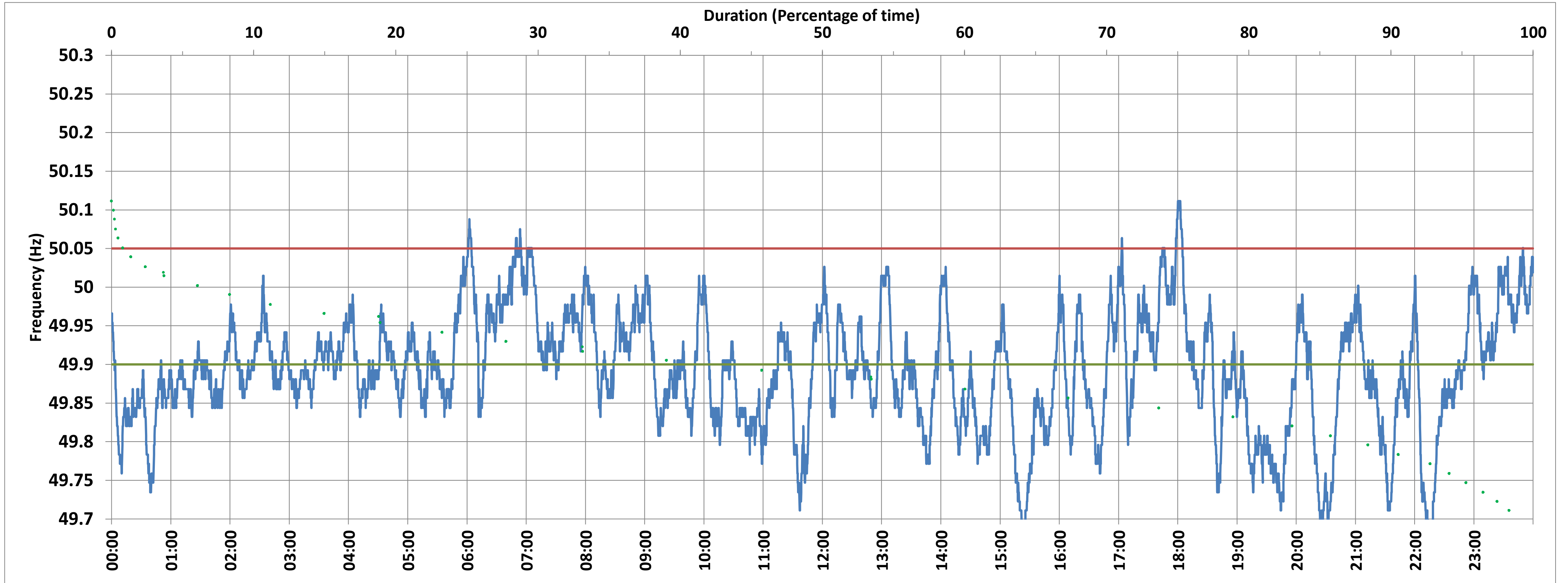


POWER SYSTEM OPERATION CORPORATION LIMITED
NATIONAL LOAD DESPATCH CENTRE NEW DELHI



SOMANAHALLI:Frequency

National Grid Frequency Profile for 10-May-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
1.01	54.27	85.05	10.61	42.65	37.43	8.16	0.14	44.38	98.99	12.58	1.22	8.30	2.37	1.35	0.00

Average Frequency :	49.892	Frequency Variation Index :	0.174	Standard Deviation :	0.075	Mileage	39.19
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Instantaneous Frequency		
Max	50.111	18:00:10
Min	49.638	22:16:10

15 minute Average Frequency		
Max	50.031	7:00:00
Min	49.718	15:30:00

No. of excursions above 50.03 Hz	15
No. of excursions below 49.97 Hz	61
No. of excursions above 50.00 Hz	39
No. of excursions below 50.00 Hz	39

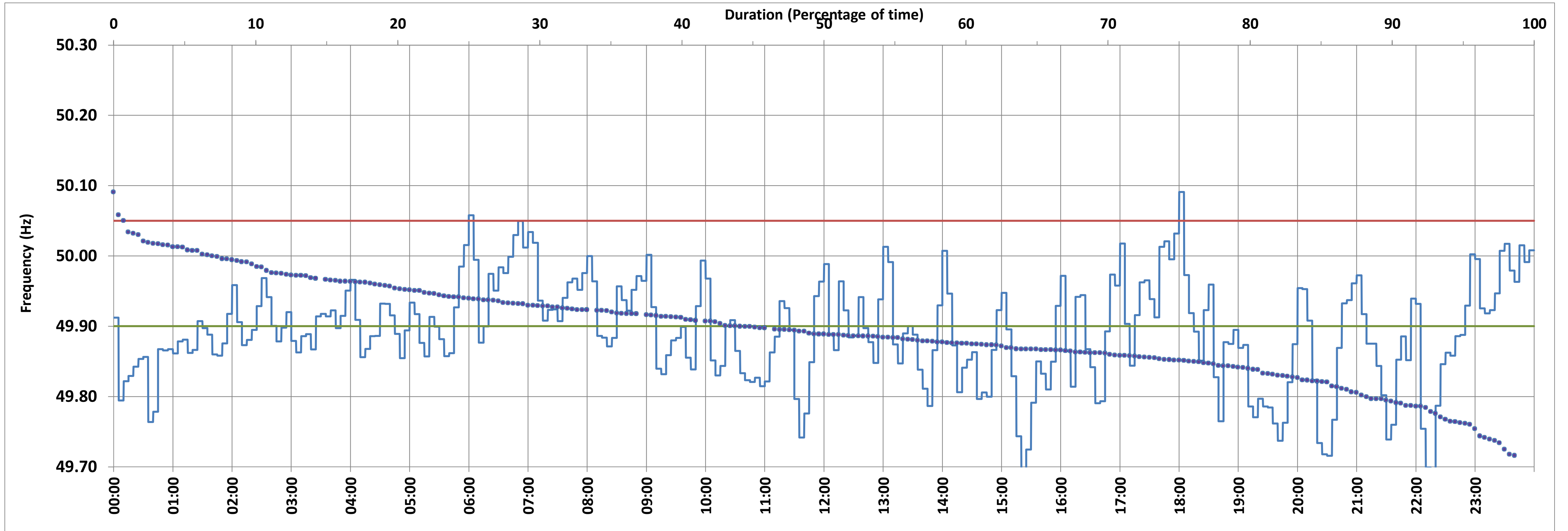
% time <49.95	76.75
% time between 49.95 to 50.05	21.90

Average time freq remains below 49.97 per excursion	0:20:05	Average time frequency remains above 50.03 per excursion	0:02:17
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SOMANAHALLI:Frequency

5 Min. Average Frequency Profile for 10-May-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
1.04	55.90	86.11	10.76	44.10	37.15	6.94	0.00	43.40	98.96	12.15	0.69	6.94	1.74	0.69	0.00

Average Frequency :	49.892
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Mileage	10.9824
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Instantaneous Frequency		
Max	50.111	18:00:10
Min	49.638	22:16:10

Based on 5 minute Average Frequency		
Max	50.091	18:05:00
Min	49.682	22:25:00

No. of excursions above 50.03 Hz	4
No. of excursions below 49.97 Hz	18
No. of excursions above 50.00 Hz	12
No. of excursions below 50.00 Hz	12

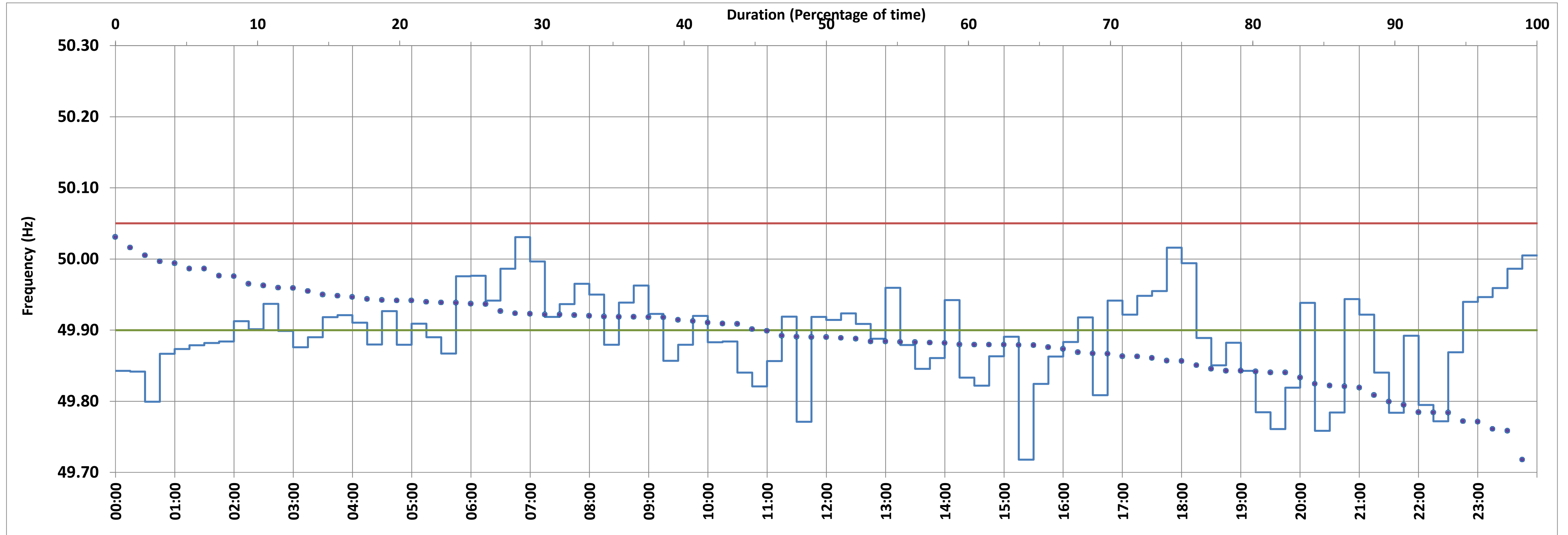
% time <49.95	78.13
% time between 49.95 to 50.05	21.18

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



SOMANAHALLI:Frequency

15 Min. Average Frequency Profile for 10-May-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	54.17	90.63	10.42	43.75	42.71	3.13	0.00	45.83	100.00	8.33	0.00	3.13	1.04	0.00	0.00	

Average Frequency :	49.892
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Mileage	4.4722
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Instantaneous Frequency		
Max	50.111	18:00:10
Min	49.638	22:16:10

Based on 15 minute Average Frequency			
Max	50.031	7:00:00	
Min	49.718	15:30:00	

No. of excursions above 50.03 Hz	1
No. of excursions below 49.97 Hz	4
No. of excursions above 50.00 Hz	3
No. of excursions below 50.00 Hz	3

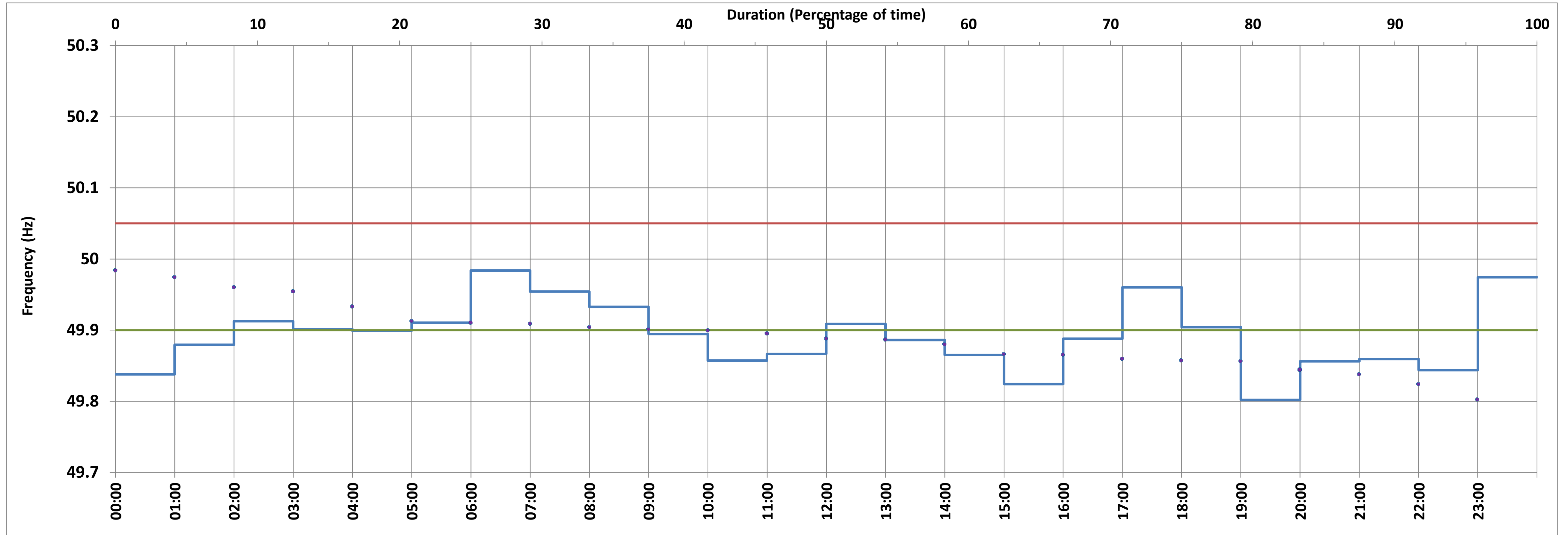
% time <49.95	85.42
% time between 49.95 to 50.05	14.58

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



SOMANAHALLI:Frequency

Hourly Average Frequency Profile for 10-May-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	58.33	91.67	0.00	58.33	41.67	0.00	0.00	41.67	100.00	8.33	0.00	0.00	0.00	0.00	0.00	

Average Frequency :	49.892
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Mileage	0.9333
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Instantaneous Frequency		
Max	50.111	18:00:10
Min	49.638	22:16:10

Based on an hour Average Frequency			
Max	49.984	7:00:00	
Min	49.802	20:00:00	

No. of excursions above 50.03 Hz	0
No. of excursions below 49.97 Hz	2
No. of excursions above 50.00 Hz	0
No. of excursions below 50.00 Hz	1

% time <49.95	83.33
% time between 49.95 to 50.05	16.67

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