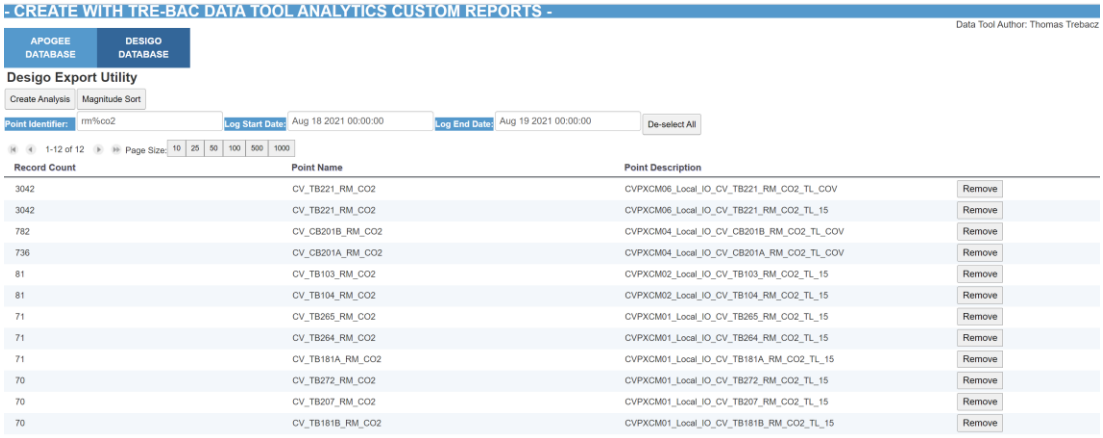
b) Copy and paste "**RM%CO2**" without quotation marks into the Point Identifier box.
   a. "RM" stands for Room.
   b. To filter room air by building add building designator followed by "%" for example:
      i. For Carver use: "**CV%RM%CO2**".

c) Select the date range by either entering or clicking on the date using the calendar widget.

d) Push the "Select All" button to select all visible data sources identified in the table or for individual data source selection push the add button next to the Point name of your choice.

e) Once you have all data sources selected push the "Create Analysis" button.

f)



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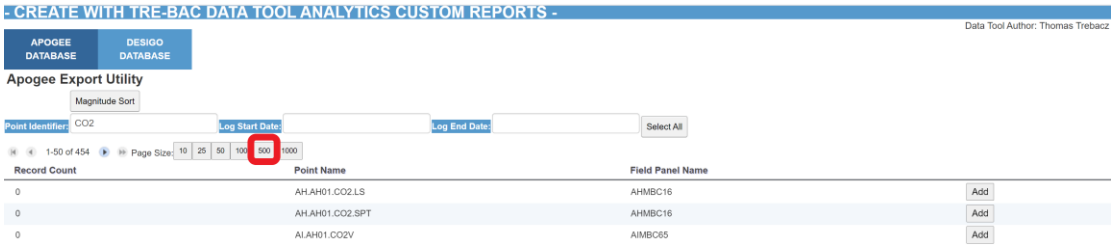
HOW TO CRAFT YOUR OWN REUSABLE CO_2 DATA FILTER

a) Open any text editor such as notepad

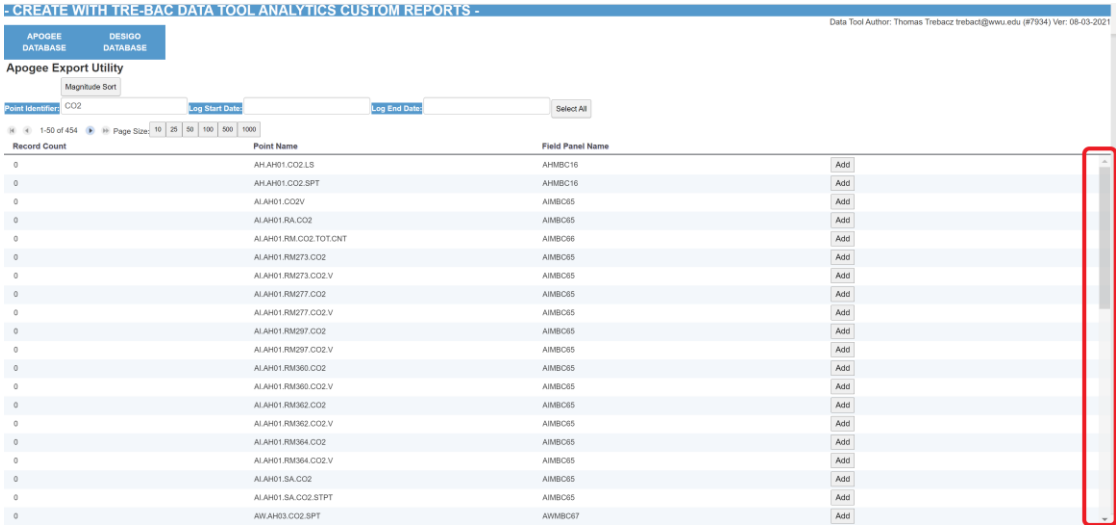
b) Navigate to Data Tool and select either Apogee or Desigo

c) Copy and paste "CO2" into Point Identifier

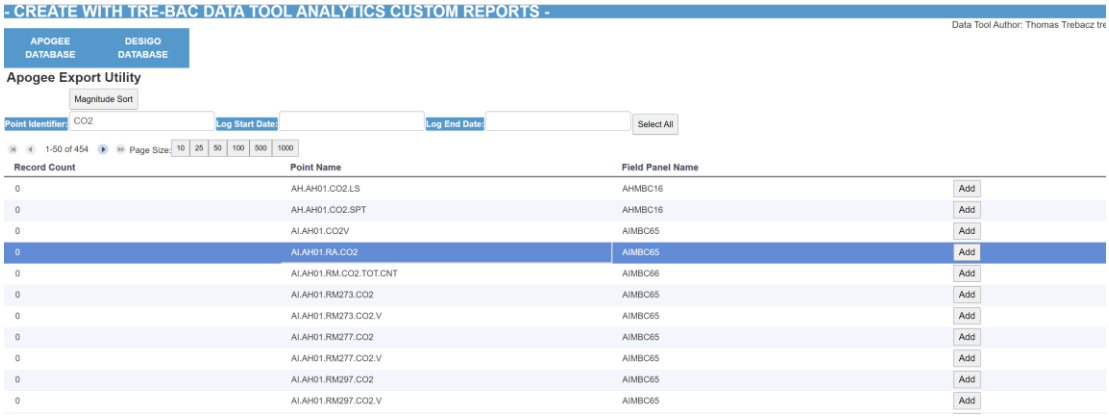
d) Left click on 500 next to Page Size



e) Using mouse scroll wheel scroll until you see desired data source point name



f) Select data source by left clicking on desired data source point name and you should see desired row turn blue



g) With the desired field in blue left click on notepad you opened in part a and you should see that point name paste itself for you else select paste from right click menu.

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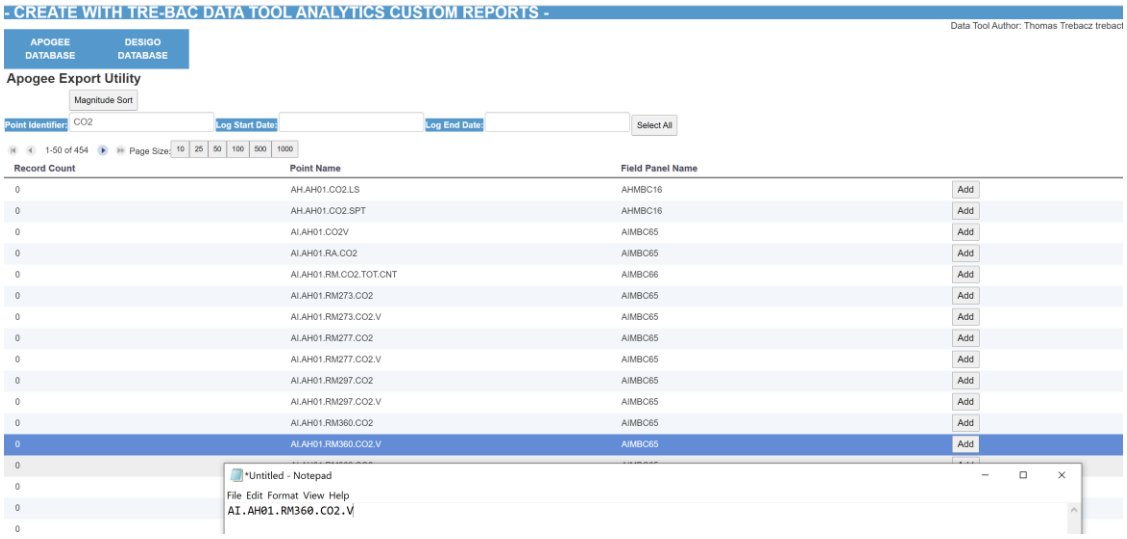

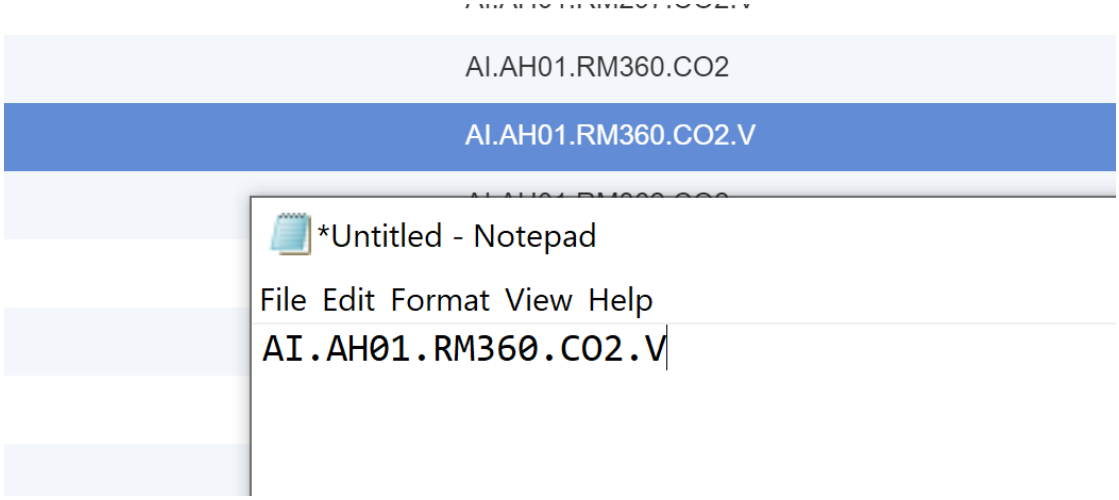

h) Now add a comma (‘,’) in notepad and make another selection than repeat the process of pasting that selection after the comma

i) Repeat this process as many times as necessary untill all desired points are found then save the notepad with a name of your choosing such as “DataToolRocks.txt”.

j) You have just created and saved your first custom query filter.

k) To use the custom query simply copy it from your text file to the Point identifier and left click on any part of the page and you will see the custom query take effect.