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2021 West Los Angeles Data Summary

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Table 1. West Los Angeles Validity Summary.

	CO	HC	NO	NH ₃	NO ₂
Attempted Measurements	25,650				
Valid Measurements	21,832	21,693	21,828	21,780	17,626
Percent of Attempts	85.1%	84.6%	85.1%	84.9%	68.7%
Submitted Plates	19,406	19,291	19,403	19,362	15,726
Percent of Attempts	75.7%	75.2%	75.6%	75.5%	61.3%
Percent of Valid Measurements	88.9%	88.9%	88.9%	88.9%	89.2%
Matched Plates	19,059	18,946	19,056	19,017	15,445
Percent of Attempts	74.3%	73.9%	74.3%	74.1%	60.2%
Percent of Valid Measurements	87.3%	87.3%	87.3%	87.3%	87.6%
Percent of Submitted Plates	98.2%	98.2%	98.2%	98.2%	98.2%

Table 2. Number of measurements of repeat vehicles.

Number of Times Measured	Number of Vehicles
1	13,939
2	1,289
3	412
4	187
5	77
6	16
7	3
>7	6

441 Electric Cars (1.7% of attempts). These vehicles are only in the WLA21_org.dbf file with the license number of 'E'. This includes Chevy Volts when we did not measure any exhaust but does not include other plug in hybrids such as the Prius Prime or other battery electric cars with a range extending engine onboard.

There were an additional 16 Volts that we measured exhaust. These vehicles are identified in the LaBrea21.dbf file.

Measurements for medium and heavy-duty vehicles in the LaBrea21.dbf file.

GVW_Class	Measurements
6	170
7	48
8	74

Explanation of the LaBrea21.dbf and the WLA21_org.dbf databases.

These are Microsoft FoxPro database file, and can be opened by any version of MS FoxPro. The files can also be read by a number of other programs such as Excel. The following is an explanation of the data fields found in this database:

License	California license plate.
Date	Date of measurement, in standard format.
Time	Time of measurement, in standard format.
Percent_CO	Carbon monoxide concentration, in percent.
CO_err	Standard error of the carbon monoxide measurement.
Percent_HC	Hydrocarbon concentration (propane equivalents), in percent.
HC_err	Standard error of the hydrocarbon measurement.
Percent_NO	Nitric oxide concentration, in percent.
NO_err	Standard error of the nitric oxide measurement.
PercentSO2	Sulfur dioxide concentration, in percent.
SO2_err	Standard error of the sulfur dioxide measurement.
PercentNH3	Ammonia concentration, in percent.
NH3_err	Standard error of the ammonia measurement.
PercentNO2	Nitrogen dioxide concentration, in percent.
NO2_err	Standard error of the nitrogen dioxide measurement.
PercentCO2	Carbon dioxide concentration, in percent.
CO2_err	Standard error of the carbon dioxide measurement.
Opacity	Opacity measurement, in percent.
Opac_err	Standard error of the opacity measurement.
Restart	Number of times data collection is interrupted and restarted by a close-following vehicle, or the rear wheels of tractor trailer.
HC_flag	Indicates a valid hydrocarbon measurement by a "V", invalid by an "X".

NO_flag	Indicates a valid nitric oxide measurement by a “V”, invalid by an “X”.
SO2_flag	Indicates a valid sulfur dioxide measurement by a “V”, invalid by an “X”.
NH3_flag	Indicates a valid ammonia measurement by a “V”, invalid by an “X”.
NO2_flag	Indicates a valid nitrogen dioxide measurement by a “V”, invalid by an “X”.
Opac_flag	Indicates a valid opacity measurement by a “V”, invalid by an “X”.
CO2_max	Reports the highest absolute concentration of carbon dioxide measured by the remote sensor over an 8 cm path; indicates plume strength.
Speed_flag	Indicates a valid speed measurement by a “V”, an invalid by an “X”, and slow speed (excluded from the data analysis) by an “S”.
Speed	Measured speed of the vehicle, in mph.
Accel	Measured acceleration of the vehicle, in mph/s.
Tag_name	File name for the digital picture of the rear of the vehicle.
Front_name	File name for the digital picture of the front of the vehicle.

The WLA21_org.dbf ends at this field while the LaBrea21.dbf files also includes the additional fields below the line.

Vin	Vehicle identification number truncated by the State of California.
Make	Manufacturer of the vehicle.
Year	Model year.
Series	Vehicle series.
Model	Vehicle model within a particular series
Body	DMV body designation abbreviation
Fuel	Fuel type G (gasoline), D (diesel), N (natural gas) and B (hybrid).
Disp_ci	DMV engine displacement cubic inches.
Gvw	DMV unladen vehicle weight in pounds.
Gvw_code	DMV gross vehicle weight class code.
V_body	VIN decoded body description.
V_cyl	VIN decoded number of engine cylinders.
V_drive	VIN decoded vehicle drive configuration.
V_engine	VIN decoded engine model.
V_fuel	VIN decoded fuel type.
V_gwvr	VIN decoded vehicle weight class.

V_make	VIN decoded make.
V_model	VIN decoded model.
V_year	VIN decoded model year.
V_series	VIN decoded series.
V_trans	VIN decoded transmission.
V_trim	VIN decoded vehicle trim.
V_type	VIN decoded vehicle classification (BUS, INC, MPV, PAS, TRK)
V_hp	VIN decoded engine horsepower
V_engman	VIN decoded engine manufacturer
CO_gkg	Grams of CO per kilogram of fuel using 860 gC/kg of fuel.
HC_gkg	Grams of HC per kilogram of fuel using 860 gC/kg of fuel and the molecular weight of propane which is our calibration gas.
NO_gkg	Grams of NO per kilogram of fuel using 860 gC/kg of fuel.
Nh3_gkg	Grams of NH ₃ per kilogram of fuel using 860 gC/kg of fuel.
NO2_gkg	Grams of NO ₂ per kilogram of fuel using 860 gC/kg of fuel.
NOx_gkg	Grams of NO _x per kilogram of fuel using 860 gC/kg of fuel.
HC_offset	Hydrocarbon concentrations after offset adjustment.
Hcgkg_off	Grams of HC per kilogram of fuel using 860 gC/kg of fuel and using the HC_offset value for this calculation.
VSP	Vehicles specific power (kw/tonne)

Data from the LAX Airport (~8 miles southwest of the site)

2021 West Los Angeles Temperature and Humidity Data								
Time	10/26 °F	10/26 %RH	10/27 °F	10/27 %RH	10/28 °F	10/28 %RH	10/29 °F	10/29 %RH
7:53	59	75	66	47	74	38	71	42
8:53	63	65	69	41	79	30	75	39
9:53	66	56	73	35	84	25	75	45
10:53	65	59	76	30	83	34	74	50
11:53	64	68	74	45	79	34	76	47
12:53	65	56	72	43	79	30	76	45
13:53	65	56	72	40	80	30	78	39
14:53	65	52	73	41	78	33	74	50
15:53	64	63	72	43	76	33	69	70
16:53	64	68	68	57	73	40	67	79
17:53	63	70	67	53	70	55	66	73

2021 West Los Angeles Temperature and Humidity Data								
Time	10/30 °F	10/30 %RH	10/31 °F	10/31 %RH	11/1 °F	11/1 %RH		
7:53	61	25	62	90	59	87		
8:53	62	24	63	75	62	78		
9:53	64	22	62	100	64	73		
10:53	67	25	63	73	63	73		
11:53	67	100	64	70	63	75		
12:53	65	97	64	70	63	75		
13:53	65	84	63	73	62	78		
14:53	62	93	62	75	62	78		
15:53	62	96	61	78	62	80		
16:53	61	100	61	78	61	87		
17:53	61	100	60	80	60	86		