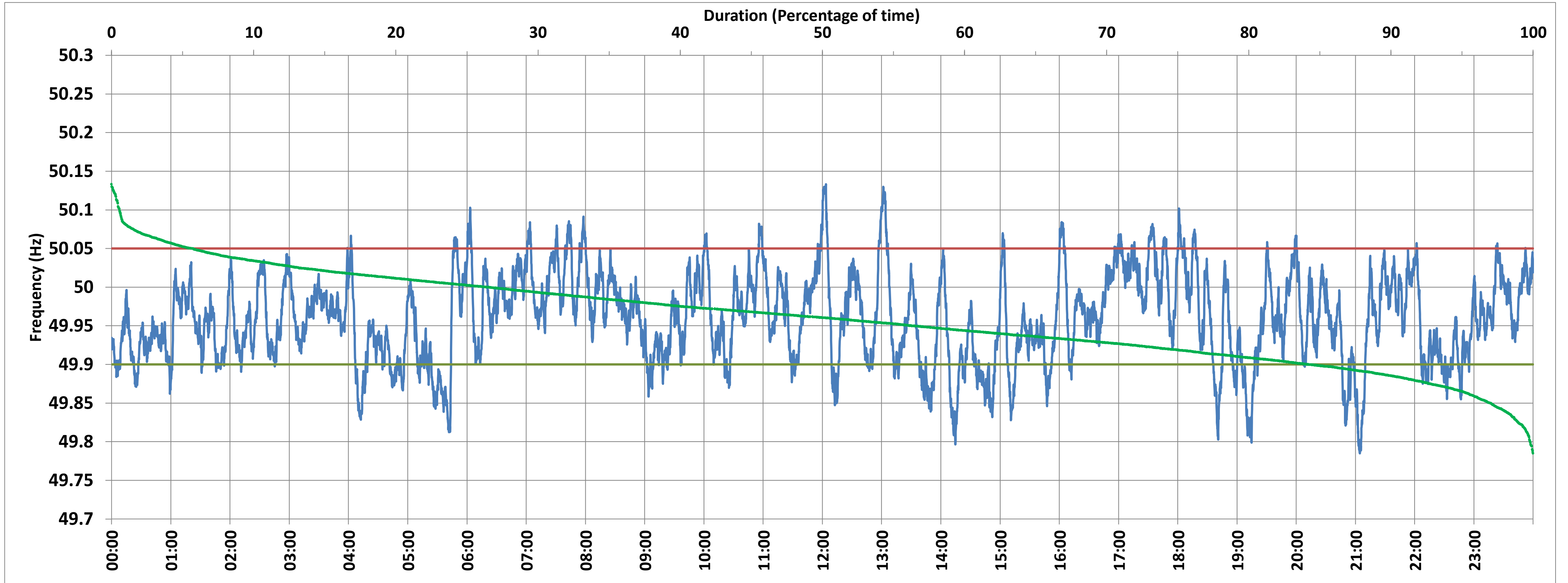




NTPC-VINDHYACHAL:Frequency

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
0.00	15.83	56.39	0.21	15.63	57.70	25.90	0.57	78.46	100.00	32.22	5.15	26.37	11.39	5.71	0.00

Average Frequency :	49.960	Frequency Variation Index :	0.050	Standard Deviation :	0.058	Mileage	46.53
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Instantaneous Frequency		
Max	50.133	12:03:30
Min	49.785	21:04:30

15 minute Average Frequency		
Max	50.035	17:15:00
Min	49.866	5:45:00

No. of excursions above 50.03 Hz	85
No. of excursions below 49.97 Hz	154
No. of excursions above 50.00 Hz	121
No. of excursions below 50.00 Hz	122

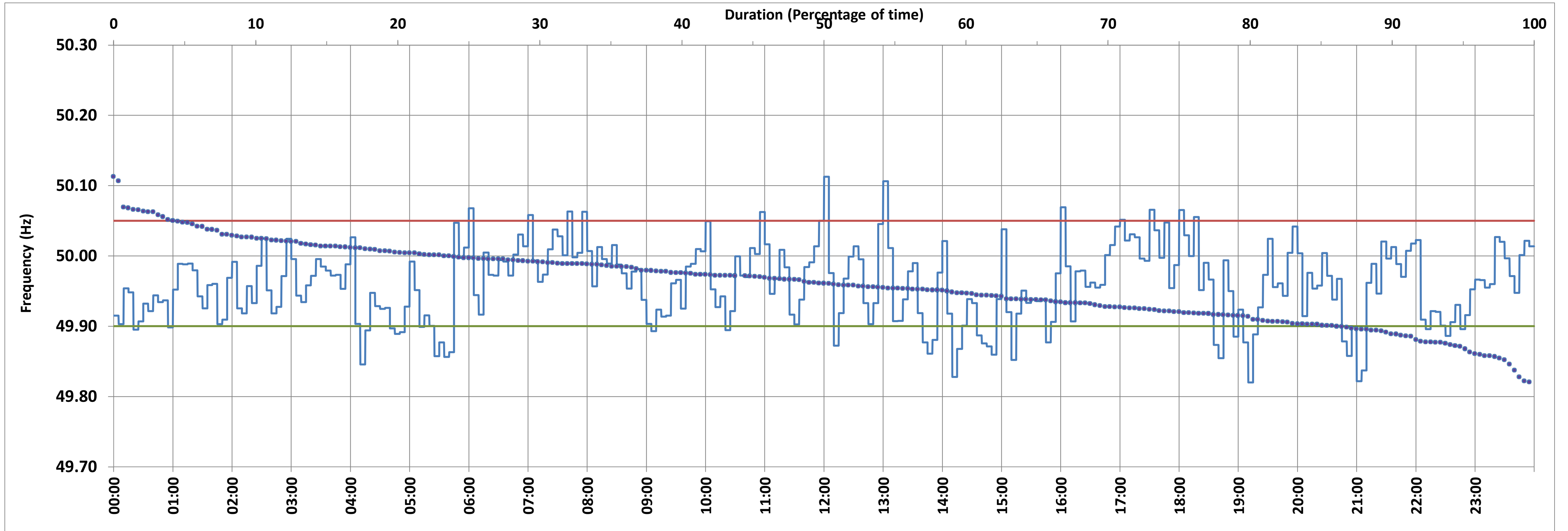
% time <49.95	43.69
% time between 49.95 to 50.05	50.60

Average time freq remains below 49.97 per excursion	0:05:16	Average time frequency remains above 50.03 per excursion	0:01:56
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NTPC-VINDHYACHAL: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
0.00	13.89	54.51	0.00	13.89	62.85	22.57	0.69	81.94	100.00	37.15	3.47	23.26	8.33	4.17	0.00

Average Frequency :	49.960
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Mileage	10.6736
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Instantaneous Frequency		
Max	50.133	12:03:30
Min	49.785	21:04:30

Based on 5 minute Average Frequency		
Max	50.113	12:05:00
Min	49.820	19:20:00

No. of excursions above 50.03 Hz	20
No. of excursions below 49.97 Hz	36
No. of excursions above 50.00 Hz	33
No. of excursions below 50.00 Hz	33

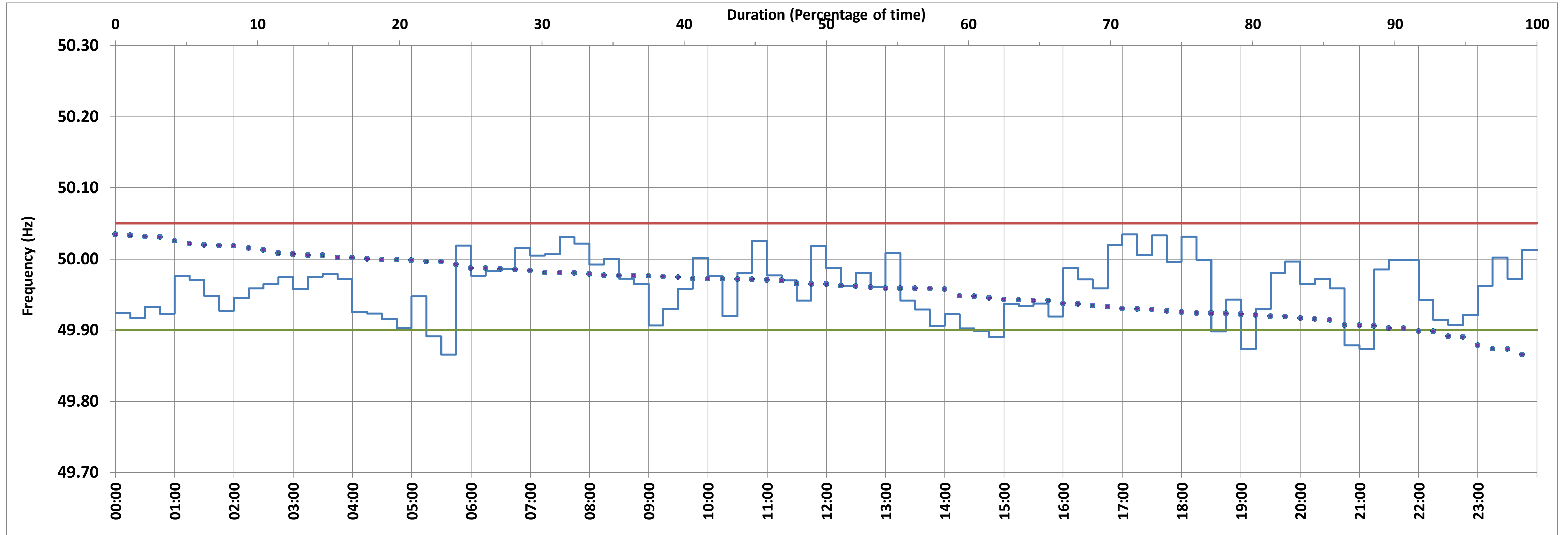
% time <49.95	41.32
% time between 49.95 to 50.05	54.51

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



NTPC-VINDHYACHAL: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	8.33	53.13	0.00	8.33	73.96	17.71	0.00	91.67	100.00	42.71	0.00	17.71	4.17	0.00	0.00	

Average Frequency :	49.960
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Mileage	2.8337
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Instantaneous Frequency		
Max	50.133	12:03:30
Min	49.785	21:04:30

Based on 15 minute Average Frequency			
Max	50.035	17:15:00	
Min	49.866	5:45:00	

No. of excursions above 50.03 Hz	4
No. of excursions below 49.97 Hz	15
No. of excursions above 50.00 Hz	10
No. of excursions below 50.00 Hz	10

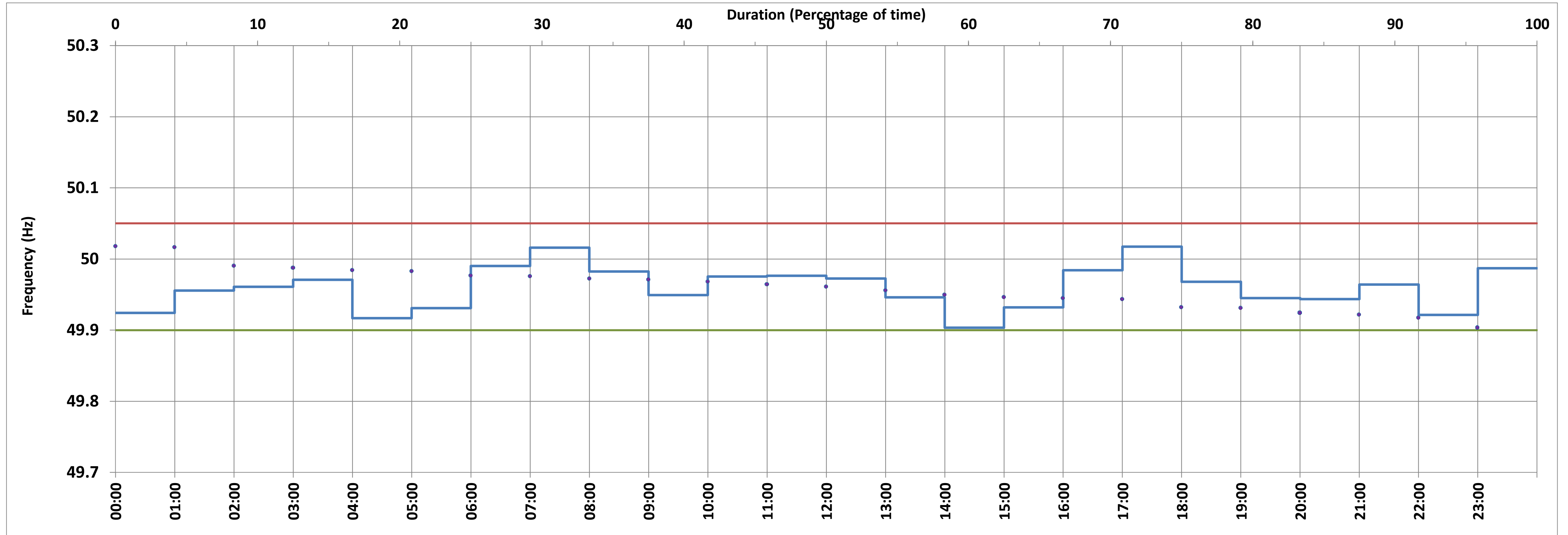
% time <49.95	40.63
% time between 49.95 to 50.05	59.38

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



NTPC-VINDHYACHAL: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	0.00	58.33	0.00	0.00	91.67	8.33	0.00	100.00	100.00	41.67	0.00	8.33	0.00	0.00	0.00	

Average Frequency :	49.960
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Mileage	0.6843
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Instantaneous Frequency		
Max	50.133	12:03:30
Min	49.785	21:04:30

Based on an hour Average Frequency			
Max	50.017	18:00:00	
Min	49.903	15:00:00	

No. of excursions above 50.03 Hz	0
No. of excursions below 49.97 Hz	5
No. of excursions above 50.00 Hz	2
No. of excursions below 50.00 Hz	3

% time <49.95	41.67
% time between 49.95 to 50.05	58.33

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