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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Wild Goose Storage, LLC to Amend its Certificate of Public Convenience and Necessity to Expand and Construct Facilities for Gas Storage Operations. (U911G)	Application 09-04-021 (Filed April 24, 2009)

WILD GOOSE CLUB'S COMMENTS ON PROPOSED DECISION OF ALJ VIETH (Mailed 11/1/2010)

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November 19, 2010

Attorney for Wild Goose Club

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Wild Goose Storage, LLC to Amend its Certificate of Public Convenience and Necessity to Expand and Construct Facilities for Gas Storage Operations. (U911G)	Application 09-04-021 (Filed April 24, 2009)

The Wild Goose Club (WGC) respectfully submits that the following comments regarding certification of the Final SEIR concerning noise impacts at the Well Pad Site (WPS).

I. CEQA GUIDELINES REQUIRE THE FINAL SEIR TO DETERMINE WHETHER THE WILD GOOSE PHASE 3 EXPANSION WILL INCREASE AMBIENT NOISE LEVELS IN THE VICINITY OF THE WELL PAD SITE.

The CEQA Guidelines at California Code of Regulations (CCR) Title 14, §15000 *et seq,* Appendix G §XI provides that an EIR should determine whether a proposed project will result in "[a] substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project" or "[a] substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project."

The noise measurements at the Well Pad Site (WPS) for the Final SEIR were " taken during daylight hours on August 2 and 3, 2010. Gas injection operations took place on August 2, and gas withdrawal operations took place on August 3." (Final SEIR, Appendix C, p. 3-1.) The Final SEIR does not report that any noise measurements were taken when the WPS was not operating. The Final SEIR refers to a "background sound level which typically ranged from 35 to 50 dBA." (Final SEIR, Appendix A, p. 4-1.) However, the chart of noise measurements immediately adjacent to that statement shows that gas injections or withdrawals were occurring during every noise measurement shown on the chart. (Final SEIR, Appendix A, p.4-1, table 4-1.) The Final SEIR

does not state that the "background sound level" to which the Final SEIR refers is intended to mean the "ambient noise level without the project" to which the CEQA Guidelines refer.

In any event, because the Final SEIR **never measured** ambient noise levels when the WPS was not operating, it never adequately determined whether the proposed expansion project at the WPS would result in a "substantial" "permanent," "temporary" or "periodic" "increase in ambient noise levels in the project vicinity above levels existing without the project" as required by the CEQA Guidelines.

II. THE FINAL SEIR USES 55 dBA, BASED UPON U.S. EVIRONMENTAL PROTECTION AGENCY GUIDELINES, AS THE THRESHHOLD FOR IMPOSING NOISE MITIGATION MEASURES AT THE WELL PAD SITE.

The Final SEIR states that, "Day-Night Level (Ldn) impact thresholds addressing noise interference with outdoor activity are not well established, but the U.S. Environmental Protection Agency (USEPA) has indicated that a noise level of 55 dBA for "outdoor areas…and other places in which quiet is a basis for use" is sufficiently protective of public health and welfare with a margin of safety (it should be noted that this level is not a regulatory goal; USEPA 1978)." (Final SEIR at p. 4-34.) The Final SEIR adopts the USEPA's suggested "quiet outdoor places" standard of 55 dBA as the benchmark for acceptable noise in the vicinity of the WPS after the proposed expansion.

> [n]oise levels at 100 yards from the WPS could exceed the USEPA's suggested outdoors noise threshold of 55 dBA. For this reason, **Section A.8, Noise, of the Draft SEIR has been revised to include Phase 3 Mitigation Measure (MM) NOI-2, which would require Wild Goose to conduct regular noise monitoring during operations at the WPS, and to implement measures that would address noise from the WPS if noise levels at 100 yards from the WPS berm increased above 55 dBA.** Implementation of Phase 3 MM NOI-2 would reduce noise impacts to wildlife as well as hunters and other recreational users in the vicinity of the WPS as a result of the Phase 3 Expansion to a less than **significant level**.

(*Id.* at 4-35) (Emphasis added.) In other words, the Final SEIR uses 55 dBA as a level of noise "in the vicinity" of the WPS caused by operation of the WPS that is "significant" enough to trigger mitigation measures

In compliance with that standard, Table 5-1 of the Final SEIR proposes the following mitigation measures when noise at the WPS exceeds 55 dBA:

> After full buildout of the Phase 3 Expansion, the applicant will employ the following noise reduction and control practices during operations at the WPS that could produce noise levels above 55 dBA Lmax at a location 100 yards from the WPS berm:
>
> · During periods when fewer than 20 wells are in operation at the WPS, the applicant will record sound pressure levels (SPLs, dBA, Leq) on a once-a-week basis at a location 100 yards from the WPS berm.
>
> · If noise levels exceed 55 dBA at a location 100 yards from the WPS berm, the applicant shall implement measures at the WPS to reduce noise levels to 55 dBA at this distance. Measures could include:
>
> 1. Increasing the WPS berm in height by 2 feet (estimated total minimum noise reduction: 5 dBA);
>
> 2. Increasing the WPS berm in height by 4 feet (estimated total minimum noise reduction: 10 dBA);
>
> 3. Application of sound insulating lagging to well lines and valves (estimated total noise reduction: 12 to 24 dBA); or
>
> 4. Installation of a cinder block (or other noise-absorbing material) enclosure or wall around the WPS equipment array (estimated total minimum noise reduction: 25 dBA).

(Final SEIR at pp. 5-19 and 5-20)

IV. THE FINAL SEIR SHOULD USE ACTUAL AMBIENT NOISE LEVEL MEASURMENTS TO DETERMINE WHETHER THE PHASE 3 EXPANSION WILL CAUSE A SUBSTANTIAL INCREASE IN AMBIENT NOISE LEVELS AT THE WELL PAD SITE, AND SHOULD REQUIRE WILD GOOSE TO CONDUCT SUFFICIENT CONTINUOUS NOISE MEASURMENTS AFTER THE EXPANSION TO DEFINE OPERATIONAL NOISE LEVELS IN THE VICINITY AND APPROPRIATE MITIGATION MEASURES.

Attached as Exhibit A is a noise study prepared by prominent noise engineering consultants Brown Buntin Associates at the WPS. Brown Buntin Associates took noise measurements at the WPS twenty-four hours a day from October 7 – 25. Attached as Exhibit B is a comment prepared by Brown Buntin Associates regarding the noise study at the WPS in the Final SEIR.

Brown Buntin Associates concludes, based upon actual field measurements, that the "hourly median" (L50) ambient noise level in the vicinity of the WPS is 48 dBa when the WPS is not in operation. Brown Buntin Associates concludes that the difference between 55 dBA (the USEPA "quiet outdoor places" benchmark adopted in the Final SEIR) and 48 dBA (the actual ambient noise level in the vicinity of the WPS when the WPS is not in operation) is sufficient to constitute a "significant" impact under CEQA. Brown Buntin Associates concludes that periodic random noise measurements at the WPS, as suggest in the noise mitigation measures for the WPS in the Final SEIR, would be just as likely to miss noises caused by operations at the WPS as to capture them, and Brown Buntin Associates recommends that noise measurements for purposes of triggering mitigation measures at the WPS should be conducted continuously for whatever period is necessary to adequately define the noise levels produced by the WPS equipment after the Phase 3 Expansion.

WGC invites the CPUC to use the Brown Buntin Associates reports to correct the errors

in the FSIR noted in this comment, and Mr. Brown,at the request of WGC, is willing to consult with the CPUC regarding his reports.

V. THE FINAL SEIR SHOULD NOT BE CERTIFIED UNTIL IT COMPLIES WITH THE CEQA GUIDELINES, AND UNTIL IT REQUIRES MITIGATION MEASURES AT THE WELL PAD SITE TO COMMENCE WHEN NOISE LEVELS CAUSED BY OPERATION OF THE WELL PAD SITE EXCEED THE PREEXISTING AMBIENT NOISE LEVEL OF 48 dBA (L50).

The primary concern about noise at the WPS arises from its potential impact upon wildlife, in particular waterfowl and wild birds, in the surrounding wetlands refuge. The FSEIR notes :

> Potential impacts to birds resulting from anthropogenic noise can include the following (Gill 2007, Francis et al. 2009, Henson and Grant 1991, Belanger and Bedard 1990, Caltrans 2007):
>
> § Disruption of communication (which affects species and individual recognition, mate selection, territorial defense, juveniles communicating with parents, and social activities);
>
> § Avoidance of otherwise suitable habitat;
>
> § Reproductive loss (resulting from nest abandonment, egg mortality due to exposure, or increased predation of eggs and hatchlings due to noise interference with detection of approaching predators);
>
> § Depressed feeding rates on wintering and staging grounds; or
>
> § Reduced community species richness and composition.

(Final SEIR, Appendix C, "A Summary of Potential Impacts to Wildlife from Noise At the Wild Goose Well Pad Site Prepared for: California Public Utilities Commission" (September 2010) at p. 4.)

With these potential impacts in mind, the Final SEIR predicts that, "**The noise level projected for the maximum gas injection flow rate** of 650 MMcfd is . . . **51 dBA at a location**

100 yards from the WPS berm . . . " (Final SEIR, Appendix C, p. 4-5.) (Emphasis added.) The Final SEIR further notes that "[i]njection operations may be somewhat louder at any given flow rate than withdrawal operations." Therefore, **if** the Wild Goose Phase 3 Expansion operates as predicted in the Final SEIR (and we have no reason to believe it will not) predicted noise levels 100 yards from the WPS (51 dBA) **should** rarely, if ever, exceed the hourly median ambient level measured by Brown Buntin when the WPs is not in operation (48 dBA) by an amount perceptible to human ears. [1]

In light of these facts, WGC respectfully requests that the hourly median ambient noise level measured by Brown Buntin Associates (48 dBA 100 yards from the WPS) be adopted as the threshold at which Wild Goose must implement mitigation measures, in place of the USEIR standard (55 dBA 100 yards from the WPS) currently used.

The 55 dBA level established by the USEPA is a generic noise threshold supposedly applicable everywhere and any time noise levels at a quiet outdoor location are at issue. WGC submits that the USEPA standard is a generic default standard that should only be used when more site specific information is not available. The USEPA standard is not specifically tailored to the WPS. Furthermore, the USEPA standard is directed to the impact of noise on human beings rather than to the impact of noise on wildlife and waterfowl. Application of the 55 dBA USEPA standard **may** result in no significant noise impact to wildlife and waterfowl at the WPS from the proposed expansion, but the standard was not intended for that purpose and the standard represents only a "best guess" regarding the impacts of noise on wildlife and waterfowl in light of the limited research on those subjects.

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[1] A 3-dBA change is the threshold of change detectable by the human ear. Final SEIR, Appendix C, p. 1-2.

On the other hand, adoption of the Brown Buntin Associates 48 dBS standard would be based upon site-specific long-term noise measurements at the WPS itself. Moroever, continuation of the existing 48 dBS ambient noise level would result in **no** noise impact upon waterfowl and other wildlife from the proposed expansion of operations at the WPS, because it would result in **no** increase in the pre-existing ambient noise levels. It should also be noted that if the predictions in the Final SEIR regarding operational noise levels at the WPS after the expansion are accurate (and we have no reason to believe they are not) Wild Goose will be able to comply with the 48 dBL Brown Buntin Associates standard without **any** incremental difficulty, delay or expense because it is predicted that noise levels 100 yards from the WPS after the expansion will **never** exceed 48 dBL by more than 3 dBL – difference that could barely be detected by the human ear.

Finally, the fundamental purpose of an EIR is to assist the lead agency (here the CPUC) in making a thoughtful cost/benefit/risk analysis regarding regulation of environmental impacts at a proposed project. Here, the Final SEIR predicts that operational noise from the Phase 3 Expansion at the WPS will **never** exceed 51 dBS and thus rarely, if ever, exceed the preexisting ambient noise level of 48 dBS by an amount that can be heard. The Final SEIR predicts that the incremental cost and burden to the Wild Goose of achieving and maintaining that noise level (48 dBs to 51 dBs) is nothing – zero dollars, zero work and zero time. Under those circumstances, why would the CPUC set a threshold noise impact level for the WPS that poses **any** risk to wildlife. In other words, based upon the findings in the Final SEIR, if Wild Goose is obliged to maintain pre-existing ambient noise levels 100 yards from the WPS (48 dBS according to the Brown Buntin Associates study) the Wild Goose Phase 3 Expansion project will pose **no** danger to surrounding wildlife, and at the same time that noise standard is predicted to impose **no**

additional cost or burden on Wild Goose. That is by definition a "win-win" solution to a potential environmental problem.

We note, in addition, that section 2.3 of the Surface Rights Addendum in the lease under which Wild Goose operates the WPS specifically "prohibits noise above the ambient, or background, noise level that can be heard at ranges in excess of one hundred (100) yards from the outer boundary of the operations site." We do not request the CPUC to enforce that lease provision, but we note that Wild Goose will incur **no** obligation or expense to which it is not already contractually committed if it is required to implement noise mitigation measures when noise at the WPS site exceeds the existing ambient noise level of 48 dBA 100 yards from the WPS.

VI. CONCLUSION

For the reasons stated above, Section A.8, Noise, of the Draft SEIR should be revised in the Final SEIR to include Phase 3 Mitigation Measure (MM) NOI-2, which should state as follows:

> After full build out of the Phase 3 Expansion, the applicant will employ the following noise reduction and control practices during operations at the WPS that could produce noise levels above 48 dBA L50 (hourly median) at a location 100 yards from the WPS berm:
>
> · The applicant will conduct sufficient continuous noise measurements for whatever period is necessary to adequately define, and monitor the noise levels produced by the well pad equipment at a location 100 yards from the WPS berm.
>
> · If noise levels exceed 55 dBA at a location 100 yards from the WPS berm, the applicant shall implement measures at the WPS to reduce noise levels to 55 dBA at this distance. Measures could include:
>
> 1. Increasing the WPS berm in height by 2 feet (estimated total minimum noise reduction: 5 dBA);
>
> 2. Increasing the WPS berm in height by 4 feet (estimated total minimum noise reduction: 10 dBA);

3. Application of sound insulating lagging to well lines and valves (estimated total noise reduction: 12 to 24 dBA); or

4. Installation of a cinder block (or other noise-absorbing material) enclosure or wall around the WPS equipment array (estimated total minimum noise reduction: 25 dBA).

(Proposed revisions to the existing Final SEIR shown by emphasis.) If the Final SEIR is not so revised then the CPUC should not certify its adequacy.

November 22, 2010

Respectfully, submitted

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By /s/ James B. Brown
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CERTIFICATE OF SERVICE

I hereby certify that I served a copy of the **WILD GOOSE CLUB'S COMMENTS ON PROPOSED DECISION OF ALJ VIETH (Mailed 11/1/2010)** on November 22, 2010, on the persons shown below. Service was made by electronic mail to those whose electronic mail addresses are available and via U.S. mail to those for whom electronic mail addresses were not known. The service list used is a the official service list found on the docket page for A.09-04-021 on website of the California Public Utilities Commission

Executed on November 22, 2010, at Stockton, California.

/s/ James B. Brown
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EXHIBIT A

BROWN • BUNTIN
ASSOCIATES, INC.

October 27, 2010

Mr. James Brown
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Dear Mr. Brown:

This letter presents the results of noise monitoring performed by Brown-Buntin Associates, Inc. (BBA) during the period of October 7-25, 2010, describing noise levels in the vicinity of the natural gas well site at the Wild Goose Club, located in Sutter County, California. The objective of this study was to document current noise levels in the vicinity of the gas well site.

This analysis describes the results of long-term continuous noise measurements at three locations, as well as short-term frequency content measurements at the same locations.

The noise measurements were conducted at the following locations:

- *Gas Well Berm*: The microphone was placed on the berm at the south edge of the gas well pad on the north side of the access road. Lat/long: N39^{o} 19.348' W121^{o} 53.009'
- *100 Yards South*: The microphone was placed along the west edge of the N-S access road, about 105 yards from the south edge of the E-W access road. Lat/long: N39^{o} 19.380' W121^{o} 53.048'.
- *100 Yards West*: The microphone was placed along the south edge of the E-W access road, about 103 yards from the west base of the berm along the west edge of the gas well pad. Lat/long: N39^{o} 19.428' W121^{o} 53.104'.

Figure 1 shows the noise measurement locations.

Table I lists the sound level measurement equipment used for this study.

TABLE I Sound Level Measurement Equipment Used Wild Goose Noise Study October 7-25, 2010							
Location	**BBA No.**	**Sound Level Meter**	**Serial No.**	**Preamplifier**	**Serial No.**	**Microphone**	**Serial No.**
Gas Well Berm	11	Larson Davis 820	1124	LD PRM828	1539/ 1561	PCB 377B02 B&K 4176	102581 2135456
100 Yards South	12	Larson Davis 820	1126	LD PRM828	1560	B&K 4176	1583190
100 Yards West	13	Larson Davis 820	1419	LD PRM828	2186	B&K 4176	2419458
All	--	Larson Davis 824	1162	LD PRM902	1679	LD 2541	6526

The Larson Davis Model 820 sound level meters were calibrated before each measurement using a Bruel & Kjaer Type 4230 acoustical calibrator, SN 584566, which was calibrated by an accredited laboratory in October 2009, and certified to be in conformance with the acoustical reference values maintained by the National Institute of Standards and Technology. The Larson Davis Model 824 sound level meter and frequency analyzer was calibrated before each measurement using a Larson Davis Model CA-250 acoustical calibrator, SN 3173, which was calibrated by an accredited laboratory in September 2006, and certified to be in conformance with the acoustical reference values maintained by the National Institute of Standards and Technology. (All BBA calibrators are cross-checked when any one calibrator is re-certified, to ensure that each is within 0.5 dB of the reference calibrator at the calibration frequency.)

The noise floor of the Larson Davis Model 820 measurement systems listed above is 17-18 dBA[1]. This means that noise levels reported as being below about 28 dBA may actually be lower than reported, as the noise floor of the instruments will contribute from 0.4 to 3.0 dB to the total reported noise level, depending upon the measured sound pressure level.

For the long-term noise measurements, the microphones were placed in a vertical position on a PVC boom about 8 feet above the ground. Each microphone was fitted with a random incidence corrector, and was protected by a large Larson Davis windscreen assembly.

For the short-term frequency analyses, the sound level meter was hand-held. The microphone was protected by a windscreen about 3.5 inches in diameter.

Weather during the measurement period was relatively mild, though heavy rain and wind were reportedly experienced on October 23-24. Observed wind speeds during equipment setup and short-term measurements were 0 to 5 mph.

Appendices A, B, and C list the hourly noise level data measured at each of the long-term noise measurement sites.

[1] See Appendix D for definitions of acoustical terms used in this report.

Figures 2 through 20 show the median (L50) noise levels measured during each hour at each long-term noise measurement site. The median noise level, which is the level exceeded for thirty minutes of the hour (50% of the time), was selected for display because it provides a good measure of the noise levels produced by steady-state noise sources. In the noise environment of this study, the median noise level represented the noise produced by gas well equipment and other background noise sources such as the wind in the trees.

As seen in Figures 2-20, the median noise levels at the gas well berm site varied. There were notable increases in noise levels on October 11, 2010, (Figure 6) during daytime hours, with corresponding increases at the distant sites.

The microphone at the gas well berm was damaged on October 12, 2020, after about 1900 hours, which affected the data collected to 1900 hours on October 13, 2010. Inspection on October 14, 2010 revealed that the PVC boom has come apart at its midpoint, and the microphone was lying on the ground, saturated with water. It appeared that the sprinklers on the berm had been turned on, and the water blast separated the boom and caused the microphone to fall. The microphone and preamplifier were replaced on October 14, 2010 before noon.

The gas well equipment appeared to be very quiet from about noon on October 15, 2010 to 0700 hours on October 20, 2010 (Figures 10-15). During daytime hours on October 20, 2010, the noise levels at the gas well berm site increased significantly, having no effect on noise levels at the distant sites. On October 21, 2010, increased noise levels at the well site berm between 0900 and 1100 hours correlated with increased noise levels at the site 100 yards west of the pad. The gas well site was quiet again from about 1900 hours October 21, 2010 until midday on October 24, 2010 (Figure 19), when a storm appeared to cause elevated noise levels at all three noise measurement sites.

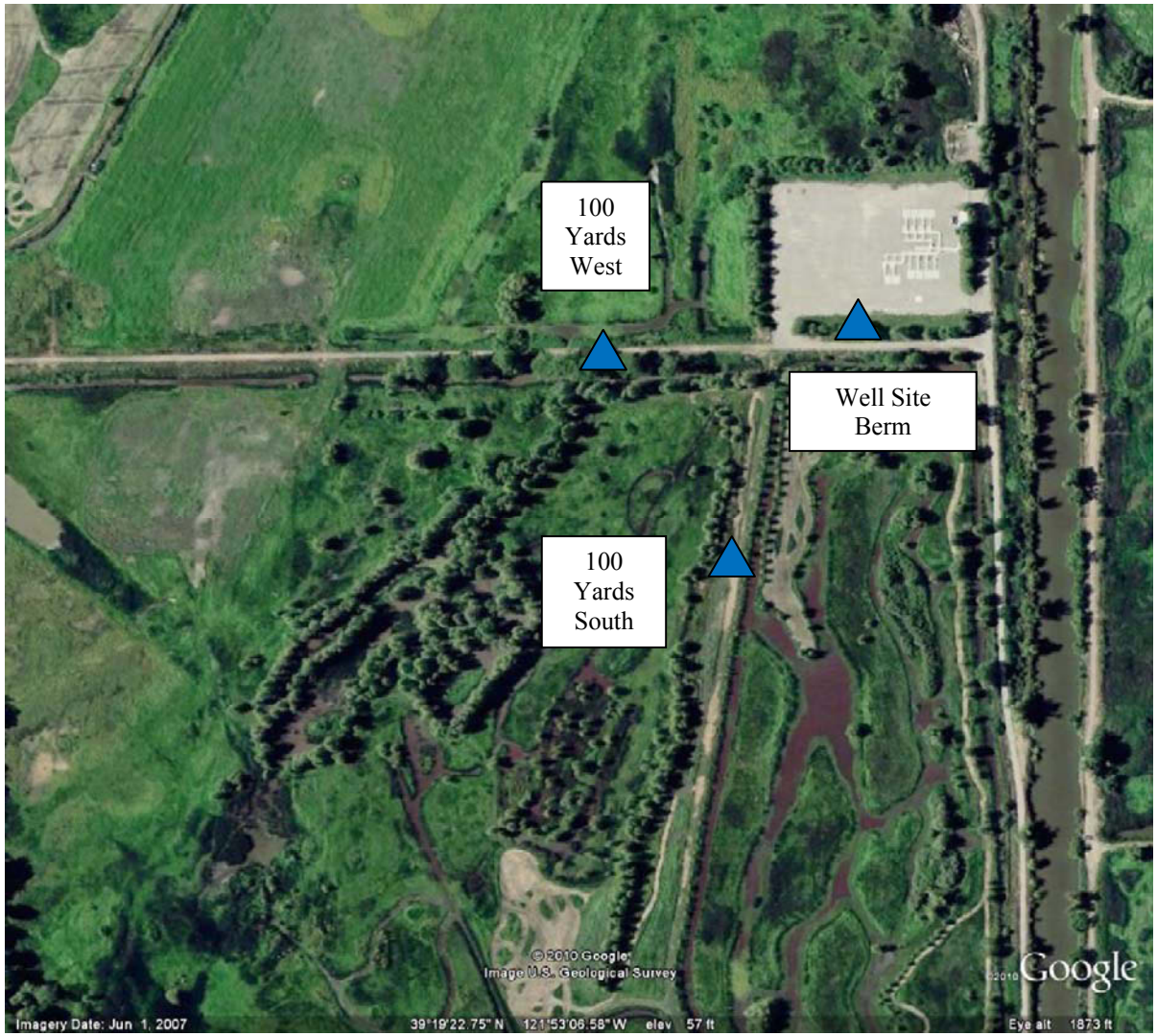
Figure 21 presents the frequency analyses conducted at each measurement site on October 14, 2010, between 11 a.m. and noon. The blue line of this figure shows the A-weighted sound pressure levels measured at the gas well berm. At that location, there was no other significant noise source. The dominant frequency band (in terms of human hearing) was centered at 3150 Hz. This is a relatively high pitch, in the range of music. Figure 21 shows that the 3150 Hz component of the gas well sound remained distinguishable at the site 100 yards west of the gas well site.

Subjectively, the gas well sound was an audible component of the ambient noise at the site 100 yards west of the well pad during equipment setup and maintenance on October 7 and 14, 2010. At the site 100 yards south of the gas well site, the gas well sound was faint on October 7, 2010, but more noticeable on October 14, 2010. At about 10 a.m. on October 25, 2010, when the meters were recovered, the gas well was essentially inaudible at all locations.

Respectfully submitted,
Brown-Buntin Associates, Inc.

Jim Buntin
Principal Consultant

Figure 1
Noise Measurement Locations
October 7-25, 2010



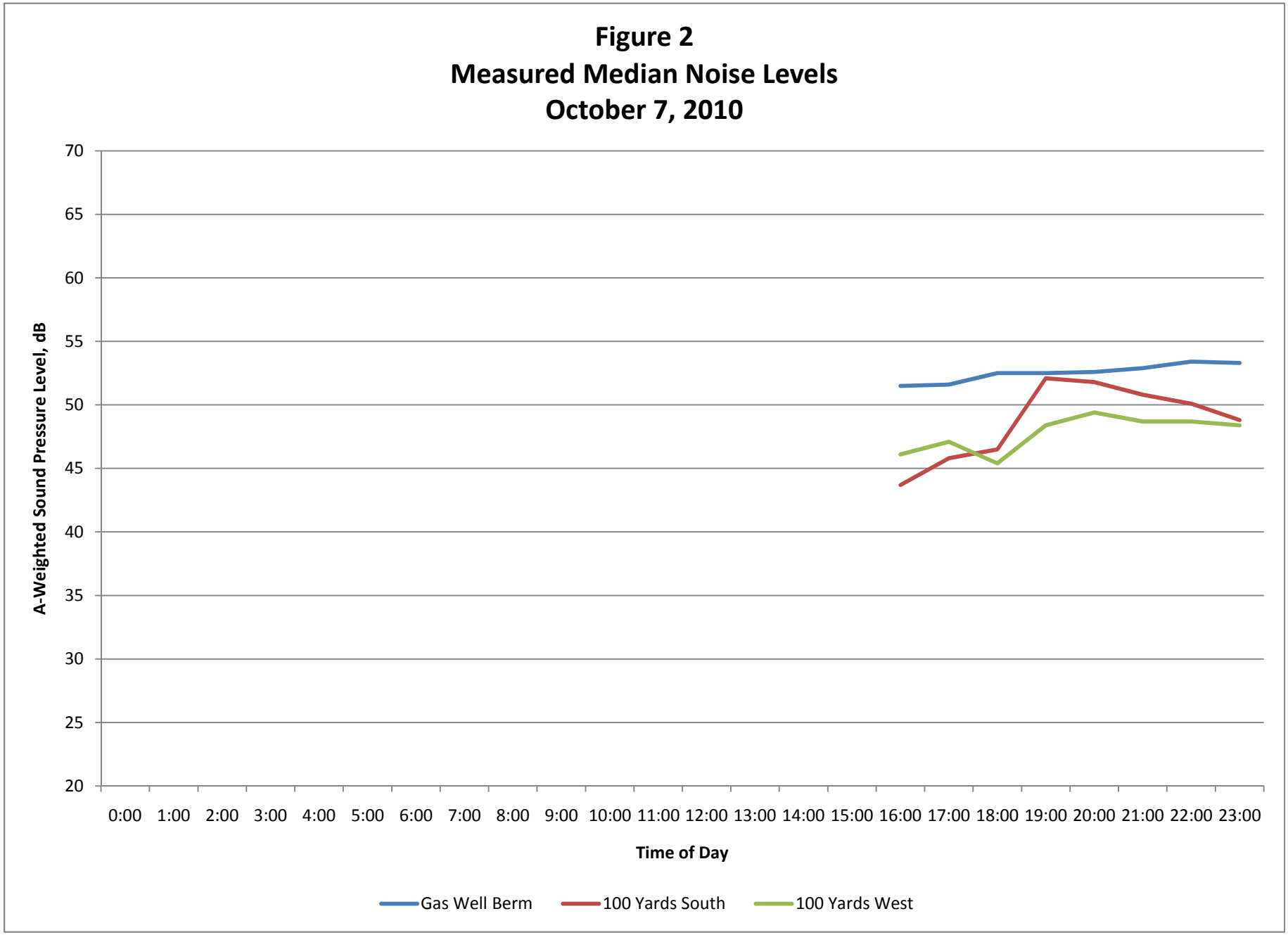


Figure 2
Measured Median Noise Levels
October 7, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

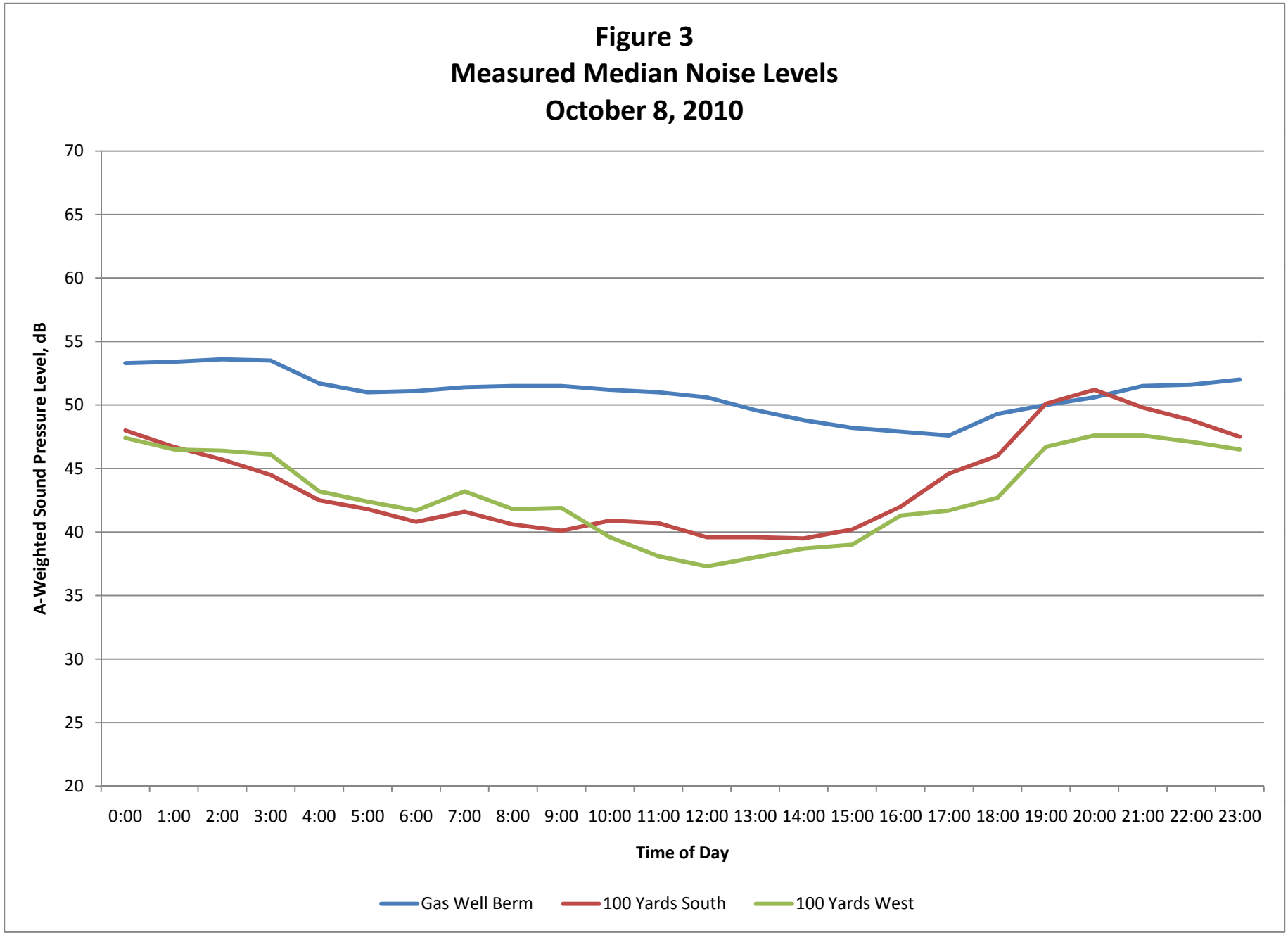


Figure 3
Measured Median Noise Levels
October 8, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

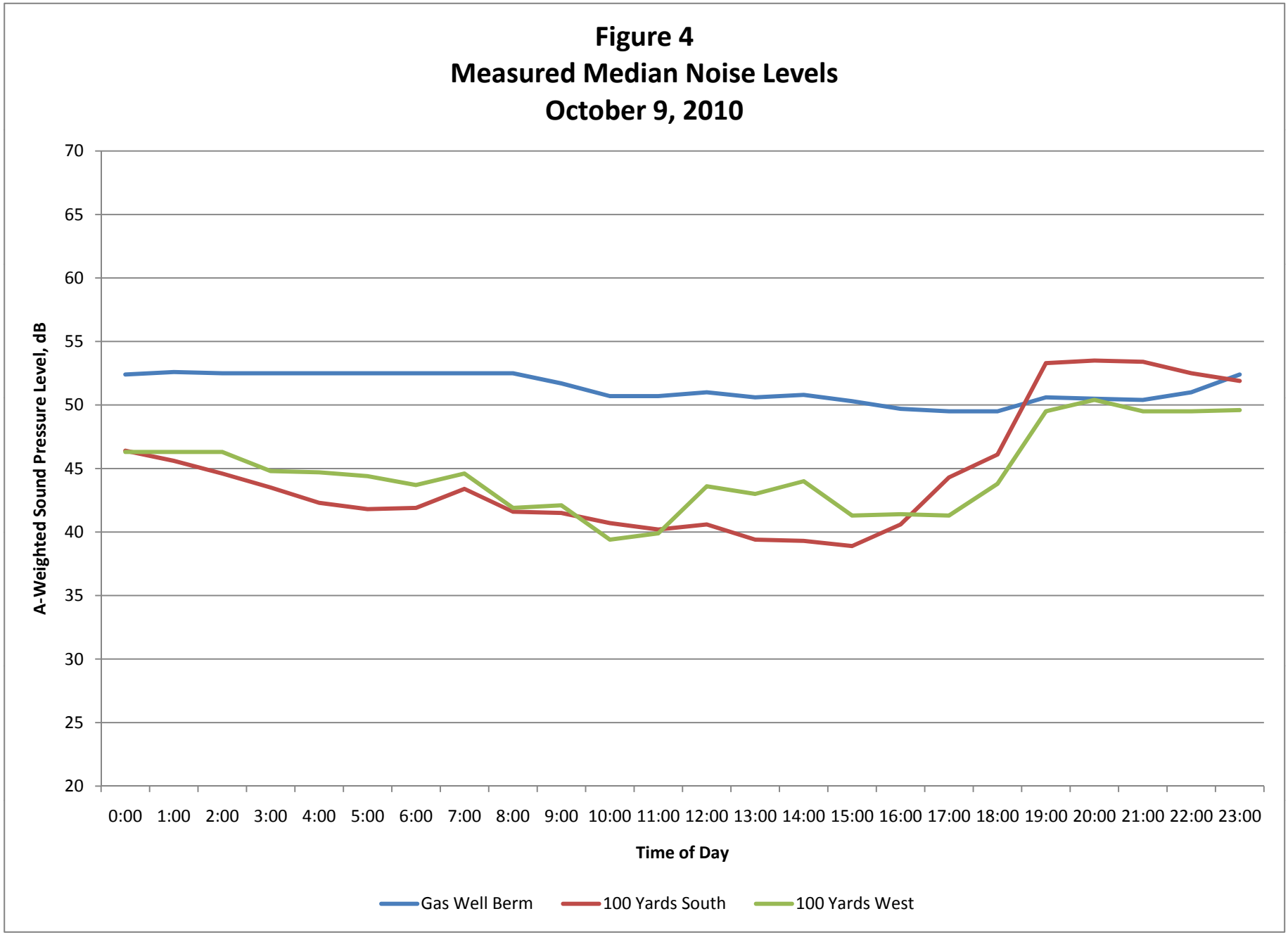


Figure 4
Measured Median Noise Levels
October 9, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

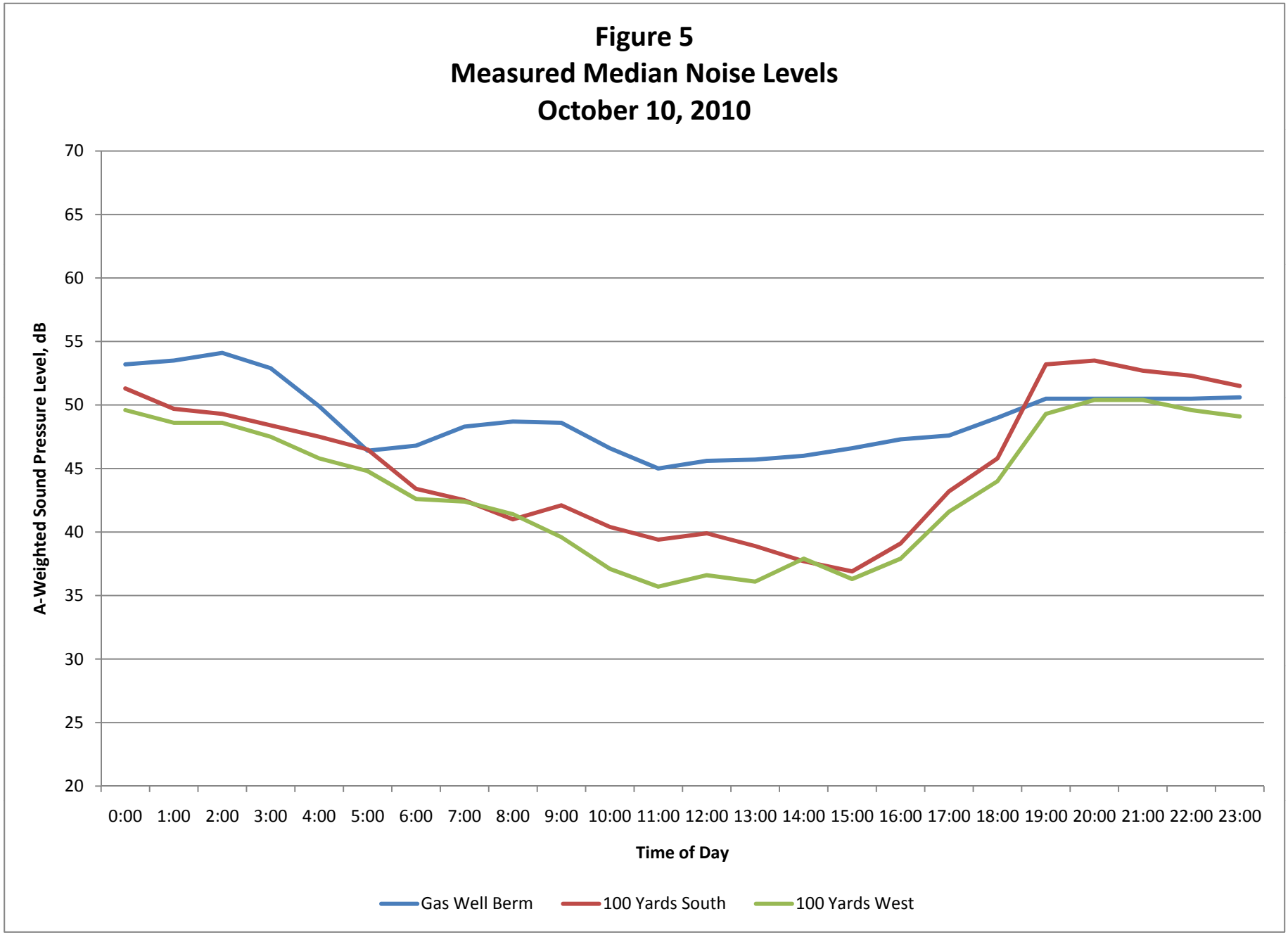


Figure 5
Measured Median Noise Levels
October 10, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

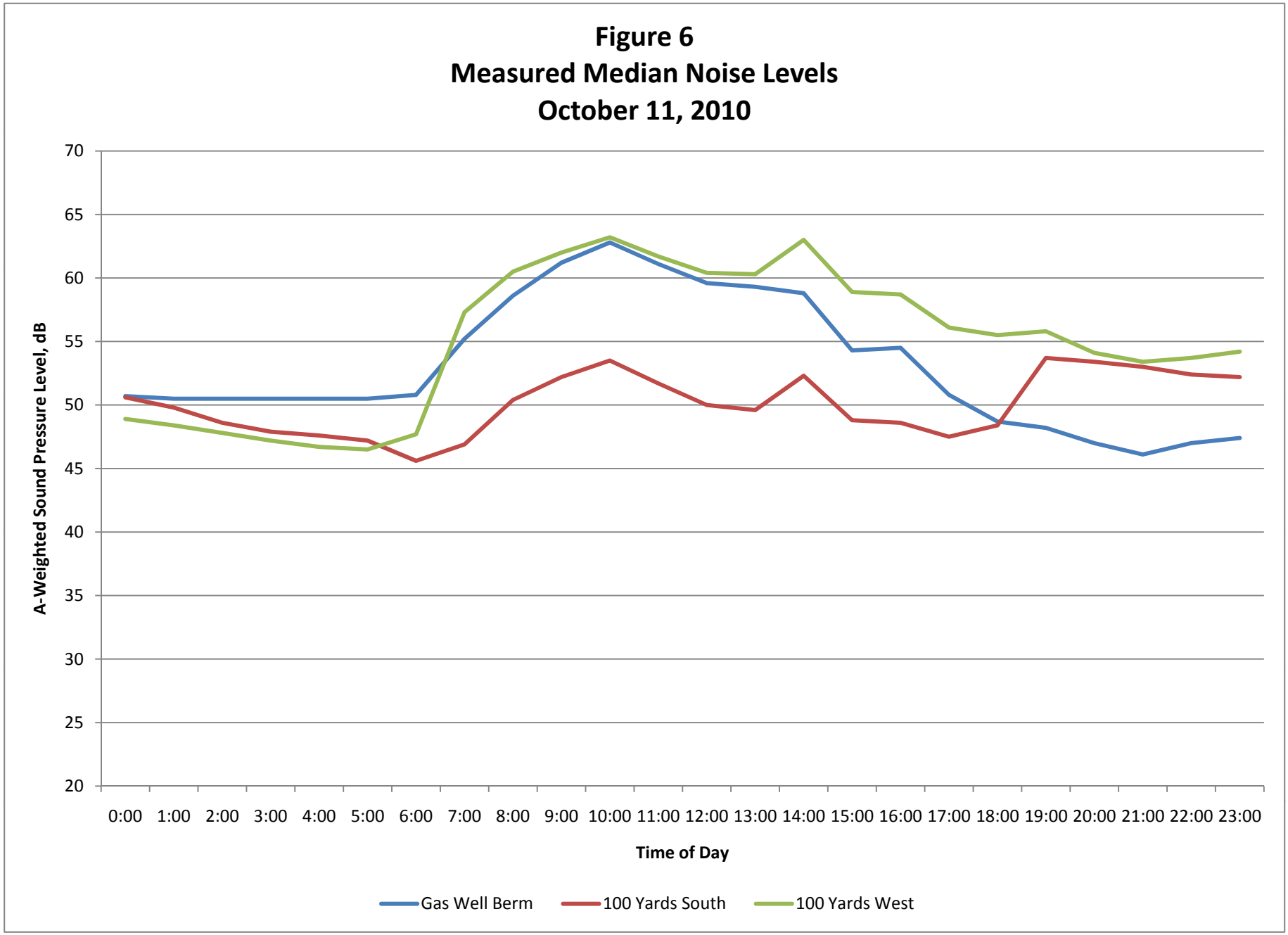


Figure 6
Measured Median Noise Levels
October 11, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

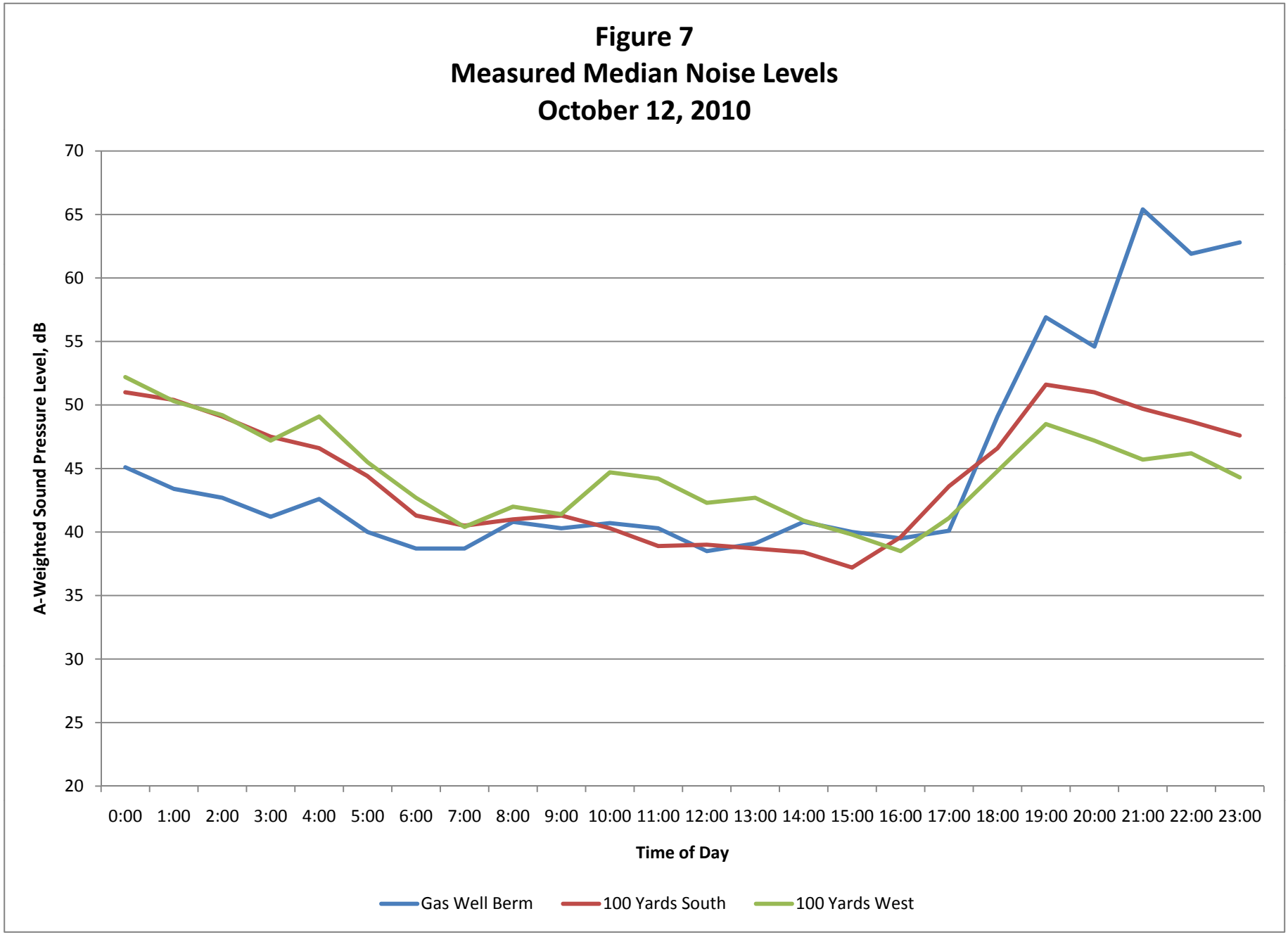


Figure 7
Measured Median Noise Levels
October 12, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

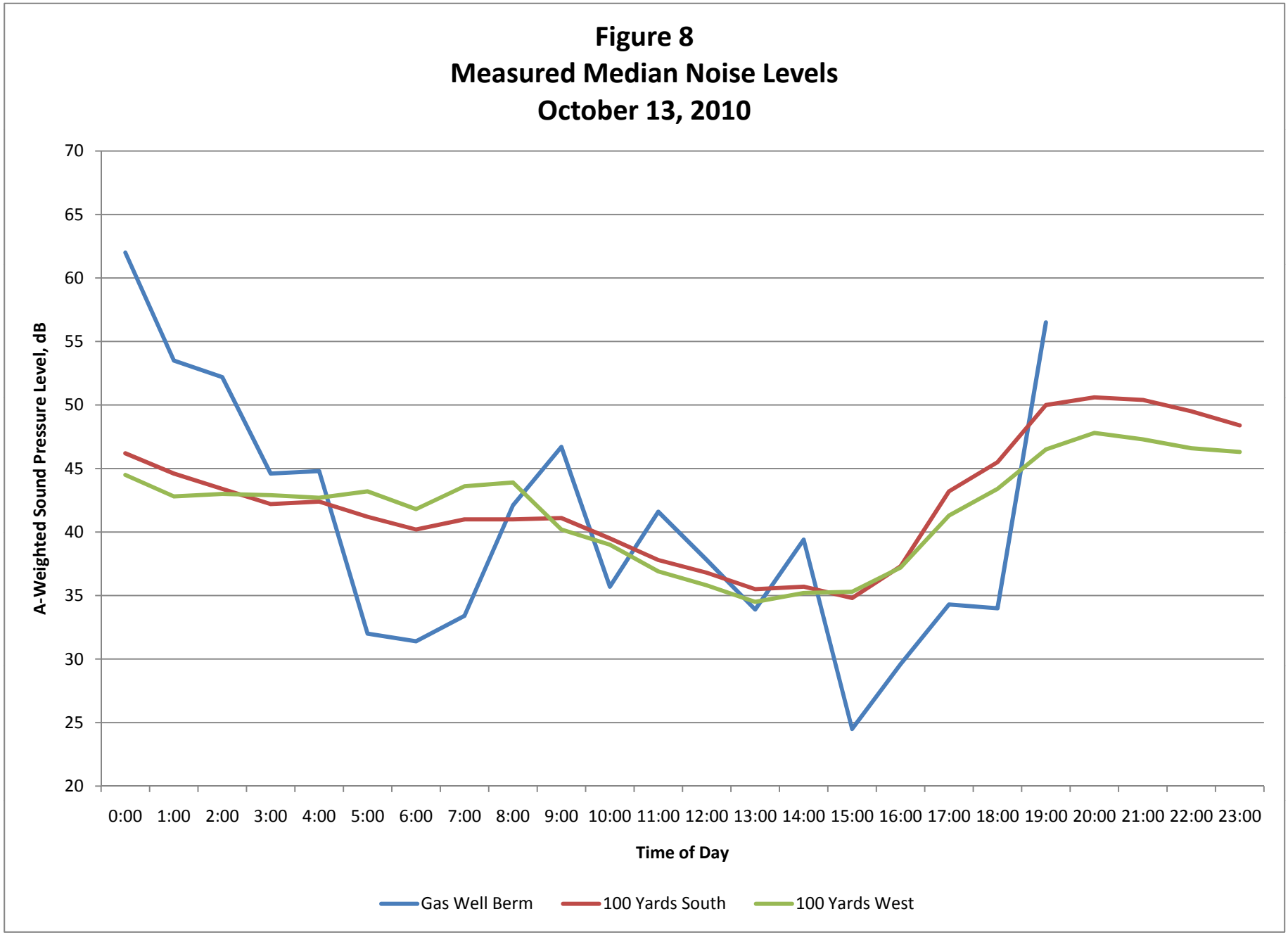


Figure 8
Measured Median Noise Levels
October 13, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

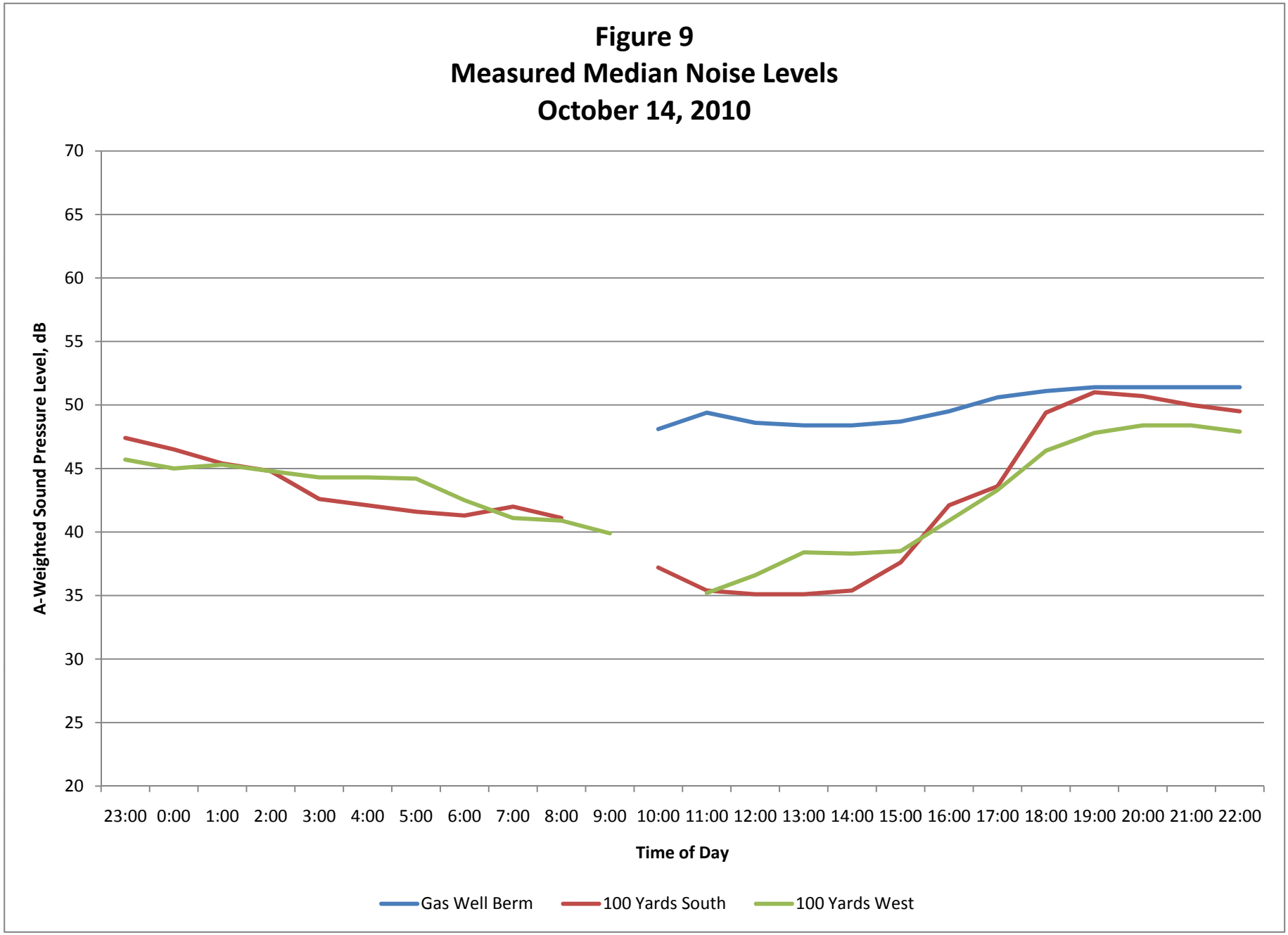


Figure 9
Measured Median Noise Levels
October 14, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

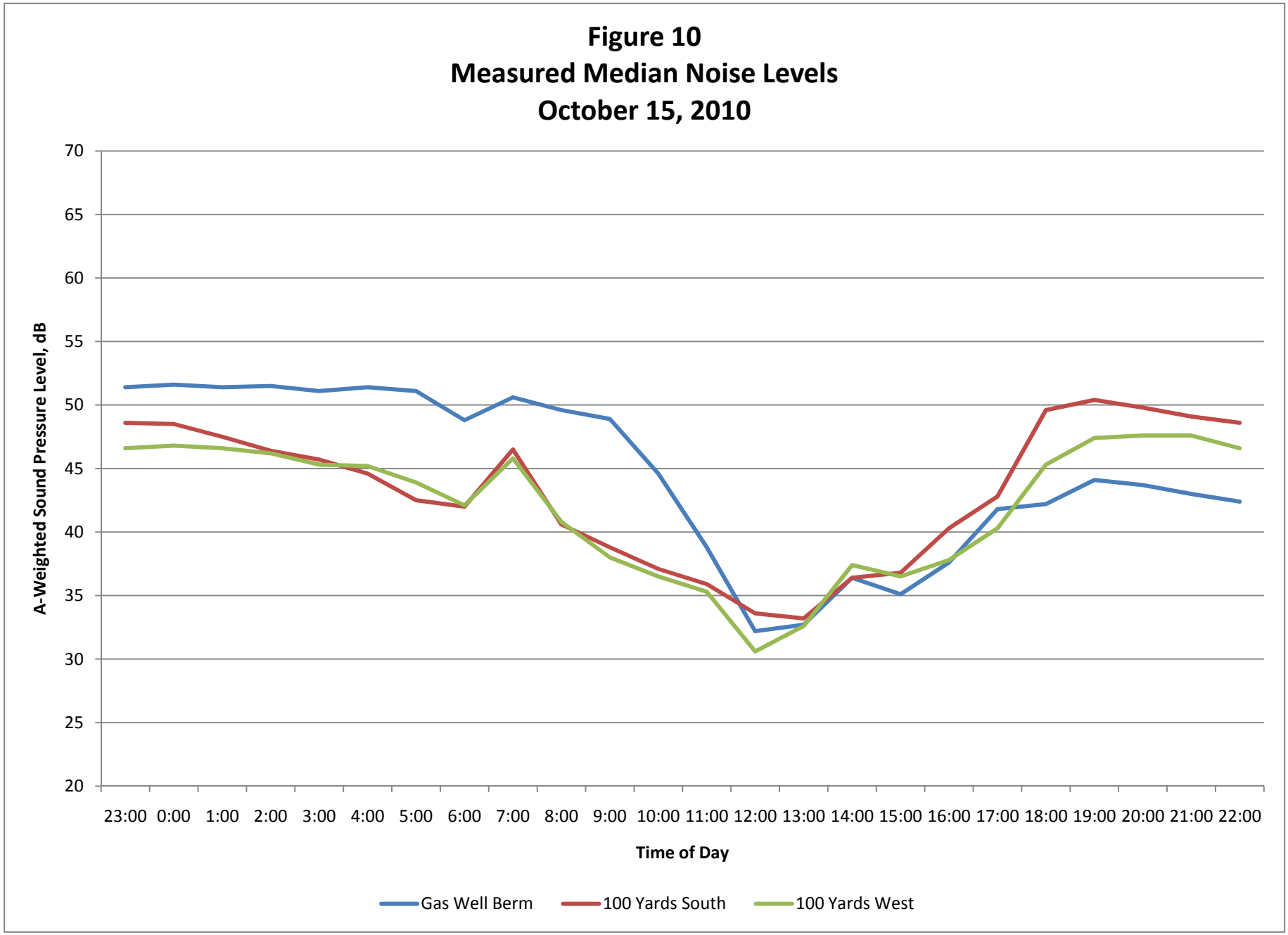


Figure 10
Measured Median Noise Levels
October 15, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

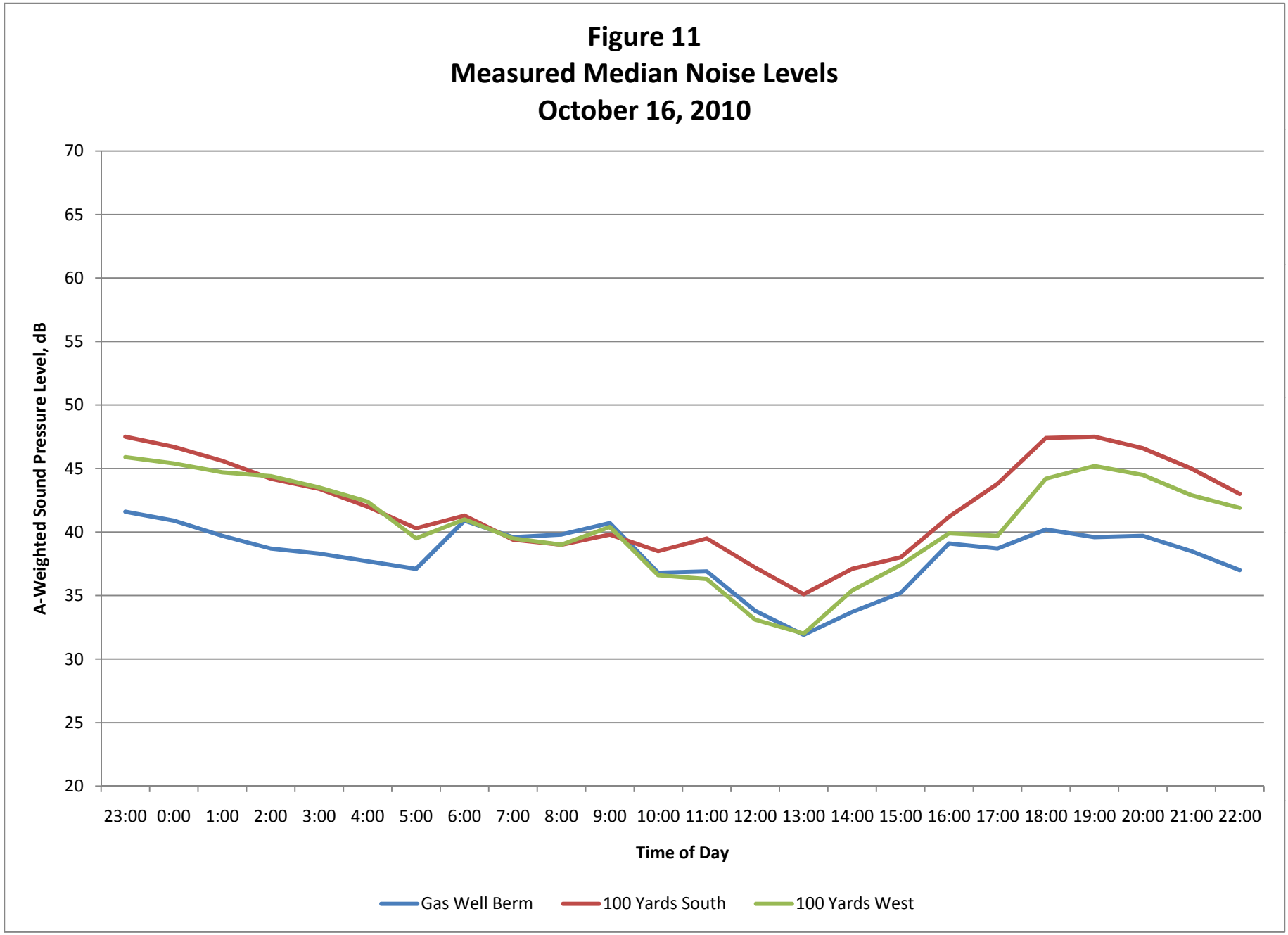


Figure 11
Measured Median Noise Levels
October 16, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

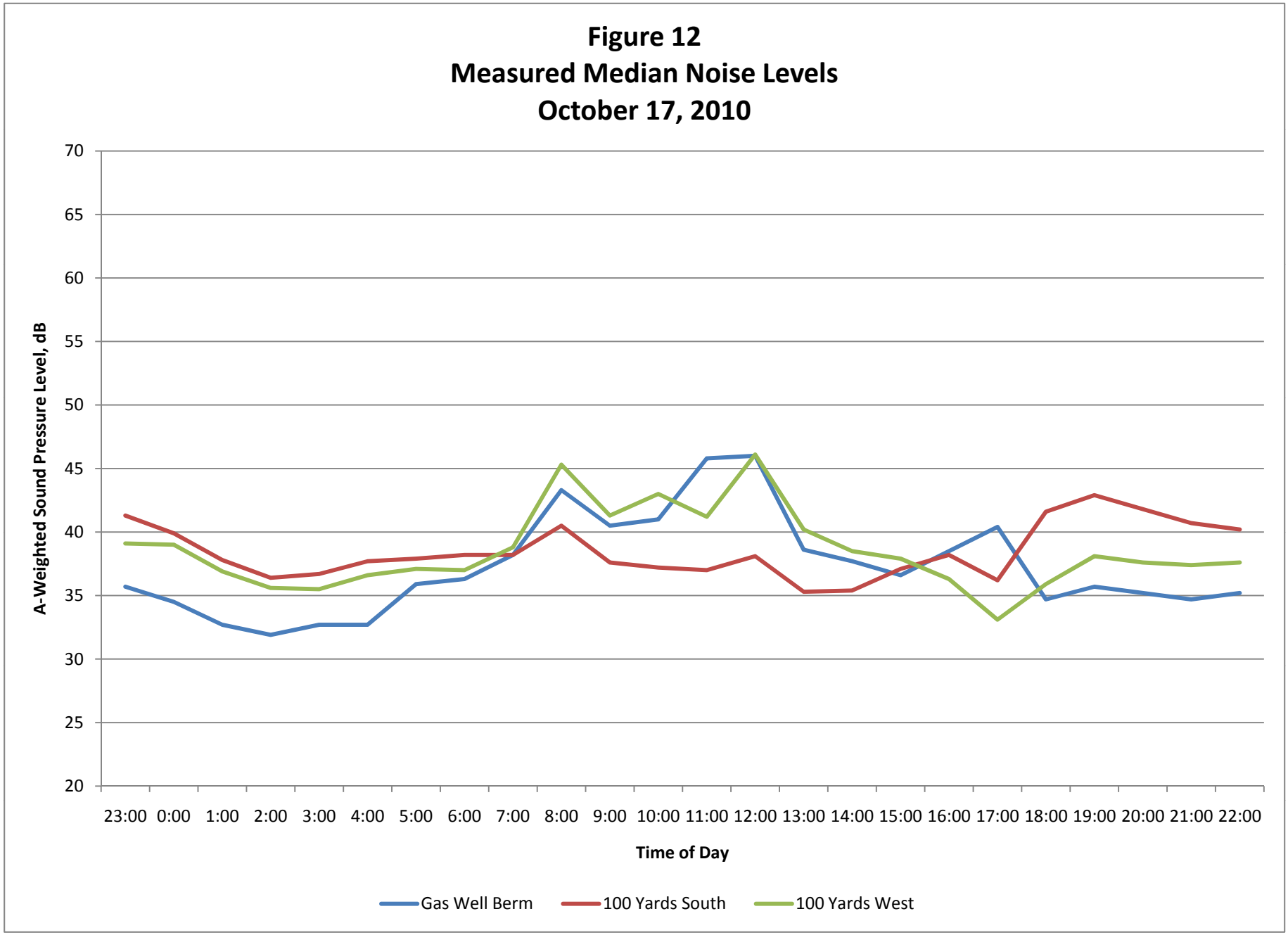


Figure 12
Measured Median Noise Levels
October 17, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

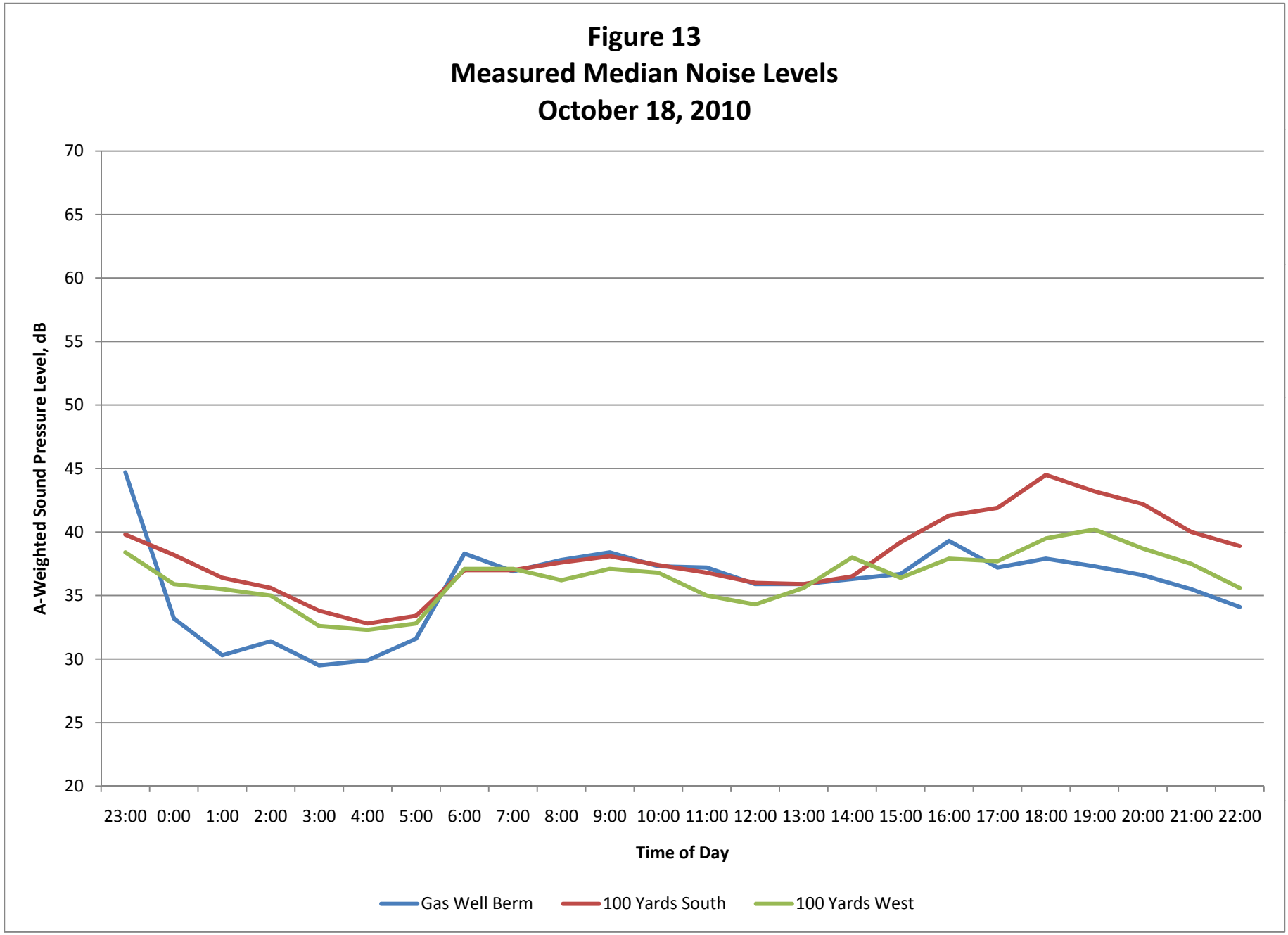


Figure 13
Measured Median Noise Levels
October 18, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

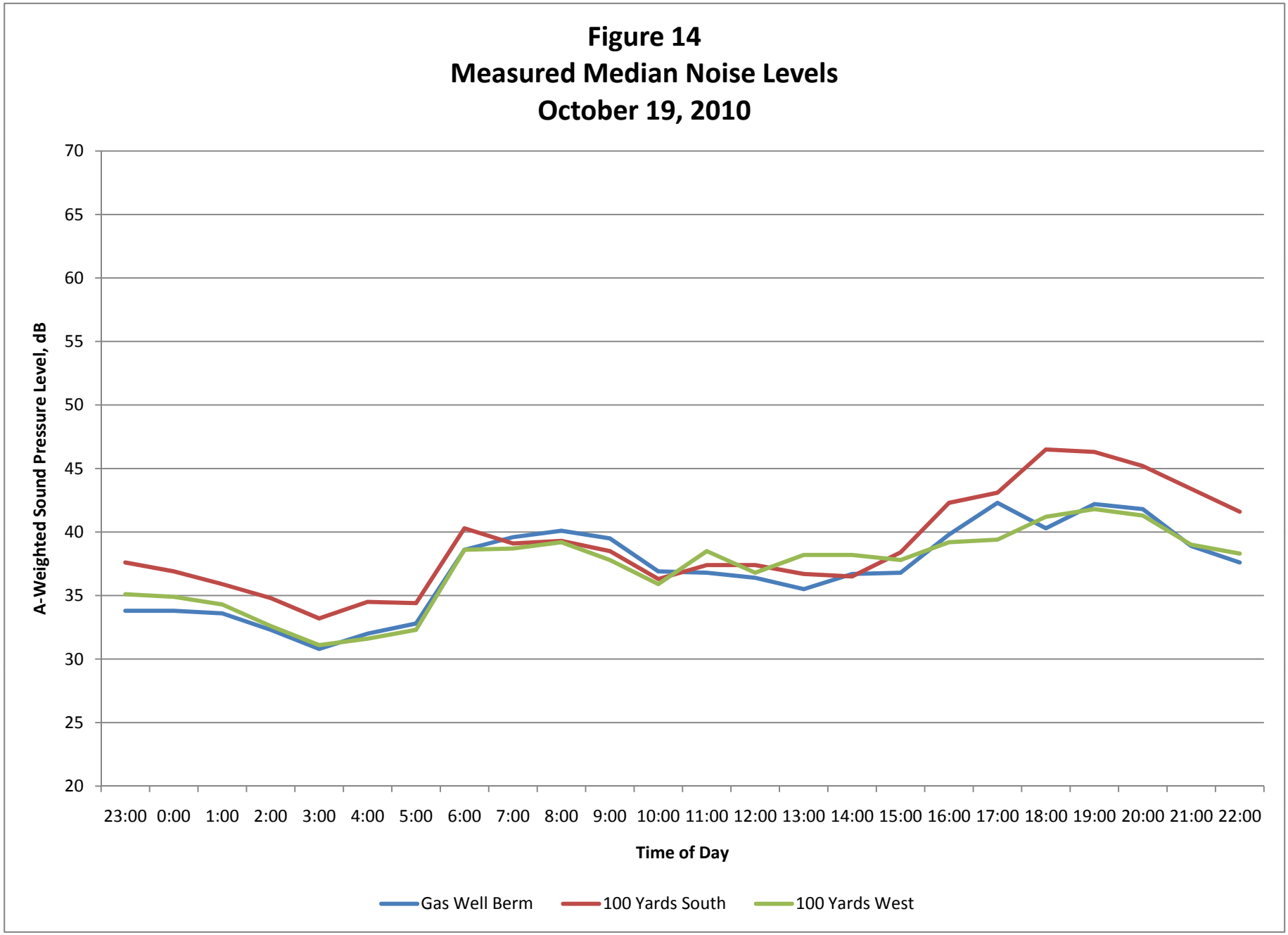


Figure 14
Measured Median Noise Levels
October 19, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

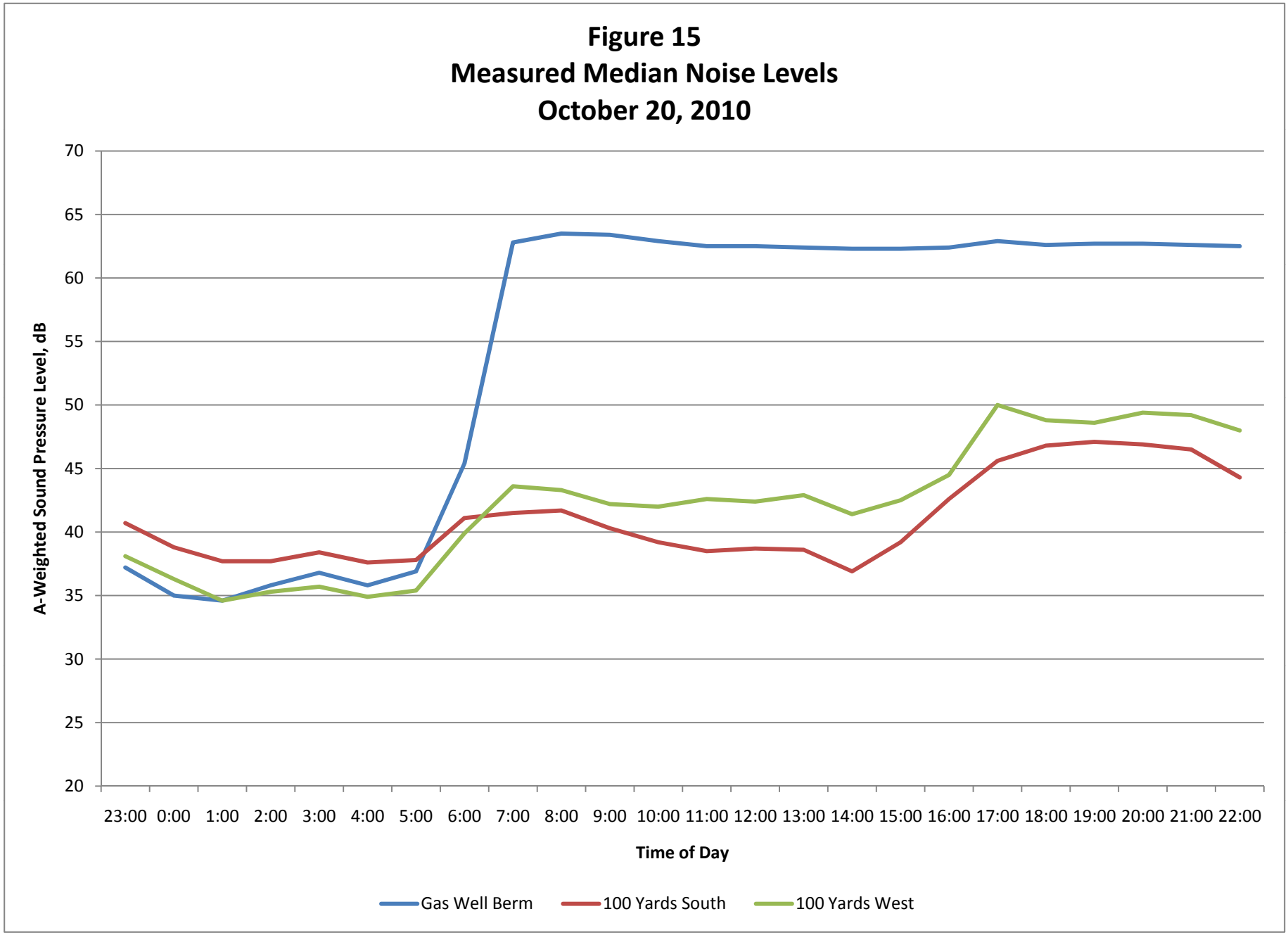


Figure 15
Measured Median Noise Levels
October 20, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

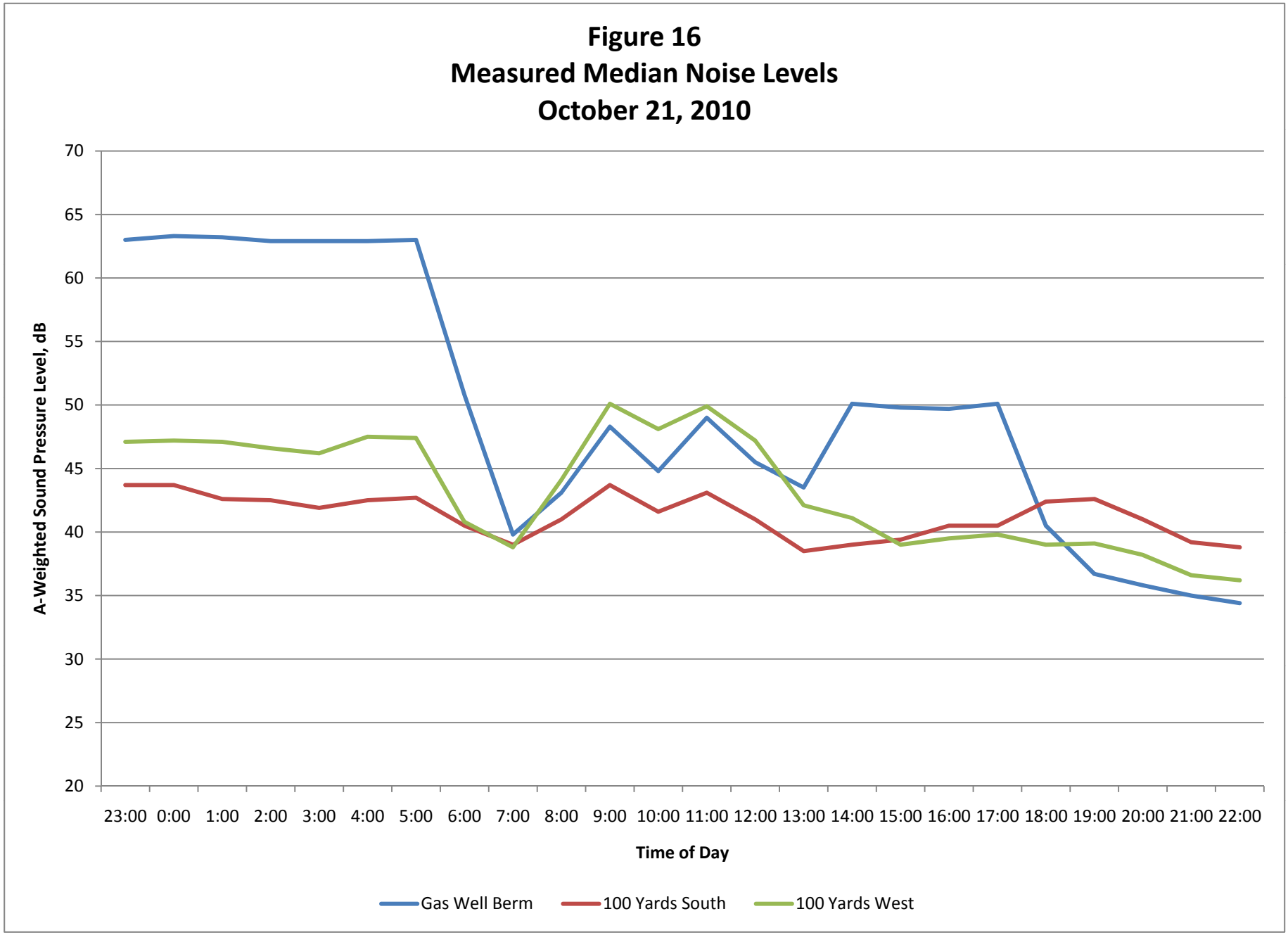


Figure 16
Measured Median Noise Levels
October 21, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

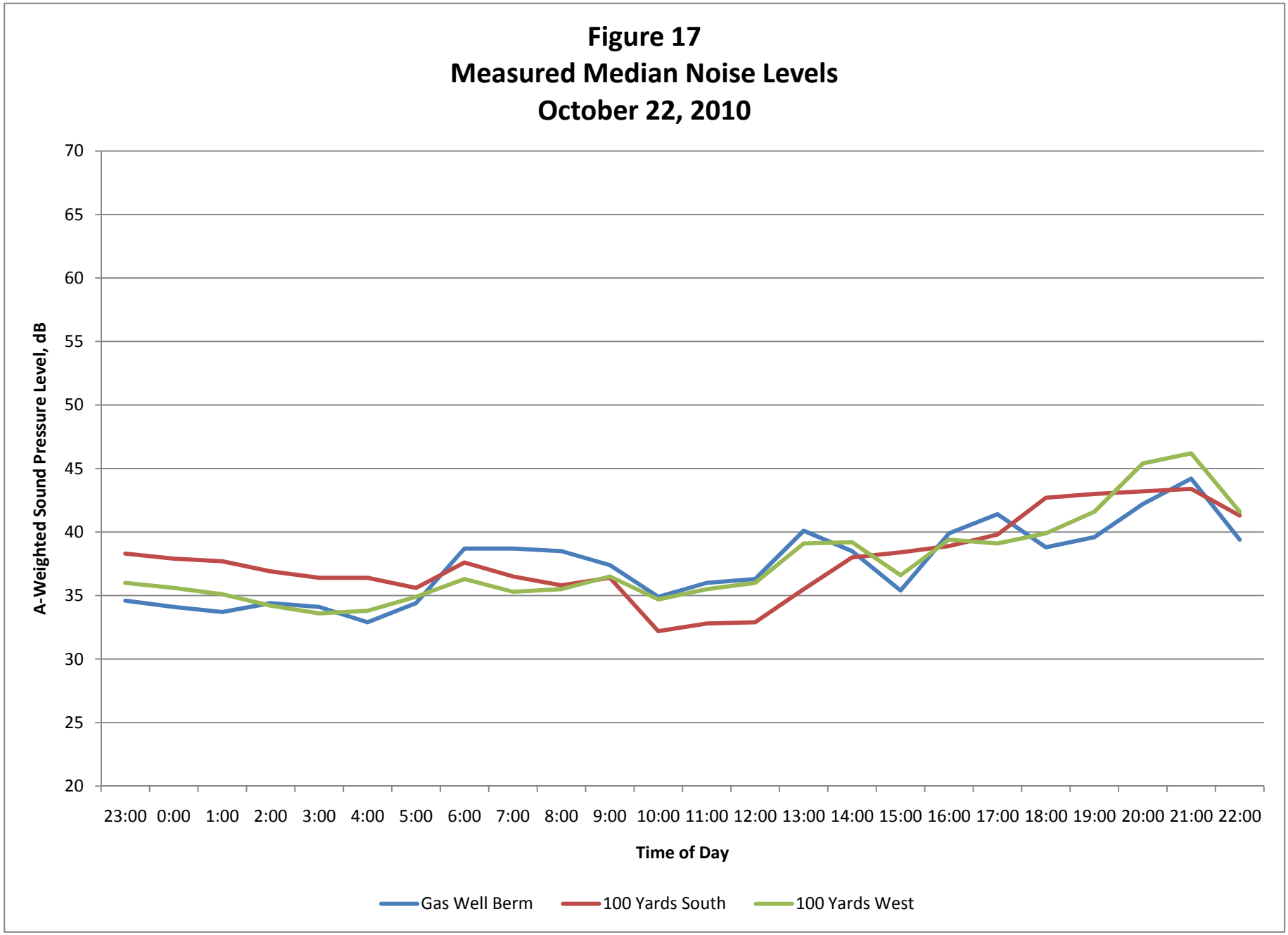


Figure 17
Measured Median Noise Levels
October 22, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

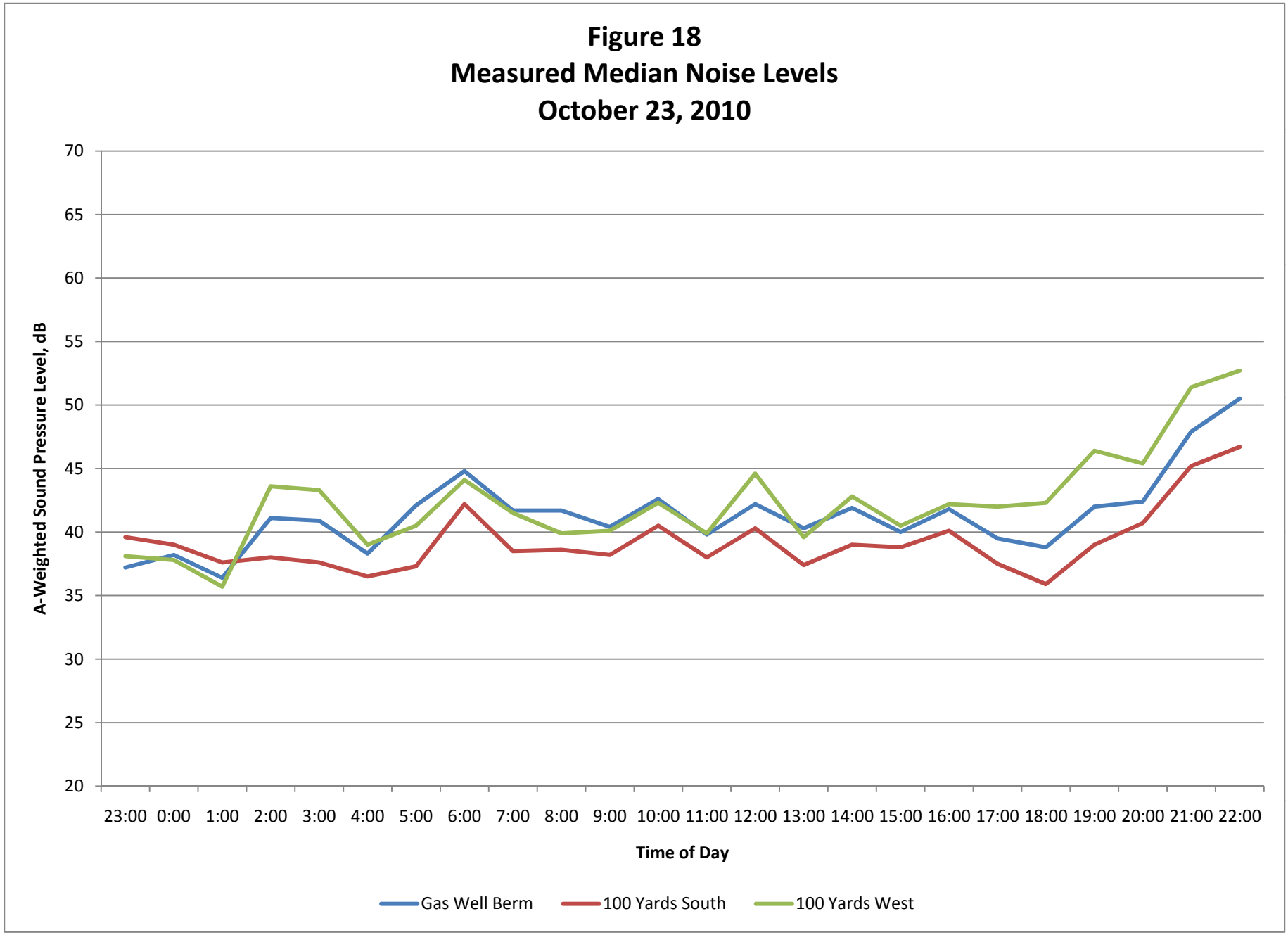


Figure 18
Measured Median Noise Levels
October 23, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

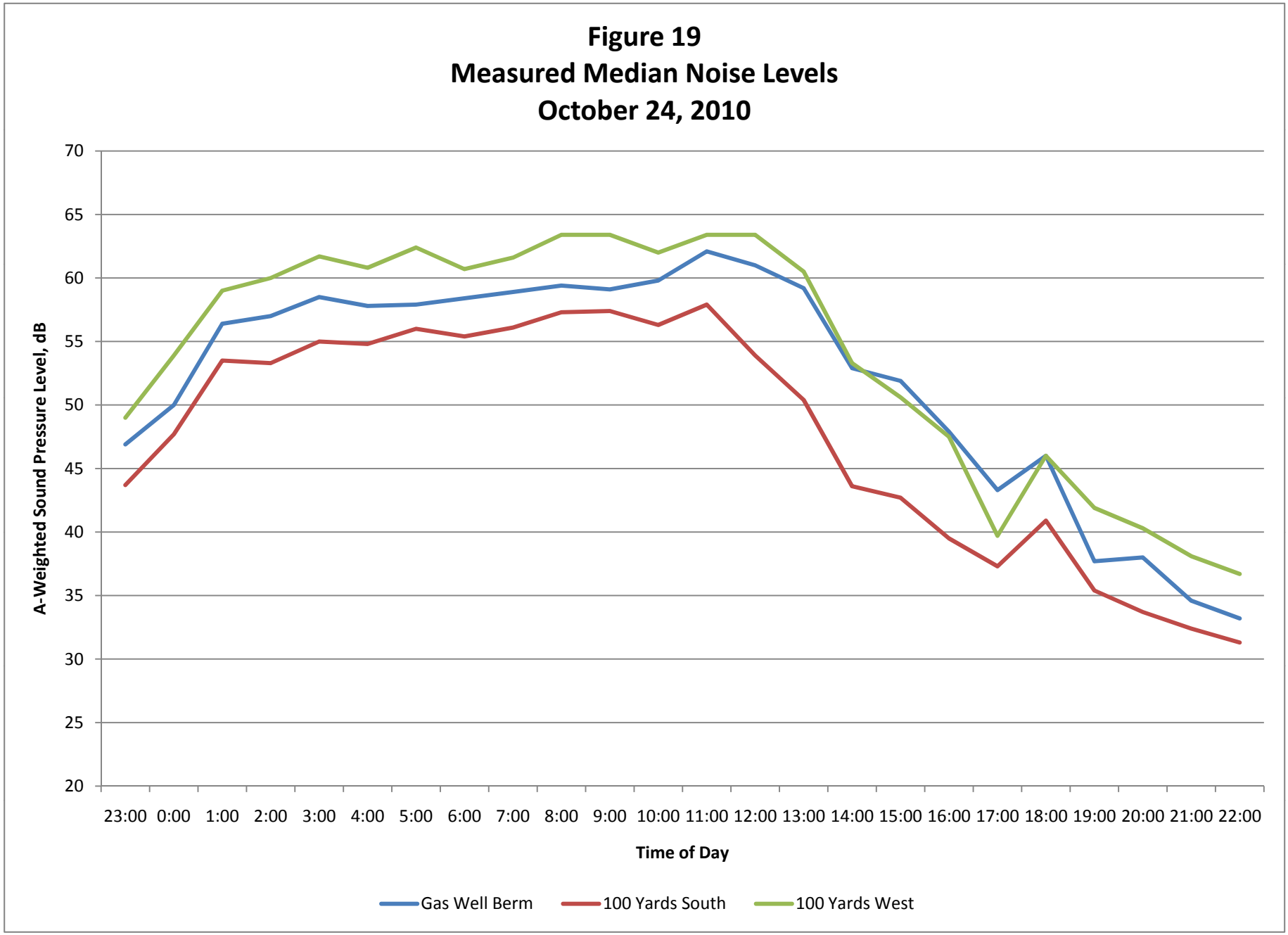


Figure 19
Measured Median Noise Levels
October 24, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

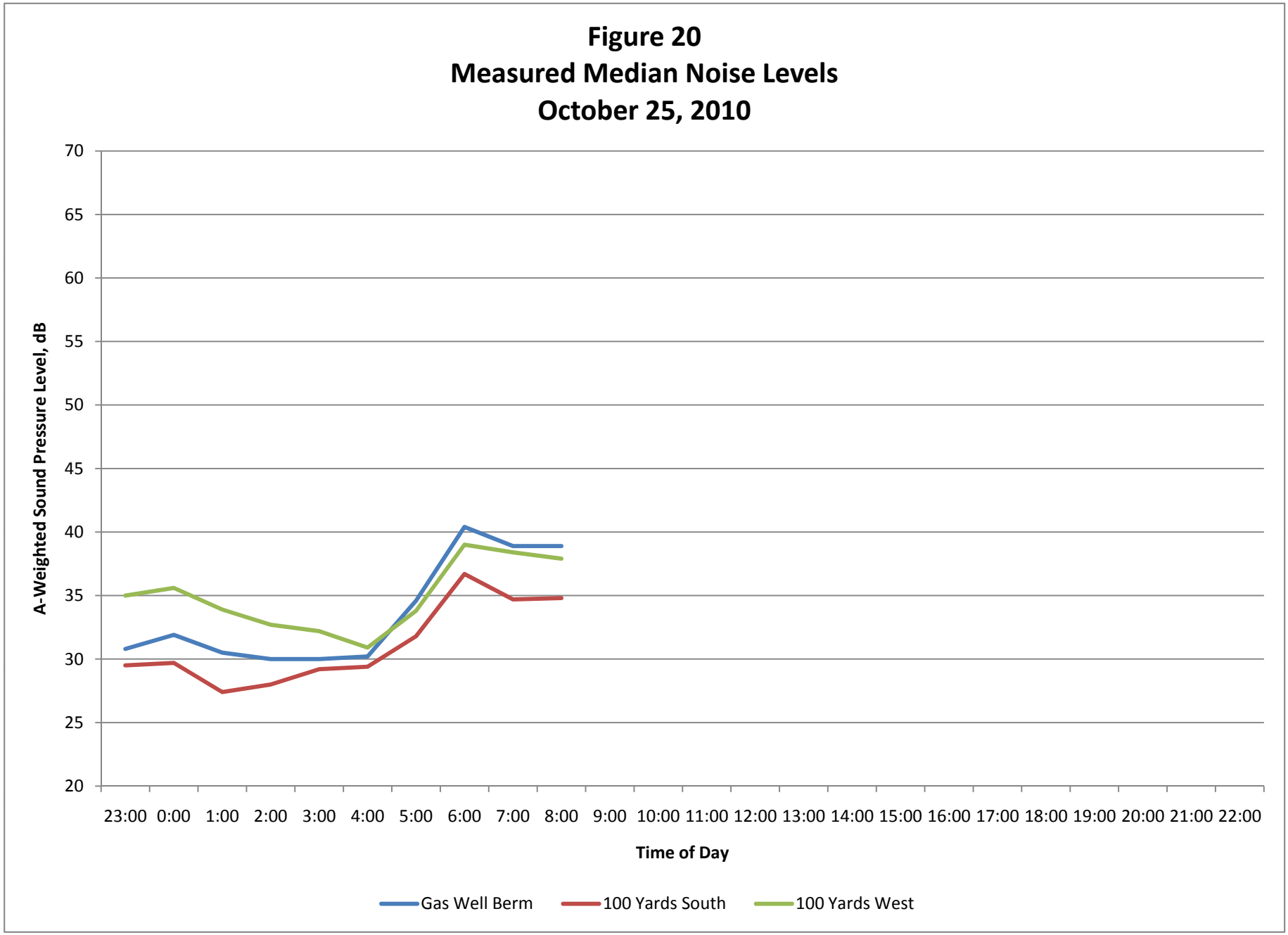


Figure 20
Measured Median Noise Levels
October 25, 2010
A-Weighted Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
25
20
23:00
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Time of Day
Gas Well Berm
100 Yards South
100 Yards West

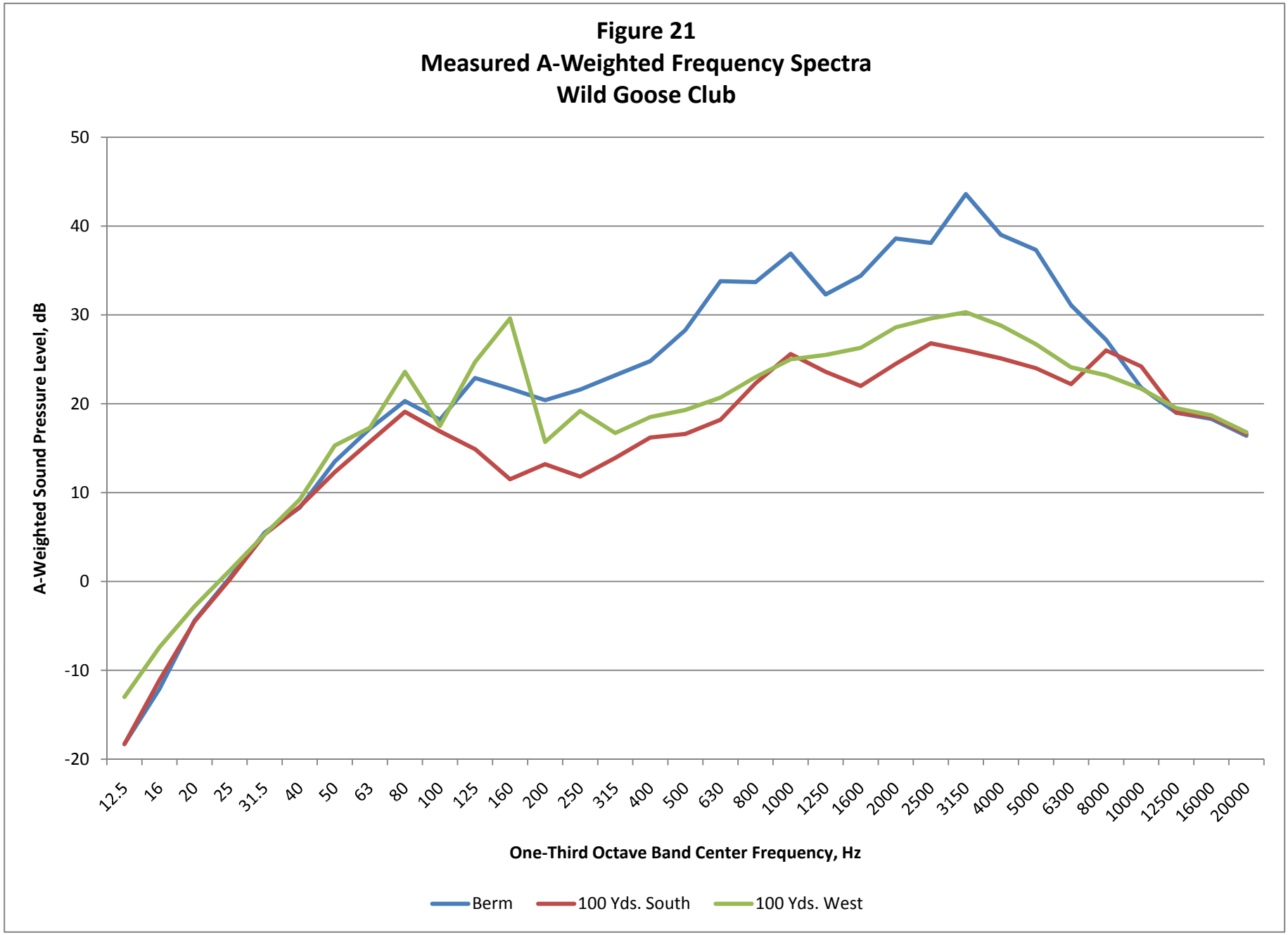


Figure 21
Measured A-Weighted Frequency Spectra
Wild Goose Club
A-Weighted Sound Pressure Level, dB
50
40
30
20
10
0
-10
-20
12.5
16
20
25
31.5
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1000
1250
1600
2000
2500
3150
4000
5000
6300
8000
10000
12500
16000
20000
One-Third Octave Band Center Frequency, Hz
Berm
100 Yds. South
100 Yds. West

Appendix A												
Sound Level Data: Gas Well Berm Site												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
07Oct 10	14:45:58	841.8	61.2	90.4	78.4	42.4	70.6	66.3	64.8	58.3	51.9	50.3
07Oct 10	15:00:00	3600	51.3	86.9	64.0	49.4	54.2	52.0	51.9	51.4	50.8	50.1
07Oct 10	16:00:00	3600	51.6	87.2	56.3	49.9	53.5	52.7	52.5	51.9	51.5	50.5
07Oct 10	17:00:00	3600	51.7	87.3	57.3	49.9	53.6	52.7	52.6	52.0	51.6	51.0
07Oct 10	18:00:00	3600	56.2	91.8	67.3	50.8	61.0	60.7	60.6	59.2	52.5	51.4
07Oct 10	19:00:00	3600	52.5	88.1	55.4	51.6	53.5	52.9	52.9	52.7	52.5	52.0
07Oct 10	20:00:00	3600	52.8	88.4	53.6	52.0	53.6	53.6	53.5	52.9	52.6	52.1
07Oct 10	21:00:00	3600	53.0	88.5	54.4	52.2	54.0	53.8	53.8	53.4	52.9	52.2
07Oct 10	22:00:00	3600	53.1	88.7	55.5	52.3	54.0	53.9	53.9	53.7	53.4	52.5
07Oct 10	23:00:00	3600	53.1	88.7	55.6	52.4	54.0	53.9	53.9	53.6	53.3	52.4
08Oct 10	0:00:00	3600	53.2	88.8	55.7	52.5	54.0	53.9	53.8	53.6	53.3	52.5
08Oct 10	1:00:00	3600	53.3	88.9	55.5	52.3	54.0	53.9	53.9	53.7	53.4	52.6
08Oct 10	2:00:00	3600	53.7	89.3	55.8	52.6	54.9	54.6	54.5	53.9	53.6	53.1
08Oct 10	3:00:00	3600	53.5	89.1	56.8	52.7	54.7	54.0	54.0	53.8	53.5	53.1
08Oct 10	4:00:00	3600	51.9	87.5	59.7	49.3	54.0	53.5	53.3	52.6	51.7	50.3
08Oct 10	5:00:00	3600	51.0	86.6	56.8	50.2	52.0	51.8	51.8	51.5	51.0	50.2
08Oct 10	6:00:00	3600	51.1	86.7	55.1	50.3	52.8	51.9	51.9	51.6	51.1	50.3
08Oct 10	7:00:00	3600	51.2	86.8	56.1	50.1	52.3	51.9	51.9	51.7	51.4	50.4
08Oct 10	8:00:00	3600	51.6	87.2	62.0	50.4	54.4	52.2	52.0	51.8	51.5	51.0
08Oct 10	9:00:00	3600	51.4	87.0	59.3	50.3	52.7	52.0	51.9	51.8	51.5	50.8
08Oct 10	10:00:00	3600	51.2	86.7	57.6	50.1	52.1	51.9	51.9	51.6	51.2	50.3
08Oct 10	11:00:00	3600	51.2	86.7	63.0	49.5	52.5	51.9	51.8	51.5	51.0	50.2
08Oct 10	12:00:00	3600	50.8	86.4	59.3	49.2	52.9	51.7	51.6	50.9	50.6	50.0
08Oct 10	13:00:00	3600	49.9	85.5	57.1	47.8	52.2	50.8	50.7	50.1	49.6	49.0
08Oct 10	14:00:00	3600	49.2	84.7	60.7	47.4	52.1	49.9	49.9	49.4	48.8	48.1
08Oct 10	15:00:00	3600	48.4	84.0	56.1	46.8	51.3	49.0	49.0	48.7	48.2	47.2
08Oct 10	16:00:00	3600	48.2	83.8	61.1	46.8	50.3	49.0	48.9	48.5	47.9	47.2
08Oct 10	17:00:00	3600	47.9	83.5	61.4	46.7	49.5	48.7	48.6	48.0	47.6	47.1
08Oct 10	18:00:00	3600	55.2	90.8	66.4	47.0	60.9	60.6	60.6	59.0	49.3	47.3
08Oct 10	19:00:00	3600	50.1	85.7	54.7	48.7	52.4	51.0	50.9	50.6	50.0	49.2
08Oct 10	20:00:00	3600	50.8	86.4	53.8	50.0	51.9	51.7	51.6	51.0	50.6	50.1
08Oct 10	21:00:00	3600	51.4	87.0	52.3	50.7	52.0	51.9	51.9	51.7	51.5	51.1
08Oct 10	22:00:00	3600	51.8	87.3	60.8	50.6	53.0	52.7	52.6	52.0	51.6	51.1
08Oct 10	23:00:00	3600	52.1	87.6	57.2	51.1	53.0	52.8	52.8	52.5	52.0	51.2
09Oct 10	0:00:00	3600	52.2	87.8	54.8	51.5	53.0	52.9	52.9	52.7	52.4	51.5
09Oct 10	1:00:00	3600	52.6	88.1	55.9	51.8	53.9	53.3	53.2	52.8	52.6	52.1
09Oct 10	2:00:00	3600	52.6	88.2	55.5	51.8	53.8	53.2	53.0	52.8	52.5	52.1
09Oct 10	3:00:00	3600	52.4	88.0	53.9	51.5	53.6	53.0	52.9	52.8	52.5	52.0
09Oct 10	4:00:00	3600	52.4	87.9	55.9	51.5	53.6	53.0	52.9	52.8	52.5	52.0
09Oct 10	5:00:00	3600	52.3	87.9	57.3	51.4	53.5	52.9	52.9	52.8	52.5	52.0
09Oct 10	6:00:00	3600	52.5	88.1	56.6	51.5	53.9	53.3	53.2	52.8	52.5	52.1
09Oct 10	7:00:00	3600	52.7	88.3	62.1	51.6	54.6	53.4	53.2	52.8	52.5	52.0
09Oct 10	8:00:00	3600	52.5	88.1	60.8	51.5	54.0	53.2	53.0	52.8	52.5	52.0
09Oct 10	9:00:00	3600	51.8	87.4	61.7	50.0	54.0	53.0	52.9	52.3	51.7	50.6
09Oct 10	10:00:00	3600	50.9	86.5	57.4	49.7	52.5	51.8	51.7	51.1	50.7	50.1
09Oct 10	11:00:00	3600	50.8	86.4	56.7	49.3	52.6	51.8	51.7	51.1	50.7	50.1
09Oct 10	12:00:00	3600	51.2	86.7	57.2	49.1	53.0	52.2	52.0	51.6	51.0	50.1
09Oct 10	13:00:00	3600	50.8	86.4	55.7	48.8	53.0	51.9	51.8	51.1	50.6	49.7
09Oct 10	14:00:00	3600	51.1	86.7	67.8	49.1	52.9	52.0	51.9	51.4	50.8	50.0
09Oct 10	15:00:00	3600	50.4	85.9	54.3	48.7	52.1	51.4	51.3	50.8	50.3	49.3
09Oct 10	16:00:00	3600	49.9	85.5	53.7	48.7	51.0	50.8	50.7	50.3	49.7	49.1
09Oct 10	17:00:00	3600	50.0	85.6	61.3	48.7	51.7	50.2	50.0	49.8	49.5	49.1
09Oct 10	18:00:00	3600	49.7	85.3	67.0	48.8	50.8	50.0	50.0	49.8	49.5	49.1
09Oct 10	19:00:00	3600	50.8	86.4	55.0	49.4	51.9	51.6	51.5	50.9	50.6	50.1
09Oct 10	20:00:00	3600	50.7	86.2	53.2	49.8	51.7	51.0	51.0	50.8	50.5	50.1
09Oct 10	21:00:00	3600	50.3	85.8	55.1	49.4	51.5	50.9	50.9	50.7	50.4	49.5
09Oct 10	22:00:00	3600	51.1	86.6	56.5	49.5	52.7	52.0	51.9	51.6	51.0	49.8
09Oct 10	23:00:00	3600	52.4	88.0	54.9	51.6	53.4	52.9	52.9	52.7	52.4	51.7

Appendix A												
Sound Level Data: Gas Well Berm Site												
10Oct 10	0:00:00	3600	53.2	88.8	58.5	52.1	54.7	53.9	53.9	53.7	53.2	52.3
10Oct 10	1:00:00	3600	53.6	89.1	59.3	52.5	54.9	54.3	54.2	53.8	53.5	53.1
10Oct 10	2:00:00	3600	54.1	89.7	58.3	52.9	55.8	55.0	54.9	54.6	54.1	53.2
10Oct 10	3:00:00	3600	53.0	88.5	57.4	51.4	54.7	53.9	53.9	53.5	52.9	51.6
10Oct 10	4:00:00	3600	50.2	85.8	57.5	47.5	52.6	51.7	51.5	50.7	49.9	48.5
10Oct 10	5:00:00	3600	46.7	82.3	56.7	43.0	50.0	48.4	48.2	47.4	46.4	44.2
10Oct 10	6:00:00	3600	47.1	82.6	54.8	44.5	50.4	48.8	48.5	47.6	46.8	45.3
10Oct 10	7:00:00	3600	48.5	84.1	56.1	47.2	51.4	49.6	49.3	48.8	48.3	47.3
10Oct 10	8:00:00	3600	49.0	84.6	59.3	47.7	50.9	49.8	49.8	49.2	48.7	48.1
10Oct 10	9:00:00	3600	48.9	84.5	58.8	47.2	51.5	49.9	49.7	49.0	48.6	47.7
10Oct 10	10:00:00	3600	46.8	82.4	54.8	44.0	49.1	48.1	48.0	47.5	46.6	45.2
10Oct 10	11:00:00	3600	45.9	81.5	61.2	43.3	50.1	46.5	46.2	45.6	45.0	44.1
10Oct 10	12:00:00	3600	45.7	81.3	50.0	44.3	47.3	46.8	46.7	46.0	45.6	45.1
10Oct 10	13:00:00	3600	46.9	82.5	69.8	44.3	48.9	47.2	47.0	46.3	45.7	45.1
10Oct 10	14:00:00	3600	46.2	81.7	53.5	44.5	47.9	47.0	46.9	46.6	46.0	45.2
10Oct 10	15:00:00	3600	46.7	82.3	57.4	45.3	48.0	47.6	47.5	46.9	46.6	46.0
10Oct 10	16:00:00	3600	47.3	82.8	57.8	46.1	48.9	47.9	47.9	47.7	47.3	46.3
10Oct 10	17:00:00	3600	47.7	83.3	58.5	46.8	48.9	48.5	48.4	47.9	47.6	47.1
10Oct 10	18:00:00	3600	53.0	88.6	64.3	47.4	58.7	57.7	57.5	55.3	49.0	48.1
10Oct 10	19:00:00	3600	50.5	86.0	53.3	49.3	51.7	51.0	50.9	50.8	50.5	50.0
10Oct 10	20:00:00	3600	50.5	86.1	52.6	49.6	51.8	51.0	51.0	50.8	50.5	50.1
10Oct 10	21:00:00	3600	50.5	86.1	52.8	49.9	51.6	51.0	50.9	50.8	50.5	50.1
10Oct 10	22:00:00	3600	50.6	86.2	53.7	49.7	51.8	51.0	51.0	50.8	50.5	50.1
10Oct 10	23:00:00	3600	50.7	86.3	54.3	49.8	51.9	51.5	51.3	50.9	50.6	50.1
11Oct 10	0:00:00	3600	50.8	86.4	54.3	49.9	51.9	51.7	51.6	51.0	50.7	50.1
11Oct 10	1:00:00	3600	50.5	86.1	56.7	49.8	51.8	51.0	51.0	50.8	50.5	50.1
11Oct 10	2:00:00	3600	50.4	85.9	54.3	49.4	51.5	50.9	50.9	50.7	50.5	49.9
11Oct 10	3:00:00	3600	50.3	85.9	56.0	49.4	51.8	51.0	50.9	50.8	50.5	49.8
11Oct 10	4:00:00	3600	50.5	86.1	57.0	49.4	52.0	51.2	51.0	50.8	50.5	49.8
11Oct 10	5:00:00	3600	50.5	86.1	56.5	49.5	51.9	51.1	51.0	50.8	50.5	49.9
11Oct 10	6:00:00	3600	51.9	87.4	61.2	49.3	57.0	54.2	53.7	51.8	50.8	50.1
11Oct 10	7:00:00	3600	56.7	92.3	66.7	50.1	62.2	60.0	59.6	57.5	55.2	52.3
11Oct 10	8:00:00	3600	60.9	96.5	72.6	51.6	67.9	64.8	64.3	61.6	58.6	54.4
11Oct 10	9:00:00	3600	63.6	99.1	75.3	52.2	70.8	67.6	67.0	64.3	61.2	56.0
11Oct 10	10:00:00	3600	64.7	100.2	75.1	53.1	70.9	68.5	68.0	65.7	62.8	57.5
11Oct 10	11:00:00	3600	63.3	98.8	74.7	50.4	70.0	67.3	66.8	64.2	61.1	56.3
11Oct 10	12:00:00	3600	61.5	97.1	73.6	51.0	67.7	65.5	65.1	62.5	59.6	54.5
11Oct 10	13:00:00	3600	61.3	96.8	73.3	50.3	68.0	65.2	64.6	62.0	59.3	54.5
11Oct 10	14:00:00	3600	62.0	97.6	88.2	47.8	68.4	65.8	65.1	62.0	58.8	53.3
11Oct 10	15:00:00	3600	57.1	92.7	70.7	44.6	63.8	61.2	60.7	57.8	54.3	49.4
11Oct 10	16:00:00	3600	56.9	92.4	70.5	45.6	63.6	61.0	60.5	57.9	54.5	49.3
11Oct 10	17:00:00	3600	53.1	88.7	65.1	43.9	59.6	57.1	56.6	53.8	50.8	47.2
11Oct 10	18:00:00	3600	50.6	86.2	63.4	43.8	57.4	54.0	53.4	50.9	48.7	46.0
11Oct 10	19:00:00	3600	49.9	85.4	62.4	44.3	56.0	53.2	52.7	50.3	48.2	45.9
11Oct 10	20:00:00	3600	48.4	84.0	60.6	42.2	54.2	51.7	51.3	49.0	47.0	44.2
11Oct 10	21:00:00	3600	47.7	83.2	59.8	42.0	53.5	50.8	50.3	48.1	46.1	43.7
11Oct 10	22:00:00	3600	48.5	84.1	60.2	42.9	54.2	51.8	51.3	49.0	47.0	44.6
11Oct 10	23:00:00	3600	49.3	84.8	62.1	41.5	56.1	52.8	52.2	49.8	47.4	44.2
12Oct 10	0:00:00	3600	46.4	82.0	62.4	41.1	51.9	49.4	48.9	47.0	45.1	42.8
12Oct 10	1:00:00	3600	44.7	80.2	54.6	39.0	49.9	47.8	47.4	45.2	43.4	40.8
12Oct 10	2:00:00	3600	44.1	79.7	55.5	38.7	49.7	47.3	46.8	44.8	42.7	40.3
12Oct 10	3:00:00	3600	42.5	78.1	56.2	38.3	47.8	44.9	44.6	42.7	41.2	39.3
12Oct 10	4:00:00	3600	43.9	79.5	57.3	38.7	49.9	46.7	46.2	44.2	42.6	40.3
12Oct 10	5:00:00	3600	40.8	76.4	55.3	37.1	45.5	43.1	42.8	41.3	40.0	38.3
12Oct 10	6:00:00	3600	39.8	75.4	56.5	36.9	44.2	41.0	40.8	39.7	38.7	37.5
12Oct 10	7:00:00	3600	39.7	75.2	51.0	37.0	44.6	42.0	41.6	39.8	38.7	37.4
12Oct 10	8:00:00	3600	42.1	77.7	51.7	38.0	47.0	45.4	45.0	42.8	40.8	39.1
12Oct 10	9:00:00	3600	41.6	77.2	57.5	37.8	46.8	43.9	43.5	41.7	40.3	38.7
12Oct 10	10:00:00	3600	42.4	78.0	56.8	35.3	48.5	45.8	45.3	42.7	40.7	38.2

Appendix A												
Sound Level Data: Gas Well Berm Site												
12Oct 10	11:00:00	3600	42.5	78.1	60.1	33.8	48.9	45.5	44.9	42.5	40.3	36.0
12Oct 10	12:00:00	3600	39.5	75.1	54.9	33.8	44.6	42.2	41.8	40.2	38.5	35.3
12Oct 10	13:00:00	3600	40.3	75.9	54.1	34.8	46.2	43.0	42.6	40.8	39.1	36.7
12Oct 10	14:00:00	3600	42.5	78.1	57.6	37.9	49.0	45.5	44.7	42.3	40.8	39.3
12Oct 10	15:00:00	3600	40.4	76.0	50.7	38.6	43.5	41.9	41.7	40.8	40.0	39.2
12Oct 10	16:00:00	3600	39.7	75.3	54.6	38.3	42.7	40.8	40.6	39.9	39.5	38.5
12Oct 10	17:00:00	3600	40.3	75.9	46.0	38.6	42.8	41.8	41.6	40.7	40.1	39.2
12Oct 10	18:00:00	3600	63.7	99.3	81.9	29.3	72.9	68.2	67.3	62.0	49.1	40.2
12Oct 10	19:00:00	3600	61.7	97.3	83.3	40.9	69.9	65.6	64.7	60.9	56.9	50.2
12Oct 10	20:00:00	3600	60.9	96.5	78.3	35.1	70.1	65.6	64.7	60.0	54.6	45.7
12Oct 10	21:00:00	3600	74.8	110.4	90.5	43.7	85.3	78.6	77.2	70.5	65.4	56.5
12Oct 10	22:00:00	3600	65.3	100.9	79.5	43.6	73.0	69.9	69.3	66.0	61.9	53.4
12Oct 10	23:00:00	3600	70.4	106.0	83.3	39.2	79.4	76.4	75.8	69.2	62.8	54.0
13Oct 10	0:00:00	3600	67.7	103.3	79.6	33.6	76.6	73.0	72.2	67.5	62.0	50.7
13Oct 10	1:00:00	3600	60.2	95.8	76.7	32.1	68.9	65.0	64.3	59.7	53.5	44.3
13Oct 10	2:00:00	3600	57.9	93.5	75.4	30.3	66.1	63.0	62.2	58.1	52.2	38.8
13Oct 10	3:00:00	3600	55.3	90.9	72.3	29.4	66.7	59.0	57.4	50.2	44.6	36.6
13Oct 10	4:00:00	3600	50.1	85.6	68.3	29.7	58.6	54.8	54.0	50.1	44.8	36.2
13Oct 10	5:00:00	3600	35.7	71.2	54.8	26.8	43.8	38.9	37.9	34.4	32.0	29.6
13Oct 10	6:00:00	3600	43.3	78.9	59.6	22.8	54.6	47.9	46.2	35.9	31.4	27.6
13Oct 10	7:00:00	3600	47.7	83.2	68.0	24.4	57.8	51.6	50.2	41.9	33.4	28.0
13Oct 10	8:00:00	3600	49.5	85.0	65.5	25.9	58.0	54.6	53.9	49.9	42.1	30.6
13Oct 10	9:00:00	3600	55.1	90.6	71.6	27.2	63.9	60.3	59.4	54.6	46.7	31.9
13Oct 10	10:00:00	3600	45.1	80.7	65.6	21.5	55.6	48.1	46.8	40.5	35.7	30.2
13Oct 10	11:00:00	3600	51.1	86.7	67.3	21.4	61.6	56.2	54.8	47.7	41.6	33.2
13Oct 10	12:00:00	3600	45.3	80.9	63.9	19.1	55.6	50.1	48.8	42.8	37.8	30.2
13Oct 10	13:00:00	3600	42.0	77.6	58.7	19.2	52.9	46.0	43.9	38.0	33.9	26.9
13Oct 10	14:00:00	3600	42.9	78.5	59.3	22.6	51.1	47.0	46.4	43.1	39.4	32.2
13Oct 10	15:00:00	3600	36.8	72.4	59.9	18.1	46.9	39.5	37.8	30.2	24.5	19.2
13Oct 10	16:00:00	3600	33.9	69.5	53.0	18.4	41.8	38.5	37.8	34.1	29.6	20.6
13Oct 10	17:00:00	3600	37.0	72.6	55.0	19.7	44.3	40.9	40.4	37.5	34.3	25.4
13Oct 10	18:00:00	3600	37.3	72.9	55.7	20.7	45.0	41.5	40.8	37.5	34.0	28.3
13Oct 10	19:00:00	3600	66.4	102.0	87.8	29.8	75.1	72.2	71.4	66.7	56.5	39.4
13Oct 10	20:00:00	3600	95.9	131.5	122.9	12.1	77.0	71.8	70.8	13.9	13.5	12.6
13Oct 10	21:00:00	3004.9	13.9	48.7	14.0	13.7	14.0	14.0	13.9	13.8	13.7	13.7
14Oct 10	10:47:06	773	47.5	76.3	60.6	45.6	51.4	48.0	47.9	47.4	46.8	46.0
14Oct 10	11:00:00	3600	48.5	84.1	61.6	46.2	51.0	49.6	49.4	48.7	48.1	47.1
14Oct 10	12:00:00	3600	50.8	86.4	64.8	47.4	56.2	53.3	52.7	50.9	49.4	48.2
14Oct 10	13:00:00	3600	56.3	91.9	80.8	46.7	59.9	56.2	55.3	50.5	48.6	47.4
14Oct 10	14:00:00	3600	50.1	85.6	67.2	46.7	54.3	50.7	50.2	48.9	48.4	47.3
14Oct 10	15:00:00	3600	48.4	84.0	56.2	46.9	49.8	49.0	48.9	48.7	48.4	47.4
14Oct 10	16:00:00	3600	49.3	84.8	60.6	47.9	52.7	49.9	49.8	49.2	48.7	48.1
14Oct 10	17:00:00	3600	49.5	85.1	53.7	48.3	50.9	50.2	50.0	49.8	49.5	48.7
14Oct 10	18:00:00	3600	55.2	90.8	66.2	48.9	60.8	60.2	60.0	59.0	50.6	49.4
14Oct 10	19:00:00	3600	51.0	86.6	54.8	50.1	52.0	51.9	51.8	51.6	51.1	50.2
14Oct 10	20:00:00	3600	51.2	86.8	54.7	50.2	52.0	51.9	51.9	51.7	51.4	50.5
14Oct 10	21:00:00	3600	51.3	86.9	57.6	50.2	52.6	51.9	51.9	51.7	51.4	50.5
14Oct 10	22:00:00	3600	51.4	86.9	57.1	50.5	52.4	51.9	51.9	51.7	51.4	50.7
14Oct 10	23:00:00	3600	51.3	86.9	56.2	49.5	52.8	52.0	51.9	51.7	51.4	50.4
15Oct 10	0:00:00	3600	51.3	86.9	55.9	50.3	52.8	52.0	51.9	51.8	51.4	50.7
15Oct 10	1:00:00	3600	51.6	87.2	55.9	50.4	53.0	52.6	52.5	51.9	51.6	51.1
15Oct 10	2:00:00	3600	51.5	87.0	56.1	50.2	52.8	52.0	51.9	51.8	51.4	50.7
15Oct 10	3:00:00	3600	51.5	87.1	56.7	50.2	52.7	52.0	51.9	51.8	51.5	51.0
15Oct 10	4:00:00	3600	51.2	86.8	54.7	50.1	52.6	51.9	51.9	51.6	51.1	50.2
15Oct 10	5:00:00	3600	51.3	86.9	56.9	50.3	52.7	51.9	51.9	51.7	51.4	50.4
15Oct 10	6:00:00	3600	51.2	86.8	55.9	50.0	52.8	52.0	51.9	51.6	51.1	50.2
15Oct 10	7:00:00	3600	49.5	85.1	55.7	46.3	52.6	51.7	51.6	50.7	48.8	47.1
15Oct 10	8:00:00	3600	55.1	90.6	72.5	46.9	63.4	59.7	58.9	53.4	50.6	48.7

Appendix A												
Sound Level Data: Gas Well Berm Site												
15Oct 10	9:00:00	3600	49.8	85.4	57.1	48.3	51.7	50.7	50.6	49.9	49.6	49.1
15Oct 10	10:00:00	3600	48.6	84.2	54.3	45.0	50.9	49.9	49.8	49.5	48.9	46.2
15Oct 10	11:00:00	3600	45.1	80.6	58.0	41.2	49.2	46.4	46.0	45.4	44.6	43.0
15Oct 10	12:00:00	3600	40.7	76.2	52.2	33.2	47.9	43.6	42.9	41.3	38.8	34.8
15Oct 10	13:00:00	3600	38.6	74.2	61.1	28.0	48.7	41.8	39.9	34.8	32.2	29.6
15Oct 10	14:00:00	3600	37.8	73.4	61.4	28.5	47.2	41.4	40.2	36.4	32.7	30.0
15Oct 10	15:00:00	3600	38.4	74.0	59.5	30.6	44.8	41.9	41.3	38.7	36.4	32.8
15Oct 10	16:00:00	3600	36.9	72.4	53.2	32.1	42.6	39.3	38.9	37.1	35.1	33.2
15Oct 10	17:00:00	3600	39.8	75.4	55.3	32.2	46.7	41.9	41.7	40.3	37.6	34.6
15Oct 10	18:00:00	3600	53.8	89.4	65.9	36.4	60.4	59.8	59.7	58.2	41.8	38.2
15Oct 10	19:00:00	3600	42.2	77.8	49.1	38.9	43.9	43.3	43.1	42.7	42.2	41.1
15Oct 10	20:00:00	3600	44.1	79.7	49.3	42.5	45.5	44.9	44.9	44.6	44.1	43.2
15Oct 10	21:00:00	3600	43.8	79.4	48.8	42.5	45.3	44.8	44.7	44.3	43.7	43.0
15Oct 10	22:00:00	3600	43.2	78.8	51.5	41.6	45.1	43.9	43.9	43.6	43.0	42.2
15Oct 10	23:00:00	3600	42.4	78.0	49.4	40.7	43.9	43.4	43.3	42.8	42.4	41.3
16Oct 10	0:00:00	3600	41.7	77.3	46.1	39.9	43.6	42.8	42.7	42.0	41.6	41.0
16Oct 10	1:00:00	3600	41.1	76.7	46.7	38.9	42.9	42.5	42.4	41.7	40.9	39.7
16Oct 10	2:00:00	3600	40.0	75.6	48.5	38.5	41.8	41.0	40.9	40.1	39.7	39.1
16Oct 10	3:00:00	3600	39.0	74.5	54.8	37.7	40.0	39.8	39.7	39.3	38.7	38.1
16Oct 10	4:00:00	3600	38.6	74.2	45.3	36.2	41.7	40.7	40.1	39.1	38.3	37.2
16Oct 10	5:00:00	3600	38.2	73.8	47.0	35.2	41.5	40.4	40.1	38.7	37.7	36.2
16Oct 10	6:00:00	3600	38.7	74.3	50.3	33.2	44.7	41.7	41.4	39.5	37.1	34.4
16Oct 10	7:00:00	3600	42.2	77.8	54.9	33.6	47.6	45.2	44.9	43.5	40.9	36.3
16Oct 10	8:00:00	3600	40.9	76.5	59.5	33.2	46.3	44.3	43.9	41.7	39.6	36.4
16Oct 10	9:00:00	3600	41.9	77.5	63.5	33.4	48.3	44.4	43.8	41.6	39.8	36.4
16Oct 10	10:00:00	3600	44.0	79.5	62.9	34.2	52.4	46.4	45.6	42.7	40.7	37.4
16Oct 10	11:00:00	3600	46.2	81.8	74.6	32.5	49.9	44.0	42.9	39.1	36.8	34.4
16Oct 10	12:00:00	3600	46.8	82.3	66.4	30.6	56.9	47.2	46.3	41.2	36.9	32.7
16Oct 10	13:00:00	3600	41.0	76.5	66.9	29.8	47.5	41.2	40.1	36.3	33.8	31.7
16Oct 10	14:00:00	3600	35.0	70.6	50.3	28.1	42.4	37.9	37.5	35.9	31.9	29.4
16Oct 10	15:00:00	3600	35.6	71.2	49.8	29.7	41.8	39.1	38.6	35.8	33.7	31.5
16Oct 10	16:00:00	3600	39.1	74.6	59.7	31.5	45.8	39.9	39.3	36.9	35.2	33.5
16Oct 10	17:00:00	3600	40.8	76.4	61.4	34.1	46.7	42.4	41.8	40.0	39.1	36.4
16Oct 10	18:00:00	3600	41.2	76.7	61.0	36.0	48.5	43.1	42.7	40.6	38.7	37.2
16Oct 10	19:00:00	3600	40.7	76.3	53.9	36.7	45.0	42.4	42.1	40.8	40.2	38.8
16Oct 10	20:00:00	3600	40.1	75.7	64.1	38.8	40.9	40.7	40.6	40.0	39.6	39.1
16Oct 10	21:00:00	3600	40.0	75.6	48.8	38.3	42.0	41.4	41.3	40.4	39.7	38.8
16Oct 10	22:00:00	3600	38.8	74.3	44.8	36.9	41.7	40.0	39.8	38.9	38.5	37.7
16Oct 10	23:00:00	3600	37.4	72.9	51.8	35.4	39.8	38.9	38.7	37.7	37.0	36.1
17Oct 10	0:00:00	3600	36.1	71.7	45.2	33.9	39.8	37.4	37.1	36.4	35.7	34.9
17Oct 10	1:00:00	3600	35.5	71.1	48.5	32.2	40.1	39.1	37.7	35.4	34.5	32.9
17Oct 10	2:00:00	3600	34.4	69.9	46.9	30.8	39.4	38.2	36.8	33.5	32.7	31.6
17Oct 10	3:00:00	3600	33.6	69.2	54.7	30.3	38.9	36.9	34.9	32.8	31.9	31.1
17Oct 10	4:00:00	3600	34.9	70.5	60.6	30.5	38.8	37.2	36.0	34.0	32.7	31.3
17Oct 10	5:00:00	3600	35.5	71.1	59.0	30.2	40.7	38.3	37.7	34.3	32.7	31.2
17Oct 10	6:00:00	3600	38.3	73.9	51.6	31.2	45.6	41.7	41.0	38.6	35.9	33.2
17Oct 10	7:00:00	3600	38.0	73.5	52.2	32.1	44.6	40.4	39.9	38.0	36.3	34.2
17Oct 10	8:00:00	3600	43.0	78.6	59.0	31.6	52.2	46.7	45.8	41.6	38.2	33.9
17Oct 10	9:00:00	3600	45.0	80.6	66.7	34.6	50.2	48.2	47.7	45.6	43.3	38.0
17Oct 10	10:00:00	3600	42.3	77.9	57.0	33.5	48.4	45.5	45.0	42.7	40.5	36.8
17Oct 10	11:00:00	3600	41.5	77.0	53.5	31.4	45.9	44.7	44.4	42.6	41.0	35.2
17Oct 10	12:00:00	3600	46.0	81.6	52.8	43.9	48.7	47.4	47.2	46.5	45.8	44.8
17Oct 10	13:00:00	3600	47.5	83.1	70.3	37.9	51.2	48.6	48.3	47.0	46.0	42.4
17Oct 10	14:00:00	3600	41.9	77.5	61.9	32.2	50.1	45.1	44.2	40.8	38.6	35.0
17Oct 10	15:00:00	3600	42.0	77.6	60.3	31.3	49.3	44.5	43.7	40.5	37.7	33.3
17Oct 10	16:00:00	3600	41.3	76.9	61.3	32.0	49.9	42.8	41.5	38.7	36.6	34.2
17Oct 10	17:00:00	3600	40.4	75.9	62.8	34.8	45.7	42.9	42.4	40.1	38.5	36.8
17Oct 10	18:00:00	3600	54.2	89.8	66.4	30.3	60.9	60.4	60.2	59.0	40.4	32.2
17Oct 10	19:00:00	3600	36.1	71.7	56.2	31.8	40.9	38.6	38.3	35.7	34.7	33.5

Appendix A												
Sound Level Data: Gas Well Berm Site												
17Oct 10	20:00:00	3600	36.3	71.9	44.8	34.2	39.8	38.7	37.9	36.4	35.7	35.1
17Oct 10	21:00:00	3600	36.7	72.3	52.3	33.2	42.9	39.0	38.4	35.9	35.2	33.7
17Oct 10	22:00:00	3600	41.1	76.7	59.9	32.8	50.1	39.6	38.8	36.1	34.7	33.5
17Oct 10	23:00:00	3600	40.4	76.0	45.9	33.3	45.9	45.7	45.6	44.3	35.2	34.1
18Oct 10	0:00:00	3600	43.2	78.8	47.7	31.5	46.0	45.8	45.8	45.4	44.7	32.3
18Oct 10	1:00:00	3600	34.4	70.0	44.7	31.0	38.9	38.0	37.4	34.4	33.2	32.1
18Oct 10	2:00:00	3600	30.9	66.5	43.2	28.7	33.8	32.8	32.7	31.7	30.3	29.2
18Oct 10	3:00:00	3600	32.4	68.0	40.6	28.7	37.9	34.9	34.5	32.5	31.4	29.4
18Oct 10	4:00:00	3600	31.5	67.0	50.8	27.6	38.2	35.1	32.7	30.4	29.5	28.3
18Oct 10	5:00:00	3600	33.0	68.6	56.6	28.1	38.4	37.0	35.0	31.8	29.9	28.5
18Oct 10	6:00:00	3600	35.1	70.6	56.5	28.6	42.5	38.0	36.9	33.5	31.6	29.5
18Oct 10	7:00:00	3600	41.2	76.8	60.7	32.8	49.7	42.8	42.1	40.0	38.3	34.8
18Oct 10	8:00:00	3600	40.9	76.5	68.7	32.8	47.6	42.4	41.8	39.4	36.9	34.5
18Oct 10	9:00:00	3600	40.4	76.0	62.8	31.2	46.7	43.4	42.8	40.4	37.8	34.0
18Oct 10	10:00:00	3600	39.9	75.5	55.9	32.7	46.1	42.9	42.4	39.9	38.4	35.2
18Oct 10	11:00:00	3600	40.3	75.9	58.6	32.2	47.5	42.5	41.8	39.4	37.3	34.8
18Oct 10	12:00:00	3600	40.6	76.2	59.5	31.7	47.8	43.3	42.5	39.6	37.2	34.2
18Oct 10	13:00:00	3600	39.2	74.7	63.0	30.8	45.5	42.1	41.5	38.7	35.9	32.9
18Oct 10	14:00:00	3600	41.6	77.2	60.9	32.5	50.7	44.3	43.5	38.9	35.9	33.8
18Oct 10	15:00:00	3600	38.6	74.2	52.9	33.2	46.3	40.5	39.9	38.0	36.3	34.6
18Oct 10	16:00:00	3600	37.4	73.0	54.5	34.2	41.5	39.2	38.9	37.7	36.7	35.3
18Oct 10	17:00:00	3600	41.2	76.8	59.2	34.5	48.2	44.2	43.6	40.9	39.3	36.4
18Oct 10	18:00:00	3600	38.6	74.2	59.5	35.2	42.8	40.1	39.6	37.9	37.2	36.1
18Oct 10	19:00:00	3600	40.3	75.9	56.6	36.3	47.8	41.7	40.9	39.3	37.9	36.8
18Oct 10	20:00:00	3600	37.7	73.2	44.8	35.8	40.8	40.0	39.2	37.8	37.3	36.3
18Oct 10	21:00:00	3600	37.2	72.8	46.4	34.7	42.0	38.5	38.1	37.3	36.6	35.4
18Oct 10	22:00:00	3600	36.3	71.9	50.7	33.7	40.6	39.1	38.0	36.1	35.5	34.3
18Oct 10	23:00:00	3600	35.1	70.7	46.3	32.4	39.9	39.0	37.9	34.8	34.1	33.2
19Oct 10	0:00:00	3600	35.1	70.6	49.1	32.4	39.8	38.4	37.6	35.1	33.8	32.9
19Oct 10	1:00:00	3600	34.1	69.7	44.0	31.3	36.8	35.8	35.7	34.8	33.8	32.4
19Oct 10	2:00:00	3600	35.1	70.7	48.9	30.4	39.8	38.8	38.4	35.5	33.6	31.5
19Oct 10	3:00:00	3600	33.3	68.8	42.7	28.7	38.7	35.9	35.0	33.3	32.3	30.4
19Oct 10	4:00:00	3600	32.4	68.0	42.7	28.6	38.7	35.4	34.4	32.2	30.8	29.4
19Oct 10	5:00:00	3600	32.7	68.3	43.7	29.6	35.9	34.7	34.5	33.4	32.0	30.5
19Oct 10	6:00:00	3600	37.1	72.7	53.7	29.0	44.9	39.8	39.4	35.4	32.8	30.3
19Oct 10	7:00:00	3600	41.3	76.8	58.2	34.4	48.2	43.7	43.0	41.2	38.6	35.9
19Oct 10	8:00:00	3600	41.6	77.2	59.9	35.2	48.0	43.9	43.4	41.2	39.6	37.3
19Oct 10	9:00:00	3600	48.7	84.3	74.9	35.8	52.3	43.4	42.9	41.3	40.1	38.1
19Oct 10	10:00:00	3600	56.0	91.6	79.5	32.4	62.4	51.4	49.5	42.6	39.5	35.7
19Oct 10	11:00:00	3600	39.9	75.5	64.8	32.9	46.0	42.7	41.9	38.8	36.9	34.4
19Oct 10	12:00:00	3600	52.5	88.1	72.9	33.0	63.3	53.8	50.5	41.0	36.8	34.6
19Oct 10	13:00:00	3600	37.9	73.5	53.6	33.6	44.7	40.2	39.6	37.7	36.4	35.0
19Oct 10	14:00:00	3600	61.2	96.8	87.0	32.9	65.8	44.6	42.5	37.2	35.5	34.2
19Oct 10	15:00:00	3600	37.7	73.2	50.7	33.9	42.8	39.5	39.0	37.9	36.7	35.0
19Oct 10	16:00:00	3600	38.3	73.9	55.9	34.2	44.9	40.6	39.9	38.0	36.8	35.3
19Oct 10	17:00:00	3600	40.6	76.2	55.9	35.7	45.8	42.0	41.8	40.7	39.8	37.0
19Oct 10	18:00:00	3600	54.0	89.6	67.7	37.9	60.5	59.8	59.7	58.6	42.3	38.6
19Oct 10	19:00:00	3600	40.6	76.2	50.6	38.9	44.0	42.1	41.8	40.8	40.3	39.3
19Oct 10	20:00:00	3600	45.8	81.4	61.7	38.8	54.1	49.9	48.9	45.1	42.2	39.7
19Oct 10	21:00:00	3600	58.7	94.3	86.5	38.3	66.0	58.5	57.3	50.1	41.8	38.9
19Oct 10	22:00:00	3600	39.6	75.1	50.5	36.8	44.2	40.8	40.6	39.7	38.9	37.6
19Oct 10	23:00:00	3600	37.8	73.4	42.5	35.9	39.5	38.8	38.7	38.1	37.6	37.0
20Oct 10	0:00:00	3600	38.2	73.8	51.2	34.3	42.3	40.2	39.9	38.3	37.2	35.5
20Oct 10	1:00:00	3600	35.5	71.0	45.3	33.0	39.7	37.7	36.7	35.7	35.0	33.8
20Oct 10	2:00:00	3600	34.7	70.3	47.8	32.8	36.7	35.8	35.8	35.1	34.6	33.5
20Oct 10	3:00:00	3600	36.3	71.9	44.6	32.4	39.8	38.8	38.3	36.9	35.8	34.1
20Oct 10	4:00:00	3600	37.3	72.8	43.4	33.0	41.1	39.8	39.4	37.8	36.8	34.4
20Oct 10	5:00:00	3600	36.6	72.2	48.2	32.5	40.4	38.9	38.6	36.9	35.8	34.1
20Oct 10	6:00:00	3600	39.7	75.3	56.0	32.8	45.8	42.9	42.4	39.1	36.9	34.7

Appendix A												
Sound Level Data: Gas Well Berm Site												
20Oct 10	7:00:00	3600	47.5	83.1	56.3	38.2	51.3	50.7	50.6	49.9	45.4	40.2
20Oct 10	8:00:00	3600	62.3	97.9	64.2	50.2	63.9	63.8	63.7	63.4	62.8	51.4
20Oct 10	9:00:00	3600	63.5	99.1	64.8	62.7	64.0	63.9	63.9	63.7	63.5	63.1
20Oct 10	10:00:00	3600	63.3	98.9	64.4	62.0	64.0	63.9	63.9	63.7	63.4	63.0
20Oct 10	11:00:00	3600	63.0	98.5	64.6	61.9	63.9	63.8	63.8	63.4	62.9	62.2
20Oct 10	12:00:00	3600	62.6	98.2	63.8	61.4	63.7	63.0	63.0	62.8	62.5	62.1
20Oct 10	13:00:00	3600	62.5	98.1	76.2	61.3	63.3	62.9	62.9	62.7	62.5	62.0
20Oct 10	14:00:00	3600	62.3	97.9	63.3	61.0	63.0	62.9	62.9	62.7	62.4	61.7
20Oct 10	15:00:00	3600	62.2	97.7	63.2	60.3	63.0	62.9	62.9	62.6	62.3	61.3
20Oct 10	16:00:00	3600	62.0	97.6	63.0	60.6	63.0	62.9	62.8	62.6	62.3	61.3
20Oct 10	17:00:00	3600	62.2	97.8	62.9	61.5	62.9	62.9	62.9	62.7	62.4	61.9
20Oct 10	18:00:00	3600	63.3	98.8	68.6	61.9	64.9	64.7	64.6	64.0	62.9	62.2
20Oct 10	19:00:00	3600	62.8	98.4	64.9	62.1	63.9	63.6	63.5	62.9	62.6	62.1
20Oct 10	20:00:00	3600	62.9	98.5	63.8	62.4	63.8	63.7	63.6	63.0	62.7	62.4
20Oct 10	21:00:00	3600	62.9	98.4	63.5	62.1	63.5	63.5	63.5	63.2	62.7	62.1
20Oct 10	22:00:00	3600	62.9	98.5	63.6	62.1	63.6	63.6	63.5	62.9	62.6	62.1
20Oct 10	23:00:00	3600	62.8	98.4	63.6	62.1	63.6	63.3	63.1	62.8	62.5	62.1
21Oct 10	0:00:00	3600	63.0	98.6	63.8	61.8	63.8	63.8	63.8	63.5	63.0	62.2
21Oct 10	1:00:00	3600	63.1	98.7	63.9	62.1	63.9	63.9	63.9	63.7	63.3	62.4
21Oct 10	2:00:00	3600	63.0	98.6	63.6	62.0	63.6	63.6	63.6	63.6	63.2	62.2
21Oct 10	3:00:00	3600	63.0	98.6	64.0	62.1	63.9	63.8	63.8	63.4	62.9	62.2
21Oct 10	4:00:00	3600	63.0	98.5	63.6	62.2	63.6	63.6	63.6	63.4	62.9	62.2
21Oct 10	5:00:00	3600	63.0	98.6	63.6	62.2	63.6	63.6	63.6	63.5	62.9	62.2
21Oct 10	6:00:00	3600	63.0	98.5	68.9	61.4	64.0	63.8	63.8	63.5	63.0	62.2
21Oct 10	7:00:00	3600	56.2	91.7	62.9	35.5	62.3	61.7	61.5	59.1	50.8	38.0
21Oct 10	8:00:00	3600	41.3	76.9	58.8	36.4	47.5	43.4	43.0	41.4	39.8	37.8
21Oct 10	9:00:00	3600	46.1	81.7	57.2	35.2	53.2	50.5	49.8	46.8	43.1	38.1
21Oct 10	10:00:00	3600	50.2	85.8	69.6	40.0	56.7	53.7	53.1	50.8	48.3	43.9
21Oct 10	11:00:00	3600	48.2	83.8	60.5	36.3	56.1	52.6	51.9	48.6	44.8	40.5
21Oct 10	12:00:00	3600	52.2	87.8	66.9	36.7	59.6	56.3	55.7	52.3	49.0	43.1
21Oct 10	13:00:00	3600	48.8	84.4	68.7	36.1	56.7	53.4	52.4	48.5	45.5	40.6
21Oct 10	14:00:00	3600	46.2	81.8	59.1	33.3	52.9	50.4	50.0	47.4	43.5	37.7
21Oct 10	15:00:00	3600	49.8	85.4	60.8	42.3	52.9	51.8	51.6	50.7	50.1	45.4
21Oct 10	16:00:00	3600	50.1	85.7	56.2	49.0	51.9	51.0	50.9	50.4	49.8	49.2
21Oct 10	17:00:00	3600	50.3	85.9	63.3	48.9	53.0	50.9	50.8	50.2	49.7	49.1
21Oct 10	18:00:00	3600	55.2	90.8	68.2	48.9	60.8	60.2	60.0	59.0	50.1	49.2
21Oct 10	19:00:00	3600	45.5	81.1	67.4	35.5	50.0	49.5	49.4	47.3	40.5	36.4
21Oct 10	20:00:00	3600	37.6	73.2	54.1	35.1	40.7	39.2	38.6	37.4	36.7	36.0
21Oct 10	21:00:00	3600	36.7	72.2	45.9	33.8	42.1	38.3	37.8	36.7	35.8	34.6
21Oct 10	22:00:00	3600	39.2	74.8	58.3	32.5	46.8	39.8	39.5	36.6	35.0	33.5
21Oct 10	23:00:00	3600	35.3	70.9	51.6	32.1	39.7	38.2	37.7	35.6	34.4	33.1
22Oct 10	0:00:00	3600	35.6	71.2	46.0	32.3	40.1	38.5	38.1	36.1	34.6	33.3
22Oct 10	1:00:00	3600	34.8	70.3	44.9	32.4	38.8	37.1	36.7	35.0	34.1	33.1
22Oct 10	2:00:00	3600	34.4	70.0	41.9	31.6	38.9	37.0	36.2	34.7	33.7	32.5
22Oct 10	3:00:00	3600	34.8	70.4	40.4	31.0	39.5	36.8	36.3	35.1	34.4	32.7
22Oct 10	4:00:00	3600	34.0	69.6	43.6	30.6	35.8	35.2	35.0	34.7	34.1	32.3
22Oct 10	5:00:00	3600	33.9	69.4	46.1	30.6	38.8	37.3	35.7	34.2	32.9	31.6
22Oct 10	6:00:00	3600	38.9	74.5	56.6	31.1	48.5	40.6	39.0	36.1	34.4	32.2
22Oct 10	7:00:00	3600	39.4	74.9	52.4	35.6	43.8	41.2	40.9	39.7	38.7	37.3
22Oct 10	8:00:00	3600	39.1	74.7	49.4	36.8	42.5	41.1	40.9	39.7	38.7	37.4
22Oct 10	9:00:00	3600	39.8	75.3	54.6	35.5	45.1	42.2	41.8	40.3	38.5	36.5
22Oct 10	10:00:00	3600	40.1	75.7	58.4	33.5	47.5	42.2	41.5	39.1	37.4	35.3
22Oct 10	11:00:00	3600	36.9	72.5	54.3	32.1	43.6	39.5	38.9	36.7	34.9	33.2
22Oct 10	12:00:00	3600	37.9	73.5	51.4	32.2	44.5	41.3	40.8	38.6	36.0	33.4
22Oct 10	13:00:00	3600	40.0	75.6	60.4	30.5	47.4	44.1	43.4	39.9	36.3	32.9
22Oct 10	14:00:00	3600	42.6	78.2	53.0	31.4	48.7	47.0	46.6	44.1	40.1	35.3
22Oct 10	15:00:00	3600	43.3	78.9	58.5	33.0	51.5	47.2	46.6	43.3	38.5	35.1
22Oct 10	16:00:00	3600	37.2	72.7	52.8	32.5	43.3	39.8	39.4	36.9	35.4	33.6
22Oct 10	17:00:00	3600	41.9	77.4	57.7	34.4	48.9	44.9	44.3	41.8	39.9	36.4

Appendix A												
Sound Level Data: Gas Well Berm Site												
22Oct 10	18:00:00	3600	54.0	89.6	68.4	34.0	60.7	59.9	59.8	59.0	41.4	37.4
22Oct 10	19:00:00	3600	40.4	76.0	59.1	35.4	45.8	42.5	41.9	39.9	38.8	36.2
22Oct 10	20:00:00	3600	40.4	76.0	50.1	36.4	44.9	43.2	42.8	40.8	39.6	37.7
22Oct 10	21:00:00	3600	44.1	79.7	53.2	38.3	50.1	47.6	47.1	44.7	42.2	40.1
22Oct 10	22:00:00	3600	45.3	80.9	54.8	37.7	50.5	48.7	48.3	46.2	44.2	41.0
22Oct 10	23:00:00	3540	41.5	76.9	52.3	34.1	48.3	45.2	44.7	42.2	39.4	35.8
23Oct 10	0:00:00	3599.9	38.0	73.5	47.3	34.4	41.0	39.9	39.9	39.2	37.2	36.0
23Oct 10	1:00:00	3600	38.2	73.8	46.4	33.7	42.0	40.4	40.1	39.2	38.2	35.2
23Oct 10	2:00:00	3600	37.7	73.3	52.4	33.1	41.5	39.7	39.5	38.4	36.4	34.7
23Oct 10	3:00:00	3600	42.2	77.8	50.9	33.6	47.5	45.4	45.1	43.2	41.1	36.7
23Oct 10	4:00:00	3600	41.3	76.9	47.6	33.2	46.1	44.5	44.0	42.8	40.9	35.9
23Oct 10	5:00:00	3600	38.6	74.2	46.6	32.1	41.7	40.7	40.6	39.7	38.3	35.0
23Oct 10	6:00:00	3600	43.1	78.7	63.5	36.5	48.3	45.2	44.8	43.1	42.1	38.3
23Oct 10	7:00:00	3600	54.4	90.0	82.0	39.4	61.9	52.7	51.3	46.9	44.8	42.4
23Oct 10	8:00:00	3600	48.3	83.9	75.5	35.7	55.2	48.1	47.3	43.9	41.7	38.6
23Oct 10	9:00:00	3600	49.0	84.6	79.3	36.3	54.6	46.6	45.8	43.4	41.7	39.1
23Oct 10	10:00:00	3600	45.2	80.8	69.9	33.5	51.9	45.2	44.5	42.1	40.4	37.1
23Oct 10	11:00:00	3600	44.8	80.4	74.1	36.0	47.5	46.0	45.8	44.6	42.6	38.4
23Oct 10	12:00:00	3600	44.2	79.7	63.6	33.2	51.4	47.6	47.0	42.5	39.8	36.2
23Oct 10	13:00:00	3600	46.2	81.8	74.1	36.0	50.6	48.4	48.1	46.3	42.2	38.3
23Oct 10	14:00:00	3600	47.1	82.7	73.8	35.0	56.0	49.4	48.1	43.0	40.3	36.5
23Oct 10	15:00:00	3600	45.8	81.4	72.7	36.6	52.4	47.7	46.8	44.1	41.9	39.2
23Oct 10	16:00:00	3600	42.3	77.8	61.5	34.8	49.1	44.7	44.1	42.0	40.0	37.1
23Oct 10	17:00:00	3600	43.0	78.6	57.4	37.2	48.9	45.7	45.1	43.1	41.8	39.7
23Oct 10	18:00:00	3600	40.3	75.9	56.3	32.9	45.3	42.8	42.6	41.1	39.5	35.6
23Oct 10	19:00:00	3600	39.8	75.4	54.7	31.3	44.8	43.3	43.0	40.7	38.8	33.7
23Oct 10	20:00:00	3600	44.7	80.2	57.4	37.5	50.1	49.3	49.0	45.6	42.0	39.1
23Oct 10	21:00:00	3600	43.5	79.1	52.8	36.0	48.9	46.8	46.4	44.3	42.4	39.0
23Oct 10	22:00:00	3600	49.9	85.4	59.4	40.0	56.9	53.9	53.3	50.7	47.9	43.0
23Oct 10	23:00:00	3600	51.9	87.5	64.5	41.9	57.8	55.5	55.0	52.9	50.5	46.5
24Oct 10	0:00:00	3600	48.3	83.9	57.3	37.8	53.8	51.9	51.5	49.4	46.9	43.1
24Oct 10	1:00:00	3600	55.9	91.5	75.2	40.3	64.9	60.7	59.9	55.3	50.0	44.9
24Oct 10	2:00:00	3600	57.9	93.5	75.2	46.9	64.0	61.7	61.1	58.9	56.4	50.7
24Oct 10	3:00:00	3600	58.4	93.9	68.8	47.5	63.8	61.9	61.5	59.3	57.0	53.0
24Oct 10	4:00:00	3600	59.9	95.5	77.6	50.5	65.6	63.1	62.8	60.9	58.5	54.1
24Oct 10	5:00:00	3600	59.4	95.0	67.9	50.8	65.4	62.9	62.5	60.3	57.8	54.2
24Oct 10	6:00:00	3600	59.3	94.9	68.8	48.7	64.9	63.0	62.6	60.4	57.9	52.6
24Oct 10	7:00:00	3600	60.0	95.6	78.4	52.8	65.5	62.8	62.5	60.4	58.4	55.8
24Oct 10	8:00:00	3600	60.5	96.1	75.8	51.9	66.8	63.7	63.0	60.8	58.9	56.2
24Oct 10	9:00:00	3600	61.2	96.7	79.4	52.6	67.2	64.4	63.9	61.7	59.4	56.2
24Oct 10	10:00:00	3600	60.9	96.4	72.8	52.3	67.2	64.3	63.7	61.3	59.1	56.0
24Oct 10	11:00:00	3600	61.6	97.1	74.0	53.2	67.9	65.1	64.6	62.3	59.8	56.1
24Oct 10	12:00:00	3600	64.3	99.9	83.0	53.0	70.8	68.1	67.6	64.9	62.1	57.4
24Oct 10	13:00:00	3600	62.7	98.2	73.6	54.4	68.7	66.3	65.8	63.4	61.0	57.5
24Oct 10	14:00:00	3600	61.2	96.8	73.9	50.9	68.0	64.8	64.3	62.0	59.2	54.9
24Oct 10	15:00:00	3600	55.4	91.0	72.7	42.5	62.3	59.3	58.8	56.1	52.9	47.1
24Oct 10	16:00:00	3600	53.7	89.2	65.4	41.9	59.6	57.3	56.9	54.9	51.9	47.3
24Oct 10	17:00:00	3600	50.1	85.7	61.5	39.0	56.8	54.1	53.6	50.8	47.9	43.7
24Oct 10	18:00:00	3600	53.8	89.4	68.2	34.1	59.9	59.6	59.5	58.0	43.3	38.7
24Oct 10	19:00:00	3600	48.4	83.9	59.8	33.7	54.9	52.7	52.2	49.5	46.0	35.9
24Oct 10	20:00:00	3600	39.6	75.2	51.5	33.7	45.3	43.4	43.0	40.5	37.7	34.8
24Oct 10	21:00:00	3600	39.5	75.1	51.8	32.4	45.2	43.1	42.7	40.4	38.0	34.8
24Oct 10	22:00:00	3600	40.2	75.8	52.6	31.3	49.6	44.7	43.9	39.9	34.6	32.5
24Oct 10	23:00:00	3600	35.3	70.9	45.0	30.3	41.2	39.8	39.3	35.9	33.2	31.1
25Oct 10	0:00:00	3600	33.2	68.7	55.1	29.0	39.9	35.4	34.9	32.5	30.8	29.7
25Oct 10	1:00:00	3600	35.5	71.1	52.7	28.2	42.3	40.1	39.7	35.6	31.9	29.0
25Oct 10	2:00:00	3600	34.3	69.9	54.4	28.2	41.1	39.2	38.3	32.7	30.5	29.1
25Oct 10	3:00:00	3600	33.9	69.5	54.7	27.8	42.5	37.2	35.9	31.9	30.0	28.5
25Oct 10	4:00:00	3600	34.6	70.2	57.0	27.8	41.4	39.4	38.2	32.7	30.0	28.6

Appendix A												
Sound Level Data: Gas Well Berm Site												
25Oct 10	5:00:00	3600	33.9	69.5	51.3	27.7	41.0	40.0	38.5	32.2	30.2	28.6
25Oct 10	6:00:00	3600	37.0	72.6	53.3	28.5	42.6	41.3	41.0	38.1	34.6	30.5
25Oct 10	7:00:00	3600	41.2	76.8	57.2	35.8	45.9	43.3	42.9	41.7	40.4	38.0
25Oct 10	8:00:00	3600	41.4	77.0	56.9	33.8	49.4	44.1	43.5	41.2	38.9	36.4
25Oct 10	9:00:00	3600	53.8	89.4	79.9	31.7	57.6	44.5	43.7	41.3	38.9	35.6
25Oct 10	10:00:00	1869.2	57.0	89.7	78.2	27.8	67.6	62.4	60.9	40.8	35.6	31.3

Appendix B												
Sound Level Data: 100 Yards South												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
07Oct 10	15:07:05	3174.5	55.4	90.4	81.1	32.1	65.6	54.9	52.8	44.4	41.4	37.8
07Oct 10	16:00:00	3600	44.6	80.2	58.4	40.8	49.8	47.1	46.7	44.9	43.7	42.2
07Oct 10	17:00:00	3600	46.1	81.7	55.9	43.1	49.0	47.7	47.5	46.7	45.8	44.4
07Oct 10	18:00:00	3600	46.8	82.4	57.4	45.2	50.5	48.0	47.9	47.0	46.5	45.4
07Oct 10	19:00:00	3600	51.8	87.4	55.0	46.8	53.9	53.7	53.6	53.0	52.1	48.3
07Oct 10	20:00:00	3600	51.9	87.4	53.5	50.5	53.5	52.9	52.8	52.3	51.8	51.1
07Oct 10	21:00:00	3600	50.9	86.4	52.3	49.9	51.9	51.8	51.7	51.3	50.8	50.2
07Oct 10	22:00:00	3600	50.1	85.6	54.4	49.0	51.0	50.9	50.8	50.6	50.1	49.2
07Oct 10	23:00:00	3600	48.9	84.5	52.4	48.0	50.0	49.8	49.8	49.4	48.8	48.2
08Oct 10	0:00:00	3600	48.0	83.6	56.4	46.8	49.3	48.9	48.8	48.5	48.0	47.2
08Oct 10	1:00:00	3600	46.8	82.3	54.5	45.4	48.4	47.8	47.8	47.3	46.7	46.1
08Oct 10	2:00:00	3600	45.9	81.5	55.4	44.8	47.5	46.8	46.7	46.2	45.7	45.1
08Oct 10	3:00:00	3600	44.7	80.3	53.6	42.8	47.2	45.9	45.8	45.1	44.5	43.3
08Oct 10	4:00:00	3600	43.0	78.6	58.3	41.0	46.8	44.3	44.0	43.3	42.5	41.3
08Oct 10	5:00:00	3600	42.1	77.7	56.6	40.5	44.4	42.9	42.8	42.4	41.8	41.1
08Oct 10	6:00:00	3600	42.0	77.6	55.1	39.4	48.4	43.7	43.1	41.6	40.8	40.1
08Oct 10	7:00:00	3600	43.3	78.9	63.8	38.0	49.1	45.4	44.9	42.9	41.6	40.0
08Oct 10	8:00:00	3600	44.8	80.4	63.6	37.0	54.2	46.8	45.9	42.5	40.6	38.5
08Oct 10	9:00:00	3600	42.0	77.5	59.4	37.6	48.4	44.0	43.3	41.4	40.1	38.9
08Oct 10	10:00:00	3600	41.4	77.0	52.9	37.6	45.5	43.6	43.2	41.9	40.9	39.3
08Oct 10	11:00:00	3600	41.2	76.8	50.0	37.6	45.5	43.2	42.9	41.6	40.7	39.3
08Oct 10	12:00:00	3600	41.3	76.8	58.0	37.1	47.2	42.6	41.9	40.6	39.6	38.3
08Oct 10	13:00:00	3600	41.5	77.1	59.5	36.5	47.8	43.0	42.3	40.6	39.6	38.2
08Oct 10	14:00:00	3600	41.8	77.4	64.4	36.9	49.8	44.5	43.5	40.4	39.5	38.2
08Oct 10	15:00:00	3600	42.1	77.7	61.8	37.1	49.0	43.6	42.9	41.0	40.2	39.0
08Oct 10	16:00:00	3600	44.5	80.1	60.6	38.5	52.7	46.9	45.8	43.4	42.0	40.3
08Oct 10	17:00:00	3600	45.1	80.6	63.4	42.6	48.0	46.2	46.0	45.4	44.6	43.3
08Oct 10	18:00:00	3600	46.0	81.6	54.0	43.9	47.9	47.0	46.9	46.6	46.0	45.2
08Oct 10	19:00:00	3600	50.0	85.5	54.9	45.0	52.4	51.6	51.4	50.8	50.1	47.8
08Oct 10	20:00:00	3600	51.1	86.7	60.5	50.1	52.0	51.9	51.8	51.6	51.2	50.2
08Oct 10	21:00:00	3600	49.8	85.3	51.1	48.8	50.9	50.8	50.7	50.3	49.8	49.2
08Oct 10	22:00:00	3600	48.8	84.4	53.4	47.5	50.0	49.8	49.7	49.3	48.8	48.1
08Oct 10	23:00:00	3600	47.6	83.2	60.6	46.3	48.9	48.3	48.1	47.8	47.5	47.0
09Oct 10	0:00:00	3600	46.4	82.0	54.0	45.1	48.4	47.3	47.0	46.8	46.4	45.4
09Oct 10	1:00:00	3600	45.7	81.3	52.0	44.3	48.0	46.8	46.7	45.9	45.6	45.0
09Oct 10	2:00:00	3600	44.8	80.4	54.4	43.3	47.3	45.9	45.8	45.0	44.6	43.9
09Oct 10	3:00:00	3600	43.5	79.1	48.5	41.4	45.2	44.7	44.5	43.9	43.5	42.4
09Oct 10	4:00:00	3600	42.4	78.0	50.4	41.0	44.9	43.5	43.2	42.7	42.3	41.3
09Oct 10	5:00:00	3600	42.3	77.8	52.4	40.0	46.3	43.9	43.6	42.5	41.8	40.9
09Oct 10	6:00:00	3600	42.7	78.3	56.3	39.7	47.1	44.9	44.5	42.9	41.9	40.8
09Oct 10	7:00:00	3600	45.0	80.5	56.9	38.6	51.1	48.1	47.6	45.3	43.4	40.9
09Oct 10	8:00:00	3600	42.9	78.5	58.0	37.8	48.6	45.9	45.4	43.4	41.6	39.5
09Oct 10	9:00:00	3600	42.8	78.4	59.4	38.5	49.2	44.6	44.1	42.6	41.5	40.0
09Oct 10	10:00:00	3600	42.7	78.3	58.6	37.4	50.1	44.8	44.2	41.9	40.7	39.2
09Oct 10	11:00:00	3600	42.3	77.8	60.4	36.6	49.0	45.5	44.7	41.9	40.2	38.3
09Oct 10	12:00:00	3600	42.8	78.4	62.2	37.5	50.0	44.0	43.3	41.7	40.6	39.2
09Oct 10	13:00:00	3600	41.4	77.0	62.4	36.8	44.9	41.7	41.4	40.3	39.4	38.1
09Oct 10	14:00:00	3600	40.1	75.6	54.8	36.3	44.4	41.7	41.5	40.3	39.3	38.1
09Oct 10	15:00:00	3600	39.4	74.9	50.6	36.4	43.8	40.8	40.6	39.6	38.9	37.6
09Oct 10	16:00:00	3600	42.0	77.6	60.1	38.1	47.5	43.9	43.5	41.8	40.6	39.2
09Oct 10	17:00:00	3600	45.1	80.7	61.4	41.0	48.0	45.8	45.7	44.9	44.3	42.1
09Oct 10	18:00:00	3600	47.2	82.8	62.5	44.1	52.2	49.4	48.9	47.1	46.1	45.1
09Oct 10	19:00:00	3600	52.9	88.5	54.4	48.6	54.0	53.9	53.9	53.6	53.3	50.7
09Oct 10	20:00:00	3600	53.4	89.0	54.9	52.6	54.0	53.9	53.9	53.7	53.5	53.1
09Oct 10	21:00:00	3600	53.3	88.8	55.5	52.4	54.0	53.9	53.9	53.7	53.4	52.9
09Oct 10	22:00:00	3600	52.4	88.0	54.9	51.6	53.8	53.2	53.0	52.8	52.5	52.1
09Oct 10	23:00:00	3600	51.9	87.5	54.0	51.1	53.0	52.8	52.8	52.5	51.9	51.2
10Oct 10	0:00:00	3600	51.2	86.8	56.2	49.8	52.8	52.0	51.9	51.7	51.3	50.3

Appendix B												
Sound Level Data: 100 Yards South												
10Oct 10	1:00:00	3600	49.9	85.4	55.8	48.9	51.5	50.8	50.7	50.1	49.7	49.1
10Oct 10	2:00:00	3600	49.4	84.9	56.6	48.1	51.6	50.2	50.0	49.7	49.3	48.3
10Oct 10	3:00:00	3600	48.4	84.0	56.1	47.0	50.8	49.5	49.2	48.8	48.4	47.4
10Oct 10	4:00:00	3600	47.7	83.3	58.0	46.1	50.6	48.9	48.7	47.9	47.5	46.6
10Oct 10	5:00:00	3600	46.6	82.2	58.4	43.9	49.6	47.9	47.8	47.2	46.5	44.7
10Oct 10	6:00:00	3600	43.9	79.5	63.0	40.5	47.8	45.9	45.6	44.5	43.4	41.5
10Oct 10	7:00:00	3600	44.3	79.8	62.6	39.1	50.5	47.0	46.4	44.0	42.5	40.7
10Oct 10	8:00:00	3600	42.0	77.6	58.1	38.3	46.9	44.5	44.0	42.4	41.0	39.5
10Oct 10	9:00:00	3600	44.5	80.1	65.4	38.6	52.1	47.3	46.6	43.9	42.1	40.2
10Oct 10	10:00:00	3600	42.7	78.3	60.9	36.6	50.0	44.9	44.4	42.2	40.4	38.4
10Oct 10	11:00:00	3600	42.1	77.7	63.1	36.1	48.3	43.0	42.5	40.7	39.4	37.9
10Oct 10	12:00:00	3600	40.0	75.6	44.8	37.5	42.5	41.7	41.5	40.7	39.9	38.4
10Oct 10	13:00:00	3600	39.1	74.7	51.0	36.0	41.6	40.6	40.5	39.7	38.9	37.3
10Oct 10	14:00:00	3600	38.3	73.9	51.3	34.5	41.9	40.3	40.0	38.8	37.7	36.1
10Oct 10	15:00:00	3600	37.1	72.7	45.5	33.6	40.0	38.6	38.4	37.7	36.9	35.6
10Oct 10	16:00:00	3600	39.3	74.9	47.6	36.3	41.9	40.7	40.6	39.8	39.1	37.8
10Oct 10	17:00:00	3600	42.9	78.5	47.6	38.8	45.7	44.9	44.8	44.1	43.2	39.9
10Oct 10	18:00:00	3600	46.3	81.9	52.6	43.8	49.9	48.7	48.3	46.6	45.8	45.0
10Oct 10	19:00:00	3600	52.9	88.5	54.6	50.0	54.0	53.9	53.9	53.6	53.2	51.3
10Oct 10	20:00:00	3600	53.4	89.0	54.4	52.6	54.1	53.9	53.9	53.8	53.5	53.1
10Oct 10	21:00:00	3600	52.8	88.4	54.5	51.5	53.9	53.7	53.7	53.2	52.7	52.1
10Oct 10	22:00:00	3600	52.2	87.7	55.0	51.1	53.0	52.9	52.9	52.7	52.3	51.4
10Oct 10	23:00:00	3600	51.3	86.9	53.6	50.6	52.0	51.9	51.9	51.8	51.5	51.1
11Oct 10	0:00:00	3600	50.5	86.1	53.4	49.6	51.9	51.5	51.4	50.9	50.6	50.1
11Oct 10	1:00:00	3600	49.8	85.4	53.3	48.5	51.0	50.8	50.7	50.3	49.8	49.1
11Oct 10	2:00:00	3600	48.7	84.2	51.9	47.8	49.9	49.7	49.6	49.0	48.6	48.1
11Oct 10	3:00:00	3600	48.0	83.6	54.0	47.1	49.4	48.9	48.8	48.4	47.9	47.2
11Oct 10	4:00:00	3600	47.8	83.3	53.1	46.5	49.6	48.7	48.5	47.9	47.6	47.1
11Oct 10	5:00:00	3600	47.2	82.8	52.9	46.0	49.2	48.0	47.9	47.7	47.2	46.3
11Oct 10	6:00:00	3600	45.8	81.3	54.8	43.4	48.6	47.0	46.9	46.4	45.6	44.3
11Oct 10	7:00:00	3600	47.6	83.2	57.4	43.9	52.4	49.7	49.3	48.0	46.9	45.4
11Oct 10	8:00:00	3600	50.8	86.4	57.9	45.4	54.6	53.1	52.9	51.7	50.4	48.0
11Oct 10	9:00:00	3600	52.8	88.4	62.4	48.3	56.8	55.3	55.0	53.6	52.2	50.3
11Oct 10	10:00:00	3600	54.2	89.8	66.8	48.9	58.7	56.9	56.6	55.0	53.5	51.2
11Oct 10	11:00:00	3600	52.7	88.3	69.5	46.5	57.8	55.8	55.4	53.4	51.7	49.2
11Oct 10	12:00:00	3600	50.5	86.1	60.8	45.1	54.8	53.1	52.8	51.5	50.0	47.3
11Oct 10	13:00:00	3600	51.0	86.5	65.8	43.9	56.6	54.1	53.7	51.5	49.6	47.2
11Oct 10	14:00:00	3600	53.3	88.9	64.6	45.1	58.8	56.4	55.9	54.2	52.3	48.6
11Oct 10	15:00:00	3600	49.8	85.4	63.4	44.4	54.7	52.6	52.1	50.6	48.8	46.3
11Oct 10	16:00:00	3600	49.1	84.7	59.1	45.1	52.9	51.5	51.2	49.8	48.6	46.6
11Oct 10	17:00:00	3600	47.9	83.4	58.4	44.9	51.1	49.4	49.2	48.3	47.5	46.3
11Oct 10	18:00:00	3600	49.2	84.8	54.4	46.0	52.8	52.0	51.8	50.0	48.4	47.1
11Oct 10	19:00:00	3600	53.7	89.3	58.0	52.1	55.0	54.8	54.7	54.3	53.7	53.1
11Oct 10	20:00:00	3600	53.4	89.0	55.1	52.1	54.8	54.4	54.3	53.8	53.4	52.5
11Oct 10	21:00:00	3600	53.1	88.7	54.9	51.9	54.8	54.1	54.0	53.6	53.0	52.2
11Oct 10	22:00:00	3600	52.4	87.9	54.0	51.3	53.2	52.9	52.9	52.7	52.4	51.7
11Oct 10	23:00:00	3600	52.1	87.6	55.0	51.1	53.0	52.9	52.9	52.6	52.2	51.2
12Oct 10	0:00:00	3600	51.0	86.6	53.8	49.9	52.7	52.0	51.9	51.6	51.0	50.2
12Oct 10	1:00:00	3600	50.2	85.8	54.4	48.8	51.0	50.9	50.9	50.7	50.4	49.5
12Oct 10	2:00:00	3600	49.0	84.5	53.9	47.6	50.0	49.9	49.8	49.6	49.1	48.2
12Oct 10	3:00:00	3600	47.5	83.1	55.1	46.1	49.0	48.7	48.5	47.9	47.5	46.5
12Oct 10	4:00:00	3600	46.6	82.2	51.3	45.6	47.9	47.2	47.0	46.8	46.6	46.1
12Oct 10	5:00:00	3600	44.5	80.1	50.5	42.3	46.9	46.3	46.1	45.0	44.4	43.2
12Oct 10	6:00:00	3600	42.0	77.6	53.9	39.4	46.3	43.6	43.3	42.3	41.3	40.1
12Oct 10	7:00:00	3600	41.7	77.3	54.5	36.9	47.7	44.5	44.0	42.0	40.5	38.4
12Oct 10	8:00:00	3600	45.8	81.4	59.4	37.0	55.3	49.8	48.9	44.8	41.0	39.0
12Oct 10	9:00:00	3600	42.7	78.3	57.8	37.8	48.9	44.9	44.4	42.5	41.3	39.6
12Oct 10	10:00:00	3600	41.9	77.5	60.8	36.6	48.2	44.4	43.8	41.7	40.3	38.3
12Oct 10	11:00:00	3600	41.9	77.5	61.0	35.0	49.0	43.6	42.7	39.9	38.9	37.3

Appendix B												
Sound Level Data: 100 Yards South												
12Oct 10	12:00:00	3600	39.7	75.3	58.3	35.4	43.0	41.3	41.0	40.0	39.0	37.3
12Oct 10	13:00:00	3600	39.7	75.3	57.0	35.1	44.8	40.9	40.7	39.7	38.7	37.0
12Oct 10	14:00:00	3600	38.9	74.4	54.3	35.1	42.6	40.6	40.3	39.3	38.4	37.1
12Oct 10	15:00:00	3600	37.5	73.0	53.9	34.8	40.0	38.9	38.8	37.9	37.2	35.9
12Oct 10	16:00:00	3600	39.9	75.4	57.1	36.8	42.4	41.0	40.9	40.3	39.6	37.9
12Oct 10	17:00:00	3600	43.7	79.3	53.0	40.4	45.9	45.5	45.4	44.5	43.6	41.5
12Oct 10	18:00:00	3600	48.6	84.1	69.3	45.3	51.6	48.6	48.3	47.2	46.6	45.8
12Oct 10	19:00:00	3600	56.5	92.1	81.9	48.1	63.1	56.0	55.1	52.4	51.6	49.9
12Oct 10	20:00:00	3600	51.1	86.7	54.6	49.9	53.0	52.3	52.0	51.6	51.0	50.2
12Oct 10	21:00:00	3600	49.8	85.4	54.6	48.5	51.0	50.8	50.7	50.2	49.7	49.1
12Oct 10	22:00:00	3600	48.8	84.4	52.4	47.9	50.0	49.8	49.7	49.2	48.7	48.1
12Oct 10	23:00:00	3600	47.6	83.2	55.1	46.1	49.0	48.8	48.7	48.1	47.6	46.6
13Oct 10	0:00:00	3600	46.1	81.7	50.8	44.8	47.0	46.9	46.9	46.6	46.2	45.2
13Oct 10	1:00:00	3600	44.7	80.3	52.6	43.0	46.9	45.8	45.6	44.9	44.6	43.9
13Oct 10	2:00:00	3600	43.6	79.1	53.8	41.5	46.5	44.9	44.7	44.0	43.4	42.2
13Oct 10	3:00:00	3600	42.8	78.3	55.2	40.3	47.1	44.3	44.0	43.1	42.2	41.1
13Oct 10	4:00:00	3600	42.5	78.1	52.8	40.6	45.0	43.5	43.3	42.8	42.4	41.5
13Oct 10	5:00:00	3600	41.4	77.0	52.0	38.9	44.4	42.8	42.6	41.8	41.2	40.2
13Oct 10	6:00:00	3600	41.3	76.9	56.5	37.8	47.5	43.8	43.1	41.1	40.2	38.7
13Oct 10	7:00:00	3600	42.7	78.2	56.6	38.4	49.8	45.2	44.5	42.1	41.0	39.5
13Oct 10	8:00:00	3600	47.5	83.1	68.4	36.6	55.4	51.2	50.4	44.8	41.0	38.8
13Oct 10	9:00:00	3600	60.0	95.6	88.5	37.1	54.7	46.6	45.9	43.1	41.1	38.7
13Oct 10	10:00:00	3600	44.2	79.8	64.0	36.0	53.5	46.7	45.8	41.9	39.5	37.3
13Oct 10	11:00:00	3600	38.8	74.4	54.1	34.5	43.8	40.8	40.4	38.9	37.8	36.2
13Oct 10	12:00:00	3600	37.7	73.3	55.0	33.6	41.5	38.9	38.7	37.7	36.8	35.3
13Oct 10	13:00:00	3600	36.8	72.3	51.6	32.3	42.6	38.1	37.8	36.4	35.5	34.1
13Oct 10	14:00:00	3600	36.5	72.1	49.4	31.1	41.9	38.6	38.3	37.0	35.7	33.0
13Oct 10	15:00:00	3600	35.2	70.7	44.4	31.0	38.8	36.9	36.7	35.6	34.8	33.3
13Oct 10	16:00:00	3600	37.4	73.0	48.5	33.4	40.3	39.1	38.9	38.1	37.3	35.1
13Oct 10	17:00:00	3600	43.1	78.7	53.3	37.8	45.6	44.7	44.6	43.8	43.2	41.1
13Oct 10	18:00:00	3600	46.1	81.7	60.3	43.1	50.7	47.2	46.9	46.1	45.5	44.3
13Oct 10	19:00:00	3600	49.7	85.3	51.5	46.6	51.0	50.8	50.8	50.5	50.0	47.8
13Oct 10	20:00:00	3600	50.7	86.3	51.6	49.8	51.6	51.1	51.0	50.8	50.6	50.1
13Oct 10	21:00:00	3600	50.2	85.8	51.4	49.4	51.0	50.9	50.9	50.7	50.4	49.5
13Oct 10	22:00:00	3600	49.4	85.0	50.5	48.4	50.4	49.9	49.9	49.8	49.5	49.0
13Oct 10	23:00:00	3600	48.3	83.9	49.6	47.1	49.4	48.9	48.9	48.7	48.4	47.6
14Oct 10	0:00:00	3600	47.4	83.0	49.3	46.1	48.0	47.9	47.9	47.7	47.4	46.6
14Oct 10	1:00:00	3600	46.6	82.1	48.5	44.8	47.9	47.6	47.5	46.9	46.5	45.6
14Oct 10	2:00:00	3600	45.4	81.0	48.3	43.6	46.9	46.5	46.3	45.8	45.4	44.4
14Oct 10	3:00:00	3600	44.8	80.4	48.3	43.4	45.9	45.8	45.7	45.3	44.8	44.1
14Oct 10	4:00:00	3600	42.9	78.4	47.5	41.5	44.9	44.4	44.3	43.0	42.6	42.1
14Oct 10	5:00:00	3600	42.1	77.6	48.5	40.6	43.6	42.9	42.9	42.6	42.1	41.2
14Oct 10	6:00:00	3600	43.3	78.9	58.3	39.8	50.2	47.0	45.9	42.8	41.6	40.3
14Oct 10	7:00:00	3600	42.7	78.3	57.8	38.0	48.9	45.4	44.8	42.9	41.3	39.3
14Oct 10	8:00:00	3600	54.0	89.6	84.8	37.3	51.8	46.5	46.0	43.8	42.0	39.5
14Oct 10	9:00:00	3600	44.7	80.2	63.0	36.8	53.8	45.6	44.8	42.6	41.1	39.3
14Oct 10	10:00:00	3061.2	43.4	78.2	65.0	36.0	50.8	46.9	46.1	42.0	40.0	37.9
14Oct 10	10:59:17	42.7	55.6	71.9	69.6	36.8	66.0	59.6	59.0	54.3	48.9	38.8
14Oct 10	11:00:00	3600	46.0	81.6	73.8	33.0	55.4	45.1	43.0	39.0	37.2	34.5
14Oct 10	12:00:00	3600	37.3	72.9	52.0	32.1	45.1	40.0	39.1	36.8	35.4	33.6
14Oct 10	13:00:00	3600	41.1	76.7	59.0	30.9	51.5	42.5	40.5	36.5	35.1	33.2
14Oct 10	14:00:00	3600	45.1	80.7	67.6	30.9	52.2	44.1	42.5	37.2	35.1	33.3
14Oct 10	15:00:00	3600	37.2	72.8	55.8	31.8	43.4	38.3	37.8	36.6	35.4	33.4
14Oct 10	16:00:00	3600	39.6	75.2	56.9	34.4	46.1	40.2	39.9	38.7	37.6	35.8
14Oct 10	17:00:00	3600	42.4	77.9	52.5	38.6	44.9	43.9	43.8	43.1	42.1	40.5
14Oct 10	18:00:00	3600	44.3	79.9	55.8	41.3	49.2	46.0	45.7	44.5	43.6	42.3
14Oct 10	19:00:00	3600	49.5	85.0	52.8	45.4	51.1	50.8	50.7	50.3	49.4	47.7
14Oct 10	20:00:00	3600	51.0	86.5	53.5	50.1	52.0	51.8	51.8	51.5	51.0	50.2
14Oct 10	21:00:00	3600	50.8	86.4	54.0	50.0	51.9	51.7	51.7	51.2	50.7	50.1

Appendix B												
Sound Level Data: 100 Yards South												
14Oct 10	22:00:00	3600	50.1	85.7	54.9	49.0	51.6	50.9	50.9	50.6	50.0	49.2
14Oct 10	23:00:00	3600	49.5	85.0	52.5	48.3	50.6	50.0	49.9	49.8	49.5	49.0
15Oct 10	0:00:00	3600	48.7	84.3	53.3	47.6	50.0	49.5	49.4	48.9	48.6	48.1
15Oct 10	1:00:00	3600	48.4	84.0	53.7	47.3	49.8	49.0	48.9	48.8	48.5	47.9
15Oct 10	2:00:00	3600	47.5	83.1	54.4	46.3	49.3	48.6	48.5	47.9	47.5	46.9
15Oct 10	3:00:00	3600	46.4	82.0	53.6	45.0	47.9	47.5	47.4	46.8	46.4	45.3
15Oct 10	4:00:00	3600	45.9	81.4	50.4	44.1	47.8	46.9	46.8	46.3	45.7	45.1
15Oct 10	5:00:00	3600	44.9	80.5	52.4	42.6	47.5	46.0	45.8	45.0	44.6	44.1
15Oct 10	6:00:00	3600	43.1	78.7	54.3	40.0	47.1	44.6	44.3	43.5	42.5	41.1
15Oct 10	7:00:00	3600	43.5	79.1	56.8	38.1	50.3	45.9	45.5	43.5	42.0	40.1
15Oct 10	8:00:00	3600	54.2	89.8	74.2	39.6	63.1	59.1	58.2	51.6	46.5	42.8
15Oct 10	9:00:00	3600	42.1	77.7	54.0	37.3	48.2	45.5	44.9	42.4	40.6	38.6
15Oct 10	10:00:00	3600	40.4	76.0	57.5	34.5	47.0	42.0	41.6	40.0	38.8	37.0
15Oct 10	11:00:00	3600	40.8	76.3	68.3	33.3	48.4	42.2	41.3	38.6	37.1	35.4
15Oct 10	12:00:00	3600	38.6	74.1	53.8	32.0	46.6	41.2	40.1	37.5	35.9	34.0
15Oct 10	13:00:00	3600	36.0	71.6	50.6	29.6	45.2	37.7	36.6	34.6	33.6	32.1
15Oct 10	14:00:00	3600	35.8	71.4	57.3	29.8	44.7	37.7	36.9	34.7	33.2	31.3
15Oct 10	15:00:00	3600	36.9	72.5	54.5	31.4	41.2	38.9	38.8	37.6	36.4	33.8
15Oct 10	16:00:00	3600	37.7	73.3	50.3	33.9	42.5	39.9	39.6	38.4	36.8	35.1
15Oct 10	17:00:00	3600	40.8	76.4	54.3	36.9	44.8	41.9	41.7	40.9	40.3	38.5
15Oct 10	18:00:00	3600	44.8	80.4	62.0	39.5	51.9	46.5	46.2	44.1	42.8	41.6
15Oct 10	19:00:00	3600	49.5	85.1	52.3	46.1	50.9	50.8	50.7	50.2	49.6	47.6
15Oct 10	20:00:00	3600	50.3	85.9	55.0	49.4	51.0	50.9	50.9	50.7	50.4	49.7
15Oct 10	21:00:00	3600	49.9	85.5	55.6	49.0	50.9	50.8	50.7	50.3	49.8	49.1
15Oct 10	22:00:00	3600	49.1	84.6	53.1	48.0	50.0	49.9	49.8	49.6	49.1	48.2
15Oct 10	23:00:00	3600	48.7	84.2	50.3	47.5	49.9	49.5	49.4	48.9	48.6	48.1
16Oct 10	0:00:00	3600	47.6	83.1	49.3	46.4	48.8	48.1	48.0	47.8	47.5	47.1
16Oct 10	1:00:00	3600	46.7	82.2	53.8	45.8	47.9	47.7	47.7	47.2	46.7	46.1
16Oct 10	2:00:00	3600	45.6	81.2	47.6	44.3	46.9	46.5	46.4	45.9	45.6	45.0
16Oct 10	3:00:00	3600	44.1	79.7	49.6	43.0	45.0	44.9	44.9	44.6	44.2	43.2
16Oct 10	4:00:00	3600	43.3	78.9	46.3	42.1	44.3	43.9	43.9	43.7	43.4	42.8
16Oct 10	5:00:00	3600	42.1	77.6	46.1	40.1	43.8	43.2	43.0	42.6	42.0	41.0
16Oct 10	6:00:00	3600	40.3	75.9	48.1	37.8	42.7	41.6	41.4	40.8	40.3	39.2
16Oct 10	7:00:00	3600	42.5	78.1	54.5	34.5	48.6	45.6	45.1	43.3	41.3	36.7
16Oct 10	8:00:00	3600	41.5	77.1	64.5	34.1	48.1	44.2	43.7	41.5	39.4	36.2
16Oct 10	9:00:00	3600	42.7	78.3	63.8	34.3	51.4	46.3	45.0	41.0	39.0	36.6
16Oct 10	10:00:00	3600	41.6	77.1	58.0	36.3	48.2	43.8	43.4	41.4	39.8	38.0
16Oct 10	11:00:00	3600	57.6	93.2	84.6	34.4	53.0	43.7	42.8	39.9	38.5	36.7
16Oct 10	12:00:00	3600	46.7	82.2	63.9	34.4	57.1	49.0	47.9	42.6	39.5	37.0
16Oct 10	13:00:00	3600	38.8	74.4	54.5	33.0	45.2	41.0	40.5	38.6	37.2	35.1
16Oct 10	14:00:00	3600	37.0	72.5	60.5	30.8	42.7	38.6	38.0	36.5	35.1	32.9
16Oct 10	15:00:00	3600	40.6	76.2	58.5	32.4	49.8	42.1	41.0	38.6	37.1	35.0
16Oct 10	16:00:00	3600	39.6	75.2	57.5	34.8	44.3	40.9	40.7	39.5	38.0	36.2
16Oct 10	17:00:00	3600	41.9	77.5	56.9	38.6	45.7	43.0	42.8	41.8	41.2	40.0
16Oct 10	18:00:00	3600	44.6	80.1	61.4	40.1	47.3	45.9	45.8	45.1	43.8	42.2
16Oct 10	19:00:00	3600	47.5	83.0	49.8	45.8	48.8	48.1	48.0	47.8	47.4	46.5
16Oct 10	20:00:00	3600	47.3	82.9	58.8	46.5	48.0	47.9	47.9	47.7	47.5	47.0
16Oct 10	21:00:00	3600	46.7	82.3	48.8	45.5	47.9	47.7	47.6	47.0	46.6	46.1
16Oct 10	22:00:00	3600	44.9	80.5	47.1	43.5	46.2	45.9	45.8	45.5	45.0	44.1
16Oct 10	23:00:00	3600	43.0	78.6	54.4	41.8	44.0	43.9	43.8	43.5	43.0	42.2
17Oct 10	0:00:00	3600	41.4	76.9	48.8	39.8	43.9	42.6	42.4	41.8	41.3	40.3
17Oct 10	1:00:00	3600	39.9	75.5	45.5	37.6	41.9	40.9	40.9	40.5	39.9	38.5
17Oct 10	2:00:00	3600	38.0	73.6	47.0	35.9	40.2	38.9	38.8	38.4	37.8	36.9
17Oct 10	3:00:00	3600	36.7	72.2	56.5	34.3	38.8	37.8	37.7	37.0	36.4	35.2
17Oct 10	4:00:00	3600	37.2	72.8	61.8	34.4	38.9	38.0	37.9	37.4	36.7	35.4
17Oct 10	5:00:00	3600	37.9	73.4	49.3	36.0	39.6	38.9	38.8	38.3	37.7	37.0
17Oct 10	6:00:00	3600	39.3	74.9	58.8	35.3	45.3	41.7	41.1	38.9	37.9	37.0
17Oct 10	7:00:00	3600	43.5	79.0	69.6	33.3	48.0	44.6	44.0	40.5	38.2	35.7
17Oct 10	8:00:00	3600	46.5	82.1	75.1	30.9	52.3	47.4	46.5	42.0	38.2	34.3

Appendix B												
Sound Level Data: 100 Yards South												
17Oct 10	9:00:00	3600	41.9	77.5	54.4	32.4	48.6	44.9	44.7	42.6	40.5	35.4
17Oct 10	10:00:00	3600	39.3	74.9	53.9	31.6	46.8	41.8	41.1	39.2	37.6	35.0
17Oct 10	11:00:00	3600	37.8	73.4	47.5	31.1	42.5	40.7	40.3	38.7	37.2	33.9
17Oct 10	12:00:00	3600	38.0	73.6	51.9	33.4	43.8	40.7	40.1	38.5	37.0	34.9
17Oct 10	13:00:00	3600	39.9	75.5	46.9	32.3	44.5	43.4	43.1	41.6	38.1	35.5
17Oct 10	14:00:00	3600	37.0	72.6	53.3	30.4	43.4	39.6	39.1	36.8	35.3	32.8
17Oct 10	15:00:00	3600	37.3	72.9	49.6	31.3	44.9	40.4	39.7	37.0	35.4	33.5
17Oct 10	16:00:00	3600	39.7	75.3	57.6	34.6	45.5	40.8	40.3	38.6	37.1	35.4
17Oct 10	17:00:00	3600	41.9	77.5	60.8	34.1	51.7	42.6	41.8	39.8	38.2	35.7
17Oct 10	18:00:00	3600	36.7	72.3	51.8	32.8	40.2	38.2	37.9	37.1	36.2	34.5
17Oct 10	19:00:00	3600	41.6	77.2	52.4	36.1	43.9	43.0	42.9	42.5	41.6	39.6
17Oct 10	20:00:00	3600	42.9	78.5	45.4	41.4	44.0	43.8	43.8	43.4	42.9	42.1
17Oct 10	21:00:00	3600	42.0	77.6	52.0	39.6	44.6	43.1	43.0	42.5	41.8	40.5
17Oct 10	22:00:00	3600	40.8	76.4	56.1	39.1	42.7	41.8	41.8	41.2	40.7	39.8
17Oct 10	23:00:00	3600	40.2	75.7	42.5	38.5	41.8	41.2	41.0	40.7	40.2	39.2
18Oct 10	0:00:00	3600	39.6	75.2	46.5	36.3	41.6	40.9	40.9	40.5	39.8	38.0
18Oct 10	1:00:00	3600	38.2	73.7	44.3	34.6	40.1	39.5	39.3	38.8	38.2	36.6
18Oct 10	2:00:00	3600	36.4	72.0	50.5	34.3	37.9	37.5	37.3	36.8	36.4	35.3
18Oct 10	3:00:00	3600	35.6	71.2	48.5	33.5	37.3	36.8	36.7	36.1	35.6	34.4
18Oct 10	4:00:00	3600	34.3	69.9	44.4	31.4	36.9	36.3	36.1	35.3	33.8	32.2
18Oct 10	5:00:00	3600	33.5	69.0	48.9	31.5	37.6	34.8	34.5	33.6	32.8	32.1
18Oct 10	6:00:00	3600	34.6	70.2	49.3	31.6	40.6	36.9	36.5	34.4	33.4	32.3
18Oct 10	7:00:00	3600	42.4	77.9	62.5	32.2	52.4	45.0	43.7	39.8	37.0	34.3
18Oct 10	8:00:00	3600	41.9	77.4	64.8	31.4	50.0	42.9	42.0	39.2	37.0	33.7
18Oct 10	9:00:00	3600	43.7	79.3	63.5	31.4	53.2	46.5	45.5	40.9	37.6	34.4
18Oct 10	10:00:00	3600	41.8	77.3	61.4	32.8	48.6	44.2	43.5	40.5	38.1	35.1
18Oct 10	11:00:00	3600	40.2	75.8	67.5	33.5	45.5	41.9	41.3	39.1	37.4	35.3
18Oct 10	12:00:00	3600	40.0	75.5	58.8	32.4	47.3	41.5	40.7	38.4	36.8	35.0
18Oct 10	13:00:00	3600	40.1	75.7	55.1	32.4	49.2	44.7	43.5	38.4	36.0	34.2
18Oct 10	14:00:00	3600	42.0	77.6	60.5	32.5	52.5	45.0	43.5	37.9	35.9	34.2
18Oct 10	15:00:00	3600	37.6	73.2	47.5	33.1	43.5	40.0	39.7	38.2	36.5	34.7
18Oct 10	16:00:00	3600	40.3	75.9	59.1	36.3	42.7	41.0	40.9	40.0	39.2	38.0
18Oct 10	17:00:00	3600	41.7	77.2	54.4	38.3	44.9	43.4	43.1	42.3	41.3	39.6
18Oct 10	18:00:00	3600	42.4	78.0	59.9	39.9	46.1	43.8	43.7	42.8	41.9	40.5
18Oct 10	19:00:00	3600	44.8	80.4	55.6	42.0	48.3	45.6	45.3	44.8	44.5	43.6
18Oct 10	20:00:00	3600	43.2	78.8	46.5	42.0	44.8	44.3	44.1	43.7	43.2	42.2
18Oct 10	21:00:00	3600	42.1	77.7	47.5	40.1	43.9	43.0	43.0	42.7	42.2	41.0
18Oct 10	22:00:00	3600	40.1	75.7	46.9	38.8	41.7	40.9	40.9	40.6	40.0	39.2
18Oct 10	23:00:00	3600	39.2	74.7	46.5	37.0	42.9	40.0	39.9	39.5	38.9	38.1
19Oct 10	0:00:00	3600	38.0	73.5	53.6	35.9	40.8	38.9	38.8	38.2	37.6	36.6
19Oct 10	1:00:00	3600	37.0	72.6	45.0	35.0	39.2	38.5	38.3	37.6	36.9	36.1
19Oct 10	2:00:00	3600	36.8	72.4	54.4	33.6	41.3	39.1	38.6	37.0	35.9	34.3
19Oct 10	3:00:00	3600	35.0	70.6	43.0	31.7	37.2	36.5	36.3	35.6	34.8	33.7
19Oct 10	4:00:00	3600	33.4	69.0	42.9	31.4	36.0	34.9	34.8	33.8	33.2	32.2
19Oct 10	5:00:00	3600	34.7	70.3	45.4	32.4	37.5	36.1	35.9	35.3	34.5	33.2
19Oct 10	6:00:00	3600	37.0	72.6	53.6	31.4	44.6	38.6	38.0	36.2	34.4	32.5
19Oct 10	7:00:00	3600	45.2	80.8	66.5	35.3	53.1	46.0	45.2	42.5	40.3	37.5
19Oct 10	8:00:00	3600	40.3	75.9	51.9	34.4	46.3	43.0	42.5	40.6	39.1	36.6
19Oct 10	9:00:00	3600	42.1	77.6	58.1	34.8	50.1	45.7	45.0	41.6	39.3	37.2
19Oct 10	10:00:00	3600	51.7	87.3	78.5	32.5	55.9	49.6	47.9	42.2	38.5	35.4
19Oct 10	11:00:00	3600	37.7	73.2	53.8	33.5	44.2	39.7	39.0	37.4	36.3	35.1
19Oct 10	12:00:00	3600	49.1	84.7	71.0	33.8	59.8	49.3	46.6	38.8	37.4	35.4
19Oct 10	13:00:00	3600	38.1	73.7	54.6	33.9	41.4	39.0	38.9	38.2	37.4	36.1
19Oct 10	14:00:00	3600	37.4	73.0	53.9	34.3	42.0	39.2	38.8	37.5	36.7	35.5
19Oct 10	15:00:00	3600	36.9	72.5	46.4	33.8	40.6	38.2	37.9	37.3	36.5	35.3
19Oct 10	16:00:00	3600	39.2	74.7	52.1	35.5	42.7	41.5	41.3	39.7	38.4	36.9
19Oct 10	17:00:00	3600	42.5	78.1	52.9	39.1	45.7	43.9	43.8	42.9	42.3	40.6
19Oct 10	18:00:00	3600	43.6	79.2	54.3	41.4	46.6	45.6	45.4	44.1	43.1	42.2
19Oct 10	19:00:00	3600	46.4	82.0	57.5	45.1	47.8	47.0	46.9	46.8	46.5	46.0

Appendix B												
Sound Level Data: 100 Yards South												
19Oct 10	20:00:00	3600	47.0	82.6	57.8	44.6	51.9	49.0	48.4	46.9	46.3	45.2
19Oct 10	21:00:00	3600	56.1	91.7	81.9	42.5	64.1	56.7	55.7	49.3	45.2	43.5
19Oct 10	22:00:00	3600	43.5	79.1	51.5	41.8	46.2	44.5	44.3	43.8	43.4	42.4
19Oct 10	23:00:00	3600	41.6	77.2	45.3	40.4	42.9	42.7	42.6	42.0	41.6	41.0
20Oct 10	0:00:00	3600	41.0	76.6	54.0	38.8	43.4	41.9	41.8	41.2	40.7	39.8
20Oct 10	1:00:00	3600	38.8	74.4	44.3	37.4	40.0	39.8	39.8	39.4	38.8	38.1
20Oct 10	2:00:00	3600	37.8	73.3	44.4	35.9	39.0	38.8	38.7	38.2	37.7	37.0
20Oct 10	3:00:00	3600	38.0	73.5	44.0	35.1	40.7	39.7	39.5	38.6	37.7	36.4
20Oct 10	4:00:00	3600	38.6	74.2	42.6	35.6	41.4	40.5	40.2	39.3	38.4	37.1
20Oct 10	5:00:00	3600	37.9	73.4	45.6	34.6	40.7	39.5	39.3	38.4	37.6	36.2
20Oct 10	6:00:00	3600	39.8	75.4	57.4	34.8	44.5	41.7	41.4	39.6	37.8	36.2
20Oct 10	7:00:00	3600	42.4	78.0	57.6	36.5	49.2	44.6	44.0	42.5	41.1	38.8
20Oct 10	8:00:00	3600	43.8	79.3	62.8	38.6	50.4	44.6	44.1	42.7	41.5	40.1
20Oct 10	9:00:00	3600	42.2	77.7	52.3	39.3	45.7	43.8	43.6	42.6	41.7	40.5
20Oct 10	10:00:00	3600	41.0	76.6	56.6	36.4	45.7	43.4	43.0	41.5	40.3	38.4
20Oct 10	11:00:00	3600	41.7	77.3	61.5	36.4	48.5	43.7	43.0	40.4	39.2	37.9
20Oct 10	12:00:00	3600	38.9	74.5	49.6	35.0	43.2	40.8	40.6	39.5	38.5	36.6
20Oct 10	13:00:00	3600	49.6	85.1	76.4	35.4	51.5	43.5	42.3	40.0	38.7	37.1
20Oct 10	14:00:00	3600	39.5	75.1	50.5	34.8	45.3	41.9	41.5	39.8	38.6	36.6
20Oct 10	15:00:00	3600	37.6	73.2	53.3	34.3	40.4	38.6	38.4	37.6	36.9	35.5
20Oct 10	16:00:00	3600	39.6	75.2	50.8	36.1	42.8	41.9	41.7	40.0	39.2	37.4
20Oct 10	17:00:00	3600	43.7	79.2	59.0	38.9	51.1	45.2	44.8	43.7	42.6	40.0
20Oct 10	18:00:00	3600	46.1	81.7	57.1	43.4	49.2	47.6	47.4	46.6	45.6	44.2
20Oct 10	19:00:00	3600	47.0	82.6	55.0	45.3	48.9	48.1	48.0	47.5	46.8	46.1
20Oct 10	20:00:00	3600	47.0	82.6	51.5	45.5	48.5	47.9	47.9	47.6	47.1	46.2
20Oct 10	21:00:00	3600	47.0	82.6	55.8	45.4	48.5	47.9	47.8	47.5	46.9	46.1
20Oct 10	22:00:00	3600	46.6	82.1	49.0	44.8	48.1	47.7	47.6	47.0	46.5	45.5
20Oct 10	23:00:00	3600	44.6	80.1	52.8	42.3	47.7	46.4	46.1	44.9	44.3	43.2
21Oct 10	0:00:00	3600	43.9	79.4	49.0	41.5	46.3	45.3	45.0	44.5	43.7	42.4
21Oct 10	1:00:00	3600	44.1	79.7	52.0	41.4	47.6	45.9	45.6	44.6	43.7	42.6
21Oct 10	2:00:00	3600	42.6	78.2	48.8	40.9	44.3	43.8	43.7	43.1	42.6	41.5
21Oct 10	3:00:00	3600	42.6	78.2	47.0	41.0	44.1	43.7	43.6	42.9	42.5	41.7
21Oct 10	4:00:00	3600	41.9	77.5	48.1	39.9	43.7	43.0	42.9	42.5	41.9	40.7
21Oct 10	5:00:00	3600	42.7	78.3	47.6	40.1	45.3	44.5	44.3	43.4	42.5	41.2
21Oct 10	6:00:00	3600	43.7	79.3	57.0	40.6	48.5	44.8	44.7	43.7	42.7	41.4
21Oct 10	7:00:00	3600	42.0	77.6	57.1	34.9	48.1	44.9	44.5	42.8	40.5	37.1
21Oct 10	8:00:00	3600	41.5	77.1	58.1	34.5	49.2	44.5	43.8	41.1	39.0	36.3
21Oct 10	9:00:00	3600	42.9	78.5	55.9	32.8	49.4	46.6	46.0	43.6	41.0	37.1
21Oct 10	10:00:00	3600	44.9	80.5	56.1	38.0	50.7	48.0	47.6	45.5	43.7	41.0
21Oct 10	11:00:00	3600	44.0	79.5	53.6	35.0	50.9	48.2	47.6	44.5	41.6	38.4
21Oct 10	12:00:00	3600	46.5	82.1	64.9	35.4	53.0	49.1	48.6	45.9	43.1	39.2
21Oct 10	13:00:00	3600	42.1	77.7	56.6	33.8	47.5	45.2	44.8	43.0	41.0	37.7
21Oct 10	14:00:00	3600	41.8	77.4	69.5	32.5	46.8	44.2	43.7	40.7	38.5	35.6
21Oct 10	15:00:00	3600	41.9	77.5	59.8	36.1	49.8	43.5	42.9	40.5	39.0	37.6
21Oct 10	16:00:00	3600	40.6	76.1	52.9	35.6	46.1	43.2	42.8	41.0	39.4	37.4
21Oct 10	17:00:00	3600	41.5	77.1	58.0	36.6	47.7	42.8	42.6	41.5	40.5	38.6
21Oct 10	18:00:00	3600	40.9	76.5	55.0	38.3	44.5	42.2	41.9	41.2	40.5	39.3
21Oct 10	19:00:00	3600	42.5	78.1	52.4	38.9	45.0	43.5	43.3	42.8	42.4	41.3
21Oct 10	20:00:00	3600	42.7	78.3	45.0	40.9	43.9	43.7	43.6	43.1	42.6	42.0
21Oct 10	21:00:00	3600	41.2	76.8	47.9	39.4	43.5	42.3	42.1	41.6	41.0	40.1
21Oct 10	22:00:00	3600	40.7	76.2	58.1	36.8	45.3	40.8	40.6	39.8	39.2	37.8
21Oct 10	23:00:00	3600	38.9	74.5	44.6	36.5	40.8	40.0	39.9	39.5	38.8	37.7
22Oct 10	0:00:00	3600	38.3	73.9	45.1	34.9	40.9	39.6	39.5	38.8	38.3	37.0
22Oct 10	1:00:00	3600	38.0	73.6	47.1	36.1	39.9	39.0	38.9	38.5	37.9	37.0
22Oct 10	2:00:00	3600	37.9	73.5	42.3	35.9	40.1	39.1	39.0	38.4	37.7	36.7
22Oct 10	3:00:00	3600	37.1	72.7	40.3	34.5	39.3	38.6	38.5	37.7	36.9	35.7
22Oct 10	4:00:00	3600	36.4	72.0	47.9	34.4	38.0	37.6	37.4	36.8	36.4	35.3
22Oct 10	5:00:00	3600	36.7	72.3	45.3	34.5	40.7	37.8	37.7	36.9	36.4	35.3
22Oct 10	6:00:00	3600	38.4	74.0	54.1	33.3	47.4	39.1	38.4	36.8	35.6	34.2

Appendix B												
Sound Level Data: 100 Yards South												
22Oct 10	7:00:00	3600	40.6	76.1	66.9	32.8	46.5	42.7	42.1	39.6	37.6	35.3
22Oct 10	8:00:00	3600	38.2	73.7	54.8	31.8	43.9	41.2	40.8	38.5	36.5	34.0
22Oct 10	9:00:00	3600	39.0	74.6	61.3	29.3	47.5	41.9	41.2	38.1	35.8	32.6
22Oct 10	10:00:00	3600	40.3	75.9	60.3	29.1	49.3	43.7	42.7	39.3	36.4	32.5
22Oct 10	11:00:00	3600	35.1	70.7	56.1	26.9	42.7	38.1	37.3	34.4	32.2	29.4
22Oct 10	12:00:00	3600	35.6	71.1	50.9	27.4	43.0	39.6	38.9	35.5	32.8	29.9
22Oct 10	13:00:00	3600	34.8	70.4	52.8	27.9	41.5	37.5	36.9	34.7	32.9	30.2
22Oct 10	14:00:00	3600	43.4	79.0	62.3	29.9	54.5	45.8	44.3	37.4	35.5	32.6
22Oct 10	15:00:00	3600	39.7	75.3	55.0	34.6	46.7	41.5	41.0	39.4	38.0	36.4
22Oct 10	16:00:00	3600	39.5	75.1	56.8	35.4	44.4	40.8	40.5	39.3	38.4	37.2
22Oct 10	17:00:00	3600	41.5	77.1	56.4	35.5	49.7	44.2	43.3	40.5	38.9	37.3
22Oct 10	18:00:00	3600	40.6	76.2	57.6	37.2	45.8	41.9	41.7	40.7	39.8	38.2
22Oct 10	19:00:00	3600	43.1	78.7	55.8	40.4	45.9	44.3	44.0	43.5	42.7	41.4
22Oct 10	20:00:00	3600	43.2	78.8	50.1	41.1	45.7	44.5	44.2	43.7	43.0	42.1
22Oct 10	21:00:00	3600	43.6	79.2	49.8	41.1	46.8	45.5	45.2	44.1	43.2	42.1
22Oct 10	22:00:00	3600	43.9	79.5	49.5	40.8	48.0	46.1	45.8	44.4	43.4	42.1
22Oct 10	23:00:00	3540	42.1	77.6	49.9	38.6	47.0	44.8	44.3	42.5	41.3	40.1
23Oct 10	0:00:00	3599.9	39.9	75.4	55.4	37.8	42.1	40.9	40.8	40.2	39.6	38.6
23Oct 10	1:00:00	3600	39.1	74.7	45.0	36.9	41.3	40.4	40.2	39.6	39.0	38.0
23Oct 10	2:00:00	3600	38.0	73.6	45.8	35.3	42.4	39.4	39.0	38.3	37.6	36.5
23Oct 10	3:00:00	3600	38.6	74.1	48.1	34.9	42.6	41.1	40.8	39.4	38.0	36.0
23Oct 10	4:00:00	3600	38.2	73.8	44.0	33.8	42.5	41.0	40.6	39.3	37.6	35.3
23Oct 10	5:00:00	3600	36.7	72.3	41.9	34.5	39.6	38.4	38.1	37.2	36.5	35.3
23Oct 10	6:00:00	3600	40.0	75.6	64.6	34.5	45.7	41.5	40.8	38.4	37.3	35.5
23Oct 10	7:00:00	3600	54.8	90.4	84.0	33.3	61.4	51.8	50.3	44.9	42.2	39.3
23Oct 10	8:00:00	3600	48.5	84.1	76.8	31.9	56.0	47.7	46.5	41.9	38.5	34.6
23Oct 10	9:00:00	3600	50.5	86.0	80.0	32.5	56.5	46.2	44.9	41.1	38.6	35.6
23Oct 10	10:00:00	3600	49.4	85.0	78.1	31.5	54.2	46.2	44.8	40.5	38.2	35.2
23Oct 10	11:00:00	3600	43.0	78.6	73.0	34.3	47.2	44.2	43.7	41.9	40.5	37.4
23Oct 10	12:00:00	3600	45.7	81.2	69.6	32.8	54.1	46.3	45.2	41.1	38.0	35.5
23Oct 10	13:00:00	3600	53.4	89.0	80.9	32.9	56.4	48.3	47.0	43.5	40.3	35.8
23Oct 10	14:00:00	3600	41.9	77.5	67.3	33.1	48.4	43.6	42.8	39.5	37.4	35.1
23Oct 10	15:00:00	3600	42.8	78.4	71.0	34.0	48.9	43.7	43.0	40.9	39.0	36.2
23Oct 10	16:00:00	3600	41.4	77.0	60.9	33.4	48.8	44.6	43.9	40.8	38.8	36.2
23Oct 10	17:00:00	3600	41.3	76.9	57.5	36.9	47.2	43.7	43.3	41.5	40.1	38.4
23Oct 10	18:00:00	3600	39.1	74.7	57.1	29.6	45.2	41.8	41.4	39.7	37.5	32.8
23Oct 10	19:00:00	3600	36.5	72.0	51.5	29.4	40.9	39.3	39.0	37.4	35.9	31.7
23Oct 10	20:00:00	3600	40.5	76.1	46.8	33.3	45.5	44.5	44.3	41.6	39.0	35.7
23Oct 10	21:00:00	3600	41.9	77.4	50.6	36.0	46.9	45.2	44.8	42.9	40.7	37.8
23Oct 10	22:00:00	3600	46.6	82.1	54.8	38.5	52.8	50.3	49.8	47.4	45.2	41.2
23Oct 10	23:00:00	3600	47.6	83.2	57.4	40.8	52.8	50.6	50.3	48.5	46.7	44.1
24Oct 10	0:00:00	3600	44.6	80.2	53.0	39.3	49.7	47.7	47.3	45.3	43.7	41.2
24Oct 10	1:00:00	3600	51.6	87.2	66.4	39.8	59.5	56.6	55.9	52.0	47.7	42.4
24Oct 10	2:00:00	3600	54.7	90.3	66.5	43.6	60.6	58.4	57.9	55.8	53.5	48.2
24Oct 10	3:00:00	3600	54.8	90.3	63.5	46.0	60.5	58.3	57.9	55.8	53.3	50.1
24Oct 10	4:00:00	3600	56.6	92.2	68.9	48.8	63.0	59.9	59.5	57.3	55.0	51.2
24Oct 10	5:00:00	3600	55.9	91.5	64.5	48.3	61.2	59.1	58.8	57.1	54.8	51.2
24Oct 10	6:00:00	3600	57.7	93.3	70.6	47.1	64.6	61.3	60.9	58.5	56.0	50.9
24Oct 10	7:00:00	3600	57.3	92.9	78.4	49.4	63.6	59.9	59.4	57.3	55.4	52.6
24Oct 10	8:00:00	3600	57.6	93.2	70.4	51.3	63.7	60.9	60.5	58.0	56.1	53.6
24Oct 10	9:00:00	3600	59.0	94.5	72.4	51.9	65.0	62.2	61.7	59.4	57.3	54.4
24Oct 10	10:00:00	3600	59.0	94.6	72.8	51.6	65.4	62.7	62.2	59.6	57.4	54.0
24Oct 10	11:00:00	3600	58.1	93.7	74.3	51.0	64.6	61.3	60.7	58.5	56.3	53.5
24Oct 10	12:00:00	3600	60.0	95.6	74.9	50.8	67.1	63.5	62.8	60.0	57.9	54.6
24Oct 10	13:00:00	3600	56.1	91.7	77.1	46.1	62.2	59.3	58.8	56.5	53.9	50.0
24Oct 10	14:00:00	3600	51.8	87.3	61.1	43.4	57.5	55.3	54.8	52.7	50.4	47.2
24Oct 10	15:00:00	3600	44.9	80.5	58.5	35.5	51.3	48.6	48.0	45.7	43.6	38.6
24Oct 10	16:00:00	3600	43.9	79.4	57.3	33.4	49.6	47.3	46.8	44.8	42.7	38.5
24Oct 10	17:00:00	3600	40.7	76.2	56.9	33.5	45.7	43.8	43.4	41.3	39.5	36.6

Appendix B												
Sound Level Data: 100 Yards South												
24Oct 10	18:00:00	3600	38.6	74.1	58.0	29.9	43.9	41.7	41.4	39.7	37.3	33.3
24Oct 10	19:00:00	3600	41.4	77.0	54.6	31.9	45.9	44.3	43.9	42.5	40.9	36.3
24Oct 10	20:00:00	3600	36.6	72.1	51.1	31.6	42.5	38.7	38.1	36.6	35.4	33.5
24Oct 10	21:00:00	3600	34.5	70.0	48.5	30.1	39.0	36.7	36.4	35.0	33.7	31.9
24Oct 10	22:00:00	3600	33.5	69.1	45.6	27.9	38.4	36.8	36.4	34.2	32.4	30.2
24Oct 10	23:00:00	3600	32.0	67.5	43.0	27.5	35.9	34.7	34.4	32.9	31.3	29.0
25Oct 10	0:00:00	3600	31.1	66.7	48.5	25.3	37.0	34.1	33.6	31.4	29.5	27.0
25Oct 10	1:00:00	3600	31.4	67.0	50.6	24.5	37.6	34.3	33.8	31.8	29.7	26.7
25Oct 10	2:00:00	3600	30.1	65.7	51.0	24.5	38.0	32.9	32.3	29.4	27.4	25.5
25Oct 10	3:00:00	3600	31.2	66.8	48.3	24.3	40.1	34.1	32.9	29.8	28.0	25.7
25Oct 10	4:00:00	3600	31.3	66.9	48.3	24.0	38.2	34.4	33.8	31.1	29.2	26.7
25Oct 10	5:00:00	3600	32.3	67.9	55.8	24.8	39.3	34.1	33.3	31.0	29.4	26.9
25Oct 10	6:00:00	3600	34.0	69.6	50.0	24.9	40.6	37.6	37.1	34.6	31.8	27.2
25Oct 10	7:00:00	3600	40.0	75.6	59.0	30.6	47.4	42.0	41.4	38.9	36.7	33.0
25Oct 10	8:00:00	3600	38.0	73.5	54.9	27.5	45.6	41.4	40.7	37.5	34.7	31.0
25Oct 10	9:00:00	3600	40.1	75.7	63.3	26.8	47.0	41.6	40.7	37.7	34.8	30.7
25Oct 10	10:00:00	2191.8	44.2	77.6	69.3	24.3	51.6	44.6	43.6	36.6	31.5	27.4

Appendix C												
Sound Level Data: 100 Yards West												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
07Oct 10	15:30:59	1740.9	56.9	89.4	84.1	39.6	65.3	59.6	58.1	51.5	47.7	42.8
07Oct 10	16:00:00	3600	48.2	83.8	62.1	41.6	55.0	51.5	51.0	48.4	46.1	43.8
07Oct 10	17:00:00	3600	47.9	83.5	58.0	42.9	52.3	50.3	50.0	48.6	47.1	45.1
07Oct 10	18:00:00	3600	46.5	82.1	55.1	43.2	51.6	49.3	48.8	46.8	45.4	44.2
07Oct 10	19:00:00	3600	48.4	83.9	55.2	45.0	50.3	49.8	49.7	49.2	48.4	46.3
07Oct 10	20:00:00	3600	49.2	84.8	51.1	48.3	50.0	49.9	49.9	49.7	49.4	48.4
07Oct 10	21:00:00	3600	48.8	84.4	50.5	47.5	49.9	49.7	49.6	49.1	48.7	48.1
07Oct 10	22:00:00	3600	48.8	84.3	51.8	47.0	50.0	49.7	49.7	49.1	48.7	48.1
07Oct 10	23:00:00	3600	48.3	83.9	50.8	46.7	49.6	49.0	48.9	48.7	48.4	47.4
08Oct 10	0:00:00	3600	47.4	82.9	53.5	45.5	48.9	48.6	48.5	47.9	47.4	46.3
08Oct 10	1:00:00	3600	46.6	82.2	50.5	45.1	48.2	47.7	47.6	46.9	46.5	45.5
08Oct 10	2:00:00	3600	46.5	82.1	53.0	44.7	48.4	47.7	47.6	46.9	46.4	45.4
08Oct 10	3:00:00	3600	46.3	81.9	53.7	43.4	48.9	47.9	47.8	47.0	46.1	44.4
08Oct 10	4:00:00	3600	43.4	79.0	55.3	40.5	46.2	44.7	44.5	43.8	43.2	41.6
08Oct 10	5:00:00	3600	42.6	78.2	55.0	40.4	44.5	43.7	43.6	42.9	42.4	41.3
08Oct 10	6:00:00	3600	42.5	78.1	58.5	39.9	47.9	43.7	43.3	42.4	41.7	40.7
08Oct 10	7:00:00	3600	43.6	79.2	55.8	40.0	46.9	45.6	45.4	44.2	43.2	41.4
08Oct 10	8:00:00	3600	44.0	79.6	58.3	39.3	51.4	45.9	45.3	43.0	41.8	40.3
08Oct 10	9:00:00	3600	44.0	79.6	63.6	38.6	50.7	46.3	45.8	43.6	41.9	39.9
08Oct 10	10:00:00	3600	41.4	77.0	62.4	35.8	46.8	43.4	42.9	41.1	39.6	37.4
08Oct 10	11:00:00	3600	41.2	76.7	57.8	34.9	49.2	44.1	43.4	40.2	38.1	36.3
08Oct 10	12:00:00	3600	42.1	77.7	60.8	34.3	52.7	43.6	42.3	38.8	37.3	35.7
08Oct 10	13:00:00	3600	41.1	76.7	57.7	33.5	49.1	44.3	43.3	40.1	38.0	35.5
08Oct 10	14:00:00	3600	43.9	79.5	62.6	35.3	53.0	47.2	46.4	42.2	38.7	36.6
08Oct 10	15:00:00	3600	41.6	77.2	59.0	35.8	48.5	44.7	44.0	41.4	39.0	36.9
08Oct 10	16:00:00	3600	42.6	78.2	57.9	38.0	48.2	44.8	44.3	42.5	41.3	39.1
08Oct 10	17:00:00	3600	42.9	78.5	62.8	40.3	47.1	44.5	44.1	42.6	41.7	41.0
08Oct 10	18:00:00	3600	43.0	78.6	49.5	40.9	45.7	44.4	44.1	43.5	42.7	41.6
08Oct 10	19:00:00	3600	46.9	82.5	53.3	43.7	50.2	48.0	47.9	47.5	46.7	45.2
08Oct 10	20:00:00	3600	48.3	83.9	73.5	46.6	48.9	48.6	48.5	47.9	47.6	47.1
08Oct 10	21:00:00	3600	47.6	83.2	48.9	46.5	48.9	48.6	48.5	47.9	47.6	47.1
08Oct 10	22:00:00	3600	48.0	83.6	62.3	45.7	52.6	48.1	48.0	47.6	47.1	46.2
08Oct 10	23:00:00	3600	46.8	82.3	61.4	44.7	48.2	47.6	47.5	46.9	46.5	45.8
09Oct 10	0:00:00	3600	46.6	82.2	60.2	44.8	48.0	47.3	47.1	46.8	46.3	45.3
09Oct 10	1:00:00	3600	47.4	83.0	60.8	44.6	52.2	48.3	47.9	46.9	46.3	45.3
09Oct 10	2:00:00	3600	46.5	82.1	54.4	43.4	48.9	48.3	48.0	47.3	46.3	44.4
09Oct 10	3:00:00	3600	45.0	80.6	47.9	42.9	47.2	46.6	46.5	45.6	44.8	43.9
09Oct 10	4:00:00	3600	45.0	80.6	54.2	43.0	48.0	46.5	46.2	45.4	44.7	43.8
09Oct 10	5:00:00	3600	44.5	80.1	52.5	41.7	46.9	45.9	45.8	45.0	44.4	43.1
09Oct 10	6:00:00	3600	45.1	80.6	61.9	40.1	51.2	46.0	45.8	44.8	43.7	41.6
09Oct 10	7:00:00	3600	46.5	82.1	66.5	40.4	53.2	49.0	48.4	46.0	44.6	42.5
09Oct 10	8:00:00	3600	43.0	78.6	57.8	38.7	48.1	45.4	44.9	43.4	41.9	40.2
09Oct 10	9:00:00	3600	43.2	78.8	54.8	36.8	48.6	45.9	45.6	43.9	42.1	39.7
09Oct 10	10:00:00	3600	43.1	78.7	64.0	36.1	52.2	43.4	42.7	40.7	39.4	37.5
09Oct 10	11:00:00	3600	41.7	77.3	55.8	35.4	47.6	44.7	44.3	42.1	39.9	37.2
09Oct 10	12:00:00	3600	44.5	80.1	61.8	35.6	49.7	47.7	47.3	45.5	43.6	39.7
09Oct 10	13:00:00	3600	45.3	80.9	63.7	34.2	51.8	49.5	49.0	46.2	43.0	37.1
09Oct 10	14:00:00	3600	45.7	81.2	55.7	35.5	52.1	49.3	48.8	46.7	44.0	39.0
09Oct 10	15:00:00	3600	43.8	79.4	55.6	35.5	50.2	48.0	47.5	44.6	41.3	37.7
09Oct 10	16:00:00	3600	42.3	77.9	53.2	37.8	46.5	44.9	44.7	43.1	41.4	39.6
09Oct 10	17:00:00	3600	43.9	79.5	62.6	39.0	48.4	43.9	43.7	42.6	41.3	39.4
09Oct 10	18:00:00	3600	44.4	79.9	59.5	42.2	46.9	45.9	45.7	44.6	43.8	43.0
09Oct 10	19:00:00	3600	49.6	85.2	52.2	46.7	51.0	50.6	50.5	49.9	49.5	48.4
09Oct 10	20:00:00	3600	50.3	85.9	52.8	49.4	51.3	50.9	50.9	50.7	50.4	49.7
09Oct 10	21:00:00	3600	49.5	85.1	54.3	48.7	50.8	50.2	50.0	49.8	49.5	49.1
09Oct 10	22:00:00	3600	49.6	85.2	53.5	48.5	50.9	50.6	50.4	49.9	49.5	49.0
09Oct 10	23:00:00	3600	49.6	85.2	53.7	48.5	50.9	50.5	50.4	49.9	49.6	49.0
10Oct 10	0:00:00	3600	49.8	85.3	55.3	47.7	51.9	50.9	50.9	50.2	49.6	48.5

Appendix C												
Sound Level Data: 100 Yards West												
10Oct 10	1:00:00	3600	48.8	84.3	53.1	47.0	50.5	49.8	49.7	49.1	48.6	47.9
10Oct 10	2:00:00	3600	48.8	84.4	56.3	47.0	50.8	49.8	49.7	49.1	48.6	47.8
10Oct 10	3:00:00	3600	47.6	83.2	52.0	45.5	49.7	48.9	48.8	48.2	47.5	46.3
10Oct 10	4:00:00	3600	46.1	81.7	55.5	44.3	49.0	47.5	47.2	46.5	45.8	45.1
10Oct 10	5:00:00	3600	48.5	84.1	61.4	41.7	58.9	50.2	48.6	45.7	44.8	43.5
10Oct 10	6:00:00	3600	44.4	80.0	61.3	39.6	48.7	44.7	44.5	43.5	42.6	41.1
10Oct 10	7:00:00	3600	44.9	80.5	58.5	39.1	53.0	48.1	47.3	44.2	42.4	40.5
10Oct 10	8:00:00	3600	43.0	78.5	60.0	38.0	49.1	46.2	45.5	43.0	41.4	39.3
10Oct 10	9:00:00	3600	42.9	78.5	61.6	35.4	51.6	44.5	43.8	41.3	39.6	37.4
10Oct 10	10:00:00	3600	41.9	77.4	64.1	31.1	49.8	45.2	44.6	41.2	37.1	33.4
10Oct 10	11:00:00	3600	41.5	77.1	61.6	30.5	50.4	43.1	42.4	39.2	35.7	32.5
10Oct 10	12:00:00	3600	41.1	76.7	63.5	30.6	49.3	44.1	42.7	39.1	36.6	33.1
10Oct 10	13:00:00	3600	41.1	76.7	64.8	30.6	47.6	42.3	41.7	38.7	36.1	33.2
10Oct 10	14:00:00	3600	41.1	76.7	57.6	31.6	49.0	44.3	43.7	41.1	37.9	33.3
10Oct 10	15:00:00	3600	42.0	77.6	63.8	32.2	52.3	45.6	44.2	39.1	36.3	34.1
10Oct 10	16:00:00	3600	44.1	79.7	63.1	34.5	51.9	46.0	44.6	40.2	37.9	36.0
10Oct 10	17:00:00	3600	42.0	77.6	54.0	37.9	46.1	44.2	43.9	42.9	41.6	38.8
10Oct 10	18:00:00	3600	45.3	80.9	56.9	41.9	50.3	47.8	47.4	45.5	44.0	42.9
10Oct 10	19:00:00	3600	49.3	84.9	63.5	46.6	50.7	50.0	49.9	49.7	49.3	48.2
10Oct 10	20:00:00	3600	50.3	85.9	51.8	49.0	51.0	50.9	50.9	50.7	50.4	49.6
10Oct 10	21:00:00	3600	50.3	85.9	51.3	49.2	51.0	50.9	50.9	50.7	50.4	49.6
10Oct 10	22:00:00	3600	49.8	85.3	52.4	48.6	50.9	50.5	50.4	49.9	49.6	49.1
10Oct 10	23:00:00	3600	49.2	84.8	52.0	48.0	50.8	50.0	49.9	49.6	49.1	48.2
11Oct 10	0:00:00	3600	49.0	84.6	50.6	47.7	50.0	49.8	49.8	49.5	48.9	48.2
11Oct 10	1:00:00	3600	48.4	84.0	51.3	47.0	49.8	49.3	49.1	48.8	48.4	47.5
11Oct 10	2:00:00	3600	47.8	83.4	51.4	46.2	49.0	48.8	48.8	48.3	47.8	47.1
11Oct 10	3:00:00	3600	47.2	82.8	52.5	45.4	48.7	47.9	47.9	47.7	47.2	46.2
11Oct 10	4:00:00	3600	46.8	82.4	52.1	45.5	48.8	47.9	47.8	47.2	46.7	46.1
11Oct 10	5:00:00	3600	46.6	82.2	54.5	45.3	48.8	47.8	47.7	46.9	46.5	45.7
11Oct 10	6:00:00	3600	51.2	86.8	63.9	44.3	58.9	55.8	55.2	50.5	47.7	45.3
11Oct 10	7:00:00	3600	58.0	93.6	65.8	49.7	62.8	61.1	60.8	59.1	57.3	53.3
11Oct 10	8:00:00	3600	62.1	97.6	70.7	52.6	67.9	65.7	65.2	63.1	60.5	56.4
11Oct 10	9:00:00	3600	63.6	99.2	72.4	52.9	69.5	67.4	66.9	64.7	62.0	57.7
11Oct 10	10:00:00	3600	65.1	100.6	76.6	52.3	71.2	69.1	68.6	66.0	63.2	58.4
11Oct 10	11:00:00	3600	63.9	99.5	76.2	48.7	70.5	67.8	67.2	64.8	61.7	57.0
11Oct 10	12:00:00	3600	61.9	97.5	73.7	49.7	67.9	65.8	65.4	63.1	60.4	55.2
11Oct 10	13:00:00	3600	62.4	98.0	75.4	47.8	69.0	66.2	65.7	63.2	60.3	54.9
11Oct 10	14:00:00	3600	65.0	100.6	75.0	49.8	72.0	68.9	68.5	65.9	63.0	58.1
11Oct 10	15:00:00	3600	61.3	96.9	74.1	49.3	67.9	65.6	65.0	62.2	58.9	54.2
11Oct 10	16:00:00	3600	60.3	95.8	70.0	49.1	66.4	63.9	63.5	61.2	58.7	54.2
11Oct 10	17:00:00	3600	57.6	93.2	69.1	49.7	63.3	60.8	60.4	58.3	56.1	53.1
11Oct 10	18:00:00	3600	56.4	92.0	64.7	49.0	61.3	59.5	59.2	57.4	55.5	52.5
11Oct 10	19:00:00	3600	56.8	92.3	64.3	50.4	61.6	59.8	59.5	57.6	55.8	53.1
11Oct 10	20:00:00	3600	55.2	90.7	64.0	50.0	60.0	58.1	57.7	55.8	54.1	51.8
11Oct 10	21:00:00	3600	54.0	89.5	61.5	50.0	58.0	56.2	55.9	54.6	53.4	51.4
11Oct 10	22:00:00	3600	54.6	90.2	62.7	49.7	58.9	57.3	56.9	55.4	53.7	51.5
11Oct 10	23:00:00	3600	55.1	90.7	62.0	49.7	59.9	58.1	57.7	55.9	54.2	51.6
12Oct 10	0:00:00	3600	53.0	88.6	60.7	48.0	57.4	55.8	55.5	53.9	52.2	49.9
12Oct 10	1:00:00	3600	51.1	86.7	58.5	46.5	56.1	53.8	53.2	51.7	50.3	48.0
12Oct 10	2:00:00	3600	50.1	85.6	58.2	45.9	54.5	52.7	52.3	50.8	49.2	47.3
12Oct 10	3:00:00	3600	47.6	83.2	54.8	44.5	51.4	49.4	49.0	48.2	47.2	45.6
12Oct 10	4:00:00	3600	50.1	85.7	57.5	45.2	54.9	53.1	52.6	50.8	49.1	46.8
12Oct 10	5:00:00	3600	46.7	82.3	54.2	42.4	51.9	49.8	49.4	47.2	45.5	43.5
12Oct 10	6:00:00	3600	43.1	78.7	50.3	38.4	46.9	45.2	44.9	43.9	42.7	40.3
12Oct 10	7:00:00	3600	41.7	77.3	55.8	36.9	47.4	44.6	44.1	41.9	40.4	38.4
12Oct 10	8:00:00	3600	43.9	79.5	64.6	37.0	48.9	47.0	46.7	44.4	42.0	39.4
12Oct 10	9:00:00	3600	42.9	78.4	57.3	35.9	48.7	46.0	45.5	43.5	41.4	38.5
12Oct 10	10:00:00	3600	46.2	81.8	55.9	37.7	52.6	49.7	49.2	47.0	44.7	40.4
12Oct 10	11:00:00	3600	45.1	80.6	56.1	34.3	50.3	48.3	47.9	46.1	44.2	39.7

Appendix C												
Sound Level Data: 100 Yards West												
12Oct 10	12:00:00	3600	43.5	79.1	52.1	34.6	49.2	46.9	46.5	44.5	42.3	38.2
12Oct 10	13:00:00	3600	43.9	79.5	54.1	33.9	49.3	47.3	46.9	45.0	42.7	38.2
12Oct 10	14:00:00	3600	42.4	77.9	55.8	35.1	48.5	45.5	45.1	43.0	40.9	37.6
12Oct 10	15:00:00	3600	43.6	79.2	65.5	34.8	50.9	46.7	45.9	42.6	39.8	37.1
12Oct 10	16:00:00	3600	39.9	75.4	57.2	35.5	44.6	42.2	41.7	39.7	38.5	36.9
12Oct 10	17:00:00	3600	41.4	77.0	50.6	37.9	43.9	43.1	42.9	42.3	41.1	39.2
12Oct 10	18:00:00	3600	46.9	82.5	66.2	41.8	51.0	48.8	48.6	46.5	44.8	42.5
12Oct 10	19:00:00	3600	56.3	91.9	82.8	45.2	62.6	54.2	53.3	50.1	48.5	46.4
12Oct 10	20:00:00	3600	47.4	82.9	51.4	45.4	49.5	48.7	48.6	47.8	47.2	46.2
12Oct 10	21:00:00	3600	46.0	81.6	52.8	44.3	49.0	47.0	46.9	46.3	45.7	45.0
12Oct 10	22:00:00	3600	46.3	81.9	51.7	44.1	48.0	47.7	47.5	46.9	46.2	45.0
12Oct 10	23:00:00	3600	44.4	80.0	52.2	42.7	46.0	45.6	45.5	44.8	44.3	43.3
13Oct 10	0:00:00	3600	44.5	80.1	48.4	41.9	46.7	45.9	45.8	45.1	44.5	43.2
13Oct 10	1:00:00	3600	43.6	79.2	63.1	41.0	45.9	44.2	44.0	43.5	42.8	42.0
13Oct 10	2:00:00	3600	43.2	78.8	49.2	40.0	45.8	44.8	44.7	43.9	43.0	41.4
13Oct 10	3:00:00	3600	43.5	79.1	60.7	40.1	46.0	44.6	44.4	43.6	42.9	41.8
13Oct 10	4:00:00	3600	42.9	78.5	48.7	40.0	45.0	44.3	44.0	43.5	42.7	41.5
13Oct 10	5:00:00	3600	47.0	82.6	66.1	40.2	56.4	48.3	46.5	44.3	43.2	42.1
13Oct 10	6:00:00	3600	43.0	78.5	61.1	38.8	47.2	44.5	44.2	42.9	41.8	40.3
13Oct 10	7:00:00	3600	44.3	79.9	51.4	39.4	48.7	46.8	46.5	45.0	43.6	41.6
13Oct 10	8:00:00	3600	48.0	83.6	68.0	37.9	55.2	50.6	49.9	47.0	43.9	40.2
13Oct 10	9:00:00	3600	43.1	78.7	62.7	36.3	49.5	44.9	44.4	42.0	40.2	38.1
13Oct 10	10:00:00	3600	41.7	77.3	57.8	34.5	48.8	44.2	43.6	41.0	39.0	36.4
13Oct 10	11:00:00	3600	39.3	74.8	56.3	33.6	46.4	42.6	41.8	38.7	36.9	35.0
13Oct 10	12:00:00	3600	39.9	75.4	63.5	31.9	46.8	42.6	41.8	38.0	35.8	33.5
13Oct 10	13:00:00	3600	37.2	72.7	54.4	31.3	44.9	39.2	38.4	35.8	34.5	32.8
13Oct 10	14:00:00	3600	41.3	76.9	64.6	31.7	49.4	45.2	44.2	37.9	35.2	33.3
13Oct 10	15:00:00	3600	40.4	75.9	62.2	32.3	48.6	40.9	39.8	36.6	35.3	34.1
13Oct 10	16:00:00	3600	37.7	73.3	47.1	34.5	42.2	39.2	38.9	37.8	37.2	35.7
13Oct 10	17:00:00	3600	41.4	77.0	48.3	37.4	44.6	43.2	43.0	42.2	41.3	38.9
13Oct 10	18:00:00	3600	43.7	79.2	49.7	41.5	46.0	45.3	45.0	44.2	43.4	42.2
13Oct 10	19:00:00	3600	46.6	82.2	49.5	44.1	48.8	47.9	47.8	47.1	46.5	45.2
13Oct 10	20:00:00	3600	48.0	83.5	51.8	46.4	49.9	49.1	49.0	48.5	47.8	47.0
13Oct 10	21:00:00	3600	47.3	82.8	49.3	46.0	48.8	48.2	48.0	47.7	47.3	46.3
13Oct 10	22:00:00	3600	46.8	82.4	50.1	45.1	48.9	47.9	47.8	47.0	46.6	45.8
13Oct 10	23:00:00	3600	46.3	81.9	48.7	44.8	47.8	47.1	47.0	46.7	46.3	45.3
14Oct 10	0:00:00	3600	45.8	81.4	56.8	44.5	47.3	46.8	46.8	46.3	45.7	45.1
14Oct 10	1:00:00	3600	45.2	80.7	59.0	43.5	46.8	46.2	46.0	45.6	45.0	44.2
14Oct 10	2:00:00	3600	45.8	81.4	60.7	43.4	47.9	46.7	46.4	45.8	45.3	44.3
14Oct 10	3:00:00	3600	45.3	80.9	62.3	42.4	46.9	45.9	45.8	45.4	44.8	43.8
14Oct 10	4:00:00	3600	45.2	80.7	64.6	41.8	47.9	45.8	45.7	44.8	44.3	43.2
14Oct 10	5:00:00	3600	48.2	83.8	67.1	41.1	57.6	51.6	49.9	45.4	44.3	42.9
14Oct 10	6:00:00	3600	44.6	80.2	59.1	40.8	48.4	45.9	45.8	44.9	44.2	42.2
14Oct 10	7:00:00	3600	43.4	79.0	52.7	38.8	48.4	45.9	45.6	44.0	42.5	40.5
14Oct 10	8:00:00	3600	41.8	77.4	57.1	37.7	45.8	43.8	43.4	42.1	41.1	39.6
14Oct 10	9:00:00	3600	48.2	83.8	67.5	37.3	58.7	48.7	46.9	42.7	40.9	39.1
14Oct 10	10:00:00	3600	41.6	77.2	59.7	33.4	47.8	44.2	43.8	41.8	39.9	36.3
14Oct 10	11:00:00	293	51.0	75.7	66.5	38.6	58.6	55.6	55.0	51.4	46.6	41.0
14Oct 10	11:16:04	2635.2	41.5	75.8	66.5	33.9	50.2	42.4	41.1	37.9	36.3	34.7
14Oct 10	12:00:00	3600	38.2	73.8	58.5	32.8	46.2	41.2	40.5	37.1	35.2	33.7
14Oct 10	13:00:00	3600	56.5	92.1	84.4	31.9	57.5	45.0	43.8	39.8	36.6	33.7
14Oct 10	14:00:00	3600	48.4	83.9	68.0	32.0	58.1	50.9	49.7	43.3	38.4	34.6
14Oct 10	15:00:00	3600	40.7	76.2	59.4	35.0	46.5	42.9	42.2	39.9	38.3	36.5
14Oct 10	16:00:00	3600	40.3	75.9	58.8	35.5	46.0	40.8	40.5	39.4	38.5	37.0
14Oct 10	17:00:00	3600	41.4	77.0	49.6	37.5	45.6	43.6	43.2	42.1	40.9	38.8
14Oct 10	18:00:00	3600	43.4	78.9	49.4	40.3	45.9	44.8	44.7	43.9	43.3	41.5
14Oct 10	19:00:00	3600	46.4	82.0	49.8	44.1	48.0	47.8	47.7	47.2	46.4	44.8
14Oct 10	20:00:00	3600	47.9	83.5	49.9	46.5	49.0	48.8	48.8	48.4	47.8	47.1
14Oct 10	21:00:00	3600	48.6	84.2	63.8	47.1	49.9	49.0	48.9	48.7	48.4	47.5

Appendix C												
Sound Level Data: 100 Yards West												
14Oct 10	22:00:00	3600	48.5	84.1	53.9	47.1	50.0	49.5	49.3	48.8	48.4	47.5
14Oct 10	23:00:00	3600	48.0	83.5	52.8	45.9	49.7	48.9	48.9	48.5	47.9	47.1
15Oct 10	0:00:00	3600	46.7	82.2	53.9	44.8	48.2	47.7	47.6	46.9	46.6	45.9
15Oct 10	1:00:00	3600	47.0	82.6	52.6	45.6	48.7	47.9	47.8	47.4	46.8	46.1
15Oct 10	2:00:00	3600	46.6	82.2	52.1	45.1	48.4	47.7	47.6	47.0	46.6	45.7
15Oct 10	3:00:00	3600	46.2	81.8	54.9	44.7	47.8	47.0	46.9	46.6	46.2	45.2
15Oct 10	4:00:00	3600	45.4	80.9	49.5	43.6	47.4	46.6	46.4	45.8	45.3	44.3
15Oct 10	5:00:00	3600	45.3	80.9	50.3	43.5	47.7	46.7	46.5	45.8	45.2	44.2
15Oct 10	6:00:00	3600	44.4	80.0	58.0	41.5	47.6	46.0	45.8	44.9	43.9	42.3
15Oct 10	7:00:00	3600	43.8	79.4	55.2	37.9	50.6	47.1	46.2	43.7	42.1	39.4
15Oct 10	8:00:00	3600	52.5	88.0	69.1	38.5	61.6	57.3	56.4	50.2	45.8	42.1
15Oct 10	9:00:00	3600	42.9	78.5	62.9	35.6	49.0	45.4	44.9	42.9	40.8	38.2
15Oct 10	10:00:00	3600	41.5	77.0	58.8	33.3	50.4	44.4	43.1	40.0	38.0	35.3
15Oct 10	11:00:00	3600	42.8	78.3	64.5	31.8	52.1	45.0	44.0	39.4	36.5	33.6
15Oct 10	12:00:00	3600	41.7	77.3	65.0	28.4	50.0	45.8	45.0	40.1	35.3	30.4
15Oct 10	13:00:00	3600	38.7	74.3	62.1	26.2	47.6	41.0	39.4	33.6	30.6	27.6
15Oct 10	14:00:00	3600	42.7	78.3	65.5	26.6	53.3	44.3	42.8	36.3	32.6	29.0
15Oct 10	15:00:00	3600	42.8	78.4	62.7	29.5	51.2	45.6	44.8	41.0	37.4	33.3
15Oct 10	16:00:00	3600	39.5	75.0	56.8	33.3	47.3	41.8	41.0	38.4	36.5	34.5
15Oct 10	17:00:00	3600	40.7	76.3	59.2	33.7	49.0	41.6	40.9	39.2	37.8	35.4
15Oct 10	18:00:00	3600	40.6	76.2	58.4	38.3	42.9	42.0	41.9	41.0	40.3	39.2
15Oct 10	19:00:00	3600	45.3	80.9	51.5	41.6	47.0	46.8	46.7	46.3	45.3	43.1
15Oct 10	20:00:00	3600	47.6	83.1	58.4	46.1	49.3	48.7	48.5	47.9	47.4	46.4
15Oct 10	21:00:00	3600	47.7	83.3	53.8	46.7	48.9	48.6	48.5	47.9	47.6	47.1
15Oct 10	22:00:00	3600	47.7	83.3	53.2	46.4	48.9	48.5	48.3	47.9	47.6	47.1
15Oct 10	23:00:00	3600	46.8	82.3	52.3	45.5	47.9	47.7	47.6	47.0	46.6	46.1
16Oct 10	0:00:00	3600	46.1	81.7	48.2	44.7	47.1	46.9	46.8	46.5	45.9	45.2
16Oct 10	1:00:00	3600	45.5	81.0	48.2	43.9	46.5	46.0	45.9	45.7	45.4	44.7
16Oct 10	2:00:00	3600	44.9	80.4	58.5	42.8	46.0	45.8	45.7	45.3	44.7	44.0
16Oct 10	3:00:00	3600	44.4	80.0	48.5	42.8	45.7	45.0	45.0	44.8	44.4	43.5
16Oct 10	4:00:00	3600	44.4	79.9	61.1	41.5	45.1	44.3	44.1	43.8	43.5	42.6
16Oct 10	5:00:00	3600	46.4	82.0	65.2	40.1	56.4	46.8	44.9	43.0	42.4	41.3
16Oct 10	6:00:00	3600	40.9	76.4	54.7	36.4	46.9	42.8	42.5	41.1	39.5	37.3
16Oct 10	7:00:00	3600	42.9	78.4	57.3	34.6	48.0	46.4	46.0	44.1	41.0	37.0
16Oct 10	8:00:00	3600	42.2	77.8	60.3	33.8	49.9	45.1	44.5	41.8	39.5	36.8
16Oct 10	9:00:00	3600	41.5	77.1	58.6	33.1	49.8	43.9	43.3	40.9	39.0	35.8
16Oct 10	10:00:00	3600	41.8	77.3	57.7	33.0	48.0	44.6	44.2	42.5	40.4	37.0
16Oct 10	11:00:00	3600	38.9	74.5	54.6	30.7	45.9	41.5	40.9	38.6	36.6	33.5
16Oct 10	12:00:00	3600	49.8	85.4	72.4	29.4	56.8	47.5	46.4	41.0	36.3	32.1
16Oct 10	13:00:00	3600	37.2	72.7	55.2	28.5	45.5	40.0	39.2	35.9	33.1	30.3
16Oct 10	14:00:00	3600	36.4	72.0	55.6	28.3	45.0	38.6	37.8	34.4	32.0	29.9
16Oct 10	15:00:00	3600	40.9	76.4	62.2	31.0	49.7	40.8	40.0	37.0	35.4	33.1
16Oct 10	16:00:00	3600	39.6	75.2	59.0	34.6	42.6	40.7	40.5	39.1	37.4	35.7
16Oct 10	17:00:00	3600	42.5	78.0	59.0	37.5	48.9	44.3	43.6	41.5	39.9	38.3
16Oct 10	18:00:00	3600	40.1	75.7	50.4	38.0	42.8	41.3	41.0	40.4	39.7	38.5
16Oct 10	19:00:00	3600	44.0	79.5	46.1	40.3	45.6	44.9	44.9	44.6	44.2	42.3
16Oct 10	20:00:00	3600	45.1	80.7	61.0	43.8	46.0	45.9	45.8	45.6	45.2	44.2
16Oct 10	21:00:00	3600	44.5	80.1	48.2	42.8	45.9	45.3	45.1	44.8	44.5	43.7
16Oct 10	22:00:00	3600	43.0	78.6	45.8	41.7	44.0	43.8	43.8	43.5	42.9	42.2
16Oct 10	23:00:00	3600	41.8	77.3	57.0	39.0	43.0	42.9	42.8	42.5	41.9	40.1
17Oct 10	0:00:00	3600	39.2	74.8	46.6	37.0	40.9	40.3	40.2	39.7	39.1	38.1
17Oct 10	1:00:00	3600	39.3	74.9	44.7	36.5	41.7	40.8	40.7	40.0	39.0	37.5
17Oct 10	2:00:00	3600	37.5	73.1	53.9	34.6	41.6	38.4	38.0	37.6	36.9	35.7
17Oct 10	3:00:00	3600	36.5	72.0	58.7	33.5	38.6	36.9	36.9	36.3	35.6	34.4
17Oct 10	4:00:00	3600	35.8	71.3	45.5	33.5	39.3	37.0	36.9	36.0	35.5	34.4
17Oct 10	5:00:00	3600	39.0	74.6	51.6	33.9	45.8	43.9	43.2	38.4	36.6	35.2
17Oct 10	6:00:00	3600	38.9	74.5	50.3	33.3	44.8	42.9	42.5	39.0	37.1	34.7
17Oct 10	7:00:00	3600	41.3	76.9	65.8	31.9	44.0	41.5	40.9	38.8	37.0	34.4
17Oct 10	8:00:00	3600	45.5	81.0	69.3	31.7	52.9	49.1	48.4	42.5	38.8	34.2

Appendix C												
Sound Level Data: 100 Yards West												
17Oct 10	9:00:00	3600	46.4	81.9	54.6	34.6	51.9	50.2	49.8	47.6	45.3	38.4
17Oct 10	10:00:00	3600	43.0	78.6	60.6	32.7	48.9	46.6	46.2	44.3	41.3	36.3
17Oct 10	11:00:00	3600	44.4	79.9	63.0	30.0	50.4	46.8	46.6	44.8	43.0	36.4
17Oct 10	12:00:00	3600	42.3	77.9	51.3	35.0	46.9	45.8	45.5	43.6	41.2	37.3
17Oct 10	13:00:00	3600	47.1	82.7	54.5	37.9	51.6	50.5	50.2	48.8	46.1	41.5
17Oct 10	14:00:00	3600	41.1	76.6	50.5	31.9	45.4	44.2	43.9	42.5	40.2	35.9
17Oct 10	15:00:00	3600	45.3	80.9	75.3	31.8	50.9	45.2	44.7	41.5	38.5	34.4
17Oct 10	16:00:00	3600	44.8	80.4	70.1	31.6	53.1	47.0	46.0	41.6	37.9	34.4
17Oct 10	17:00:00	3600	37.6	73.2	51.7	31.6	43.3	41.1	40.7	38.2	36.3	33.3
17Oct 10	18:00:00	3600	33.9	69.5	48.0	30.4	38.2	36.4	36.1	34.5	33.1	31.5
17Oct 10	19:00:00	3600	43.4	78.9	61.9	32.2	55.0	39.9	39.3	37.8	35.9	33.7
17Oct 10	20:00:00	3600	38.1	73.7	44.8	36.0	40.2	39.3	39.0	38.7	38.1	37.0
17Oct 10	21:00:00	3600	38.1	73.6	48.3	35.9	41.5	39.3	39.0	38.0	37.6	36.8
17Oct 10	22:00:00	3600	37.6	73.2	49.1	35.9	40.8	38.9	38.7	37.9	37.4	36.4
17Oct 10	23:00:00	3600	38.0	73.6	40.6	36.2	40.1	39.7	39.6	38.4	37.6	36.7
18Oct 10	0:00:00	3600	38.8	74.4	59.5	34.3	40.0	39.8	39.8	39.3	38.4	35.9
18Oct 10	1:00:00	3600	36.0	71.5	42.2	33.4	37.9	37.5	37.4	36.7	35.9	34.3
18Oct 10	2:00:00	3600	35.5	71.1	42.4	32.0	37.5	36.8	36.7	36.1	35.5	33.6
18Oct 10	3:00:00	3600	34.9	70.5	49.6	31.6	36.9	36.3	36.2	35.6	35.0	32.8
18Oct 10	4:00:00	3600	32.9	68.5	41.7	30.7	35.1	34.0	33.9	33.2	32.6	31.7
18Oct 10	5:00:00	3600	32.7	68.3	44.9	30.4	36.4	33.8	33.6	32.8	32.3	31.3
18Oct 10	6:00:00	3600	34.3	69.9	44.8	31.1	41.0	36.9	36.2	34.1	32.8	31.5
18Oct 10	7:00:00	3600	38.6	74.2	49.8	32.8	44.3	42.0	41.5	39.1	37.1	34.8
18Oct 10	8:00:00	3600	39.4	75.0	54.2	31.5	47.0	42.1	41.5	39.1	37.1	34.2
18Oct 10	9:00:00	3600	37.9	73.5	51.3	30.1	43.9	41.7	41.2	38.7	36.2	32.6
18Oct 10	10:00:00	3600	39.2	74.8	54.1	31.5	45.8	42.7	42.2	39.4	37.1	34.1
18Oct 10	11:00:00	3600	40.3	75.9	59.7	30.8	48.6	43.6	42.7	39.3	36.8	33.2
18Oct 10	12:00:00	3600	39.2	74.7	59.3	30.1	46.6	40.5	39.8	37.2	35.0	32.2
18Oct 10	13:00:00	3600	37.4	73.0	57.0	29.8	44.3	41.0	40.4	37.1	34.3	31.4
18Oct 10	14:00:00	3600	44.0	79.6	64.7	30.9	53.7	47.6	46.5	40.8	35.6	32.6
18Oct 10	15:00:00	3600	43.5	79.0	65.4	33.6	51.9	46.4	45.6	41.5	38.0	35.0
18Oct 10	16:00:00	3600	37.5	73.0	49.4	34.3	43.1	39.3	38.9	37.5	36.4	35.2
18Oct 10	17:00:00	3600	39.9	75.5	59.7	35.6	45.9	41.0	40.5	38.9	37.9	36.6
18Oct 10	18:00:00	3600	38.6	74.2	55.8	36.2	43.3	40.7	40.2	38.6	37.7	36.6
18Oct 10	19:00:00	3600	40.8	76.4	54.9	37.0	47.4	42.2	41.5	40.0	39.5	38.3
18Oct 10	20:00:00	3600	40.2	75.8	44.7	38.7	41.8	41.0	40.9	40.6	40.2	39.2
18Oct 10	21:00:00	3600	40.1	75.7	60.3	37.2	45.2	39.9	39.8	39.1	38.7	38.1
18Oct 10	22:00:00	3600	37.5	73.1	45.3	35.5	39.5	38.9	38.8	38.3	37.5	36.3
18Oct 10	23:00:00	3600	35.8	71.4	45.6	34.1	37.5	36.8	36.7	36.1	35.6	34.5
19Oct 10	0:00:00	3600	35.5	71.0	52.8	33.7	36.9	36.4	36.2	35.7	35.1	34.2
19Oct 10	1:00:00	3600	35.1	70.7	44.1	33.0	37.1	36.5	36.3	35.6	34.9	33.8
19Oct 10	2:00:00	3600	41.5	77.0	62.3	30.9	49.2	36.6	36.4	35.5	34.3	32.3
19Oct 10	3:00:00	3600	37.6	73.1	60.6	30.5	36.0	34.6	34.5	33.5	32.6	31.3
19Oct 10	4:00:00	3600	31.5	67.1	44.2	29.3	33.9	33.1	32.9	32.1	31.1	30.1
19Oct 10	5:00:00	3600	32.5	68.0	54.3	29.8	36.6	33.7	33.2	32.4	31.6	30.4
19Oct 10	6:00:00	3600	40.1	75.7	71.5	29.5	45.1	39.1	38.2	34.5	32.3	30.4
19Oct 10	7:00:00	3600	42.5	78.1	65.6	33.8	49.1	45.1	44.4	41.3	38.6	35.8
19Oct 10	8:00:00	3600	40.7	76.3	63.0	34.5	46.0	42.7	42.2	40.2	38.7	36.7
19Oct 10	9:00:00	3600	50.6	86.2	76.4	33.6	46.4	42.9	42.5	40.7	39.2	37.3
19Oct 10	10:00:00	3600	57.4	93.0	83.3	30.9	61.1	46.7	45.1	40.8	37.8	34.3
19Oct 10	11:00:00	3600	43.4	79.0	60.5	31.0	54.4	46.2	44.9	39.6	35.9	33.2
19Oct 10	12:00:00	3600	49.3	84.8	70.8	32.1	59.3	50.2	47.9	41.6	38.5	34.8
19Oct 10	13:00:00	3600	38.8	74.4	54.9	32.3	45.4	41.8	41.3	38.5	36.8	34.1
19Oct 10	14:00:00	3600	40.9	76.5	67.0	33.4	45.7	42.7	42.1	39.7	38.2	36.8
19Oct 10	15:00:00	3600	39.5	75.0	52.9	34.0	46.0	42.0	41.4	39.1	38.2	35.5
19Oct 10	16:00:00	3600	38.6	74.2	56.9	34.2	42.9	40.0	39.8	38.7	37.8	36.4
19Oct 10	17:00:00	3600	40.1	75.7	54.7	36.3	44.6	41.1	40.9	39.9	39.2	37.8
19Oct 10	18:00:00	3600	39.8	75.4	52.5	37.6	43.6	41.6	41.1	39.9	39.4	38.3
19Oct 10	19:00:00	3600	41.4	77.0	52.5	38.8	44.6	42.6	42.3	41.7	41.2	40.0

Appendix C												
Sound Level Data: 100 Yards West												
19Oct 10	20:00:00	3600	44.0	79.6	59.0	39.5	51.4	47.2	46.2	43.1	41.8	40.4
19Oct 10	21:00:00	3600	57.7	93.3	86.8	38.3	64.1	56.5	55.4	48.2	41.3	39.3
19Oct 10	22:00:00	3600	39.5	75.0	54.0	37.5	43.6	40.3	40.0	39.6	39.0	38.2
19Oct 10	23:00:00	3600	38.4	73.9	43.4	36.6	40.1	39.5	39.4	38.8	38.3	37.3
20Oct 10	0:00:00	3600	38.5	74.0	50.4	35.6	41.2	39.4	39.1	38.7	38.1	37.1
20Oct 10	1:00:00	3600	36.5	72.0	42.9	33.7	38.9	37.9	37.8	37.0	36.3	34.7
20Oct 10	2:00:00	3600	34.9	70.5	48.5	33.2	36.5	35.7	35.6	35.0	34.6	34.0
20Oct 10	3:00:00	3600	35.5	71.1	43.7	32.6	38.4	37.1	36.9	36.0	35.3	34.0
20Oct 10	4:00:00	3600	36.0	71.6	49.2	32.8	38.6	37.7	37.5	36.7	35.7	34.2
20Oct 10	5:00:00	3600	35.4	71.0	45.3	32.6	39.1	37.0	36.8	35.9	34.9	33.4
20Oct 10	6:00:00	3600	38.7	74.3	59.7	32.8	45.7	40.1	39.5	37.5	35.4	33.9
20Oct 10	7:00:00	3600	41.5	77.1	57.2	35.4	48.7	43.5	42.9	41.2	39.9	37.6
20Oct 10	8:00:00	3600	43.8	79.4	51.2	41.0	46.2	45.1	44.9	44.2	43.6	42.4
20Oct 10	9:00:00	3600	43.6	79.1	51.8	41.3	46.0	44.8	44.7	43.9	43.3	42.2
20Oct 10	10:00:00	3600	42.6	78.2	55.9	39.7	46.1	44.6	44.3	43.0	42.2	40.7
20Oct 10	11:00:00	3600	43.6	79.2	60.3	39.4	49.0	45.0	44.7	43.1	42.0	40.5
20Oct 10	12:00:00	3600	43.0	78.6	51.9	39.8	46.2	45.0	44.8	43.8	42.6	41.0
20Oct 10	13:00:00	3600	49.3	84.8	76.1	39.5	51.2	45.6	45.0	43.6	42.4	40.6
20Oct 10	14:00:00	3600	48.7	84.3	75.2	39.4	48.6	46.1	45.8	44.3	42.9	40.7
20Oct 10	15:00:00	3600	41.7	77.3	53.7	38.8	44.7	43.1	42.9	42.1	41.4	40.1
20Oct 10	16:00:00	3600	42.6	78.2	49.4	40.3	44.8	43.9	43.8	43.1	42.5	41.3
20Oct 10	17:00:00	3600	45.3	80.9	56.8	41.8	48.9	48.2	48.0	45.8	44.5	43.1
20Oct 10	18:00:00	3600	50.0	85.6	58.1	46.2	52.0	51.4	51.2	50.7	50.0	47.7
20Oct 10	19:00:00	3600	49.3	84.9	59.9	44.8	53.1	51.4	51.1	49.8	48.8	46.9
20Oct 10	20:00:00	3600	48.8	84.4	52.5	44.5	51.5	50.6	50.4	49.5	48.6	47.0
20Oct 10	21:00:00	3600	49.7	85.3	55.1	46.3	53.3	51.5	51.2	50.3	49.4	47.5
20Oct 10	22:00:00	3600	49.5	85.0	54.3	45.8	52.4	51.3	51.0	50.2	49.2	47.4
20Oct 10	23:00:00	3600	48.2	83.8	52.0	45.5	50.9	49.8	49.7	48.8	48.0	46.7
21Oct 10	0:00:00	3600	47.5	83.1	53.8	44.0	51.0	49.8	49.5	48.2	47.1	45.3
21Oct 10	1:00:00	3600	47.3	82.9	51.5	44.1	49.5	48.8	48.6	47.9	47.2	45.7
21Oct 10	2:00:00	3600	47.4	83.0	58.8	44.4	50.1	49.1	48.9	47.9	47.1	45.8
21Oct 10	3:00:00	3600	46.9	82.5	51.2	44.2	49.4	48.6	48.4	47.5	46.6	45.3
21Oct 10	4:00:00	3600	46.3	81.8	50.0	43.3	48.6	47.8	47.7	47.0	46.2	44.4
21Oct 10	5:00:00	3600	47.8	83.4	51.4	44.7	50.8	50.0	49.8	48.6	47.5	46.1
21Oct 10	6:00:00	3600	47.7	83.3	57.0	44.9	50.2	49.0	48.9	48.1	47.4	46.1
21Oct 10	7:00:00	3600	42.7	78.3	50.7	34.0	47.8	46.6	46.4	44.5	40.8	36.3
21Oct 10	8:00:00	3600	40.5	76.0	52.5	33.2	46.6	44.3	43.8	41.1	38.8	35.8
21Oct 10	9:00:00	3600	48.2	83.8	60.5	33.2	56.5	53.0	52.2	48.8	44.1	38.2
21Oct 10	10:00:00	3600	51.8	87.4	62.9	40.8	58.1	55.3	54.9	52.7	50.1	45.2
21Oct 10	11:00:00	3600	50.5	86.1	60.9	37.6	57.4	54.8	54.4	51.3	48.1	43.1
21Oct 10	12:00:00	3600	52.7	88.3	67.0	38.4	59.6	56.9	56.4	53.4	49.9	44.4
21Oct 10	13:00:00	3600	49.5	85.0	62.3	37.0	56.3	53.3	52.7	50.1	47.2	42.5
21Oct 10	14:00:00	3600	44.8	80.3	57.5	33.9	52.8	48.6	47.9	44.8	42.1	36.7
21Oct 10	15:00:00	3600	43.0	78.6	58.7	36.1	47.9	45.7	45.4	43.3	41.1	38.3
21Oct 10	16:00:00	3600	41.9	77.5	54.8	36.8	49.0	45.9	45.3	41.5	39.0	37.5
21Oct 10	17:00:00	3600	40.1	75.7	50.7	37.3	44.6	42.1	41.8	40.4	39.5	38.2
21Oct 10	18:00:00	3600	40.4	76.0	53.5	37.8	44.1	42.1	41.9	40.7	39.8	38.6
21Oct 10	19:00:00	3600	39.8	75.4	52.9	37.4	44.3	41.3	40.9	39.7	39.0	38.1
21Oct 10	20:00:00	3600	39.2	74.8	43.9	37.6	40.8	40.0	39.9	39.6	39.1	38.2
21Oct 10	21:00:00	3600	38.4	74.0	45.9	36.0	42.3	39.3	39.0	38.7	38.2	37.2
21Oct 10	22:00:00	3600	39.1	74.7	58.0	34.6	44.5	38.8	38.5	37.6	36.6	35.3
21Oct 10	23:00:00	3600	36.4	72.0	43.4	34.6	38.7	37.5	37.3	36.7	36.2	35.2
22Oct 10	0:00:00	3600	36.9	72.5	45.7	33.7	43.0	38.0	37.8	36.8	36.0	35.1
22Oct 10	1:00:00	3600	35.9	71.4	48.9	34.4	38.2	36.9	36.8	36.0	35.6	34.5
22Oct 10	2:00:00	3600	35.3	70.9	44.8	33.5	37.1	36.4	36.1	35.7	35.1	34.1
22Oct 10	3:00:00	3600	34.5	70.1	43.0	32.6	37.9	35.6	35.3	34.7	34.2	33.2
22Oct 10	4:00:00	3600	33.9	69.4	45.4	32.5	35.5	34.8	34.7	34.0	33.6	33.1
22Oct 10	5:00:00	3600	34.9	70.5	58.5	32.6	37.8	35.5	35.2	34.5	33.8	33.1
22Oct 10	6:00:00	3600	40.1	75.7	69.9	32.2	48.3	41.0	40.3	37.7	34.9	33.2

Appendix C												
Sound Level Data: 100 Yards West												
22Oct 10	7:00:00	3600	38.0	73.5	54.4	32.0	44.1	41.0	40.6	38.3	36.3	33.6
22Oct 10	8:00:00	3600	36.4	72.0	49.0	31.3	41.9	39.3	38.8	36.8	35.3	33.3
22Oct 10	9:00:00	3600	36.7	72.3	48.3	30.4	41.9	39.8	39.4	37.4	35.5	32.7
22Oct 10	10:00:00	3600	38.4	73.9	56.6	30.4	44.4	41.4	40.9	38.6	36.5	33.6
22Oct 10	11:00:00	3600	38.9	74.5	55.1	27.5	47.8	42.8	42.0	38.1	34.7	30.7
22Oct 10	12:00:00	3600	38.9	74.5	54.5	28.3	47.3	41.8	41.0	38.4	35.5	31.3
22Oct 10	13:00:00	3600	39.6	75.1	56.9	29.5	47.6	42.9	42.1	39.1	36.0	32.1
22Oct 10	14:00:00	3600	42.0	77.6	60.6	30.9	49.6	45.3	44.7	42.0	39.1	34.3
22Oct 10	15:00:00	3600	41.9	77.5	55.2	35.3	49.0	45.6	44.9	41.9	39.2	36.5
22Oct 10	16:00:00	3600	38.3	73.9	57.0	34.2	44.7	40.3	39.8	37.8	36.6	35.3
22Oct 10	17:00:00	3600	41.6	77.2	55.7	34.3	48.3	45.1	44.6	41.8	39.4	36.5
22Oct 10	18:00:00	3600	40.6	76.2	49.1	35.4	46.3	44.0	43.6	41.4	39.1	37.0
22Oct 10	19:00:00	3600	41.7	77.3	56.8	37.0	47.3	44.8	44.4	41.9	39.9	38.3
22Oct 10	20:00:00	3600	43.1	78.7	52.5	39.0	48.5	45.9	45.5	43.7	41.6	39.8
22Oct 10	21:00:00	3600	47.5	83.1	60.2	40.5	54.0	51.1	50.5	47.9	45.4	42.6
22Oct 10	22:00:00	3600	47.4	83.0	58.2	40.1	52.8	50.3	49.9	48.1	46.2	43.6
22Oct 10	23:00:00	3540	44.5	80.0	56.7	36.7	52.1	48.8	48.1	44.7	41.6	38.1
23Oct 10	0:00:00	3599.9	39.0	74.6	46.5	35.3	44.3	41.7	41.1	39.4	38.1	36.5
23Oct 10	1:00:00	3600	39.5	75.0	49.6	35.3	45.4	43.0	42.5	39.8	37.8	36.3
23Oct 10	2:00:00	3600	37.0	72.5	53.0	33.8	41.7	38.6	38.0	36.6	35.7	34.6
23Oct 10	3:00:00	3600	44.3	79.9	53.1	34.6	49.7	47.4	47.1	45.4	43.6	38.4
23Oct 10	4:00:00	3600	44.2	79.7	50.9	34.2	48.8	47.6	47.3	45.8	43.3	37.3
23Oct 10	5:00:00	3600	40.1	75.7	53.6	32.9	45.3	43.3	42.9	41.2	39.0	34.3
23Oct 10	6:00:00	3600	42.3	77.9	66.1	33.9	47.4	45.2	44.8	42.9	40.5	36.4
23Oct 10	7:00:00	3600	50.9	86.5	77.2	36.4	58.3	50.9	49.9	46.7	44.1	40.7
23Oct 10	8:00:00	3600	45.8	81.4	67.3	34.7	53.0	48.0	47.3	44.4	41.5	38.0
23Oct 10	9:00:00	3600	47.6	83.1	77.1	32.5	52.5	46.1	45.5	42.8	39.9	35.7
23Oct 10	10:00:00	3600	43.4	79.0	68.4	32.1	49.4	45.1	44.6	42.2	40.1	36.2
23Oct 10	11:00:00	3600	43.4	79.0	66.7	33.8	48.0	46.3	45.9	44.1	42.3	38.5
23Oct 10	12:00:00	3600	44.3	79.9	61.9	32.4	52.0	48.7	48.1	43.8	39.9	35.3
23Oct 10	13:00:00	3600	48.4	84.0	72.8	33.1	52.9	51.8	51.6	49.6	44.6	36.4
23Oct 10	14:00:00	3600	44.1	79.6	72.0	33.4	49.7	46.8	46.3	43.8	39.6	36.2
23Oct 10	15:00:00	3600	44.5	80.1	63.0	34.3	50.5	47.8	47.4	45.3	42.8	38.9
23Oct 10	16:00:00	3600	46.7	82.3	64.5	32.5	54.9	47.7	47.0	44.2	40.5	36.2
23Oct 10	17:00:00	3600	43.1	78.7	55.1	35.9	48.4	46.0	45.7	43.9	42.2	38.9
23Oct 10	18:00:00	3600	43.1	78.7	53.7	35.2	48.5	46.5	46.0	44.0	42.0	37.8
23Oct 10	19:00:00	3600	43.8	79.4	54.0	31.6	49.4	47.6	47.1	44.7	42.3	37.0
23Oct 10	20:00:00	3600	48.9	84.4	56.5	37.9	54.4	53.3	53.1	50.1	46.4	42.0
23Oct 10	21:00:00	3600	47.5	83.0	57.0	36.4	53.7	51.4	50.9	48.3	45.4	40.9
23Oct 10	22:00:00	3600	53.4	89.0	63.1	40.6	60.3	57.3	56.8	54.1	51.4	46.3
23Oct 10	23:00:00	3600	54.0	89.6	62.7	43.5	59.8	57.4	56.9	54.9	52.7	48.9
24Oct 10	0:00:00	3600	50.6	86.2	60.6	41.0	56.8	54.3	53.7	51.4	49.0	44.4
24Oct 10	1:00:00	3600	58.4	94.0	72.0	41.6	66.8	63.5	62.8	58.4	53.9	46.4
24Oct 10	2:00:00	3600	61.3	96.9	72.1	48.0	68.2	65.6	65.1	62.3	59.0	54.0
24Oct 10	3:00:00	3600	61.4	97.0	71.3	49.9	67.1	65.1	64.7	62.7	60.0	55.3
24Oct 10	4:00:00	3600	63.4	99.0	77.0	52.3	69.8	67.4	66.8	64.0	61.7	57.1
24Oct 10	5:00:00	3600	62.8	98.4	73.6	51.3	69.0	66.9	66.5	64.0	60.8	56.1
24Oct 10	6:00:00	3600	64.2	99.8	76.1	50.0	70.7	68.4	67.8	65.0	62.4	56.2
24Oct 10	7:00:00	3600	62.9	98.5	78.3	53.8	69.6	66.9	66.3	63.3	60.7	57.2
24Oct 10	8:00:00	3600	63.1	98.7	74.4	53.5	69.3	66.6	66.1	63.8	61.6	58.0
24Oct 10	9:00:00	3600	66.0	101.6	80.5	54.4	73.5	69.8	69.1	66.3	63.4	58.8
24Oct 10	10:00:00	3600	65.9	101.5	78.2	53.8	73.2	70.0	69.4	66.4	63.4	58.6
24Oct 10	11:00:00	3600	64.5	100.1	75.9	53.2	71.6	68.9	68.3	65.2	62.0	57.0
24Oct 10	12:00:00	3600	65.8	101.4	78.5	55.0	72.6	69.9	69.3	66.7	63.4	58.7
24Oct 10	13:00:00	3600	65.4	101.0	78.2	52.6	72.1	69.1	68.7	66.2	63.4	58.2
24Oct 10	14:00:00	3600	62.8	98.4	74.3	51.3	70.3	67.0	66.4	63.3	60.5	55.6
24Oct 10	15:00:00	3600	55.2	90.8	66.3	42.9	61.7	59.3	58.7	56.3	53.3	47.8
24Oct 10	16:00:00	3600	52.8	88.4	63.1	42.0	59.1	56.9	56.5	53.8	50.6	45.8
24Oct 10	17:00:00	3600	49.6	85.2	62.4	39.6	56.0	53.3	52.7	50.0	47.5	43.5

Appendix C												
Sound Level Data: 100 Yards West												
24Oct 10	18:00:00	3600	42.6	78.1	55.1	33.8	49.7	46.6	46.0	43.1	39.7	35.6
24Oct 10	19:00:00	3600	47.5	83.1	57.3	38.7	53.9	51.3	50.8	48.7	46.0	40.1
24Oct 10	20:00:00	3600	43.2	78.8	53.9	38.0	48.4	46.5	46.0	44.1	41.9	39.5
24Oct 10	21:00:00	3600	41.2	76.7	51.7	37.3	45.5	44.0	43.7	42.1	40.3	38.2
24Oct 10	22:00:00	3600	42.1	77.7	56.2	35.4	51.4	45.5	44.7	40.4	38.1	36.4
24Oct 10	23:00:00	3600	37.6	73.2	46.3	34.9	41.0	40.0	39.8	38.3	36.7	35.3
25Oct 10	0:00:00	3600	35.8	71.3	53.6	32.7	39.9	38.1	37.7	35.8	35.0	33.5
25Oct 10	1:00:00	3600	36.9	72.5	49.7	31.8	41.8	40.0	39.7	38.1	35.6	32.7
25Oct 10	2:00:00	3600	35.0	70.6	52.2	31.7	40.6	36.8	36.4	34.9	33.9	32.4
25Oct 10	3:00:00	3600	34.8	70.4	53.7	29.8	41.4	36.8	36.2	34.0	32.7	31.1
25Oct 10	4:00:00	3600	33.9	69.5	51.9	29.6	39.6	36.0	35.7	34.2	32.2	30.5
25Oct 10	5:00:00	3600	32.6	68.2	48.4	28.9	39.3	34.5	33.9	32.3	30.9	30.0
25Oct 10	6:00:00	3600	35.6	71.2	52.3	29.1	41.4	39.0	38.6	36.3	33.8	30.4
25Oct 10	7:00:00	3600	40.3	75.9	56.0	34.8	45.3	42.9	42.5	40.7	39.0	36.6
25Oct 10	8:00:00	3600	40.7	76.3	54.2	31.2	48.0	43.7	43.1	40.7	38.4	35.2
25Oct 10	9:00:00	3600	41.9	77.4	71.0	30.8	47.6	43.3	42.6	40.0	37.9	34.6
25Oct 10	10:00:00	3600	49.2	84.8	76.0	27.9	60.3	46.1	44.6	39.8	36.0	32.4

APPENDIX D-1

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

APPENDIX D-2

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of "noise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

EXHIBIT B

BROWN • BUNTIN
ASSOCIATES, INC.

November 11, 2010

Mr. James Brown
The San Tomo Group
11292 No. Alpine Road
Stockton, CA 95212

Dear Mr. Brown:

Thank you for requesting our review of the Supplemental Environmental Impact report (SEIR) for the Wild Goose Phase 3 Storage Expansion. The following comments refer to the SEIR and its Appendix C.

Pursuant to CEQA, a noise impact is significant if it causes a substantial permanent increase in ambient noise levels. To make that determination, it is necessary to adequately describe ambient noise levels. The ambient noise level is defined as the all-encompassing noise level exclusive of the noise source in question. This definition considers the natural variation in noise levels over time, so a proper description of ambient noise levels should include the range of noise levels and statistical measures of the noise exposure.

The SEIR for the Wild Goose Phase 3 Storage Expansion fails to adequately describe ambient noise levels. The report fails to state the number, duration or time of day of the ambient noise level samples; it appears that the noise specialists were present in the project area only for a portion of two days. In contrast, the noise level data collected by Brown-Buntin Associates, Inc. (BBA) during the period of October 7-25, 2010, provide a detailed description of ambient noise levels and the effects of noise produced by the existing well pad equipment upon noise levels measured at receiver locations 100 yards from the well pad. One of the BBA noise measurement positions (100 yards west) was at approximately the same location as the "Site 2" that was described in the SEIR Noise Appendix.

The data collected by BBA at the above location indicate that ambient noise levels at the well pad and the 100-yard measurement sites were unaffected by well pad equipment during daytime hours on October 12, 16, 18, 19, 22 and 23, 2010. During those periods, the median (L50) hourly noise levels at all three sites ranged from about 30 to 45 dB. This range of hourly noise levels (as well as the range of other hourly statistical descriptors listed in Appendices A, B and C) provides an adequate description of ambient noise levels without the well pad equipment in operation.

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Criteria for judging the significance of changes in ambient noise levels vary according to the jurisdiction involved and the noise source of concern. It is usually considered that a 3 dB increase in noise levels is the minimum perceptible change, and a 5 dB increase is clearly noticeable. A 10 dB increase corresponds to a doubling of apparent loudness. Many local jurisdictions consider a 5 dB increase in ambient noise levels to be significant; others apply a +10 dB threshold. These determinations are usually made in terms of the median or energy-average (Leq) noise levels, and may consider hourly or 24-hour average time periods.

The California Energy Commission (CEC) has established a threshold of significance based upon the increase in background noise levels, represented by the hourly L90 metric (the level exceeded 90% of the time). The ambient background noise level is calculated by the CEC as the arithmetic average of the hourly L90 values of the four quietest contiguous hours. The CEC threshold of significance is an increase of 10 dB above the ambient noise level as so defined. Where the noise source is relatively constant, or steady-state, as is the case with a power generation facility, the new noise source effectively becomes the background noise level, and is limited by the CEC criterion to causing no more than a doubling of the loudness of the background noise level.

For new roadways introduced to relatively quiet residential areas, Caltrans considers an increase of 12 dB in the energy-average hourly noise level (Leq) to be significant, under design hour (the highest free-flowing traffic volume) traffic conditions. Since traffic noise levels vary by time of day, average hourly noise levels during the other hours of the day are lower than during the design hour conditions.

Referring to Appendix C of our report, containing the noise measurement data for the site 100 yards west of the well pad lot, it is possible to summarize the ambient noise data for the quietest days in terms of the above metrics. For a uniform approach, the rounded hourly data for the quietest four contiguous hours (in terms of the L90 value) of each of the "quiet days" is averaged in Table I below. The median (L50) and L90 values are averaged arithmetically; the Leq values are averaged on an energy basis (logarithmically).

Based upon Table I, and considering first the Leq (energy-average) metric, the four-hour average values in Table I ranged from about 37 dB to 45 dB. The four-hour average L50 values ranged from about 32 dB to 41 dB. The four-hour average L90 values ranged from about 31 dB to 38 dB.

These data also provide examples of how the hourly Leq values can be significantly affected by relatively loud noise events of short duration that do not materially affect median and background noise levels. For example, the Leq value for the 1200 hour on October 16 is more than 10 dB higher than that of the adjacent hours, while the L50 and L90 values in that hour are within about 1 dB of the values for the adjacent hours.

If one applies the commonly-used local jurisdiction criterion of a 5 dB allowable increase in Leq or L50 values, the threshold of significance would be about 42 to 50 dB in terms of Leq, and 37 to 45 dB in terms of L50. If the CEC criterion of 10 dB above the average L90 value is applied,

the impact threshold value is an L90 of 41 to 48 dB. The Caltrans criterion would be in the range of 49 to 57 dB.

Table I Ambient Noise Level Data For The Four Quietest Contiguous Hours in a Day 100 Yards West of Well Pad				
Date (2010)	Hour Beginning	Sound Level, dB		
		Leq	L50	L90
October 12	12:00	43.5	42.3	38.2
	13:00	43.9	42.7	38.2
	14:00	42.4	40.9	37.6
	15:00	43.6	39.8	37.1
	Average	43.4	41.4	37.8
October 16	11:00	38.9	36.6	33.5
	12:00	49.8	36.3	32.1
	13:00	37.2	33.1	30.3
	14:00	36.4	32.0	29.9
	Average	44.5	34.5	31.5
October 18	11:00	40.3	36.8	33.2
	12:00	39.2	35.0	32.2
	13:00	37.4	34.3	31.4
	14:00	44.0	35.6	32.6
	Average	40.9	35.4	32.4
October 19	3:00	37.6	32.6	31.3
	4:00	31.5	31.1	30.1
	5:00	32.5	31.6	30.4
	6:00	40.1	32.3	30.4
	Average	36.8	31.9	30.6
October 22	10:00	38.4	36.5	33.6
	11:00	38.9	34.7	30.7
	12:00	38.9	35.5	31.3
	13:00	39.6	36.0	32.1
	Average	39.0	35.7	31.9
October 23	9:00	47.6	39.9	35.7
	10:00	43.4	40.1	36.2
	11:00	43.4	42.3	38.5
	12:00	44.3	39.9	35.3
	Average	45.1	40.6	36.4

The proposed noise standard of 55 dB at a distance of 100 yards is therefore less stringent than the standards that would be applied by jurisdictions other than Caltrans to ensure that the noise impact would be less than significant.

The proposed standard is also expressed as a maximum value (Lmax), rather than an average or background noise level. The time interval of the measurement is not stated. As shown by the data in Appendices A, B and C, the maximum hourly values varied widely, and did not reflect the noise levels produced by the well pad equipment. Instead, the measured Lmax values represented very short duration noise events (as little as one second in length), typically caused by nearby birds or passing vehicles.

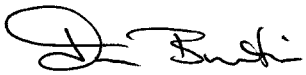
Based upon the fact that the well pad equipment appears to produce relatively constant noise levels when it is operation, the appropriate noise standard would be an average or median noise level. Because intermittent loud events such as passing vehicles or birds could significantly affect hourly Leq values, the measured median (L50) noise level would be more likely to describe the noise produced by that equipment. My recommendation is that the noise standard for this project should be in terms of an hourly median noise level. Based upon the CEC noise impact threshold determination method, the recommended value is an hourly median noise level of 48 dB. This is 7 dB more stringent than the recommended standard, which is a clearly noticeable difference.

The proposed condition of approval would require a noise measurement of undefined length once a week. As shown by the data in Appendices A, B and C, and Figures 2-21 of the BBA report, it is difficult to predict the date or time of well pad equipment operation. Therefore a periodic random noise measurement would be just as likely to miss the noise due to well pad operations as to capture it.

To ensure that the required noise measurements will adequately describe the noise of well pad operations, the measurements should be continuous for whatever period is necessary to adequately define the noise levels produced by the well pad equipment. Modern noise measurement equipment is capable of continuous remote unattended operation and reporting. The data can be analyzed, and regular reports can be prepared, by the equipment manufacturer or by a qualified acoustical consultant.

I hope that this information will meet your needs at this time. If you have any questions or comments regarding this report, please feel free to call me at (916) 765-6205, or to send an e-mail to jbuntin@brown-buntin.com.

Respectfully submitted,
Brown-Buntin Associates, Inc.



Jim Buntin
Principal Consultant