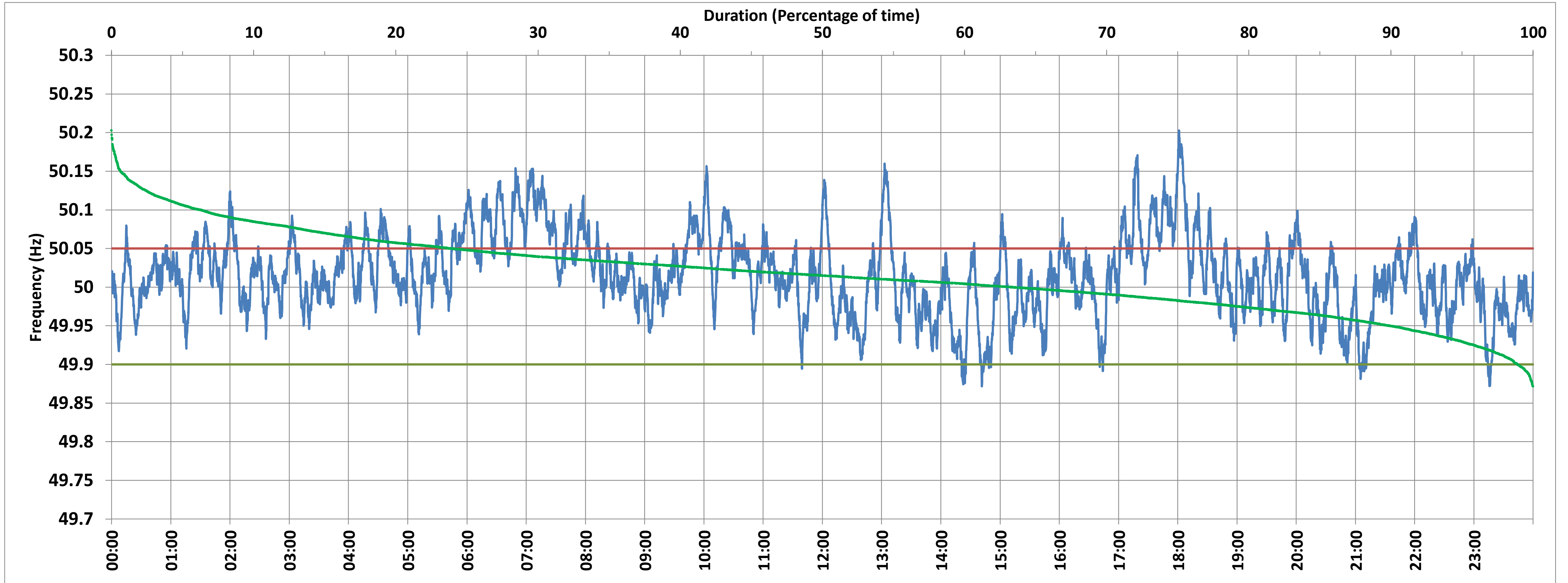




MPPTCL BINA:Frequency

National Grid Frequency Profile for 31-Mar-2018



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2
0.00	1.09	18.25	0.00	1.09	35.63	57.04	6.24	75.07	99.99	44.34	17.62	63.24	37.41	23.84	0.01

Average Frequency :	50.016	Frequency Variation Index :	0.030	Standard Deviation :	0.052	Mileage	46.38
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Instantaneous Frequency		
Max	50.203	18:01:10
Min	49.872	14:41:30

15 minute Average Frequency		
Max	50.118	7:15:00
Min	49.923	21:15:00

No. of excursions above 50.03 Hz	168
No. of excursions below 49.97 Hz	112
No. of excursions above 50.00 Hz	184
No. of excursions below 50.00 Hz	182

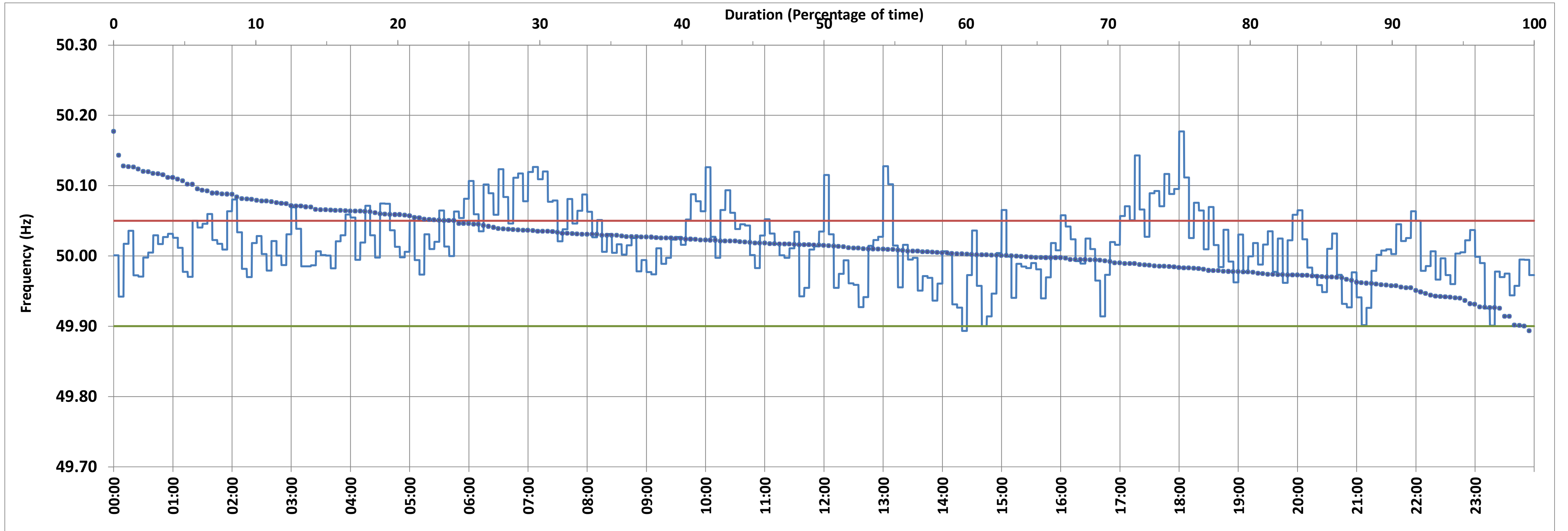
% time <49.95	10.06
% time between 49.95 to 50.05	66.10

Average time freq remains below 49.97 per excursion	0:02:21	Average time frequency remains above 50.03 per excursion	0:03:12
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MPPTCL BINA:Frequency

5 Min. Average Frequency Profile for 31-Mar-2018



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2
0.00	0.69	14.24	0.00	0.69	36.11	57.29	5.90	75.00	100.00	51.39	18.40	63.19	34.38	24.31	0.00

Average Frequency :	50.016
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Mileage	9.1331
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Instantaneous Frequency		
Max	50.203	18:01:10
Min	49.872	14:41:30

Based on 5 minute Average Frequency		
Max	50.177	18:05:00
Min	49.893	14:30:00

No. of excursions above 50.03 Hz	36
No. of excursions below 49.97 Hz	22
No. of excursions above 50.00 Hz	38
No. of excursions below 50.00 Hz	38

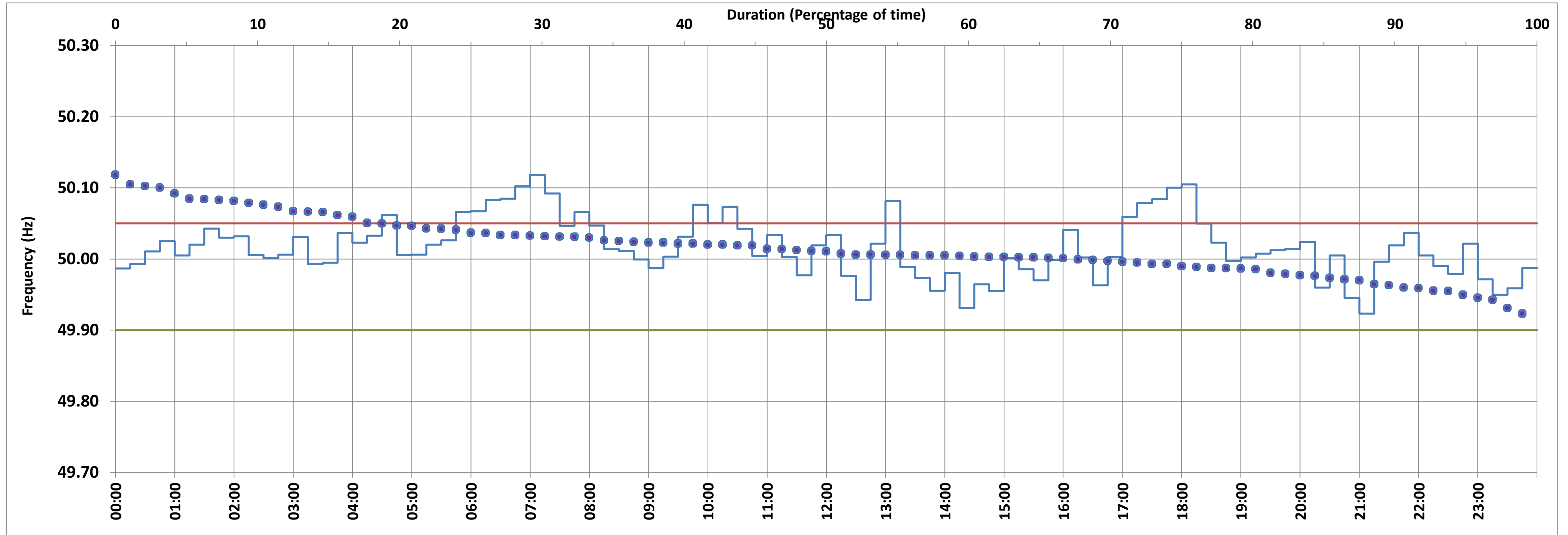
% time <49.95	7.99
% time between 49.95 to 50.05	67.71

NOTE: All calculations except Instantaneous Max/Min based on 5 minute average frequency



MPPTCL BINA:Frequency

15 Min. Average Frequency Profile for 31-Mar-2018



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2	
0.00	0.00	11.46	0.00	0.00	32.29	63.54	4.17	81.25	100.00	55.21	14.58	67.71	33.33	18.75	0.00	

Average Frequency :	50.016
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Mileage	2.4869
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Instantaneous Frequency		
Max	50.203	18:01:10
Min	49.872	14:41:30

Based on 15 minute Average Frequency			
Max	50.118	7:15:00	
Min	49.923	21:15:00	

No. of excursions above 50.03 Hz	13
No. of excursions below 49.97 Hz	7
No. of excursions above 50.00 Hz	12
No. of excursions below 50.00 Hz	13

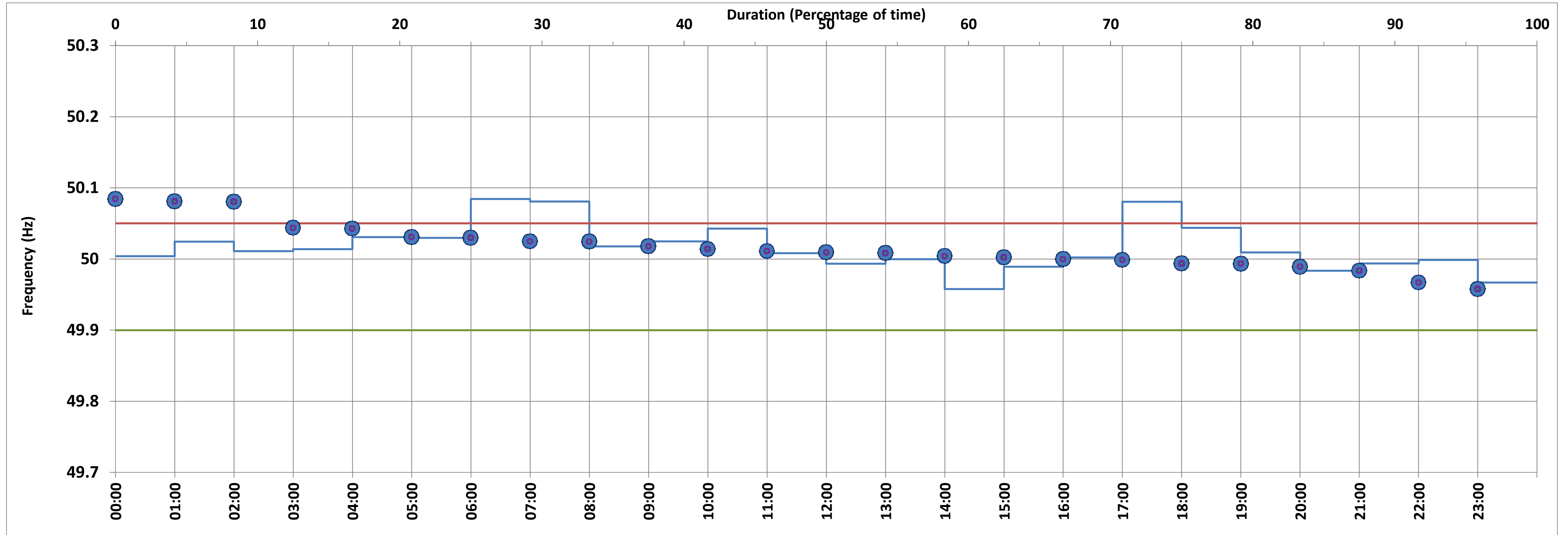
% time <49.95	5.21
% time between 49.95 to 50.05	76.04

NOTE: All calculations except Instantaneous Max/Min based on 15 minute average frequency



MPPTCL BINA:Frequency

Hourly Average Frequency Profile for 31-Mar-2018



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2	
0.00	0.00	8.33	0.00	0.00	33.33	66.67	0.00	87.50	100.00	66.67	12.50	66.67	25.00	12.50	0.00	

Average Frequency :	50.016
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Mileage	0.5647
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Instantaneous Frequency		
Max	50.203	18:01:10
Min	49.872	14:41:30

Based on an hour Average Frequency			
Max	50.084	7:00:00	
Min	49.958	15:00:00	

No. of excursions above 50.03 Hz	4
No. of excursions below 49.97 Hz	2
No. of excursions above 50.00 Hz	2
No. of excursions below 50.00 Hz	2

% time <49.95	0.00
% time between 49.95 to 50.05	87.50

NOTE: All calculations except Instantaneous Max/Min based on an hour average frequency