

January 21, 2011

Klaus Lambeck, Chief  
Facilities, Siting & Environmental  
Analysis Division  
180 East Broad Street  
Columbus, Ohio 43215

**Re: Case No. 08-170-EL-BTX  
OSU-Roberts 138kV Transmission Line Project**

**Matthew J. Satterwhite**  
Senior Counsel –  
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Dear Mr. Lambeck:

On January 13, 2011 the attached ambient noise study was provided to the Board's Staff. The study is provided pursuant to Condition #17 of the Certificate granted in this case. The January 13, 2011 communication also informed your staff that the right of way clearing on the west side of the Scioto River was set to begin on January 24, 2011 and will be completed by March 1, 2100. This letter is provided to formally provide the study in the docket and memorialize the previous communication with Board staff.

Cordially,

//s/ Matthew J. Satterwhite  
Matthew J. Satterwhite, Senior Counsel

Attachment

# **Roberts - OSU 138 kV Line Ambient Audible Noise Study**



**Report by: Dave Klinect, AEP Dolan Technology Center  
John Heppner, Transmission Line Engineering  
PTS #213388.000**

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## **Summary**

American Electric Power (AEP) is preparing to bore a tunnel underneath the Scioto River at a location along Riverside Drive near the intersection of Lane Avenue. The purpose of this tunnel is to install an underground 138 kV transmission line between Lane Avenue (OSU) and Roberts Road stations.

To prepare for this endeavor, AEP was asked to obtain ambient audible noise (AN) data in the area to determine what, if any, impact these activities would create.

## **Instrumentation**

Audible Noise (AN) measuring instrumentation used for this testing included the following:

Bruel and Kjaer Model 2250 sound level meter

Bruel and Kjaer Model ½-inch microphone

Bruel and Kjaer Model acoustic calibrator

Tripod

## **Measurement Locations**

Three measurement locations were chosen for this sound study; they are shown on the map in Appendix A. Additionally, photographs that were taken of the testing locations, including showing the location of the sound level meter, can be found in Appendix B.

## **Results**

Audible Noise (AN) data was collected from Location #1 over the timeframe September 9 (beginning at 10AM) to September 12 (Ending at 2:30AM).

AN data was collected from Locations #2 and #3 over the timeframe September 16 (beginning at 2PM) to September 19 (Ending at 12:00PM).

The AN data collection process was such that the sound level meter continually monitored and captured the audible noise information and generated an equivalent A-weighted AN datapoint at the end of an hour. Upon recording the hourly datapoints, a new collection process began.

Appendix C contains both the hourly datapoint logs and graphs of the recorded data.

## **Weather Information**

For completeness in understanding the AN datasets, Appendix D contains tabulated weather information for the dates AN data was collected. The weather information was pulled from [www.weatherunderground.com](http://www.weatherunderground.com).

**Conclusion**

AEP has subcontracted the Horizontal Directional Drilling (HDD) on this project to the Laney Directional Drilling Company. Laney is a well established company with great experience with HDD work including working within urban areas. Additional information about Laney can be found at [www.laneydrilling.com](http://www.laneydrilling.com)

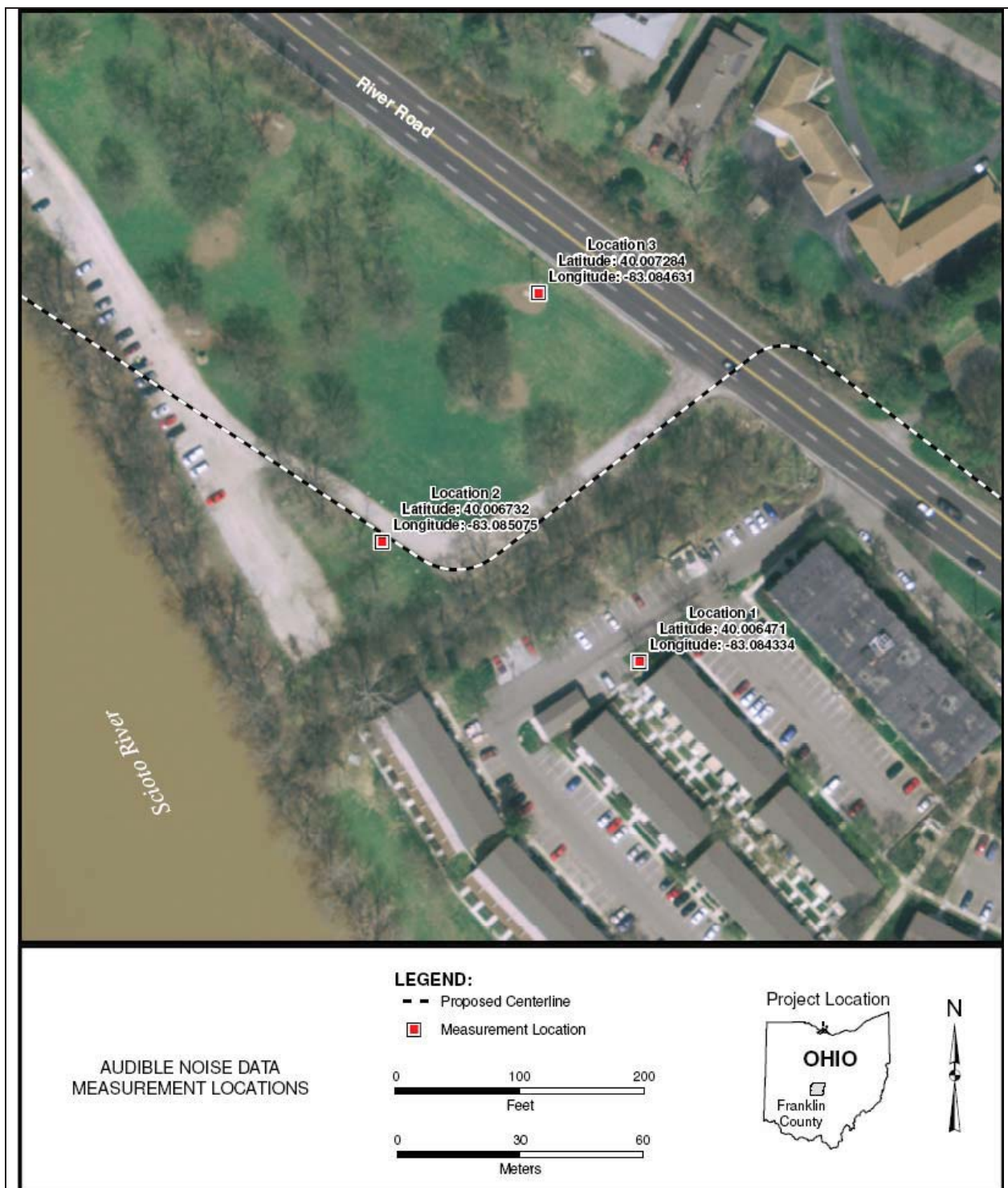
The Horizontal Directional Drilling Contractor, Laney Directional drilling Company has decided to place the drilling rig equipment on the west side of the Scioto River and drill from west to east. This places the drilling equipment approximately 1400' from the closest residential complex located on the east side of the Scioto River. Due to this distance and the presence of trees and shrubs along the banks of the river that will help muffle the sound from the equipment, it is not anticipated that noise levels will be disruptive to the residential area.

Although noise is not expected to be bothersome to the residential area, if any complaints are raised about noise levels, AEP will work with the Ohio Power Siting Board Staff and Laney Directional Drilling to install barriers to minimize any noise disruptions.

## **Appendices**

## **Appendix A**

### **Measurement Location Map**





## **Appendix B**

### **Photographs**

## Location #1 Photographs



## Location #2 Photographs





## Location #3 Photographs



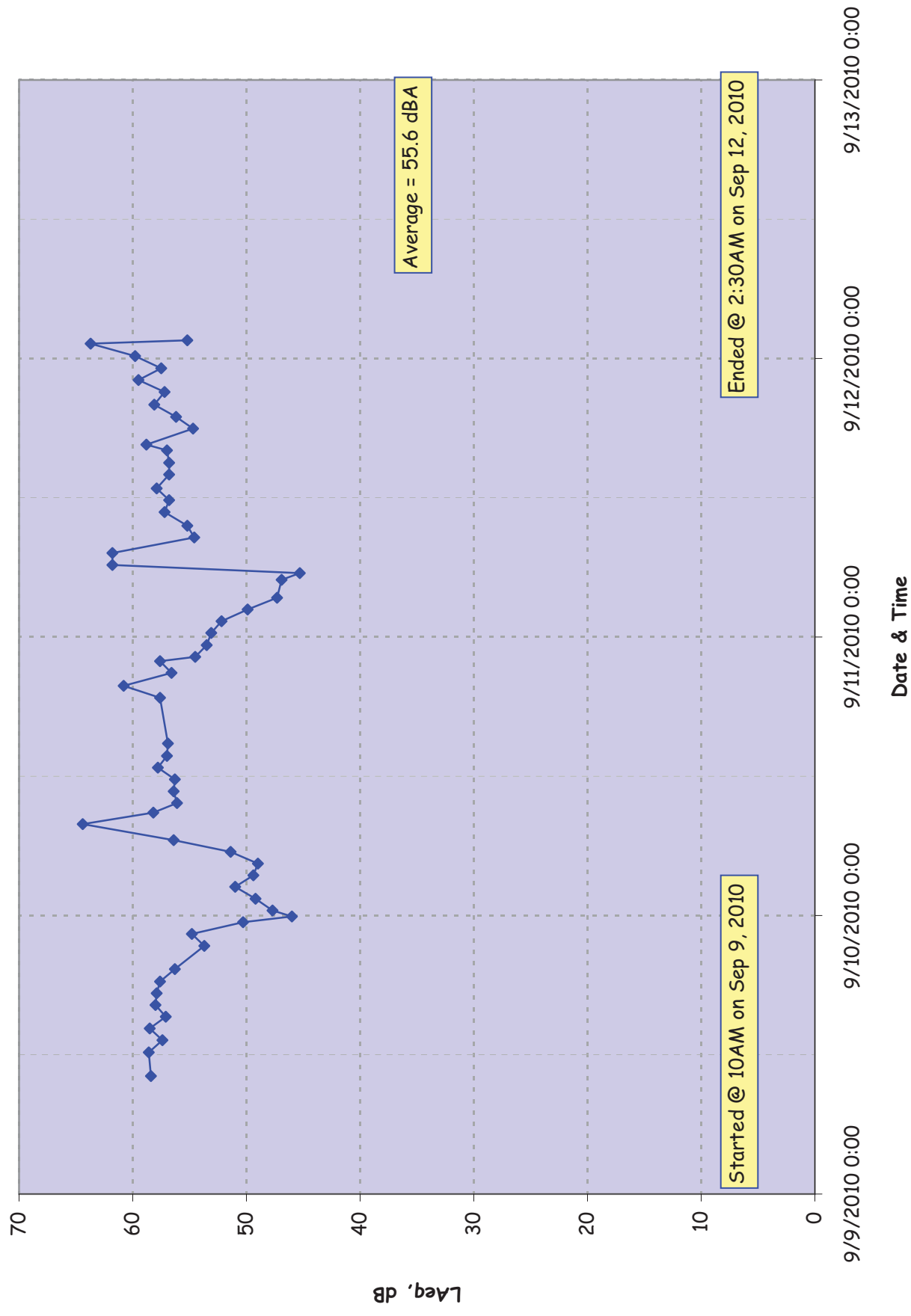
## **Appendix C**

### **Tabulated Data and Graphs**

### Location #1 AN Data

Date/Time	LAeq
9/9/2010 10:09	58.4
9/9/2010 12:12	58.6
9/9/2010 13:15	57.4
9/9/2010 14:15	58.5
9/9/2010 15:16	57.1
9/9/2010 16:17	58
9/9/2010 17:17	57.9
9/9/2010 18:18	57.6
9/9/2010 19:22	56.3
9/9/2010 21:23	53.7
9/9/2010 22:24	54.8
9/9/2010 23:25	50.3
9/9/2010 23:55	46
9/10/2010 0:25	47.7
9/10/2010 1:26	49.2
9/10/2010 2:28	51
9/10/2010 3:28	49.4
9/10/2010 4:28	49
9/10/2010 5:29	51.4
9/10/2010 6:29	56.4
9/10/2010 7:52	64.4
9/10/2010 8:52	58.2
9/10/2010 9:41	56.1
9/10/2010 10:42	56.4
9/10/2010 11:43	56.3
9/10/2010 12:44	57.8
9/10/2010 13:45	57
9/10/2010 14:49	56.9
9/10/2010 18:45	57.6
9/10/2010 19:47	60.8
9/10/2010 20:54	56.6
9/10/2010 21:54	57.6
9/10/2010 22:17	54.5
9/10/2010 23:18	53.5
9/11/2010 0:21	53.1
9/11/2010 1:21	52.2
9/11/2010 2:22	49.9
9/11/2010 3:22	47.3
9/11/2010 4:55	46.9
9/11/2010 5:30	45.3
9/11/2010 6:12	61.8
9/11/2010 7:13	61.8
9/11/2010 8:34	54.6
9/11/2010 9:35	55.2
9/11/2010 10:46	57.2
9/11/2010 11:47	56.8
9/11/2010 12:48	57.9
9/11/2010 13:59	56.8
9/11/2010 15:00	56.8
9/11/2010 16:05	57
9/11/2010 16:34	58.8
9/11/2010 17:57	54.7
9/11/2010 18:58	56.2
9/11/2010 20:01	58.1
9/11/2010 21:06	57.2
9/11/2010 22:09	59.5
9/11/2010 23:09	57.5
9/12/2010 0:12	59.8
9/12/2010 1:16	63.7
9/12/2010 1:33	55.2

## Audible Noise, Riverside Drive, Location 1

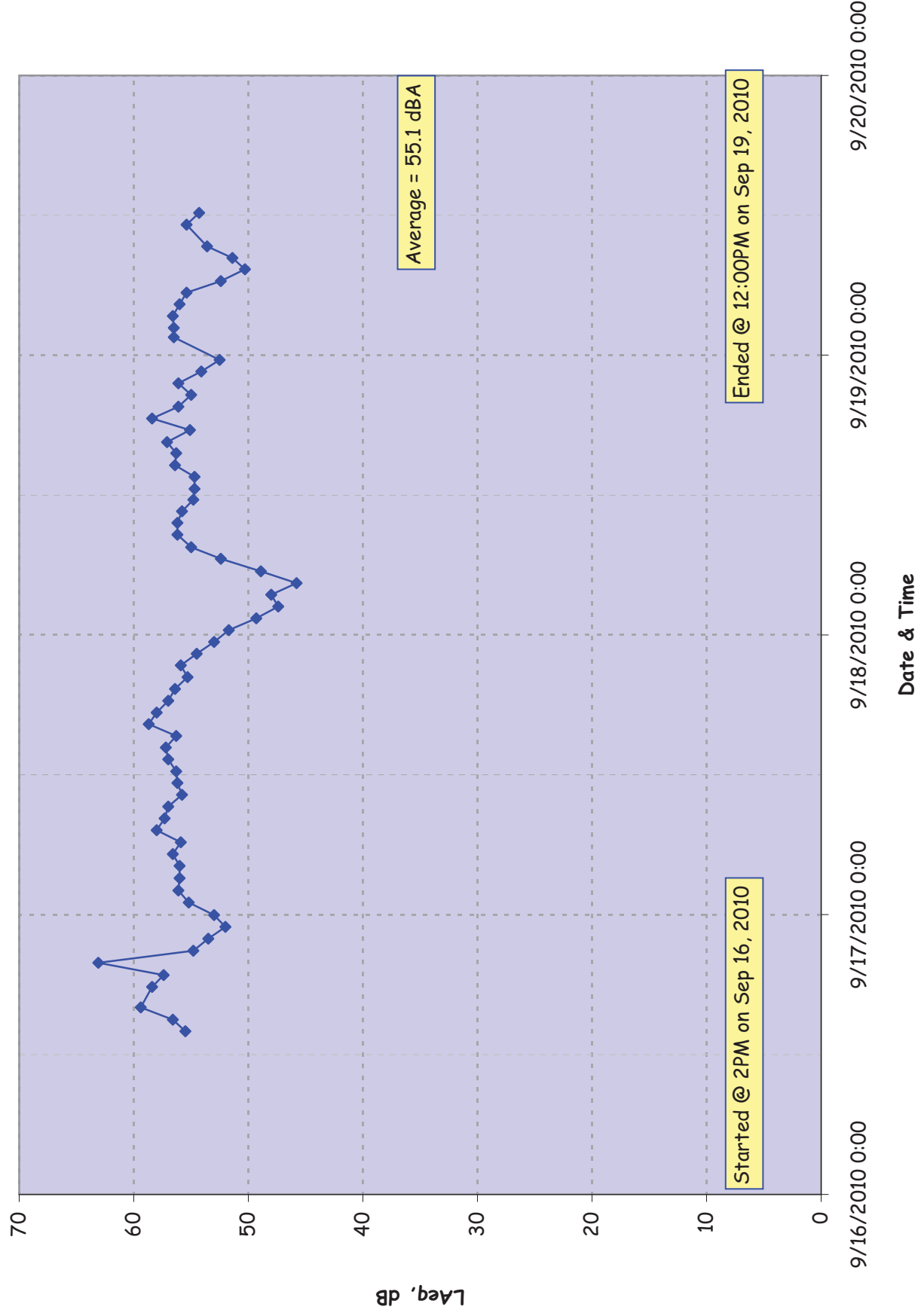


**Location #2 AN Data**

<b>Date/Time</b>	<b>Laeq</b>
9/16/2010 13:59	55.5
9/16/2010 15:00	56.6
9/16/2010 16:02	59.4
9/16/2010 17:48	58.4
9/16/2010 18:49	57.4
9/16/2010 19:51	63.1
9/16/2010 20:54	54.8
9/16/2010 21:56	53.5
9/16/2010 22:56	52
9/16/2010 23:58	53
9/17/2010 1:02	55.2
9/17/2010 2:04	56.1
9/17/2010 3:07	56
9/17/2010 4:11	56
9/17/2010 5:11	56.6
9/17/2010 6:12	55.9
9/17/2010 7:15	58
9/17/2010 8:15	57.3
9/17/2010 9:16	57
9/17/2010 10:17	55.8
9/17/2010 11:17	56.2
9/17/2010 12:17	56.3
9/17/2010 13:20	57
9/17/2010 14:20	57.2
9/17/2010 15:20	56.3
9/17/2010 16:20	58.7
9/17/2010 17:21	58
9/17/2010 18:21	57
9/17/2010 19:22	56.4
9/17/2010 20:22	55.3
9/17/2010 21:23	55.9
9/17/2010 22:23	54.5
9/17/2010 23:24	53
9/18/2010 0:24	51.7
9/18/2010 1:25	49.3
9/18/2010 2:25	47.4
9/18/2010 3:26	48
9/18/2010 4:27	45.8
9/18/2010 5:27	48.9
9/18/2010 6:31	52.4
9/18/2010 7:31	55
9/18/2010 8:36	56.2
9/18/2010 9:36	56.2
9/18/2010 10:36	55.8
9/18/2010 11:36	54.8
9/18/2010 12:32	54.7
9/18/2010 13:33	54.7
9/18/2010 14:34	56.4
9/18/2010 15:35	56.3
9/18/2010 16:32	57.1
9/18/2010 17:34	55.1
9/18/2010 18:34	58.4
9/18/2010 19:35	56.1
9/18/2010 20:35	55
9/18/2010 21:35	56.1
9/18/2010 22:35	54.1
9/18/2010 23:36	52.5
9/19/2010 1:32	56.5
9/19/2010 2:20	56.5
9/19/2010 3:21	56.6
9/19/2010 4:22	56
9/19/2010 5:22	55.4
9/19/2010 6:21	52.4
9/19/2010 7:22	50.3
9/19/2010 8:20	51.4
9/19/2010 9:20	53.6
9/19/2010 11:12	55.4
9/19/2010 12:12	54.3



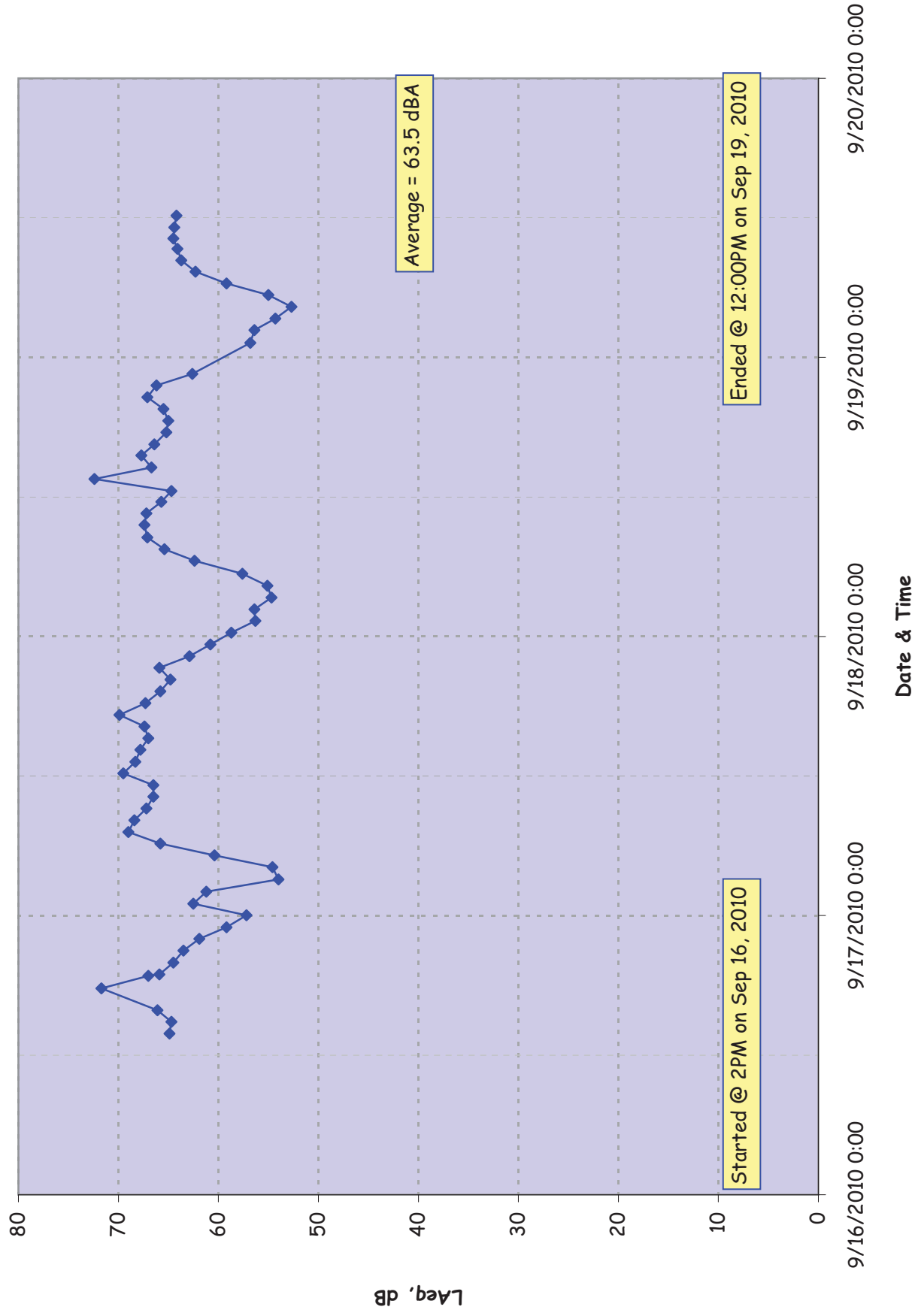
# Audible Noise, Riverside Drive, Location 2



### Location #3 AN Data

Date/Time	LAeq
9/16/2010 13:51	64.9
9/16/2010 14:51	64.7
9/16/2010 15:52	66.1
9/16/2010 17:44	71.7
9/16/2010 18:49	67
9/16/2010 18:56	65.9
9/16/2010 19:56	64.5
9/16/2010 20:58	63.5
9/16/2010 21:59	61.9
9/16/2010 23:00	59.2
9/17/2010 0:02	57.2
9/17/2010 1:01	62.5
9/17/2010 2:03	61.2
9/17/2010 3:06	54
9/17/2010 4:09	54.6
9/17/2010 5:10	60.4
9/17/2010 6:11	65.8
9/17/2010 7:11	69
9/17/2010 8:12	68.4
9/17/2010 9:12	67.2
9/17/2010 10:13	66.5
9/17/2010 11:13	66.5
9/17/2010 12:13	69.5
9/17/2010 13:13	68.3
9/17/2010 14:15	67.8
9/17/2010 15:15	67
9/17/2010 16:15	67.4
9/17/2010 17:15	69.9
9/17/2010 18:16	67.3
9/17/2010 19:16	65.8
9/17/2010 20:17	64.8
9/17/2010 21:18	65.9
9/17/2010 22:18	62.9
9/17/2010 23:19	60.8
9/18/2010 0:19	58.7
9/18/2010 1:20	56.3
9/18/2010 2:20	56.4
9/18/2010 3:21	54.7
9/18/2010 4:21	55.1
9/18/2010 5:23	57.6
9/18/2010 6:30	62.4
9/18/2010 7:30	65.4
9/18/2010 8:31	67.1
9/18/2010 9:35	67.4
9/18/2010 10:35	67.2
9/18/2010 11:35	65.7
9/18/2010 12:31	64.7
9/18/2010 13:32	72.4
9/18/2010 14:32	66.7
9/18/2010 15:33	67.7
9/18/2010 16:32	66.4
9/18/2010 17:32	65.2
9/18/2010 18:33	65
9/18/2010 19:33	65.5
9/18/2010 20:34	67.1
9/18/2010 21:35	66.2
9/18/2010 22:35	62.6
9/19/2010 1:14	56.8
9/19/2010 2:20	56.4
9/19/2010 3:20	54.3
9/19/2010 4:21	52.7
9/19/2010 5:21	55
9/19/2010 6:22	59.2
9/19/2010 7:22	62.3
9/19/2010 8:20	63.7
9/19/2010 9:20	64.1
9/19/2010 10:14	64.5
9/19/2010 11:11	64.4
9/19/2010 12:11	64.2

### Audible Noise, Riverside Drive, Location 3



# **Appendix D**

## **Weather Information**

## Weather for September 9, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	60.1	62	30.05	NNW	9.2	N/A	Clear
1:51 AM	57.9	67	30.05	NNW	6.9	N/A	Clear
2:51 AM	55.9	72	30.05	NNW	6.9	N/A	Clear
3:51 AM	55	72	30.04	NNW	4.6	N/A	Clear
4:51 AM	54	75	30.05	NNW	5.8	N/A	Clear
5:51 AM	52	77	30.06	NW	5.8	N/A	Clear
6:51 AM	51.1	80	30.07	NNW	6.9	N/A	Partly Cloudy
7:51 AM	51.1	80	30.07	North	5.8	N/A	Partly Cloudy
8:51 AM	55	74	30.08	North	6.9	N/A	Clear
9:51 AM	59	64	30.08	North	8.1	N/A	Partly Cloudy
10:51 AM	63	52	30.08	NNE	12.7	N/A	Scattered Clouds
11:51 AM	64.9	48	30.07	North	6.9	N/A	Scattered Clouds
12:51 PM	66	45	30.06	NNW	10.4	N/A	Scattered Clouds
1:51 PM	69.1	40	30.04	North	4.6	N/A	Scattered Clouds
2:51 PM	71.1	36	30.03	NW	8.1	N/A	Scattered Clouds
3:51 PM	71.1	36	30.01	WNW	11.5	N/A	Scattered Clouds
4:51 PM	72	34	30.01	NW	8.1	N/A	Mostly Cloudy
5:51 PM	72	35	30	NNW	9.2	N/A	Mostly Cloudy
6:51 PM	70	36	30	NW	8.1	N/A	Mostly Cloudy
7:51 PM	68	40	30.01	NW	5.8	N/A	Mostly Cloudy
8:51 PM	64.9	48	30.01	North	3.5	N/A	Mostly Cloudy
9:51 PM	61	60	30.02	Calm	Calm	N/A	Clear
10:51 PM	59	64	30.01	ENE	4.6	N/A	Clear
11:51 PM	57.9	65	30.02	NE	3.5	N/A	Clear

## Weather for September 10, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	57	67	30.03	NNE	3.5	N/A	Clear
1:51 AM	55	72	30.02	Calm	Calm	N/A	Clear
2:51 AM	54	77	30.02	Calm	Calm	N/A	Clear
3:51 AM	52	83	30.02	Calm	Calm	N/A	Clear
4:51 AM	51.1	86	30.03	North	3.5	N/A	Clear
5:51 AM	50	89	30.04	NNE	3.5	N/A	Clear
6:51 AM	50	89	30.05	NNE	3.5	N/A	Clear
7:51 AM	51.1	83	30.06	Calm	Calm	N/A	Clear
8:51 AM	57	72	30.06	Calm	Calm	N/A	Partly Cloudy
9:51 AM	63	63	30.06	East	5.8	N/A	Partly Cloudy
10:51 AM	66	54	30.06	Variable	5.8	N/A	Partly Cloudy
11:51 AM	68	49	30.05	Calm	Calm	N/A	Scattered Clouds
12:51 PM	71.1	42	30.04	NE	9.2	N/A	Scattered Clouds
1:51 PM	72	41	30.03	Variable	4.6	N/A	Scattered Clouds
2:51 PM	75	38	30.01	ENE	6.9	N/A	Partly Cloudy
3:51 PM	75	37	29.99	Calm	Calm	N/A	Partly Cloudy
4:51 PM	75.9	36	29.97	East	6.9	N/A	Scattered Clouds
5:51 PM	75	36	29.96	ESE	4.6	N/A	Partly Cloudy
6:51 PM	73.9	37	29.96	East	5.8	N/A	Partly Cloudy
7:51 PM	69.1	45	29.97	ENE	6.9	N/A	Partly Cloudy
8:51 PM	64.9	58	29.99	East	10.4	N/A	Partly Cloudy
9:51 PM	63	63	30	East	9.2	N/A	Clear
10:51 PM	61	67	30	East	8.1	N/A	Clear
11:51 PM	60.1	69	29.99	East	9.2	N/A	Clear

## Weather for September 11, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	59	72	29.98	East	8.1	N/A	Clear
1:51 AM	59	72	29.97	East	9.2	N/A	Clear
2:51 AM	57	74	29.96	East	6.9	N/A	Clear
3:51 AM	57	74	29.97	East	8.1	N/A	Clear
4:51 AM	55	80	29.96	East	6.9	N/A	Clear
5:51 AM	55	80	29.96	Calm	Calm	N/A	Clear
6:51 AM	54	83	29.95	East	4.6	N/A	Partly Cloudy
7:51 AM	57	74	29.96	East	8.1	N/A	Scattered Clouds
8:51 AM	60.1	64	29.94	ESE	8.1	N/A	Mostly Cloudy
9:51 AM	64	60	29.91	East	10.4	N/A	Mostly Cloudy
10:51 AM	70	51	29.91	East	6.9	N/A	Mostly Cloudy
11:51 AM	73	42	29.88	SE	12.7	N/A	Overcast
12:51 PM	73.4	44	29.84	ESE	11.5	N/A	Overcast
1:51 PM	77	42	29.81	SSE	12.7	N/A	Overcast
2:51 PM	75.9	46	29.81	SE	11.5	N/A	Overcast
3:51 PM	78.1	50	29.78	SE	11.5	N/A	Overcast
4:51 PM	75	69	29.77	South	12.7	0	Light Rain
5:51 PM	73	79	29.8	South	4.6	0.01	Light Rain
6:51 PM	68	87	29.83	NNW	8.1	0	Mostly Cloudy
7:51 PM	66	87	29.85	NNW	5.8	N/A	Overcast
7:58 PM	66.2	88	29.85	WNW	5.8	N/A	Overcast
8:35 PM	66.2	88	29.87	WNW	8.1	N/A	Mostly Cloudy
8:51 PM	64.9	87	29.86	NW	5.8	N/A	Mostly Cloudy
9:24 PM	64.4	88	29.88	WNW	6.9	N/A	Overcast
9:51 PM	64.9	87	29.87	WNW	8.1	N/A	Mostly Cloudy
10:51 PM	64.9	87	29.88	WNW	8.1	N/A	Mostly Cloudy
11:51 PM	64.9	84	29.9	WNW	6.9	N/A	Mostly Cloudy

## Weather for September 12, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	63	90	29.91	West	6.9	N/A	Partly Cloudy
1:51 AM	62.1	93	29.91	West	6.9	N/A	Partly Cloudy
2:22 AM	62.6	94	29.92	WNW	6.9	N/A	Mostly Cloudy
2:51 AM	62.1	93	29.92	WNW	8.1	N/A	Overcast
3:51 AM	62.1	90	29.94	WNW	6.9	N/A	Overcast
4:25 AM	60.8	88	29.96	WNW	4.6	N/A	Partly Cloudy
4:51 AM	60.1	93	29.95	NW	3.5	N/A	Scattered Clouds
5:51 AM	61	90	29.97	WNW	3.5	N/A	Mostly Cloudy
5:58 AM	60.8	88	29.99	West	3.5	N/A	Overcast
6:51 AM	61	90	29.99	NW	4.6	N/A	Overcast
7:42 AM	60.8	88	30.02	WNW	4.6	N/A	Scattered Clouds
7:51 AM	61	90	30.02	WNW	5.8	N/A	Scattered Clouds
8:00 AM	60.8	88	30.03	NW	4.6	N/A	Mostly Cloudy
8:25 AM	62.6	82	30.04	NW	6.9	N/A	Mostly Cloudy
8:51 AM	63	84	30.03	NW	4.6	N/A	Haze
9:44 AM	64.4	77	30.06	NNW	8.1	N/A	Scattered Clouds
9:51 AM	66	78	30.06	NNW	9.2	N/A	Scattered Clouds
10:51 AM	68	63	30.06	NW	9.2	N/A	Scattered Clouds
11:51 AM	71.1	47	30.07	NNW	12.7	N/A	Scattered Clouds
12:51 PM	73.9	40	30.07	NW	9.2	N/A	Scattered Clouds
1:51 PM	75	38	30.06	NW	15	N/A	Partly Cloudy
2:51 PM	75.9	36	30.06	WNW	12.7	N/A	Scattered Clouds
3:51 PM	78.1	30	30.04	WNW	16.1	N/A	Partly Cloudy
4:51 PM	77	32	30.04	NW	11.5	N/A	Scattered Clouds
5:51 PM	78.1	31	30.04	NNW	15	N/A	Scattered Clouds
6:51 PM	75.9	33	30.05	NNW	10.4	N/A	Partly Cloudy
7:51 PM	73.9	37	30.05	NW	5.8	N/A	Clear
8:51 PM	71.1	42	30.06	Calm	Calm	N/A	Clear
9:51 PM	62.1	70	30.06	Calm	Calm	N/A	Clear
10:51 PM	61	72	30.05	Calm	Calm	N/A	Clear
11:51 PM	59	78	30.05	Calm	Calm	N/A	Clear



## Weather for September 16, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	71.1	51	29.96	SE	13.8	N/A	Overcast
1:51 AM	71.1	53	29.94	SE	13.8	0	Mostly Cloudy
2:51 AM	70	55	29.92	SSE	11.5	N/A	Mostly Cloudy
3:51 AM	70	57	29.89	SSE	8.1	N/A	Overcast
4:51 AM	69.1	70	29.85	SSE	12.7	0	Overcast
5:51 AM	70	68	29.86	South	10.4	0	Light Rain
6:51 AM	66.9	81	29.86	SSW	9.2	0.02	Rain
7:10 AM	66.2	88	29.88	South	15	0.07	Heavy Thunderstorms and Rain
7:30 AM	64.4	94	29.87	South	9.2	N/A	Light Rain
7:51 AM	64.9	93	29.85	South	11.5	0.18	Light Rain
8:51 AM	66	96	29.83	South	11.5	0.08	Overcast
9:51 AM	69.1	87	29.83	SSW	15	N/A	Overcast
10:51 AM	70	84	29.85	SSW	13.8	N/A	Overcast
11:51 AM	73	76	29.83	SSW	16.1	0	Overcast
12:51 PM	73	73	29.82	SSW	12.7	N/A	Overcast
1:51 PM	75	69	29.79	SSW	8.1	N/A	Mostly Cloudy
2:51 PM	78.1	60	29.75	SSW	19.6	N/A	Overcast
3:51 PM	80.1	58	29.72	SSW	21.9	N/A	Mostly Cloudy
4:51 PM	75	71	29.7	South	18.4	0	Light Rain
5:15 PM	73.4	78	29.74	SW	18.4	0	Light Rain
5:51 PM	72	84	29.74	West	10.4	0.03	Mostly Cloudy
6:51 PM	70	76	29.79	NW	23	N/A	Mostly Cloudy
7:51 PM	68	76	29.83	NW	15	N/A	Scattered Clouds
8:51 PM	66.9	70	29.86	WNW	15	N/A	Partly Cloudy
9:51 PM	64.9	73	29.88	WNW	12.7	N/A	Scattered Clouds
10:51 PM	64	75	29.91	NW	11.5	N/A	Mostly Cloudy
11:18 PM	64.4	77	29.93	NNW	12.7	N/A	Mostly Cloudy
11:51 PM	64	80	29.93	WNW	8.1	N/A	Overcast

## Weather for September 17, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:29 AM	62.6	82	29.95	NW	9.2	N/A	Overcast
12:51 AM	63	84	29.94	NW	12.7	N/A	Overcast
1:29 AM	62.6	88	29.96	NW	11.5	N/A	Overcast
1:51 AM	61	93	29.96	NNW	11.5	0	Light Drizzle
2:04 AM	60.8	88	29.98	NNW	10.4	0	Overcast
2:51 AM	62.1	84	29.98	North	11.5	0	Overcast
3:51 AM	61	81	29.99	North	8.1	N/A	Overcast
4:51 AM	61	75	30.01	North	6.9	N/A	Overcast
5:21 AM	60.8	77	30.03	North	4.6	N/A	Overcast
5:51 AM	60.1	78	30.04	North	8.1	N/A	Overcast
6:51 AM	60.1	78	30.05	NNW	8.1	N/A	Overcast
7:51 AM	59	81	30.06	North	6.9	N/A	Overcast
8:51 AM	59	81	30.09	North	8.1	N/A	Overcast
9:51 AM	60.8	77	30.11	Calm	Calm	N/A	Overcast
10:51 AM	62.1	72	30.13	NW	6.9	N/A	Overcast
11:51 AM	63	67	30.13	Variable	3.5	N/A	Overcast
12:51 PM	66	56	30.14	Calm	Calm	N/A	Overcast
1:51 PM	66	54	30.13	Calm	Calm	N/A	Overcast
2:51 PM	68	50	30.12	North	6.9	N/A	Mostly Cloudy
3:51 PM	70	47	30.12	Calm	Calm	N/A	Mostly Cloudy
4:51 PM	70	47	30.12	Calm	Calm	N/A	Scattered Clouds
5:51 PM	71.1	45	30.12	Calm	Calm	N/A	Scattered Clouds
6:51 PM	69.1	49	30.12	Calm	Calm	N/A	Partly Cloudy
7:51 PM	66	59	30.12	North	4.6	N/A	Clear
8:51 PM	63	67	30.13	Calm	Calm	N/A	Clear
9:51 PM	61	72	30.13	Calm	Calm	N/A	Clear
10:51 PM	57.9	84	30.14	Calm	Calm	N/A	Clear
11:51 PM	57	83	30.15	Calm	Calm	N/A	Clear

## Weather for September 18, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	55.9	87	30.17	North	3.5	N/A	Clear
1:51 AM	55	86	30.17	Calm	Calm	N/A	Clear
2:51 AM	55.9	84	30.17	Calm	Calm	N/A	Clear
3:51 AM	54	90	30.17	Calm	Calm	N/A	Clear
4:51 AM	53.1	93	30.17	Calm	Calm	N/A	Clear
5:51 AM	53.1	93	30.17	Calm	Calm	N/A	Clear
6:51 AM	52	93	30.18	Calm	Calm	N/A	Clear
7:51 AM	53.1	93	30.19	Calm	Calm	N/A	Clear
8:51 AM	57.9	84	30.2	SSE	4.6	N/A	Partly Cloudy
9:51 AM	63	70	30.2	South	9.2	N/A	Scattered Clouds
10:51 AM	68	63	30.21	SW	4.6	N/A	Scattered Clouds
11:51 AM	71.1	57	30.2	Variable	3.5	N/A	Scattered Clouds
12:51 PM	75	46	30.19	West	3.5	N/A	Scattered Clouds
1:51 PM	77	42	30.17	South	5.8	N/A	Mostly Cloudy
2:51 PM	79	38	30.13	Calm	Calm	N/A	Mostly Cloudy
3:51 PM	80.1	35	30.12	SSW	5.8	N/A	Overcast
4:51 PM	80.1	34	30.12	SSW	6.9	N/A	Overcast
5:51 PM	81	34	30.11	South	4.6	N/A	Mostly Cloudy
6:51 PM	80.1	36	30.11	SE	3.5	N/A	Mostly Cloudy
7:51 PM	73.9	52	30.11	North	6.9	N/A	Mostly Cloudy
8:51 PM	70	57	30.13	East	3.5	N/A	Mostly Cloudy
9:51 PM	71.1	57	30.1	SE	10.4	N/A	Mostly Cloudy
10:51 PM	71.1	59	30.12	SE	3.5	N/A	Overcast
11:51 PM	70	63	30.13	Calm	Calm	N/A	Overcast

## Weather for September 19, 2010

Time (EDT)	Temp. (F)	Rel. Hum. (%)	Sea Level Pressure (Inches)	Wind Direction	Wind Speed (MPH)	Precipitation (Inches)	Conditions
12:51 AM	66.9	73	30.14	Calm	Calm	N/A	Mostly Cloudy
1:51 AM	66	78	30.13	Calm	Calm	0	Mostly Cloudy
2:51 AM	64.9	81	30.14	Calm	Calm	N/A	Mostly Cloudy
3:51 AM	64.9	81	30.12	Calm	Calm	N/A	Partly Cloudy
4:51 AM	64.9	84	30.12	Calm	Calm	N/A	Partly Cloudy
5:51 AM	64	87	30.11	Calm	Calm	N/A	Mostly Cloudy
6:51 AM	64	84	30.13	Calm	Calm	N/A	Mostly Cloudy
7:51 AM	63	87	30.14	Calm	Calm	N/A	Mostly Cloudy
8:51 AM	68	76	30.15	Calm	Calm	N/A	Mostly Cloudy
9:51 AM	71.1	68	30.14	Calm	Calm	N/A	Scattered Clouds
10:51 AM	73.9	57	30.14	Calm	Calm	N/A	Mostly Cloudy
11:51 AM	79	47	30.13	Calm	Calm	N/A	Mostly Cloudy
12:51 PM	81	45	30.12	SSW	4.6	N/A	Mostly Cloudy
1:51 PM	82	41	30.11	Calm	Calm	N/A	Mostly Cloudy
2:51 PM	84	40	30.09	Calm	Calm	N/A	Mostly Cloudy
3:51 PM	81	54	30.08	North	13.8	N/A	Mostly Cloudy
4:51 PM	75.9	64	30.09	North	10.4	N/A	Overcast
5:51 PM	73.9	68	30.09	North	10.4	0	Light Rain
6:51 PM	73	68	30.09	NNE	9.2	0	Mostly Cloudy
7:51 PM	71.1	70	30.09	North	6.9	N/A	Mostly Cloudy
8:51 PM	68	78	30.1	Calm	Calm	N/A	Mostly Cloudy
9:51 PM	68	78	30.11	North	3.5	N/A	Mostly Cloudy
10:51 PM	66.9	81	30.12	North	3.5	N/A	Mostly Cloudy
11:51 PM	64.9	81	30.12	NNE	10.4	N/A	Mostly Cloudy

## **Appendix E**

### **HDD Drilling Rig Noise Level**



## LANEY DIRECTIONAL DRILLING CO.

*"There is no substitute for experience"*

### HDD Drilling Rig Noise Levels

#### Entry ("Rig Side")

On January 9<sup>th</sup>, 2007 I made a site visit to Texas City, Texas where a Laney Directional Drilling rig was located and noise readings were measured.

Equipment at the **Entry** was LDD 06 a two motor rack and pinion drilling rig with dual Cat 3406 engines both operating at normal throttle:

50'	91 dB
100'	87 dB
150'	82 dB

Ambient noise level with all LDD equipment off was 71 dB.

#### Exit ("pipe side")

Readings were taken on exit side the following week.

Equipment on the **Exit** was a Tracked hydraulic Backhoe and a Vacuum truck:

50'	93 dB
100'	88 dB
150'	83 dB

#### Exit ("pipe side")

Readings were taken on exit side March 16<sup>th</sup> in Angleton, Texas

Equipment on the **Exit** was a Tracked hydraulic Backhoe and two Vacuum trucks:

50'	85 dB
100'	82 dB
150'	75 dB

Ambient noise level with all LDD equipment off and out of the wind was 71 dB.



## LANEY DIRECTIONAL DRILLING CO.

*"There is no substitute for experience"*

### Entry ("Rig Side")

On March 27<sup>th</sup>, 2007 I made a site visit to Angleton, Texas where a Laney Directional Drilling rig was located and noise readings were measured.

Equipment at the **Entry** was LDD 19 a two motor rack and pinion drilling rig with dual Cat 3406 engines both operating at normal throttle:

50'	90 dB
100'	86 dB
150'	80 dB

Ambient noise level with all LDD equipment off was 76 dB on a windy day.

### Exit ("pipe side")

Readings were taken on exit side March 27<sup>th</sup> in Angleton, Texas

Equipment on the **Exit** was a Tracked hydraulic Backhoe and two welding machines running:

50'	79 dB
100'	72 dB
150'	70 dB

Ambient noise level with all LDD equipment off and out of the wind was 70 dB.

**Laney Directional Drilling Co.**  
**Rack Drill Rig Specifications**

**Laney Hydraulic Rig LDD-388**

Length 45 ft.  
Width 8 ft.  
Height 9 ft.

Shipping weight 66,000 lbs. Gross

The maximum pipe handling diameter is 36 inches and up to 2,000 feet in length. It can utilize 47,000 foot pounds of torque and 388,000 foot pounds of push and pull force.

**Laney Hydraulic Power Unit  
LDD-388**

Length 45 ft.  
Width 8 ft.  
Height 12 ft

Shipping weight 66,000 lbs. Gross



**Laney LDD-388 Control Cabin**

Length 10 ft.  
Width 8 ft.  
Height 8 ft  
Shipping weight 11,000 lbs. Gross

The noise level produced by this unit is 92 dbu at 25 feet and 90 dbu at 75 feet.



**This foregoing document was electronically filed with the Public Utilities**

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Summary: Notice OSU-Roberts 138k Transmission Line Project electronically filed by Mr. Matthew J Satterwhite on behalf of American Electric Power Service Corporation