



ACOUSTIC MONITORING NOISE STUDY

Beulah Road Mulch Site

Town of Vienna, Virginia

February 2018

Revised August 2019

SUBMITTED BY:



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1.0 INTRODUCTION

1.1 Project Description

Whitman, Requardt and Associates, LLP (WRA) conducted an acoustic monitoring study associated with the Town of Vienna's Beulah Road Mulch Site. The purpose of this study is to determine the existing ambient sound levels associated with the operation of the leaf grinding facility.

This report contains a discussion of the following items:

- A description of noise terminology;
- The results of ambient noise monitoring efforts;
- An evaluation of the noise reduction of the existing noise barrier;
- A prediction of sound levels for the site;
- A comparison to the results of the 2004 noise study; and
- A discussion the Town of Vienna's noise ordinance as it related to the operation of the mulch site.

2.0 NOISE FUNDAMENTALS AND TERMINOLOGY

2.1 Noise Descriptors

Noise is generally defined as unwanted or annoying sound. Airborne sound occurs by a rapid fluctuation of air pressure above and below atmospheric pressure. Sound pressure levels are usually measured and expressed in decibels (dB). The decibel scale is logarithmic and expresses the ratio of the sound pressure unit being measured to a standard reference level.

Most sounds occurring in the environment do not consist of a single frequency, but rather a broad band of differing frequencies. The intensities of each frequency add to generate sound. Because the human ear does not respond to all frequencies equally, the method commonly used to quantify environmental noise consists of evaluating all of the frequencies of a sound according to a weighting system. It has been found that the A-weighted filter on a sound level meter, which includes circuits to differentially measure selected audible frequencies, best approximates the frequency response of the human ear. Consequently, A-weighted decibels (dB(A)) were primarily used for the noise monitoring efforts.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, creating a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, a statistical noise descriptor called the equivalent hourly sound level, or L_{eq} (h), is commonly used. L_{eq} (h) describes a noise sensitive receptor's cumulative exposure from all noise-producing events over a one-hour period (herein referenced as " L_{eq} ").

Because decibels are logarithmic units, sound levels cannot be added by ordinary arithmetic means. The following general relationships provide a basic understanding of sound generation and propagation:

- An increase, or decrease, of 10 dB will be perceived by a receptor to be a doubling, or halving, of the sound level;
- Doubling the distance between the noise source and receptor will produce a 6 dB sound level decrease; and
- A sound level increase of 3 dB is barely detectable by the human ear.

3.0 EXISTING NOISE ENVIRONMENT

To assess the existing noise conditions at the mulch site, short term noise monitoring was conducted. Noise monitoring was conducted in the vicinity of noise-sensitive land uses (i.e. residences) near the mulch site.

3.1 Short-term Noise Monitoring

Short-term noise measurements of 10 minutes duration were obtained by WRA at multiple sites at and/or near the much facility on January 18, 2018. Eight short-term measurements were collected (in four monitoring sessions) using two Rion NL-42 Type 2 (precision) sound level meters. Prior to the noise monitoring sessions, the noise meter was calibrated to 94 dB using a Rion NC-74 precision acoustic calibrator.

Readings were taken on the A-weighted scale and reported in dB(A). The data collection procedure involved the collection of equivalent continuous sound level measurements (L_{eq}), in consecutive 10-second intervals. This method allows individual time intervals to be correlated with witnessed noise events. Data collected by the sound level meter included time, L_{eq} , minimum noise level (L_{min}), maximum noise level (L_{max}), percentile sound levels (e.g. L_5 , L_{10} , L_{50} , L_{90} , L_{95}), and the sound exposure level (SEL) for each interval. Hourly L_{eq} were derived at each location from the 10-minute L_{eq} values.

A summary of the short-term noise monitoring results is presented in **Table 3-1**. For each site, the table lists the assigned monitoring site number; the location of the monitoring site; the monitoring session number; the monitored sound level; and the dominant sources of noise at each site.

The location of each noise monitoring site in relation to the project roadway is shown on **Figure 3-1**. The data logger outputs for each monitoring session are included as **Appendix A**.

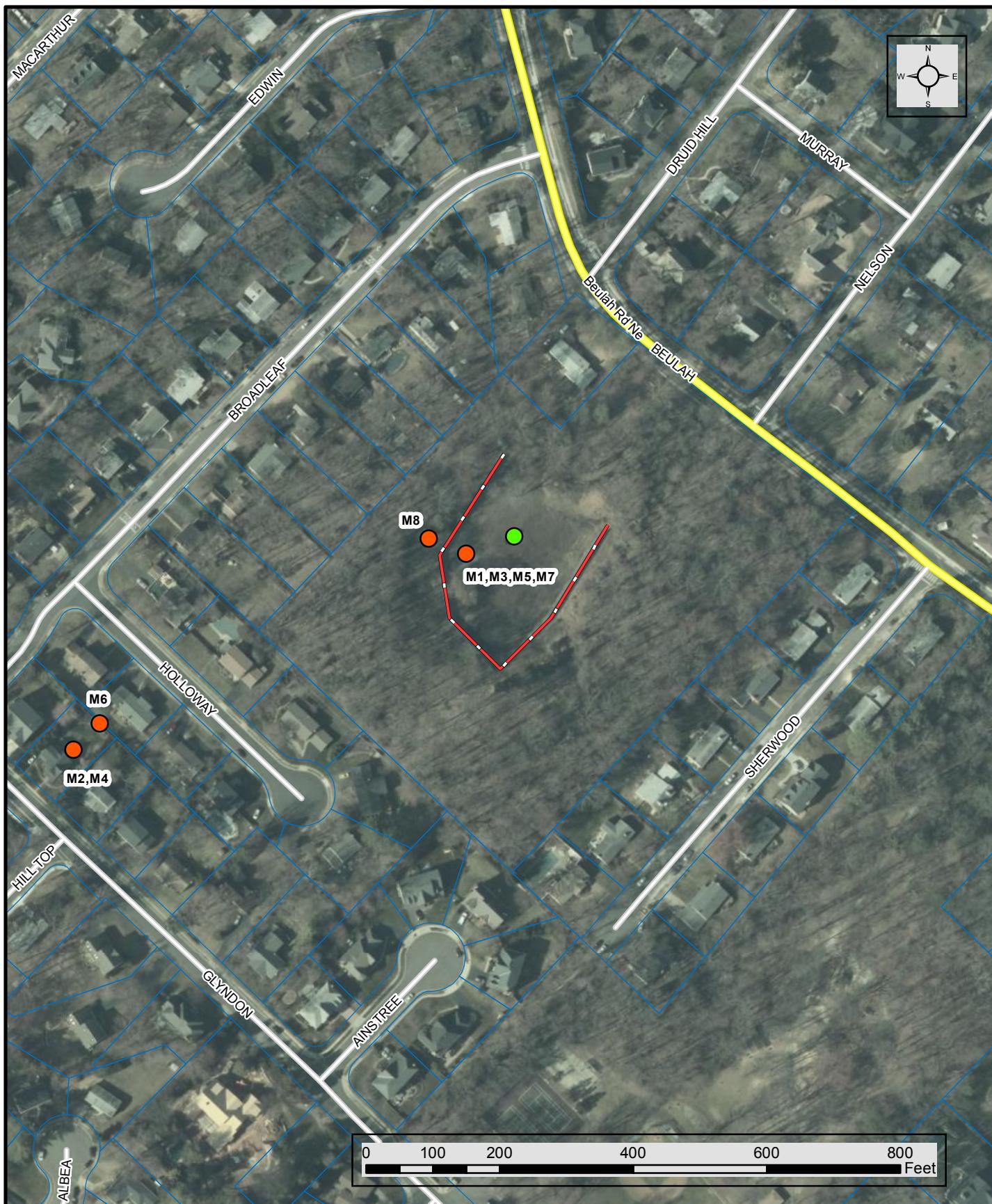


Figure 3-1:
Noise
Monitoring
Locations

ACOUSTIC MONITORING NOISE STUDY
Beulah Road Mulch Site
Town of Vienna, Virginia

- Noise Monitoring Locations
- Location of Leaf Grinder
- Town of Vienna Parcels
- Existing Noise Barrier Location

Table 3-1: Short-term Noise Monitoring Summary

Site	Location	Monitoring Session	Dominant Sources of Noise	L _{eq} (dB(A))
M1	Located approximately 50 feet from grinder and 15 feet inside the noise barrier	1	Idling Loaders, Mulch Trucks	54.9
M2	Located in backyard of the residence at 441 Glyndon Street NE	1	Idling Loaders, Mulch Trucks / Ambient	49.9
M3	Located approximately 50 feet from grinder and 15 feet inside the noise barrier	2	Grinder	76.1
M4	Located in backyard of the residence at 441 Glyndon Street NE	2	Ambient	45.9
M5	Located approximately 50 feet from grinder and 15 feet inside the noise barrier	3	Grinder	78.5
M6	Located at fence line of the residence at 441 Glyndon Street NE	3	Ambient	45.2
M7	Located approximately 50 feet from grinder and 15 feet inside the noise barrier	4	Grinder	78.1
M8	Located approximately 15 feet behind the noise barrier	4	Grinder	61.9

3.2 Interpretation of the Monitoring Results

While **Table 3-1** shows the overall levels for each monitoring session, charts were created for each of the four monitoring sessions that show a more detailed breakdown of the events and their associated monitored sound levels. For all of the monitoring sessions, sites M1, M3, M5, and M7 represented the baseline (i.e. sound level meter remained in the same location and represents the operations inside the existing noise barrier.)

Chart 3-1: Monitoring Session #1: Sites M1 and M2

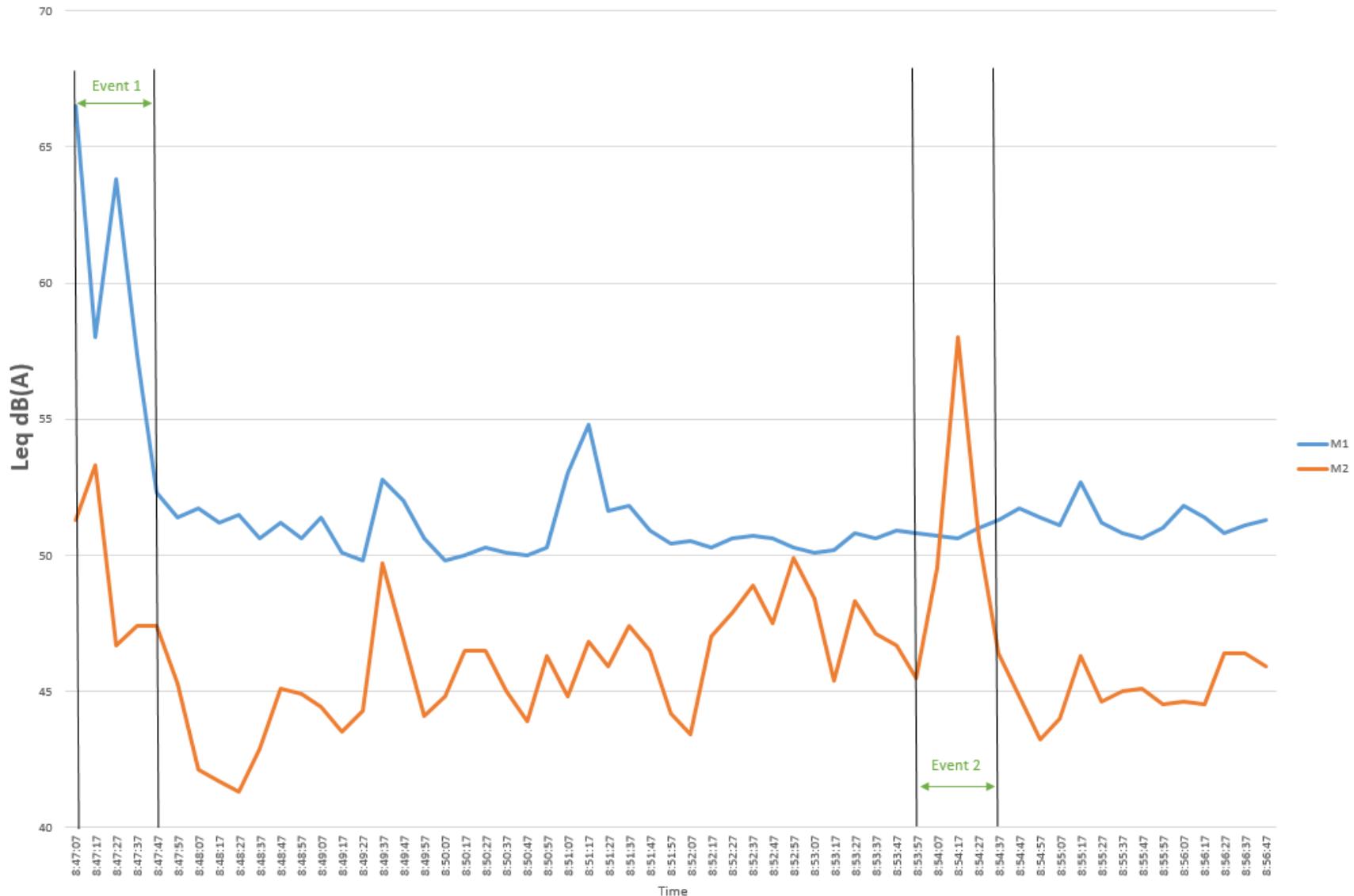


Chart 3-2: Monitoring Session #2: Sites M3 and M4

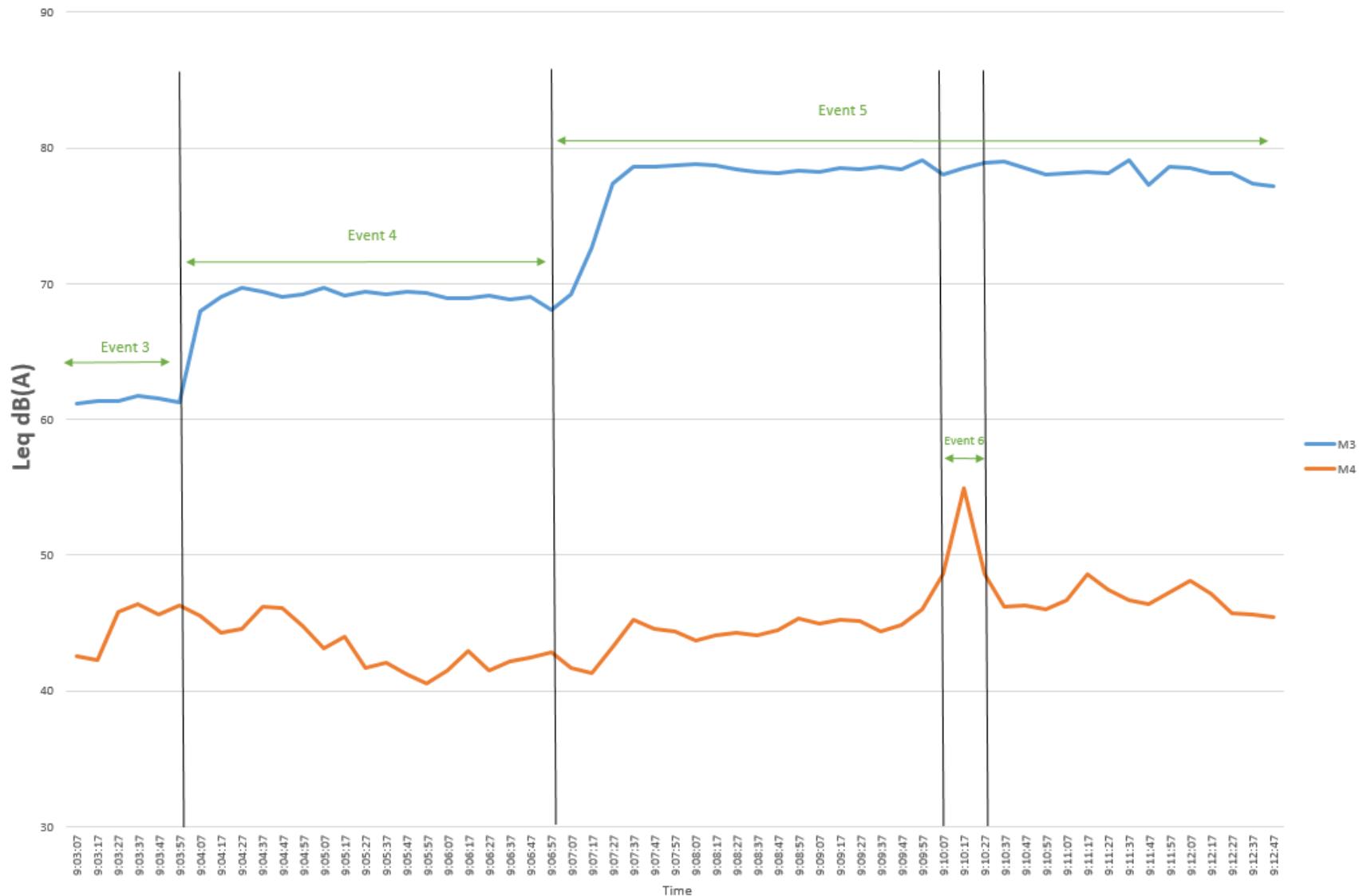


Chart 3-3: Monitoring Session #3: Sites M5 and M6

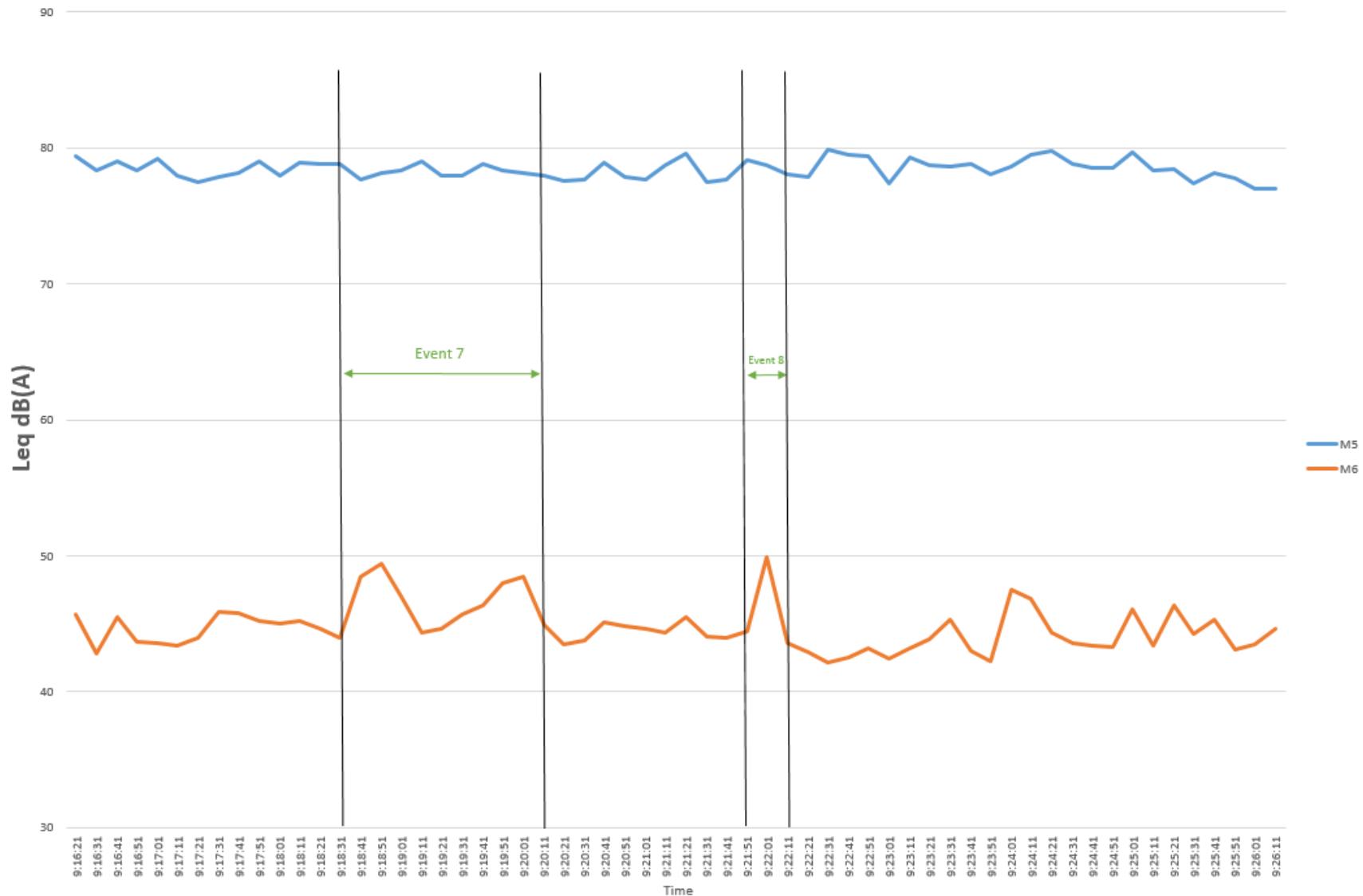
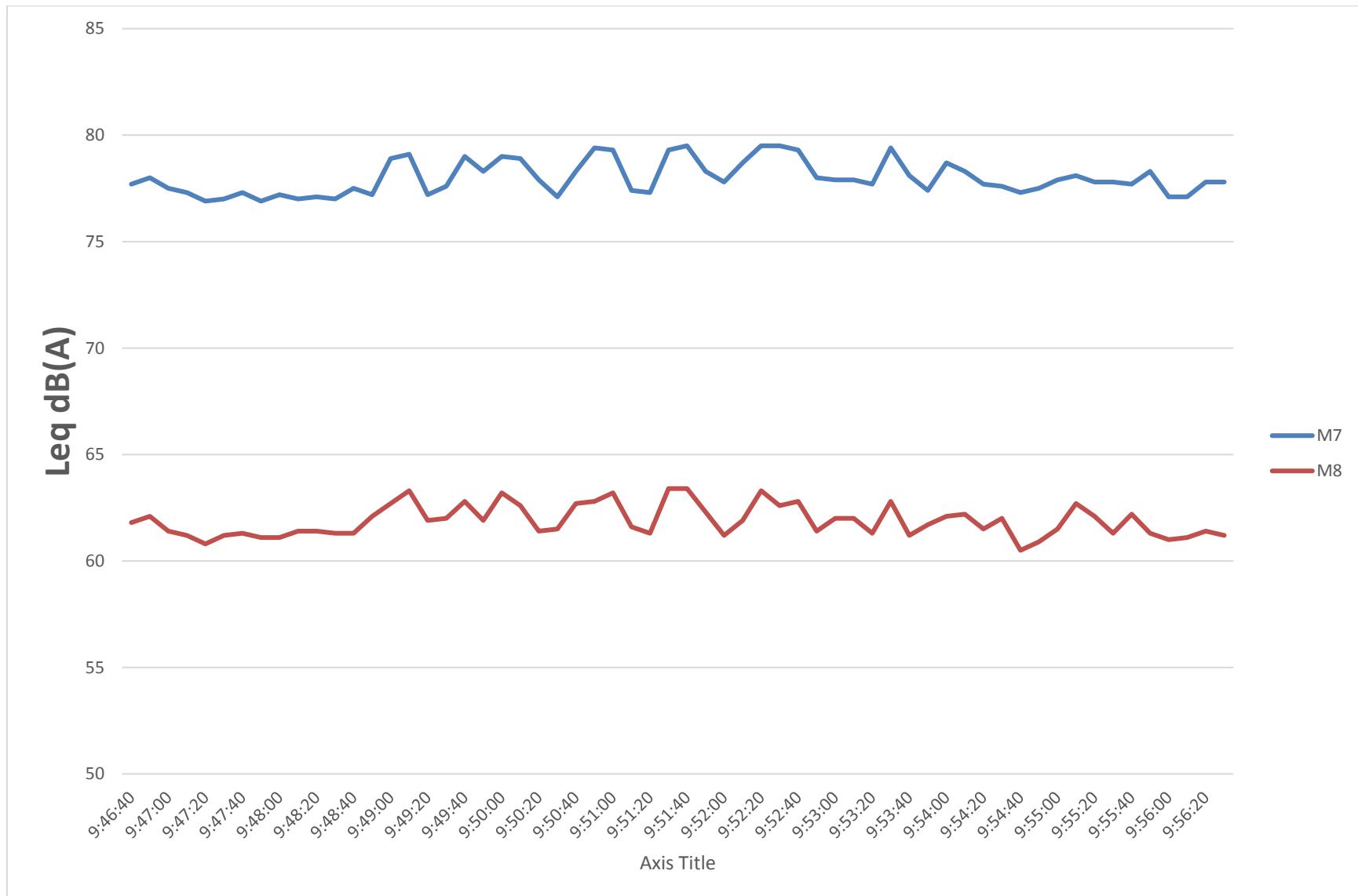


Chart 3-4: Monitoring Session #4: Sites M7 and M8



3.3 Monitoring Session #1: Sites M1 and M2

Monitoring Session #1 was conducted from 8:47-8:57 AM. This session represents activities that occur at the Mulch Site when the grinder is not in operation. Based on **Chart 3-1**, there were two noticeable events that occurred during this 10-minute monitoring session:

- **Event #1** represents an event where a mulch truck was loaded using one of the John Deere wheel loaders (An example of this type of event is shown in **Photo 3-1**); and
- **Event #2** represents an event when the resident of house at 441 Glyndon Street NE started a conversation with WRA's field technician.

The rest of the session represents idling noise associated with the John Deere loaders. Monitored sound levels for these events have been summarized in **Table 3-2**.

Table 3-2: Sound Levels and Activities for Monitoring Session #1

Site	Event	Dominant Sources of Noise	Range of Monitored L_{eq} (dB(A))
M1	1	Mulch Truck Loading Event	52-67
M2	1	Mulch Truck Loading Event	47-53
M1	2	Conversation with Resident	50-51
M2	2	Conversation with Resident	46-58
M1	Non-Event	Idling Loaders	50-55
M2	Non-Event	Idling Loaders	41-50

Photo 3-1: Mulch Truck Loading Event

3.3.1 Observations Based on Monitoring Session #1

Based on a review of the data logs and field notes for the monitoring session the following observations were made:

- The sound levels associated with the idling loaders were monitored to have sound levels up 10 dB(A) lower, with an average of 5 dB(A) in the backyard of the residence at Site M2; and
- The conversation with the resident generated sound levels that were approximately 7 dB(A) higher than the idling loaders. This would demonstrate that the activities at the work site do not appear to interfere with speech.

3.4 Monitoring Session #2: Sites M3 and M4

Monitoring Session #2 was conducted from 9:03-9:13 AM. This session represents activities that occur at the Mulch Site when the grinder is in operation. Based on **Chart 3-2**, there were four noticeable events that occurred during this 10-minute monitoring session:

- **Event #3** represents the grinder just after starting, under a low throttle;
- **Event #4** represents the grinder under a medium throttle, as the engine was “warming up”;

- **Event #5** represents the grinder under full throttle, as well as the wheel loaders moving leaves into the grinder and represents the mulch facility running at full operation (An example of this type of event is shown in **Photo 3-2**); and
- **Event #6** represents an event where occasional wind gusts caused the gate to bang against the fencepost near the residence at 441 Glyndon Street NE.

Monitored sound levels for these events have been summarized in **Table 3-3**.

Table 3-3: Sound Levels and Activities for Monitoring Session #2

Site	Event	Dominant Sources of Noise	Range of Monitored L _{eq} (dB(A))
M3	3	Grinder (Low Throttle)	61-62
M4	3	Grinder (Low Throttle)	42-46
M3	4	Grinder (Medium Throttle)	68-73
M4	4	Grinder (Medium Throttle)	41-46
M3	5	Grinder (Full Throttle)	77-79
M4	5	Grinder (Full Throttle)	43-49
M3	6	Gate at Residence	78-79
M4	6	Gate at Residence	49-55

Photo 3-2: Grinder Operation

3.4.1 Observations Based on Monitoring Session #2

Based on a review of the data logs and field notes for the monitoring session the following observations were made:

- The sound levels associated with the grinder operation were monitored to have sound levels ranging from 15-30 dB(A) lower, in the backyard of the residence at Site M2; and
- The Leq sound levels associated with **Event #6** were approximately 7 dB(A) higher than the abated sound levels from the grinder operations at the mulch site.

3.5 Monitoring Session #3: Sites M5 and M6

Monitoring Session #3 was conducted from 9:16-9:26 AM. This session represents activities that occur at the Mulch Site when the grinder is in operation. Based on **Chart 3-3**, there were two noticeable events that occurred during this 10-minute monitoring session:

- **Event #7** represents an event where multiple mulch trucks were loaded using the John Deere wheel loaders; and
- **Event #8** represents an event where a mulch truck was loaded using one of the John Deere wheel loaders.

The rest of the session represents normal grinder operations at the mulch site. Monitored sound levels for these events have been summarized in **Table 3-4**.

Table 3-4: Sound Levels and Activities for Monitoring Session #3

Site	Event	Dominant Sources of Noise	Range of Monitored L _{eq} (dB(A))
M5	7	Mulch Truck Loading Events	78-79
M6	7	Mulch Truck Loading Events	44-49
M5	8	Mulch Truck Loading Event	78-79
M6	8	Mulch Truck Loading Event	43-50
M5	Non-Event	Grinder Operation	77-80
M6	Non-Event	Grinder Operation	42-48

3.5.1 Observations Based on Monitoring Session #3

Based on a review of the data logs and field notes for the monitoring session the following observation was made:

- The sound levels associated with the grinder operation were monitored to have sound levels ranging from 29-38 dB(A) lower, in the backyard of the residence at Site M2, averaging 32 dB(A) lower.

3.6 Monitoring Session #4: Sites M7 and M8

Monitoring Session #4 was conducted from 9:46-9:56 AM. This session represents activities that occur at the Mulch Site when the grinder is in operation. The purpose of this site was to determine the level of noise abatement provided by the existing noise barrier. Based on **Chart 3-4**, monitored sound levels have been summarized in **Table 3-5**.

Table 3-5: Sound Levels and Activities for Monitoring Session #4

Site	Event	Dominant Sources of Noise	Range of Monitored L _{eq} (dB(A))
M7	Non-Event	Grinder Operation	77-80
M8	Non-Event	Grinder Operation	61-63

3.6.1 Observations Based on Monitoring Session #4

Based on a review of the data logs and field notes for the monitoring session the following observation was made:

- The existing noise barrier is currently providing an average of 16 dB(A) of noise attenuation directly behind the wall (15 feet behind barrier), with a standard deviation of 0.4, which shows excellent correlation between the two sites.

4.0 PREDICTED NOISE LEVELS

In order to predict the existing sound levels associated with the mulch site operations sound levels were modeled using FHWA's Construction Noise Model (RCNM ver. 1.1), on the adjacent residences within the nearby vicinity. Noise receptors were modeled at the property lines for residence located on Broadleaf Drive NE, Holloway Court NE, Glyndon Street NE, Ainstree Court NE, and Sherwood Drive.

4.1 Equipment and Work Site Operations

Noise modeling was conducted using normal worksite conditions and equipment which include:

- The leaf grinder
- Three John Deere (model 544K II) wheel loaders
- Six mulch trucks (model F450 or equivalent) (per hour)
- Two gasoline powered pickups (per hour)

The John Deere wheel loaders also come with standard back-up warning alarms that were also incorporated into the analysis. The back-up alarms (part no. AT307092) manufacturer specs rate the alarm at 112 dB (at 5 feet) at a center frequency of 1,200 Hertz (Hz). 112 dB converts to approximately 112.6 dB(A) and would be approximately 86 dB(A) at 80 feet. The warning horn specifications in RCNM were adjusted to reflect this reference noise level.

4.2 Presentation of Modeled Results

The modeled results are presented in **Table 4-1**.

Table 4-1: Summary of Predicted Sound Levels

Receptor Number	Approximate Distance Between Residences and Grinder at Mulch Site (ft.)	Roadway	Predicted Sound Levels L_{eq} (dB(A))
R1	200	Broadleaf Drive NE	59
R2	380	Broadleaf Drive NE	53
R3	335	Holloway Court NE	54
R4	380	Holloway Court NE	53
R5	585	Glyndon Street NE	49
R6	700	Glyndon Street NE	48
R7	320	Sherwood Drive	55
R8	500	Sherwood Drive	51
R9	385	Ainstree Court NE	53
R10	560	Ainstree Court NE	51

While measured sound levels are slightly higher than modeled results, this is most likely due conservative estimates on the modeled number of mulch vehicles and extra wheel loader. The maximum modeled Leq does not approach 65 dB(A) at any of the adjacent residential property lines, which generally represents the threshold at which outdoor speech interference (@3ft) occurs.

4.3 Consistency with 2004 Noise Report

In 2004, Miller, Beam & Paganelli, Inc. performed an acoustical analysis for potential noise impacts from leaf mulching operations at the Beulah Road Mulch Site on the surrounding community. Based on this report, a proposed 12-foot high noise barrier was predicted to reduce noise from the grinder by more than 5 dB(A) at the surrounding properties, roughly reducing **projected noise levels** without a barrier in the 60-65 dB(A) range **to the 55-60 dB(A) range with a barrier**. The report concluded that the installation of the proposed barrier around the work area would provide a noticeable reduction in noise from the leaf grinder, mulch trucks, and loaders. The sound coating, enclosures, and silencers would further reduce noise from the grinder, which was determined to be the loudest of the noise sources. The combination of these noise reduction procedures would achieve the desired goal of reducing the noise in the community surrounding the Beulah Road property to a reasonable level while still allowing use of the leaf grinder.

The WRA Noise Report confirmed through modeling activities and operations at the mulch site, that predicted noise levels would range from 51-59 dB(A) at the residential property lines, immediately adjacent to the mulch site. As such these predicted results are very consistent with the previous analysis.

5.0 COMPLIANCE WITH TOWN OF VIENNA'S NOISE ORDINANCE

Section 10-20.1 of the Town's Code, often referred to as the "Noise Ordinance", provides regulations in order to reduce the impact of "excessive, unnecessary or unusually loud noises" that are "unusual and unnatural in their time and place" on residential areas. Excerpts from the Noise Ordinance are included below, specifically pertaining to operations at the mulch site.

Sec. 10-20.1. Noise¹.

- (a) *It is declared as a matter of legislative determination and public policy that the making, creation or maintenance of excessive, unnecessary or unusual loud noises, unusual and unnatural in their time and place and which disturb the usual peace, quietude, tranquility and normal enjoyable use of any residential area are detrimental to the public health, safety, convenience, welfare and prosperity of the residents of the Town of Vienna and constitute a public nuisance.*
- (b) *Any person, firm or corporation which permits, allows or suffers any such excessive, unnecessary, loud or unusual noise or noises as referred to in subsection [10-20.1\(a\)](#) above, to emanate from his property or place of business so as to disturb the usual peace, quietude, tranquility and normal enjoyable use of any residence or residences in the Town shall be guilty of a civil offense with a penalty of \$250.00 for the first offense and \$500.00 for each subsequent offense. This section shall*

¹ (Code 1969, § 10-20.1; Ord. of 12-5-1977; Ord. of 2-25-1991; Ord. of 3-2008; Ord. of 6-6-2011(2), § 1)

not apply to noise generated in connection with a business conducted on property zoned CM or CMP.²

- (c) *In addition to any other excessive, unnecessary or unusually loud noises as referred to in subsection [10-20.1\(a\)](#) above, and not to the exclusion of such, the following acts are specifically declared to be excessive, unnecessary and unusually loud noises, unusual and unnatural in their time and place and disturbing to the usual peace, quietude, tranquility and normal enjoyable use of residential area; are detrimental to public health, safety, and welfare of the residents of the Town of Vienna, and constitute a public nuisance:*
 - (1) *The loading or unloading of commercial vehicles within 300 feet of any residence between the hours of 11:00 p.m. and 6:00 a.m. Monday through Saturday, or between 11:00 p.m. and 8:00 a.m. on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day;*
 - (2) *...*³
 - (3) *...*
 - (4) *The operation between the hours of 8:00 p.m. and 7:00 a.m., or between 8:00 p.m. and 9:00 a.m. on Saturday, Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day of any pile driver, hammer, chain saw, steam, diesel, or gasoline powered shovel, derrick or hoist, lawnmowers, lawn maintenance equipment, or other equipment, the use of which is attended by loud and unusual noise, except during any emergency caused necessity to protect the public health and safety as determined by the director of public works, chief of police, Town Manager or his/her designee, Fairfax County Building Inspector, or Fairfax County Fire Marshal or his/her designee. The time limitations for Saturday, Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day shall not apply to usual and customary maintenance activities associated with recreational uses as defined in Town Code [section 18-4](#). Notwithstanding the foregoing, no contractor or person performing the activities listed above for remuneration, except when it relates to a recreational use, shall be permitted to engage in such activity on Sunday;*
 - (5) *The operation of any propulsion engine of a commercial motor vehicle for more than three minutes when the vehicle is parked, left unattended, or is stopped for other than traffic or maintenance reasons;*
 - (6) *...*
- (d) *Any person, firm or corporation which permits, allows or suffers any such acts set forth in subsection [10-20.1\(c\)](#) shall be guilty of maintaining a public nuisance and, upon conviction thereof, shall be punished as provided in [section 10-20](#) of this Code.*

5.1 Noise Ordinance Compliance

WRA has determined that the activities and operations at the mulch site do not violate or cause an exceedance of the Town of Vienna's Noise Ordinance because they do not create or maintain "excessive, unnecessary or unusual loud noises, unusual and unnatural in their time and place and which disturb the usual peace, quietude, tranquility and normal enjoyable use of any residential area; are detrimental to the public health, safety, convenience, welfare and prosperity of the residents of the Town of Vienna, and

² This section applies because the mulch site is zoned Local Commercial (C-1) (Town of Vienna GIS, 2012)

³ This section of the noise ordinance was not included in the report because it does not apply to the activities and operations at the mulch site.

constitute a public nuisance,” as outlined in Section 10-20.1(c) of the Noise Ordinance. All activities and operations occur within normal time of day restrictions, and therefore do not constitute a public nuisance, consistent with the Town of Vienna’s Noise Ordinance.

Appendix A – Data Logger Outputs

Measurement M-1

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)	TIME	IL
2	1/18/2018 9:47	00d 00:00:10.0	66.5	76.5	68.9	62	68.7	68.4	66.9	64.3	63.3	4,466,836	44,668,359	7,762,471	1,584,893	7,413,102	6,918,310	4,897,788	2,691,535	2,137,962	8:47:07	
3	1/18/2018 9:47	00d 00:00:10.0	58	68	64.6	54.8	61	59.6	55.9	55	54.9	630,957	6,309,573	2,884,032	301,995	1,258,925	912,011	389,045	316,228	309,030	8:47:17	
4	1/18/2018 9:47	00d 00:00:10.0	63.8	73.8	71.7	55.3	70.7	68.6	61.3	57	56.5	2,398,833	23,988,329	14,791,084	338,844	11,748,976	7,244,360	1,348,963	501,187	446,684	8:47:27	
5	1/18/2018 9:47	00d 00:00:10.0	57.4	67.4	63.6	52.9	62.4	60.5	56.5	53.9	53.4	549,541	5,495,409	2,290,868	194,984	1,737,801	1,122,018	446,684	245,471	218,776	8:47:37	
6	1/18/2018 9:47	00d 00:00:10.0	52.3	62.3	53.5	51.6	53.3	52.3	51.7	51.7	51.7	169,824	1,698,244	223,872	144,544	213,796	213,796	169,824	147,911	147,911	8:47:47	
7	1/18/2018 9:47	00d 00:00:10.0	51.4	61.4	52.2	50.9	52	51.9	51.6	50.9	50.9	138,038	1,380,384	165,959	123,027	158,489	154,882	144,544	123,027	123,027	8:47:57	
8	1/18/2018 9:48	00d 00:00:10.0	51.7	61.7	52.7	50.9	52.5	52.4	51.3	51	50.9	147,911	1,479,108	186,209	123,027	177,828	173,780	134,896	125,893	123,027	8:48:07	9.6
9	1/18/2018 9:48	00d 00:00:10.0	51.2	61.2	51.7	51	51.6	51.6	51.2	51.1	51	131,826	1,318,257	147,911	125,893	144,544	144,544	131,826	128,825	125,893	8:48:17	9.5
10	1/18/2018 9:48	00d 00:00:10.0	51.5	61.5	51.8	51.2	51.7	51.7	51.5	51.4	51.3	141,254	1,412,538	151,356	131,826	147,911	147,911	141,254	138,038	134,896	8:48:27	10.2
11	1/18/2018 9:48	00d 00:00:10.0	50.6	60.6	51.2	50.2	51	50.9	50.7	50.3	50.2	114,815	1,148,154	131,826	104,713	125,893	123,027	117,490	107,152	104,713	8:48:37	7.7
12	1/18/2018 9:48	00d 00:00:10.0	51.2	61.2	51.6	50.8	51.5	51.4	51.1	50.9	50.9	131,826	1,318,257	144,544	120,226	141,254	138,038	128,825	123,027	123,027	8:48:47	6.1
13	1/18/2018 9:48	00d 00:00:10.0	50.6	60.6	51.5	50	51.4	51.4	50.6	50.1	50.1	114,815	1,148,154	141,254	100,000	138,038	138,038	114,815	102,329	102,329	8:48:57	5.7
14	1/18/2018 9:49	00d 00:00:10.0	51.4	61.4	52.9	49.9	52.7	52.4	51.5	50	50	138,038	1,380,384	194,984	97,724	186,209	173,780	141,254	100,000	100,000	8:49:07	7
15	1/18/2018 9:49	00d 00:00:10.0	50.1	60.1	50.6	49.8	50.4	50.2	50.1	49.9	49.9	102,329	1,023,293	114,815	95,499	109,648	104,713	102,329	97,724	97,724	8:49:17	6.6
16	1/18/2018 9:49	00d 00:00:10.0	49.8	59.8	50.1	49.5	50.1	50.1	49.7	49.6	49.6	95,499	954,993	102,329	89,125	102,329	102,329	93,325	91,201	91,201	8:49:27	5.5
17	1/18/2018 9:49	00d 00:00:10.0	52.8	62.8	54.5	50.1	54.3	54.1	52.4	51.2	50.2	190,546	1,905,461	281,838	102,329	269,153	257,040	173,780	131,826	104,713	8:49:37	3.1
18	1/18/2018 9:49	00d 00:00:10.0	52	62	55.6	50.2	54.5	53.6	51.4	50.4	50.3	158,489	1,584,893	363,078	104,713	281,838	229,087	138,038	109,648	107,152	8:49:47	5.1
19	1/18/2018 9:49	00d 00:00:10.0	50.6	60.6	52.3	50.1	51.7	51.4	50.6	50.3	50.2	114,815	1,148,154	169,824	102,329	147,911	138,038	114,815	107,152	104,713	8:49:57	6.5
20	1/18/2018 9:50	00d 00:00:10.0	49.8	59.8	50.1	49.6	50	50	49.8	49.7	49.7	95,499	954,993	102,329	91,201	100,000	100,000	95,499	93,325	93,325	8:50:07	5
21	1/18/2018 9:50	00d 00:00:10.0	50	60	50.4	49.7	50.3	50.2	49.9	49.8	49.7	100,000	1,000,000	109,648	93,325	107,152	104,713	97,724	95,499	93,325	8:50:17	3.5
22	1/18/2018 9:50	00d 00:00:10.0	50.3	60.3	50.9	50	50.8	50.6	50.3	50.1	50.1	107,152	1,071,519	123,027	100,000	120,226	114,815	107,152	102,329	102,329	8:50:27	3.8
23	1/18/2018 9:50	00d 00:00:10.0	50.1	60.1	50.3	49.8	50.3	50.2	50.1	50	49.9	102,329	1,023,293	107,152	95,499	107,152	104,713	102,329	100,000	97,724	8:50:37	5.1
24	1/18/2018 9:50	00d 00:00:10.0	50	60	50.2	49.8	50.1	50.1	50	49.8	49.8	100,000	1,000,000	104,713	95,499	102,329	102,329	100,000	95,499	95,499	8:50:47	6.1
25	1/18/2018 9:50	00d 00:00:10.0	50.3	60.3	50.4	50	50.4	50.4	50.3	50.1	50.1	107,152	1,071,519	109,648	100,000	109,648	109,648	107,152	102,329	102,329	8:50:57	4
26	1/18/2018 9:51	00d 00:00:10.0	53	63	55.7	50.4	55.3	55	52.5	50.7	50.6	199,526	1,995,262	371,535	109,648	338,844	316,228	177,828	117,490	114,815	8:51:07	8.2
27	1/18/2018 9:51	00d 00:00:10.0	54.8	64.8	57.5	50.7	57.1	57	54.2	51.5	51	301,995	3,019,952	562,341	117,490	512,861	501,187	263,027	141,254	125,893	8:51:17	8
28	1/18/2018 9:51	00d 00:00:10.0	51.6	61.6	52.5	50.8	52.3	52.3	51.3	50.8	50.8	144,544	1,445,440	177,828	120,226	169,824	169,824	134,896	120,226	120,226	8:51:27	5.7
29	1/18/2018 9:51	00d 00:00:10.0	51.8	61.8	56	50.3	55.1	53.8	51	50.5	50.4	151,356	1,513,561	398,107	107,152	323,594	239,883	125,89				

Measurement M-5

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)
2	1/18/2018 9:47	00d 00:00:10.0	51.3	61.3	57.9	44.7	56.8	54.8	50.5	45.8	45.3	134,896	1,348,963	616,595	29,512	478,630	301,995	112,202	38,019	33,884
3	1/18/2018 9:47	00d 00:00:10.0	53.3	63.3	60.5	46.8	59	57.8	50.8	48	47.4	213,796	2,137,962	1,122,018	47,863	794,328	602,560	120,226	63,096	54,954
4	1/18/2018 9:47	00d 00:00:10.0	46.7	56.7	51	45.4	50.3	49.2	46.4	45.8	45.6	46,774	467,735	125,893	34,674	107,152	83,176	43,652	38,019	36,308
5	1/18/2018 9:47	00d 00:00:10.0	47.4	57.4	48.4	46.1	48.3	48.2	47.5	46.4	46.3	54,954	549,541	69,183	40,738	67,608	66,069	56,234	43,652	42,658
6	1/18/2018 9:47	00d 00:00:10.0	47.4	57.4	49.2	45.7	49	48.7	47.1	46.1	46	54,954	549,541	83,176	37,154	79,433	74,131	51,286	40,738	39,811
7	1/18/2018 9:47	00d 00:00:10.0	45.3	55.3	48.4	43.2	48.2	47.8	44.8	43.3	43.3	33,884	338,844	69,183	20,893	66,069	60,256	30,200	21,380	
8	1/18/2018 9:48	00d 00:00:10.0	42.1	52.1	44.4	41.2	44.1	43.8	42.1	41.4	41.3	16,218	162,181	27,542	13,183	25,704	23,988	16,218	13,804	13,490
9	1/18/2018 9:48	00d 00:00:10.0	41.7	51.7	42.5	41.1	42.4	42.3	41.6	41.3	41.2	14,791	147,911	17,783	12,882	17,378	16,982	14,454	13,490	13,183
10	1/18/2018 9:48	00d 00:00:10.0	41.3	51.3	42.5	40.6	42.3	42	41.3	40.8	40.7	13,490	134,896	17,783	11,482	16,982	15,849	13,490	12,023	11,749
11	1/18/2018 9:48	00d 00:00:10.0	42.9	52.9	44	40.6	43.8	43.6	43	40.8	40.8	19,498	194,984	25,119	11,482	23,988	22,909	19,953	12,023	12,023
12	1/18/2018 9:48	00d 00:00:10.0	45.1	55.1	47	43.4	46.7	46.5	44.9	43.7	43.6	32,359	323,594	50,119	21,878	46,774	44,668	30,903	23,442	22,909
13	1/18/2018 9:48	00d 00:00:10.0	44.9	54.9	47.1	43.2	46.3	45.5	44.1	43.4	43.4	30,903	309,030	51,286	20,893	42,658	35,481	25,704	21,878	
14	1/18/2018 9:49	00d 00:00:10.0	44.4	54.4	46.9	42.9	46.6	46.2	44.5	43.1	43.1	27,542	275,423	48,978	19,498	45,709	41,687	28,184	20,417	
15	1/18/2018 9:49	00d 00:00:10.0	43.5	53.5	45.1	42.2	44.8	44.4	43.6	42.6	42.4	22,387	223,872	32,359	16,596	30,200	27,542	22,909	18,197	17,378
16	1/18/2018 9:49	00d 00:00:10.0	44.3	54.3	46.3	42.9	45.8	45.3	44.2	43.1	43	26,915	269,153	42,658	19,498	38,019	33,884	26,303	20,417	19,953
17	1/18/2018 9:49	00d 00:00:10.0	49.7	59.7	52.5	45.2	52	51.5	49.1	45.5	45.4	93,325	933,254	177,828	33,113	158,489	141,254	81,283	35,481	34,674
18	1/18/2018 9:49	00d 00:00:10.0	46.9	56.9	48.7	44.5	48.6	48.6	47	44.9	44.7	48,978	489,779	74,131	28,184	72,444	72,444	50,119	30,903	29,512
19	1/18/2018 9:49	00d 00:00:10.0	44.1	54.1	46.9	42	46.4	46.2	44.1	42.7	42.3	25,704	257,040	48,978	15,849	43,652	41,687	25,704	18,621	16,982
20	1/18/2018 9:50	00d 00:00:10.0	44.8	54.8	46.9	42	46.5	45.9	44.5	42.6	42.2	30,200	301,995	48,978	15,849	44,668	38,905	28,184	18,197	16,596
21	1/18/2018 9:50	00d 00:00:10.0	46.5	56.5	48.3	43.8	48.2	48.1	46	44	43.9	44,668	446,684	67,608	23,988	66,069	64,565	39,811	25,119	24,547
22	1/18/2018 9:50	00d 00:00:10.0	46.5	56.5	47.7	45.1	47.6	47.6	46.9	45.3	45.2	44,668	446,684	58,884	32,359	57,544	57,544	48,978	33,884	33,113
23	1/18/2018 9:50	00d 00:00:10.0	45	55	47	44	46.4	46.1	44.9	44.2	44.1	31,623	316,228	50,119	25,119	43,652	40,738	30,903	26,303	25,704
24	1/18/2018 9:50	00d 00:00:10.0	43.9	53.9	46.1	42.6	45.4	44.9	44	42.8	42.7	24,547	245,471	40,738	18,197	34,674	30,903	25,119	19,055	18,621
25	1/18/2018 9:50	00d 00:00:10.0	46.3	56.3	48.4	43.1	47.9	47.7	45.8	43.7	43.5	42,658	426,580	69,183	20,417	61,660	58,884	38,019	23,442	22,387
26	1/18/2018 9:51	00d 00:00:10.0	44.8	54.8	48	43.6	46.8	46.3	44.9	43.9	43.8	30,200	301,995	63,096	22,909	47,863	42,658	30,903	24,547	23,988
27	1/18/2018 9:51	00d 00:00:10.0	46.8	56.8	48.4	45.3	48.2	47.8	46.3	45.5	45.5	47,863	478,630	69,183	33,884	66,069	60,256	42,658	35,481	
28	1/18/2018 9:51	00d 00:00:10.0	45.9	55.9	48	45	47.3	47	45.9	45.2	45.1	38,905	389,045	63,096	31,623	53,703	50,119	38,905	33,113	32,359
29	1/18/2018 9:51	00d 00:00:10.0	47.4	57.4	49.3	45.4	49.1	48.5	47.5	46.4	45.9	54,954	549,541	85,114	34,674	81,283	70,795	56,234	43,652	38,905
30	1/18/2018 9:51	00d 00:00:10.0	46.5	56.5	48.7	44.6	48.2	48	46.3	44.9	44.7	44,668	446,684	74,131	28,840	66,069	63,096	42,658	30,903	29,512
31	1/18/2018 9:51	00d 00:00:10.0	44.2	54.2	47.1	42.5	46.9	46.2	44.2	42.9	42.8	26,303	263,027	51,286	17,783	48,978	41,687	26,303	19,498	19,055
32	1/18/2018 9:52	00d 00:00:10.0	43.4	53.4	45.7	42.2	43.6	43.4	43	42.4	42.3	21,878	218,776	37,154	16,596	22,909	21,878	19,953	17,378	16,982
33	1/18/2018 9:52	00d 00:00:10.0	47	57	50.8	44	50.3	49.3	46.5											

Measurement M-2

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)	TIME	IL
2	1/18/2018 10:03	00d 00:00:10.0	61.2	71.2	61.6	60.9	61.5	61.5	61.2	61	61	1,318,257	13,182,567	1,445,440	1,230,269	1,412,538	1,412,538	1,318,257	1,258,925	1,258,925	9:03:07	18.6
3	1/18/2018 10:03	00d 00:00:10.0	61.4	71.4	61.8	61.1	61.7	61.6	61.4	61.2	61.2	1,380,384	13,803,843	1,513,561	1,288,250	1,479,108	1,445,440	1,380,384	1,318,257	1,318,257	9:03:17	19.1
4	1/18/2018 10:03	00d 00:00:10.0	61.4	71.4	61.6	61.1	61.5	61.5	61.4	61.2	61.2	1,380,384	13,803,843	1,445,440	1,288,250	1,412,538	1,412,538	1,380,384	1,318,257	1,318,257	9:03:27	15.6
5	1/18/2018 10:03	00d 00:00:10.0	61.7	71.7	62.2	61.3	62.1	61.6	61.4	61.4	61.4	1,479,108	14,791,084	1,659,587	1,348,963	1,621,810	1,445,440	1,380,384	1,380,384	1,348,963	9:03:37	15.3
6	1/18/2018 10:03	00d 00:00:10.0	61.5	71.5	61.8	61.2	61.8	61.7	61.5	61.3	61.3	1,412,538	14,125,375	1,513,561	1,318,257	1,513,561	1,479,108	1,412,538	1,348,963	1,348,963	9:03:47	15.9
7	1/18/2018 10:03	00d 00:00:10.0	61.3	71.3	61.8	60.9	61.7	61.5	61.2	61	61	1,348,963	13,489,629	1,513,561	1,230,269	1,479,108	1,412,538	1,318,257	1,258,925	1,258,925	9:03:57	15
8	1/18/2018 10:04	00d 00:00:10.0	68	78	71.5	61.4	71.4	71.2	65.2	61.6	61.5	6,309,573	63,095,734	14,125,375	1,380,384	13,182,567	3,311,311	1,445,440	1,412,538	9:04:07	22.5	
9	1/18/2018 10:04	00d 00:00:10.0	69	79	70.3	68.4	69.8	69.7	69	68.5	68.5	7,943,282	79,432,823	10,715,193	6,918,310	9,549,926	9,332,543	7,943,282	7,079,458	7,079,458	9:04:17	24.7
10	1/18/2018 10:04	00d 00:00:10.0	69.7	79.7	70.1	69.3	69.9	69.6	69.4	69.4	69.4	9,332,543	93,325,430	10,232,930	8,511,380	9,772,372	9,772,372	9,120,108	8,709,636	8,709,636	9:04:27	25.1
11	1/18/2018 10:04	00d 00:00:10.0	69.4	79.4	70	69.2	69.8	69.6	69.4	69.3	69.2	8,709,636	87,096,359	10,000,000	8,317,638	9,549,926	9,120,108	8,709,636	8,511,380	8,317,638	9:04:37	23.2
12	1/18/2018 10:04	00d 00:00:10.0	69	79	69.3	68.6	69.3	69.2	69	69	68.8	7,943,282	79,432,823	8,511,380	7,244,360	8,511,380	8,317,638	7,943,282	7,585,776	9:04:47	22.9	
13	1/18/2018 10:04	00d 00:00:10.0	69.2	79.2	69.6	68.6	69.5	69.5	69.1	68.8	68.7	8,317,638	83,176,377	9,120,108	7,244,360	8,912,509	8,812,305	7,585,776	7,413,102	9:04:57	24.4	
14	1/18/2018 10:05	00d 00:00:10.0	69.7	79.7	69.9	69.3	69.8	69.8	69.7	69.5	69.4	9,332,543	93,325,430	9,772,372	8,511,380	9,549,926	9,549,926	9,332,543	8,912,509	8,709,636	9:05:07	26.6
15	1/18/2018 10:05	00d 00:00:10.0	69.1	79.1	69.7	68.9	69.6	69.5	69.1	69	68.9	8,128,305	81,283,052	9,332,543	7,762,471	9,120,108	8,912,509	8,128,305	7,943,282	7,762,471	9:05:17	25.1
16	1/18/2018 10:05	00d 00:00:10.0	69.4	79.4	69.7	68.9	69.7	69.6	69.4	69	69	8,709,636	87,096,359	9,332,543	7,762,471	9,332,543	9,120,108	8,709,636	7,943,282	9:05:27	27.7	
17	1/18/2018 10:05	00d 00:00:10.0	69.2	79.2	69.6	68.7	69.6	69.6	69.1	68.9	68.8	8,317,638	83,176,377	9,120,108	7,413,102	9,120,108	9,120,108	8,128,305	7,762,471	7,585,776	9:05:37	27.1
18	1/18/2018 10:05	00d 00:00:10.0	69.4	79.4	69.6	69.1	69.5	69.5	69.4	69.2	69.1	8,709,636	87,096,359	9,120,108	8,128,305	8,912,509	8,912,509	8,709,636	8,317,638	8,128,305	9:05:47	28.2
19	1/18/2018 10:05	00d 00:00:10.0	69.3	79.3	69.7	68.9	69.6	69.6	69.2	69	69	8,511,380	85,113,804	9,332,543	7,762,471	9,120,108	9,120,108	8,317,638	7,943,282	7,943,282	9:05:57	28.8
20	1/18/2018 10:06	00d 00:00:10.0	68.9	78.9	69.5	68.3	69.4	69.4	68.9	68.4	68.4	7,762,471	77,624,712	8,912,509	6,760,830	8,709,636	8,709,636	7,762,471	6,918,310	6,918,310	9:06:07	27.4
21	1/18/2018 10:06	00d 00:00:10.0	68.9	78.9	69.2	68.3	69.1	69.1	68.8	68.5	68.4	7,762,471	77,624,712	8,317,638	6,760,830	8,128,305	8,128,305	7,585,776	7,079,458	6,918,310	9:06:17	26
22	1/18/2018 10:06	00d 00:00:10.0	69.1	79.1	69.6	68.6	69.5	69.4	69	68.8	68.7	8,128,305	81,283,052	9,120,108	7,244,360	8,912,509	8,709,636	7,943,282	7,585,776	7,413,102	9:06:27	27.6
23	1/18/2018 10:06	00d 00:00:10.0	68.8	78.8	69.7	68.1	69.6	69.3	68.7	68.3	68.2	7,585,776	75,857,758	9,332,543	6,456,542	9,120,108	8,511,380	7,413,102	6,760,830	6,606,934	9:06:37	26.6
24	1/18/2018 10:06	00d 00:00:10.0	69	79	69.9	68.6	69.8	69.7	69	68.7	68.7	7,943,282	79,432,823	9,772,372	7,244,360	9,549,926	9,332,543	7,943,282	7,413,102	9:06:47	26.5	
25	1/18/2018 10:06	00d 00:00:10.0	68.1	78.1	69.1	66.3	69	68.9	68.3	66.8	66.5	6,456,542	64,565,423	8,128,305	4,265,795	7,943,282	7,762,471	6,760,830	4,786,301	4,466,836	9:06:57	25.3
26	1/18/2018 10:07	00d 00:00:10.0	69.2	79.2	70.1	67.9	70	69.8	69	68	68	8,317,638	83,176,377	10,232,930	6,165,950	10,000,000	9,549,926	7,943,282	6,309,573	9:07:07	27.5	
27	1/18/2018 10:07	00d 00:00:10.0	72.7	82.7	73.8	69.7	73.8	73.6	72.8	70.7	70.5	18,620,871	186,208,714	23,988,329	9,332,543	23,988,329	22,908,677	19,054,607	11,748,976	11,220,185	9:07:17	31.4
28	1/18/2018																					

Measurement M-6

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)
2	1/18/2018 10:03	00d 00:00:10.0	42.6	52.6	46.1	41.4	45	43.8	42.3	41.5	41.5	18,197	181,970	40,738	13,804	31,623	23,988	16,982	14,125	14,125
3	1/18/2018 10:03	00d 00:00:10.0	42.3	52.3	43.2	41.5	43.2	42.8	42.1	41.7	41.6	16,982	169,824	20,893	14,125	20,893	19,055	16,218	14,791	14,454
4	1/18/2018 10:03	00d 00:00:10.0	45.8	55.8	46.9	42.9	46.8	46.8	45.7	43.2	43	38,019	380,189	48,978	19,498	47,863	47,154	20,893	19,953	
5	1/18/2018 10:03	00d 00:00:10.0	46.4	56.4	46.8	45.6	46.7	46.7	46.5	45.9	45.7	43,652	436,516	47,863	36,308	46,774	44,668	38,905	37,154	
6	1/18/2018 10:03	00d 00:00:10.0	45.6	55.6	46.3	44.9	46.2	46.1	45.7	45	44.9	36,308	363,078	42,658	30,903	41,687	40,738	37,154	31,623	30,903
7	1/18/2018 10:03	00d 00:00:10.0	46.3	56.3	46.9	45	46.8	46.8	46	45.3	45.2	42,658	426,580	48,978	31,623	47,863	47,863	39,811	33,884	33,113
8	1/18/2018 10:04	00d 00:00:10.0	45.5	55.5	46.9	44.3	46.9	46.8	45.4	44.6	44.4	35,481	354,813	48,978	26,915	48,978	47,863	34,674	28,840	27,542
9	1/18/2018 10:04	00d 00:00:10.0	44.3	54.3	44.8	43.8	44.8	44.6	44.2	43.9	43.9	26,915	269,153	30,200	23,988	30,200	28,840	26,303	24,547	24,547
10	1/18/2018 10:04	00d 00:00:10.0	44.6	54.6	45	44.2	44.9	44.9	44.5	44.3	44.2	28,840	288,403	31,623	26,303	30,903	30,903	28,184	26,915	26,303
11	1/18/2018 10:04	00d 00:00:10.0	46.2	56.2	47.3	44.8	47.2	47.2	46	44.9	44.9	41,687	416,869	53,703	30,200	52,481	52,481	39,811	30,903	30,903
12	1/18/2018 10:04	00d 00:00:10.0	46.1	56.1	46.9	44.7	46.8	46.8	46.5	45.1	44.9	40,738	407,380	48,978	29,512	47,863	47,863	44,668	32,359	30,903
13	1/18/2018 10:04	00d 00:00:10.0	44.8	54.8	45.4	44.1	45.4	45.3	44.8	44.5	44.4	30,200	301,995	34,674	25,704	34,674	33,884	30,200	28,184	27,542
14	1/18/2018 10:05	00d 00:00:10.0	43.1	53.1	44.1	42.5	43.9	43.7	43.2	42.7	42.6	20,417	204,174	25,704	17,783	24,547	23,442	20,893	18,621	18,197
15	1/18/2018 10:05	00d 00:00:10.0	44	54	44.8	42.8	44.7	44.7	44	43.5	43.1	25,119	251,189	30,200	19,055	29,512	29,512	25,119	22,387	20,417
16	1/18/2018 10:05	00d 00:00:10.0	41.7	51.7	42.8	41.2	42.7	42.5	41.6	41.3	41.3	14,791	147,911	19,055	13,183	18,621	17,783	14,454	13,490	13,490
17	1/18/2018 10:05	00d 00:00:10.0	42.1	52.1	43.2	41.2	43.1	43	41.7	41.2	41.2	16,218	162,181	20,893	13,183	20,417	19,953	14,791	13,183	13,183
18	1/18/2018 10:05	00d 00:00:10.0	41.2	51.2	42.4	40.7	42.2	42	41.2	40.8	40.8	13,183	131,826	17,378	11,749	16,596	15,849	13,183	12,023	12,023
19	1/18/2018 10:05	00d 00:00:10.0	40.5	50.5	41	40.2	40.8	40.8	40.5	40.3	40.3	11,220	112,202	12,589	10,471	12,023	12,023	11,220	10,715	10,715
20	1/18/2018 10:06	00d 00:00:10.0	41.5	51.5	42.8	40	42.5	42.4	41.4	40.1	40.1	14,125	141,254	19,055	10,000	17,783	17,378	13,804	10,233	10,233
21	1/18/2018 10:06	00d 00:00:10.0	42.9	52.9	45.6	41.3	44.9	44.5	43	41.5	41.4	19,498	194,984	36,308	13,490	30,903	28,184	19,953	14,125	13,804
22	1/18/2018 10:06	00d 00:00:10.0	41.5	51.5	41.9	41	41.9	41.8	41.5	41.1	41.1	14,125	141,254	15,488	12,589	15,488	15,136	14,125	12,882	12,882
23	1/18/2018 10:06	00d 00:00:10.0	42.2	52.2	43	41.3	42.9	42.8	42.2	41.4	41.4	16,596	165,959	19,953	13,490	19,498	19,055	16,596	13,804	13,804
24	1/18/2018 10:06	00d 00:00:10.0	42.5	52.5	43.2	41.6	43.1	43	42.5	41.7	41.7	17,783	177,828	20,893	14,454	20,417	19,953	17,783	14,791	14,791
25	1/18/2018 10:06	00d 00:00:10.0	42.8	52.8	43.8	41.7	43.7	43.5	43	42.1	41.8	19,055	190,546	23,988	14,791	23,442	22,387	19,953	16,218	15,136
26	1/18/2018 10:07	00d 00:00:10.0	41.7	51.7	42.7	41.2	42.5	42.2	41.6	41.3	41.2	14,791	147,911	18,621	13,183	17,783	16,596	14,454	13,490	13,183
27	1/18/2018 10:07	00d 00:00:10.0	41.3	51.3	42.1	41	42	42	41.3	41.1	41.1	13,490	134,896	16,218	12,589	15,849	15,849	13,490	12,882	12,882
28	1/18/2018 10:07	00d 00:00:10.0	43.2	53.2	46	41	45.7	45.2	41.7	41.1	41	20,893	208,930	39,811	12,589	37,154	33,113	14,791	12,882	12,589
29	1/18/2018 10:07	00d 00:00:10.0	45.2	55.2	47.6	43.6	47.5	46.8	44.8	43.9	43.8	33,113	331,131	57,544	22,909	56,234	47,863	30,200	24,547	23,988
30	1/18/2018 10:07	00d 00:00:10.0	44.6	54.6	46.3	43.6	46.2	45.8	44.4	43.7	43.7	28,840	288,403	42,658	22,909	41,687	38,019	27,542	23,442	
31	1/18/2018 10:07	00d 00:00:10.0	44.4	54.4	46	43.3	45.9	45.8	44.5	43.3	43.3	27,542	275,423	39,811	21,380	38,905	38,019	28,184	21,380	21,380
32	1/18/2018 10:08	00d 00:00:10.0	43.7	53.7	44.6	43.2	44.5	44.3	43.7	43.3	43.3	23,442	234,423	28,840	20,893	28,184	26,915	23,442	21,380	21,380
33	1/18/2018 10:08	00d 00:00:10.0	44.1	54.1	45	43.1														

Measurement M-3

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)	TIME	IL
1	1/18/2018 10:16	00d 00:00:10.0	79.4	89.4	82.4	77.5	81.9	81.4	79.1	78.6	78	87,096,359	870,963,590	173,780,083	56,234,133	154,881,662	138,038,426	81,283,052	72,443,596	63,095,734	9:16:21	33.7
2	1/18/2018 10:16	00d 00:00:10.0	78.3	88.3	80.3	77	80.2	79.7	77.4	77.1	77	67,608,298	676,082,975	107,151,931	50,118,723	104,712,855	93,325,430	54,954,087	51,286,138	50,118,723	9:16:31	35.5
3	1/18/2018 10:16	00d 00:00:10.0	79	89	80.2	78.3	79.8	79.1	78.5	78.5	78.5	79,432,823	794,328,235	104,712,855	67,608,298	95,499,259	95,499,259	81,283,052	70,794,578	70,794,578	9:16:41	33.5
4	1/18/2018 10:16	00d 00:00:10.0	78.3	88.3	80.3	77.4	80	79.3	78.2	77.6	77.5	67,608,298	676,082,975	107,151,931	54,954,087	100,000,000	85,113,804	66,069,345	57,543,994	56,234,133	9:16:51	34.6
5	1/18/2018 10:17	00d 00:00:10.0	79.2	89.2	80.9	77.2	80.4	80.3	78.3	77.5	77.4	83,176,377	831,763,771	123,026,877	52,480,746	109,647,820	107,151,931	67,608,298	56,234,133	54,954,087	9:17:01	35.6
6	1/18/2018 10:17	00d 00:00:10.0	78	88	80.3	77.2	79.6	79.2	78.2	77.4	77.4	63,095,734	630,957,344	107,151,931	52,480,746	91,201,084	83,176,377	66,069,345	54,954,087	54,954,087	9:17:11	34.6
7	1/18/2018 10:17	00d 00:00:10.0	77.5	87.5	78.4	76.9	78.2	78	77.5	77	77	56,234,133	562,341,325	69,183,097	48,977,882	66,069,345	63,095,734	56,234,133	50,118,723	50,118,723	9:17:21	33.5
8	1/18/2018 10:17	00d 00:00:10.0	77.9	87.9	78.9	77.2	78.8	78.6	77.8	77.3	77.3	61,659,500	616,595,002	77,624,712	52,480,746	75,857,758	72,443,596	60,255,959	53,703,180	53,703,180	9:17:31	32
9	1/18/2018 10:17	00d 00:00:10.0	78.2	88.2	79.1	77.5	78.9	78.7	78	77.8	77.7	66,069,345	660,693,448	81,283,052	56,234,133	77,624,712	74,131,024	63,095,734	60,255,959	58,884,366	9:17:41	32.4
10	1/18/2018 10:17	00d 00:00:10.0	79	89	79.9	77.9	79.7	79.6	79	78.3	78.2	79,432,823	794,328,235	97,723,722	61,659,500	93,325,430	91,201,084	79,432,823	67,608,298	66,069,345	9:17:51	33.8
11	1/18/2018 10:18	00d 00:00:10.0	78	88	78.6	77.1	78.5	78.5	78	77.2	77.2	63,095,734	630,957,344	72,443,596	51,286,138	70,794,578	70,794,578	63,095,734	52,480,746	52,480,746	9:18:01	33
12	1/18/2018 10:18	00d 00:00:10.0	78.9	88.9	79.7	78	79.6	79.5	78.9	78.3	78.2	77,624,712	776,247,117	93,325,430	63,095,734	91,201,084	89,125,094	77,624,712	67,608,298	66,069,345	9:18:11	33.7
13	1/18/2018 10:18	00d 00:00:10.0	78.8	88.8	80.1	77.9	79.9	79.7	78.6	78.2	78.2	75,857,758	758,577,575	102,329,299	61,659,500	97,723,722	93,325,430	72,443,596	66,069,345	66,069,345	9:18:21	34.2
14	1/18/2018 10:18	00d 00:00:10.0	78.8	88.8	80	77	79.9	79.7	78.7	77.4	77.1	75,857,758	758,577,575	100,000,000	50,118,723	97,723,722	93,325,430	74,131,024	54,954,087	51,286,138	9:18:31	34.8
15	1/18/2018 10:18	00d 00:00:10.0	77.7	87.7	78.8	76.7	78.7	78.6	77.9	76.8	76.7	58,884,366	588,843,655	75,857,758	46,773,514	74,131,024	72,443,596	61,659,500	47,863,009	46,773,514	9:18:41	29.2
16	1/18/2018 10:18	00d 00:00:10.0	78.2	88.2	79.3	77.5	79	78.9	78	77.7	77.6	66,069,345	660,693,448	85,113,804	56,234,133	79,432,823	77,624,712	63,095,734	58,884,366	57,543,994	9:18:51	28.8
17	1/18/2018 10:19	00d 00:00:10.0	78.3	88.3	79.6	77.4	79.2	78.9	78	77.6	77.6	67,608,298	676,082,975	91,201,084	54,954,087	83,176,377	77,624,712	63,095,734	57,543,994	57,543,994	9:19:01	31.3
18	1/18/2018 10:19	00d 00:00:10.0	79	89	80.1	78	79.8	79.4	79	78.4	78.3	79,432,823	794,328,235	102,329,299	63,095,734	95,499,259	87,096,359	79,432,823	69,183,097	67,608,298	9:19:11	34.7
19	1/18/2018 10:19	00d 00:00:10.0	78	88	79.2	77.4	79	78.9	78.1	77.5	77.5	63,095,734	630,957,344	83,176,377	54,954,087	79,432,823	77,624,712	64,565,423	56,234,133	56,234,133	9:19:21	33.4
20	1/18/2018 10:19	00d 00:00:10.0	78	88	78.6	77	78.5	78.3	77.9	77.2	77.1	63,095,734	630,957,344	72,443,596	50,118,723	70,794,578	67,608,298	61,659,500	52,480,746	51,286,138	9:19:31	32.3
21	1/18/2018 10:19	00d 00:00:10.0	78.8	88.8	79.7	77.6	79.6	79.4	78.7	78	77.7	75,857,758	758,577,575	93,325,430	57,543,994	91,201,084	87,096,359	74,131,024	63,095,734	58,884,366	9:19:41	32.4
22	1/18/2018 10:19	00d 00:00:10.0	78.3	88.3	79.4	77.3	79.3	79	78.3	77.6	77.4	67,608,298	676,082,975	87,096,359	53,703,180	85,113,804	79,432,823	67,608,298	57,543,994	54,954,087	9:19:51	30.3
23	1/18/2018 10:20	00d 00:00:10.0	78.2	88.2	79	77	78.7	78.5	78.2	77.5	77.1	66,069,345	660,693,448	79,432,823	50,118,723	74,131,024	70,794,578	66,069,345	56,234,133	51,286,138	9:20:01	29.7
24	1/18/2018 10:20	00d 00:00:10.0	78	88	79.2	77.1	79.1	78.9	77.7	77.4	77.3	63,095,734	630,957,344	83,176,377	51,286,138	81,283,052	77,624,712	58,884,366	54,954,087	53,703,180	9:20:11	33.1
25	1/18/2018 10:20	00d 00:00:10.0	77.6	87.6	78.7	77	78.4	78.3	77.7	77.1	77	57,543,994	575,439,937	74,131,024	50,118,723	69,183,097	67,608,298	58,884,366	51,286,138	50,118,723	9:20:21	34.1
26	1/18/2018																					

Measurement M-7

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)
1	1/18/2018 10:16	00d 00:00:10.0	45.7	55.7	61.2	41	59.1	57	47.4	43.7	43.2	37,154	371,535	1,318,257	19,953	812,831	501,187	54,954	23,442	20,893
2	1/18/2018 10:16	00d 00:00:10.0	42.8	52.8	44.4	41.3	44.2	42.8	41.4	41.4	42.1	19,055	190,546	27,542	13,490	26,303	26,303	19,055	13,804	13,804
3	1/18/2018 10:16	00d 00:00:10.0	45.5	55.5	51.2	42	49.8	49.1	43.5	42.2	42.1	35,481	354,813	131,826	15,849	95,499	81,283	22,387	16,596	16,218
4	1/18/2018 10:16	00d 00:00:10.0	43.7	53.7	47.5	41.4	46.4	45.4	43.5	42.2	41.7	23,442	234,423	56,234	13,804	43,652	34,674	22,387	16,596	14,791
5	1/18/2018 10:17	00d 00:00:10.0	43.6	53.6	47.8	41	47.2	46.2	43	41.2	41.2	22,909	229,087	60,256	12,589	52,481	41,687	19,953	13,183	13,183
6	1/18/2018 10:17	00d 00:00:10.0	43.4	53.4	45.1	42	44.9	44.6	43.1	42.5	42.5	21,878	218,776	32,359	15,849	30,903	28,840	20,417	17,783	17,783
7	1/18/2018 10:17	00d 00:00:10.0	44	54	48	42.3	46.9	45.9	43.3	42.5	42.4	25,119	251,189	63,096	16,982	48,978	38,905	21,380	17,783	17,378
8	1/18/2018 10:17	00d 00:00:10.0	45.9	55.9	47	43.7	46.9	46.8	45.7	44.2	43.8	38,905	389,045	50,119	23,442	48,978	47,863	37,154	26,303	23,988
9	1/18/2018 10:17	00d 00:00:10.0	45.8	55.8	47.2	44.9	47	46.8	45.4	45	45	38,019	380,189	52,481	30,903	50,119	47,863	34,674	31,623	31,623
10	1/18/2018 10:17	00d 00:00:10.0	45.2	55.2	48	44.1	47.6	47.1	44.9	44.3	44.2	33,113	331,131	63,096	25,704	57,544	51,286	30,903	26,915	26,303
11	1/18/2018 10:18	00d 00:00:10.0	45	55	46.1	44.3	45.5	45.3	44.7	44.4	44.4	31,623	316,228	40,738	26,915	35,481	33,884	29,512	27,542	27,542
12	1/18/2018 10:18	00d 00:00:10.0	45.2	55.2	46.4	44	46.2	46.2	45.4	44.3	44.2	33,113	331,131	43,652	25,119	41,687	41,687	34,674	26,915	26,303
13	1/18/2018 10:18	00d 00:00:10.0	44.6	54.6	45.3	43.6	45.2	45.2	44.8	44	43.8	28,840	288,403	33,884	22,909	33,113	33,113	30,200	25,119	23,988
14	1/18/2018 10:18	00d 00:00:10.0	44	54	44.6	43.1	44.6	44.5	44	43.4	43.3	25,119	251,189	28,840	20,417	28,840	28,184	25,119	21,380	21,380
15	1/18/2018 10:18	00d 00:00:10.0	48.5	58.5	50.1	44.2	50.1	49.9	49.2	44.3	44.2	70,795	707,946	102,329	26,303	102,329	97,724	83,176	26,915	26,303
16	1/18/2018 10:18	00d 00:00:10.0	49.4	59.4	51.4	47.8	51.3	51.1	49.1	48.1	48	87,096	870,964	138,038	60,256	134,896	128,825	81,283	64,565	63,096
17	1/18/2018 10:19	00d 00:00:10.0	47	57	49	44.1	48.9	48.9	47.3	44.8	44.4	50,119	501,187	79,433	25,704	77,625	77,625	53,703	30,200	27,542
18	1/18/2018 10:19	00d 00:00:10.0	44.3	54.3	44.9	43.6	44.8	44.3	43.8	43.7	26,915	269,153	30,903	22,909	30,200	30,200	26,915	23,988	23,442	
19	1/18/2018 10:19	00d 00:00:10.0	44.6	54.6	45.6	43.8	45.4	45.1	44.3	43.9	43.9	28,840	288,403	36,308	23,988	34,674	32,359	26,915	24,547	24,547
20	1/18/2018 10:19	00d 00:00:10.0	45.7	55.7	46.2	45.2	46.2	46.1	45.6	45.3	45.3	37,154	371,535	41,687	33,113	41,687	40,738	36,308	33,884	33,884
21	1/18/2018 10:19	00d 00:00:10.0	46.4	56.4	47.5	45.5	47.5	47.3	45.9	45.7	45.6	43,652	436,516	56,234	35,481	56,234	53,703	38,905	37,154	36,308
22	1/18/2018 10:19	00d 00:00:10.0	48	58	48.4	47	48.3	48.2	47.9	47.4	47.1	63,096	630,957	69,183	50,119	67,608	66,069	61,660	54,954	51,286
23	1/18/2018 10:20	00d 00:00:10.0	48.5	58.5	50.6	45.9	50.4	50.1	48.6	46.6	46.2	70,795	707,946	114,815	38,905	109,648	102,329	72,444	45,709	41,687
24	1/18/2018 10:20	00d 00:00:10.0	44.9	54.9	45.9	43.8	45.8	45.7	45	44.2	44	30,903	309,030	38,905	23,988	38,019	37,154	31,623	26,303	25,119
25	1/18/2018 10:20	00d 00:00:10.0	43.5	53.5	44	43	43.9	43.6	43.1	43	22,387	223,872	25,119	19,953	24,547	24,547	22,909	20,417	19,953	19,953
26	1/18/2018 10:20	00d 00:00:10.0	43.8	53.8	44.2	43	44.2	44.1	43.9	43.2	43.1	23,988	239,883	26,303	19,953	26,303	25,704	24,547	20,893	20,417
27	1/18/2018 10:20	00d 00:00:10.0	45.1	55.1	45.6	44.2	45.6	45.5	45	44.5	44.4	32,359	323,594	36,308	26,303	36,308	35,481	31,623	28,184	27,542
28	1/18/2018 10:20	00d 00:00:10.0	44.8	54.8	46.7	43.5	46.3	46.1	44.5	43.8	43.6	30,200	301,995	46,774	22,387	42,658	40,738	28,184	23,988	22,909
29	1/18/2018 10:21	00d 00:00:10.0	44.6	54.6	45.4	43.9	45.3	45.1	44.3	44.1	44	28,840	288,403	34,674	24,547	33,884	32,359	26,915	25,704	25,119
30	1/18/2018 10:21	00d 00:00:10.0	44.3	54.3	45.4	43.8	45.3	45.2	44.3	44	43.9	26,915	269,153	34,674	23,988	33,884	33,113	26,915	25,119	24,547
31	1/18/2018 10:21	00d 00:00:10.0	45.5	55.5	47.5	43.7	47.2	46.5	45.2	44	43.8	35,481	354,813	56,234	23,442	52,481	44,668	33,113	25,119	23,988
32	1/18/2018 10:21	00d 00:00:10.0	44.1	54.1	47.1	42.5														

Measurement M-4

Address	Start Time	Measurement Time	Leq	LE	Lmax	Lmin	LN1	LN2	LN3	LN4	LN5	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)	TIME	IL
1	1/18/2018 10:46	00d 00:00:10.0	77.7	87.7	78.3	77.1	78.2	78.2	77.6	77.3	77.2	58,884,366	588,843,655	67,608,298	51,286,138	66,069,345	66,069,345	57,543,994	53,703,180	52,480,746	9:46:40	15.9
2	1/18/2018 10:46	00d 00:00:10.0	78	88	78.7	77.4	78.6	77.9	77.6	77.6	77.5	63,095,734	630,957,344	74,131,024	54,954,087	72,443,596	69,183,097	61,659,500	57,543,994	57,543,994	9:46:50	15.9
3	1/18/2018 10:47	00d 00:00:10.0	77.5	87.5	78.2	77.2	78	77.8	77.5	77.4	77.3	56,234,133	562,341,325	66,069,345	52,480,746	63,095,734	60,255,959	56,234,133	54,954,087	53,703,180	9:47:00	16.1
4	1/18/2018 10:47	00d 00:00:10.0	77.3	87.3	77.6	76.8	77.6	77.5	77.3	77	77	53,703,180	537,031,796	57,543,994	47,863,009	57,543,994	56,234,133	53,703,180	50,118,723	50,118,723	9:47:10	16.1
5	1/18/2018 10:47	00d 00:00:10.0	76.9	86.9	77.5	76.5	77.5	77.4	76.8	76.5	76.5	48,977,882	489,778,819	56,234,133	44,668,359	56,234,133	54,954,087	47,863,009	44,668,359	44,668,359	9:47:20	16.1
6	1/18/2018 10:47	00d 00:00:10.0	77	87	77.3	76.7	77.3	77.1	76.8	76.8	77.2	50,118,723	501,187,234	53,703,180	46,773,514	53,703,180	51,286,138	47,863,009	47,863,009	9:47:30	15.8	
7	1/18/2018 10:47	00d 00:00:10.0	77.3	87.3	77.9	76.6	77.7	77.6	77.3	76.7	76.7	53,703,180	537,031,796	61,659,500	45,708,819	58,884,366	57,543,994	53,703,180	46,773,514	46,773,514	9:47:40	16
8	1/18/2018 10:47	00d 00:00:10.0	76.9	86.9	77.5	76.1	77.5	77.4	76.9	76.2	76.2	48,977,882	489,778,819	56,234,133	40,738,028	56,234,133	54,954,087	48,977,882	41,686,938	41,686,938	9:47:50	15.8
9	1/18/2018 10:48	00d 00:00:10.0	77.2	87.2	77.4	76.7	77.3	77.3	77.2	76.8	76.8	52,480,746	524,807,460	54,954,087	46,773,514	53,703,180	52,480,746	47,863,009	47,863,009	9:48:00	16.1	
10	1/18/2018 10:48	00d 00:00:10.0	77	87	77.5	76.7	77.3	77.2	77	76.8	76.8	50,118,723	501,187,234	56,234,133	46,773,514	53,703,180	52,480,746	50,118,723	47,863,009	47,863,009	9:48:10	15.6
11	1/18/2018 10:48	00d 00:00:10.0	77.1	87.1	77.8	76.4	77.7	77.6	77	76.6	76.6	51,286,138	60,255,959	43,651,583	58,884,366	57,543,994	50,118,723	45,708,819	45,708,819	9:48:20	15.7	
12	1/18/2018 10:48	00d 00:00:10.0	77	87	77.5	76.7	77.3	77.3	77	76.8	76.8	50,118,723	501,187,234	56,234,133	46,773,514	53,703,180	50,118,723	47,863,009	47,863,009	9:48:30	15.7	
13	1/18/2018 10:48	00d 00:00:10.0	77.5	87.5	78.2	76.9	78.1	77.8	77.2	77	77	56,234,133	562,341,325	66,069,345	48,977,882	64,565,423	60,255,959	52,480,746	50,118,723	50,118,723	9:48:40	16.2
14	1/18/2018 10:48	00d 00:00:10.0	77.2	87.2	78.7	74.4	78.6	78.4	77.4	74.8	74.8	52,480,746	74,131,024	27,542,287	72,443,596	69,183,097	54,954,087	30,199,517	30,199,517	9:48:50	15.1	
15	1/18/2018 10:49	00d 00:00:10.0	78.9	88.9	80.9	77.6	80.7	80.5	78.4	77.7	77	77,624,712	123,026,877	57,543,994	117,489,755	112,201,845	69,183,097	58,884,366	58,884,366	9:49:00	16.2	
16	1/18/2018 10:49	00d 00:00:10.0	79.1	89.1	81	77.9	80.6	80.5	79.3	78.2	78.1	81,283,052	812,830,516	125,892,541	61,659,500	114,815,362	112,201,845	85,113,804	66,069,345	64,565,423	9:49:10	15.8
17	1/18/2018 10:49	00d 00:00:10.0	77.2	87.2	78.7	76	78.5	78.3	77.5	76.1	76.1	52,480,746	524,807,460	74,131,024	39,810,717	70,794,578	67,608,298	56,234,133	40,738,028	40,738,028	9:49:20	15.3
18	1/18/2018 10:49	00d 00:00:10.0	77.6	87.6	79.1	75.1	79	78.8	77.5	75.4	75.3	57,543,994	575,439,937	81,283,052	32,359,366	79,432,823	75,857,758	56,234,133	34,673,685	33,884,416	9:49:30	15.6
19	1/18/2018 10:49	00d 00:00:10.0	79	89	80.9	77.9	80.6	80.4	78.3	78	78	79,432,823	794,328,235	123,026,877	61,659,500	114,815,362	109,647,820	67,608,298	63,095,734	63,095,734	9:49:40	16.2
20	1/18/2018 10:49	00d 00:00:10.0	78.3	88.3	81.2	73.9	80.6	80.3	79.1	74.6	74.4	67,608,298	676,082,975	131,825,674	24,547,089	114,815,362	107,151,931	81,283,052	28,840,315	27,542,287	9:49:50	16.4
21	1/18/2018 10:50	00d 00:00:10.0	79	89	81	73.7	80.7	80.5	77.9	75	74	79,432,823	794,328,235	125,892,541	23,442,288	117,489,755	112,201,845	61,659,500	31,622,777	25,118,864	9:50:00	15.8
22	1/18/2018 10:50	00d 00:00:10.0	78.9	88.9	81.4	77.8	80.9	80.4	78.8	78	78	77,624,712	776,247,117	138,038,426	60,255,959	123,026,877	109,647,820	75,857,758	63,095,734	63,095,734	9:50:10	16.3
23	1/18/2018 10:50	00d 00:00:10.0	77.9	87.9	79	77.2	78.8	78.6	77.7	77.3	77.3	61,659,500	616,595,002	79,432,823	52,480,746	75,857,758	72,443,596	58,884,366	53,703,180	53,703,180	9:50:20	16.5
24	1/18/2018 10:50	00d 00:00:10.0	77.1	87.1	78.3	75.3	78.2	78.1	77.3	75.5	75.5	51,286,138	61,659,500	67,608,298	33,884,416	66,069,345	64,565,423	53,703,180	37,153,523	35,481,339	9:50:30	15.6
25	1/18/2018 10:50	00d 00:00:10.0	78.3	88.3	80.4	74.8	80.1	79.5	78	75.3	75	67,608,298	676,082,975	109,647,820	30,199,517	102,329,299	89,125,094	63,095,734	33,884,416	31,622,777	9:50:40	15.6
26	1/18/2018 10:50	00d 00:00:10.0	79.4	89.4	80.7	78.4	80															

Measurement M-8

Address	Start Time	Measurement Time	Leq	LE (SEL)	Lmax	Lmin	L5	L10	L50	L90	L95	Leq (Energy)	LE (SEL) (Energy)	Lmax (Energy)	Lmin (Energy)	L5 (Energy)	L10 (Energy)	L50 (Energy)	L90 (Energy)	L95 (Energy)
1	1/18/2018 10:46	00d 00:00:10.0	61.8	71.8	64.6	60.8	63.9	63.5	61.8	61	61	1,513,561	15,135,612	2,884,032	1,202,264	2,454,709	2,238,721	1,513,561	1,258,925	1,258,925
2	1/18/2018 10:46	00d 00:00:10.0	62.1	72.1	63.5	61.1	63	62.8	61.9	61.3	61.2	1,621,810	16,218,101	2,238,721	1,288,250	1,995,262	1,905,461	1,548,817	1,348,963	1,318,257
3	1/18/2018 10:47	00d 00:00:10.0	61.4	71.4	61.9	60.8	61.8	61.7	61.5	60.9	60.9	1,380,384	13,803,843	1,548,817	1,202,264	1,513,561	1,479,108	1,412,538	1,230,269	1,230,269
4	1/18/2018 10:47	00d 00:00:10.0	61.2	71.2	61.6	60.7	61.6	61.5	61	60.8	60.8	1,318,257	13,182,567	1,445,440	1,174,898	1,445,440	1,412,538	1,258,925	1,202,264	1,202,264
5	1/18/2018 10:47	00d 00:00:10.0	60.8	70.8	61.5	60.5	61.3	61.3	60.9	60.6	60.6	1,202,264	12,022,644	1,412,538	1,122,018	1,348,963	1,348,963	1,230,269	1,148,154	1,148,154
6	1/18/2018 10:47	00d 00:00:10.0	61.2	71.2	61.7	60.6	61.6	61.5	61.1	60.7	60.7	1,318,257	13,182,567	1,479,108	1,148,154	1,445,440	1,412,538	1,288,250	1,174,898	1,174,898
7	1/18/2018 10:47	00d 00:00:10.0	61.3	71.3	61.9	60.7	61.8	61.7	61.3	60.9	60.8	1,348,963	13,489,629	1,548,817	1,174,898	1,513,561	1,479,108	1,348,963	1,230,269	1,202,264
8	1/18/2018 10:47	00d 00:00:10.0	61.1	71.1	61.5	60.7	61.4	61.3	61.1	60.9	60.8	1,288,250	12,882,496	1,412,538	1,174,898	1,380,384	1,348,963	1,288,250	1,230,269	1,202,264
9	1/18/2018 10:48	00d 00:00:10.0	61.1	71.1	61.3	60.8	61.2	61.2	61.1	60.9	60.9	1,288,250	12,882,496	1,348,963	1,202,264	1,318,257	1,318,257	1,288,250	1,230,269	1,230,269
10	1/18/2018 10:48	00d 00:00:10.0	61.4	71.4	61.7	61.1	61.6	61.5	61.3	61.2	61.2	1,380,384	13,803,843	1,479,108	1,288,250	1,445,440	1,412,538	1,348,963	1,318,257	1,318,257
11	1/18/2018 10:48	00d 00:00:10.0	61.4	71.4	61.6	61.1	61.6	61.5	61.4	61.2	61.1	1,380,384	13,803,843	1,445,440	1,288,250	1,445,440	1,412,538	1,380,384	1,318,257	1,288,250
12	1/18/2018 10:48	00d 00:00:10.0	61.3	71.3	62.2	60.9	61.9	61.9	61.2	61.1	61	1,348,963	13,489,629	1,659,587	1,230,269	1,548,817	1,548,817	1,318,257	1,288,250	1,258,925
13	1/18/2018 10:48	00d 00:00:10.0	61.3	71.3	61.9	60.8	61.9	61.8	61.2	60.9	60.9	1,348,963	13,489,629	1,548,817	1,202,264	1,548,817	1,513,561	1,318,257	1,230,269	1,230,269
14	1/18/2018 10:48	00d 00:00:10.0	62.1	72.1	63.9	60.2	63.8	63.7	61.4	60.4	60.3	1,621,810	16,218,101	2,454,709	1,047,129	2,398,833	2,344,229	1,380,384	1,096,478	1,071,519
15	1/18/2018 10:49	00d 00:00:10.0	62.7	72.7	64	61.6	63.9	63.8	62.5	61.6	61.6	1,862,087	18,620,871	2,511,886	1,445,440	2,454,709	2,398,833	1,778,279	1,445,440	1,445,440
16	1/18/2018 10:49	00d 00:00:10.0	63.3	73.3	64.6	62.6	64.1	63.9	63.3	62.8	62.8	2,137,962	21,379,621	2,884,032	1,819,701	2,570,396	2,454,709	2,137,962	1,905,461	1,905,461
17	1/18/2018 10:49	00d 00:00:10.0	61.9	71.9	62.6	61.2	62.5	62.5	62.1	61.3	61.2	1,548,817	15,488,166	1,819,701	1,318,257	1,778,279	1,778,279	1,621,810	1,348,963	1,318,257
18	1/18/2018 10:49	00d 00:00:10.0	62	72	62.5	60.9	62.5	62.4	62	61.1	61	1,584,893	15,848,932	1,778,279	1,230,269	1,778,279	1,737,801	1,584,893	1,288,250	1,258,925
19	1/18/2018 10:49	00d 00:00:10.0	62.8	72.8	64	61.4	63.7	63.6	62.3	61.6	61.5	1,905,461	19,054,607	2,511,886	1,380,384	2,344,229	2,290,868	1,698,244	1,445,440	1,412,538
20	1/18/2018 10:49	00d 00:00:10.0	61.9	71.9	63.8	60.4	63.5	63.4	62	60.7	60.5	1,548,817	15,488,166	2,398,833	1,096,478	2,238,721	2,187,762	1,584,893	1,174,898	1,122,018
21	1/18/2018 10:50	00d 00:00:10.0	63.2	73.2	64.8	60.8	64.5	64.2	63.5	60.8	60.8	2,089,296	20,892,961	3,019,952	1,202,264	2,818,383	2,630,268	2,238,721	1,202,264	1,202,264
22	1/18/2018 10:50	00d 00:00:10.0	62.6	72.6	63.8	61.6	63.5	63.5	62.7	61.8	61.7	1,819,701	18,197,009	2,398,833	1,445,440	2,238,721	2,238,721	1,862,087	1,513,561	1,479,108
23	1/18/2018 10:50	00d 00:00:10.0	61.4	71.4	62.7	60.9	62.5	62.4	61.1	60.9	60.9	1,380,384	13,803,843	1,862,087	1,230,269	1,778,279	1,737,801	1,288,250	1,230,269	1,230,269
24	1/18/2018 10:50	00d 00:00:10.0	61.5	71.5	62.4	60.5	62.3	62.1	61.5	60.8	60.7	1,412,538	14,125,375	1,737,801	1,122,018	1,698,244	1,621,810	1,412,538	1,202,264	1,174,898
25	1/18/2018 10:50	00d 00:00:10.0	62.7	72.7	64.5	61.1	64.2	64.1	62.3	61.4	61.2	1,862,087	18,620,871	2,818,383	1,288,250	2,630,268	2,570,396	1,698,244	1,380,384	1,318,257
26	1/18/2018 10:50	00d 00:00:10.0	62.8	72.8	63.4	62	63.3	63.2	62.9	62.1	62.1	1,905,461	19,054,607	2,187,762	1,584,893	2,137,962	2,089,296	1,949,845	1,621,810	1,621,810
27	1/18/2018 10:51	00d 00:00:10.0	63.2	73.2	63.9	62.5	63.8	63.7	63.1	62.7	62.7	2,089,296	20,892,961	2,454,709	1,778,279	2,398,833	2,344,229	2,041,738	1,862,087	1,862,087
28	1/18/2018 10:51	00d 00:00:10.0	61.6	71.6	62.8	61.1	62.6	61.6	61.2	61.1	61	1,445,440	14,454,398	1,905,461	1,288,250	1,819,701	1,659,587	1,445,440	1	