

**Appendix G:  
Noise Supporting Information**

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# VACUTECH

## SOUND LEVEL METER READINGS

**MODEL: FT-DD-T440HP3 (40hp T4 VACSTAR TURBINE VACUUM PRODUCER)**

**READING ONE:** 60 DB-A, 3 FEET FROM TURBINE @ 45° ANGLE  
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

**READING TWO:** 56 DB-A, 10 FEET FROM TURBINE @ 45° ANGLE  
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

**READING THREE:** 51 DB-A, 20 FEET FROM TURBINE @ 45° ANGLE  
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

**READING FOUR:** 44 DB-A, 30 FEET FROM TURBINE @ 45° ANGLE  
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

**NOTE:** THESE READINGS WERE TAKEN OUTSIDE OF 8'x10'x8' CINDER BLOCK ENCLOSURE WITH CONCRETE SLAB AND NO ROOF.

## SOUND LEVEL METER USED:

SIMPSON MODEL #40003 – MSHA APPROVED.  
MEETS OSHA & WALSH-HEALY REQUIREMENTS FOR NOISE CONTROL.  
CONFORMS TO ANSI S1.4-1983, IEC 651 SPECS FOR METER TYPE.

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**Approved**

03/22/2021 12:09:27 PM

Project Number: 3746.0003  
 Project Name: Blue Wave Car Wash  
 Test Personnel: Henrique Zhu

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## Noise Measurement Survey

Site Number: ST-1      Date: 6-29-22      Time: From 11:10AM To 11:25AM

Site Location:                      Site features dried grass and firm dirt surface. Concrete wall alongside existing carwash, and metal fence with wood slats along southern boundary of site. Road on Northern boundary of site has E. Leland Road, approx. 200ft away.

Primary Noise Sources: E. Leland Road traffic, traffic in residential unit south of site, Car Wash behind concrete wall (East of site)

### Measurement Results

	dBA
Leq	51.8
Lmax	57.9
Lmin	46.1
L5	56.4
L10	55.9
L50	50.2
L90	47.7
Ldn	
CNEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dBA
11:16	Car wash	~57
11:22	Tank degassing	~54

Comments: Vehicle speeds: 20-40mph depending on traffic light, posted 30mph. 2 vehicle lanes, 1 bike lane. 15-20 cars in each vehicle group, 2 groups every 5 minutes. Vehicles range from compact cars to semi-trailer trucks.

Equipment: SoundTrack LxT2      Measured Difference: -0.49 dBA  
 Settings: A-Weighted  Other       Slow  Fast       Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
7.8	2	88.3		
Comments:				

Photos Taken:

Project Number: 3746.0003  
 Project Name: Blue Wave Car Wash  
 Test Personnel: Henrique Zhu

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## Noise Measurement Survey

Site Number: ST-2      Date: 6-29-22      Time: From 11:41AM To 11:56AM

Site Location: Site features dried grass and firm dirt surface. Concrete wall alongside existing carwash, and metal fence with wood slats along southern boundary of site. Road on Northern boundary of site has E. Leland Road, approx. 125ft away. Concrete wall ends right by tripod position.

Primary Noise Sources: E. Leland Road traffic, traffic in residential unit south of site, Car Wash behind concrete wall (East of site)

### Measurement Results

	dB(A)
Leq	56.1
Lmax	74.7
Lmin	50.2
L5	58.0
L10	56.5
L50	53.9
L90	52.3
Ldn	
CNEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dB(A)
11:45	Tank degassing	~65
11:50	Sports car acceleration	~65

Comments: Vehicle speeds: 20-40mph depending on traffic light, posted 30mph. 2 vehicle lanes, 1 bike lane. 15-20 cars in each vehicle group, 2 groups every 5 minutes. Vehicles range from compact cars to semi-trailer trucks.

Equipment: SoundTrack LxT2      Measured Difference: -0.49 dB(A)  
 Settings: A-Weighted  Other       Slow  Fast       Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
11.4	3.8	82.5		
Comments:				

Project Number: 3746.0003  
 Project Name: Blue Wave Car Wash  
 Test Personnel: Henrique Zhu

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## Noise Measurement Survey

Site Number: ST3 Date: 6-29-22 Time: From 12:08PM To 12:18PM

Site Location: Site features dried grass and firm dirt surface. Concrete wall alongside existing carwash, and metal fence with wood slats along southern boundary of site. Road on Northern boundary of site has E. Leland Road, approx. 10ft away.

Primary Noise Sources: E. Leland Road traffic, traffic in residential unit south of site, Car Wash behind concrete wall (East of site)

### Measurement Results

	dBA
Leq	62.5
Lmax	75.6
Lmin	51.6
L5	67.3
L10	66.0
L50	60.6
L90	55.4
Ldn	
CNEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dBA
12:25	Car Wash	~66

Comments: Vehicle speeds: 20-40mph depending on traffic light, posted 30mph. 2 vehicle lanes, 1 bike lane. 15-20 cars in each vehicle group, 2 groups every 5 minutes. Vehicles range from compact cars to semi-trailer trucks.

Equipment: SoundTrack LxT2  
 Settings: A-Weighted  Other

Measured Difference: -0.49 dBA  
 Slow  Fast  Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8.9	3.2	87.9		
Comments:				