

Appendix D

Noise Data

CERTIFICATE OF CALIBRATION

2250/4189 Lin Rev 2.07

Certificate Number 1-115142148-202

Page 2 of 2

"As received = Final Data"

Calibration Details:

Sound Level Meter Model Number 2250 Serial Number 2548189
Microphone Model Number 4189 Serial Number 2543364

The sound level meter under test was calibrated acoustically while operating in the "Lin" weighting mode. The acoustical response of the microphone and sound level meter was tested with the multifunction calibrator in the "pressure" mode. Uncertainty of the calibration is based on a sound level meter with a digital type scale with a resolution of 0.1dB.

Frequency in Hertz	Free Field Correction in dB	Expected Level and Acceptance Criteria for Type 1 SLM in dB μ V	Actual Reading in dB μ V	Uncertainty $k=2$ in dB
1,000	0.1	94.05	93.9	0.2
31.5	0.0	93.96 \pm 1.5	94.1	0.2
63.0	0.0	93.99 \pm 1.5	94.0	0.2
125	0.0	94.02 \pm 1.0	94.0	0.2
250	0.0	93.96 \pm 0.9	94.0	0.2
500	0.0	93.82 \pm 0.8	94.0	0.2
2,000	0.3	93.88 \pm 0.8	93.8	0.3
4,000	0.9	93.10 \pm 0.8	93.0	0.4
8,000	2.8	90.84 +1.4/-2.8	90.6	0.5
12,500	5.4	87.63 +2.8/-5.8	87.7	0.6

Calibration Conditions:

Preconditioning: 24 Hours at 23 \pm 3 °C

Environmental conditions: Air Temperature 23 °C
Air pressure 986 mbar
Relative Humidity 39 %

Calibration Instrumentation:

Model Number	Serial Number	Trace Number	Calibration Due	Calibration Interval
Brüel & Kjær 4226	2433680	1-105985031-701	20 Jan 2008	6 mo

Remarks:

The Bruel and Kjaer Calibration Laboratory
2815-A Colonnades Court
Norcross, GA 30071-1588
Telephone: 770-209-6907
Fax: 770-447-4033
Web site address: <http://www.bkhome.com>



Certificate of Calibration

No.: 1-115142148-401

Calibration of:

Type: Brüel & Kjær 4189
Serial Number: 2543364

Customer:

Name: RBF Consulting
Address: 14725 Alton Parkway
Irvine, CA 92618

Calibration Conditions:

Pressure [kPa]: 97.81
Temperature [°C]: 23
Humidity [%]: 35

Specifications:

This document certifies that the instrument as listed under "Type" has been calibrated and unless otherwise indicated under "Final Data", meets acceptance criteria as prescribed by the referenced Procedure. Statements of compliance, where applicable, are based on calibration results falling within specified criteria with no reduction by the uncertainty of the measurements. The calibration of the listed transducer, was accomplished using a test system which conforms with the requirements of ISO/IEC 17025, ANSI/NCSL Z540-1, and guidelines of ISO 10012-1. For "as received" and "final" data, see the attached page(s). Items marked with one asterisk (*) are not covered by the scope of the current A2LA accreditation. This Certificate and attached data pages shall not be reproduced, except in full, without written approval of the Bruel and Kjaer Calibration Laboratory-Norcross, GA. Results relate only to the items tested. The transducer has been calibrated using Measurement Standards with values traceable to the National Institute of Standards and Technology, National Measurement Institutes or derived from natural physical constants.

Procedure: The calibrations were performed according to procedure: 4189-S251-FF-01

Results:

"As Received" Data: Within Acceptance Criteria
 "Final" Data : Within Acceptance Criteria

"As Received" Data: Outside Acceptance Criteria
 "Final" Data : Outside Acceptance Criteria

The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k=2$ providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with EA-4/02 from elements originating from standards, calibration method, effect of environmental conditions and any short term contribution from the device under calibration.

Date of Calibration: November 15, 2007

Date of Issue: November 15, 2007

John Kimple

Technician

Quality Representative

Sensitivity

Open-circuit Sensitivity at Calibration Conditions: -25.12 dB re. 1V/Pa or 55.45 mV/Pa
 Open-circuit Sensitivity at Reference Conditions: -25.16 dB re. 1V/Pa or 55.23 mV/Pa
 Calibration Frequency: 251.19 Hz
 Uncertainty: +/- 0.11 dB

Reference Conditions

Pressure: 101.3 kPa
 Temperature: 23 °C
 Relative Humidity: 50%

Reference Microphones

Type	Serial Number	Calibration Due:	Calibrated by:	Trace Number:
4180	2541528	08 Feb 2009	DPLA	M2.00-0555-2.1
4180	2541531	08 Feb 2009	DPLA	M2.00-0555-3.1

Normalized Frequency Response

Normalization Frequency: 250 Hz
 Actuator Response is valid at Calibration Conditions
 Applied Sound Field Correction: **Free-field Correction with Grid, 0 deg incidence.**

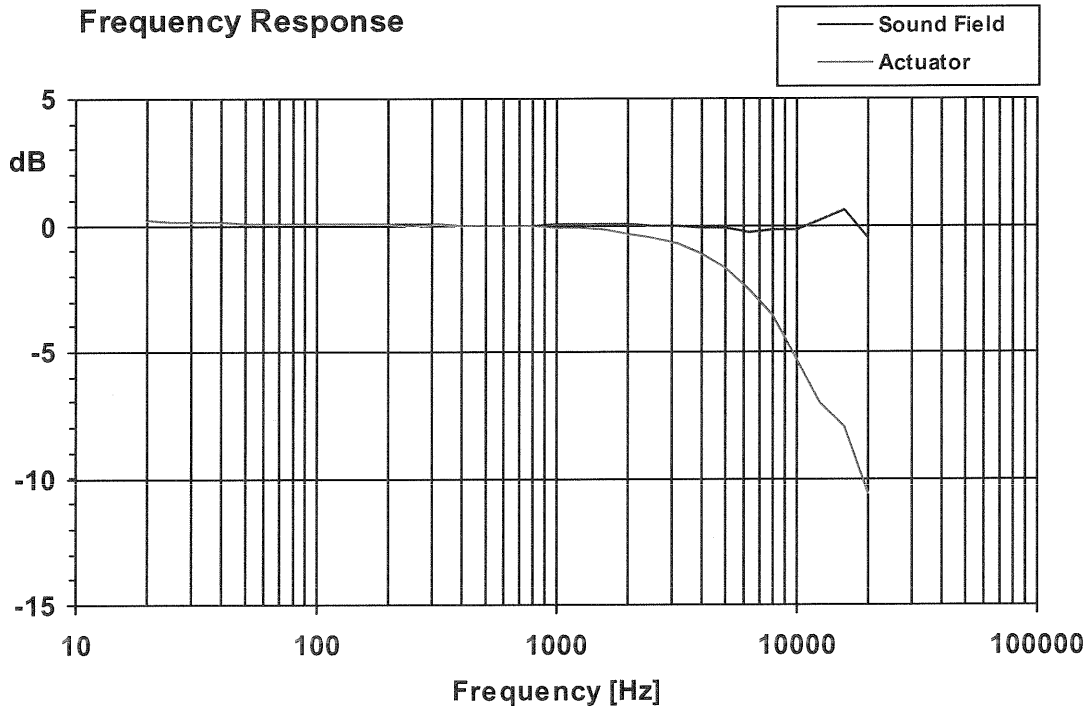
Frequency [Hz]	Actuator Response [dB]	Sound Field Corrections [dB]	Combined Uncertainty [dB]	Upper Tolerance [dB]	Lower Tolerance [dB]	Status
20.0	0.16	0.16	0.28	1.00	-1.00	OK
25.1	0.14	0.14	0.21	1.00	-1.00	OK
31.6	0.12	0.12	0.18	1.00	-1.00	OK
39.8	0.10	0.10	0.17	1.00	-1.00	OK
50.1	0.08	0.08	0.16	1.00	-1.00	OK
63.1	0.07	0.07	0.15	1.00	-1.00	OK
79.4	0.05	0.05	0.15	1.00	-1.00	OK
100.0	0.05	0.05	0.15	1.00	-1.00	OK
125.9	0.03	0.03	0.15	1.00	-1.00	OK
158.5	0.01	0.01	0.15	1.00	-1.00	OK
199.5	0.02	0.02	0.15	1.00	-1.00	OK
251.2	0.00	0.00	0.15	1.00	-1.00	OK
316.2	0.01	0.01	0.15	1.00	-1.00	OK
398.1	-0.02	-0.01	0.15	1.00	-1.00	OK
501.2	-0.03	-0.01	0.15	1.00	-1.00	OK
631.0	-0.04	-0.01	0.15	1.00	-1.00	OK
794.3	-0.07	0.00	0.15	1.00	-1.00	OK
1000.0	-0.09	0.01	0.15	1.00	-1.00	OK
1258.9	-0.12	0.03	0.15	1.00	-1.00	OK
1584.9	-0.21	0.01	0.16	1.00	-1.00	OK
1995.3	-0.32	0.00	0.16	1.00	-1.00	OK
2511.9	-0.49	-0.02	0.17	1.00	-1.00	OK
3162.3	-0.76	-0.04	0.18	1.00	-1.00	OK
3981.1	-1.15	-0.08	0.19	1.00	-1.00	OK
5011.9	-1.72	-0.14	0.19	1.00	-1.00	OK
6309.6	-2.53	-0.25	0.19	1.00	-1.00	OK
7943.3	-3.61	-0.23	0.19	1.00	-1.00	OK
10000.0	-5.34	-0.21	0.25	2.00	-2.00	OK
12589.3	-7.02	0.17	0.31	2.00	-2.00	OK
15848.9	-8.02	0.57	0.39	2.00	-2.00	OK
19952.6	-10.55	-0.50	0.53	2.00	-2.00	OK

Normalized Frequency Response:

Normalization Frequency: 250 Hz

Actuator Response is valid at Calibration Conditions

Applied Sound Field Correction: **Free-field Correction with Grid, 0 deg incidence.**



Comments:

Site Number: 1			
Recorded By: Eddie Torres and Kristen Bogue			
Job Number: 10-106067			
Date: 12/13/2007			
Time: 11:59 AM			
Location: Northeast portion of the project site			
GPS: n/a			
Source of Peak Noise: Ambient			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
63.5	45.5	65.9	80.3

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/14/2007	
	Microphone	Brüel & Kjær	4189	2543364	11/15/2007	
	Preamp	Brüel & Kjær	ZC 0032	4265	7/18/2006	
	Calibrator	Brüel & Kjær	4231	2545667	7/31/2006	
Data						
Est.	Duration: 10 minutes			Sky: ☀ Partly Cloudy		
	Note: n/a			Sensor Height (ft): 5 ft		

Photo of Measurement Location





2250

Instrument:		2250
Application:		BZ7225 Version 2.0.2
Start Time:		12/03/2007 11:59:12
End Time:		12/03/2007 12:09:12
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		140.32

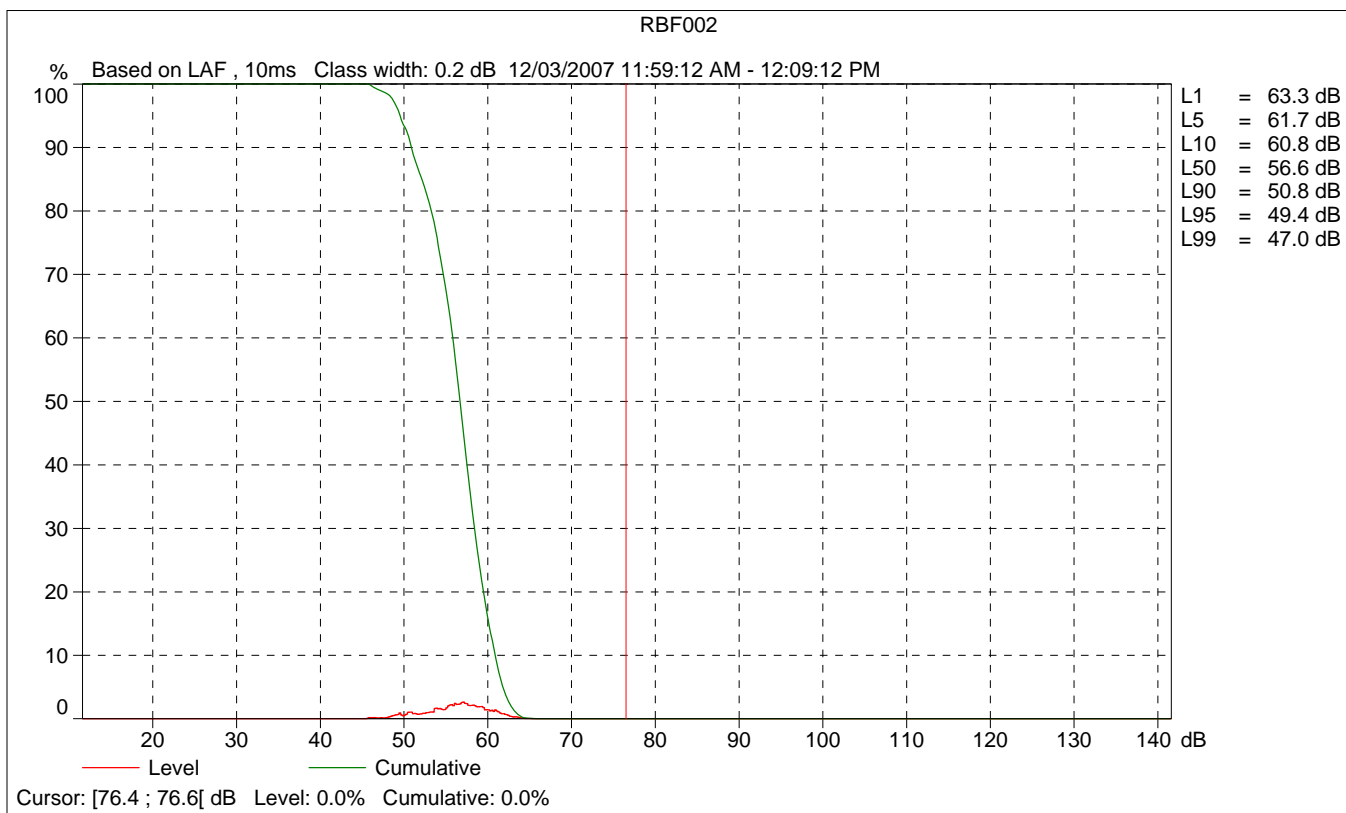
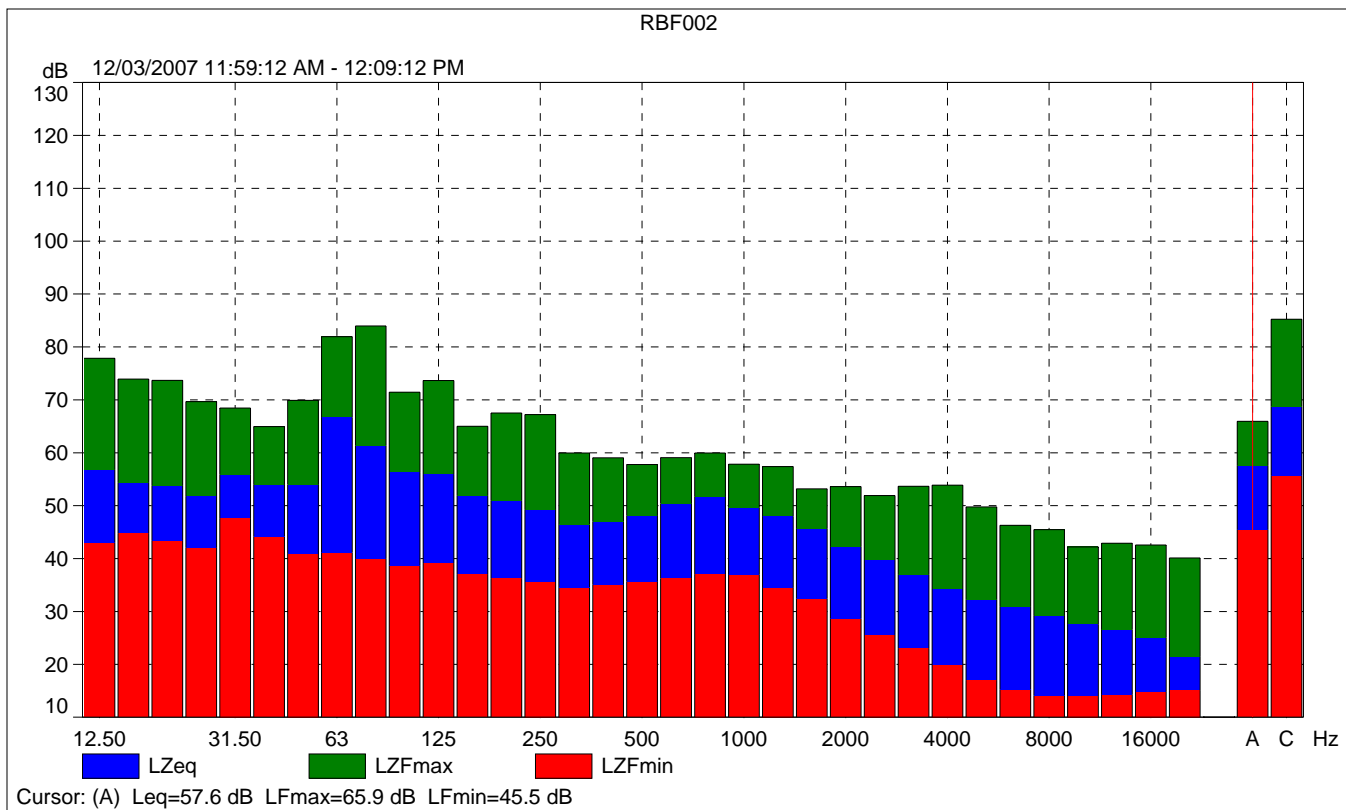
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

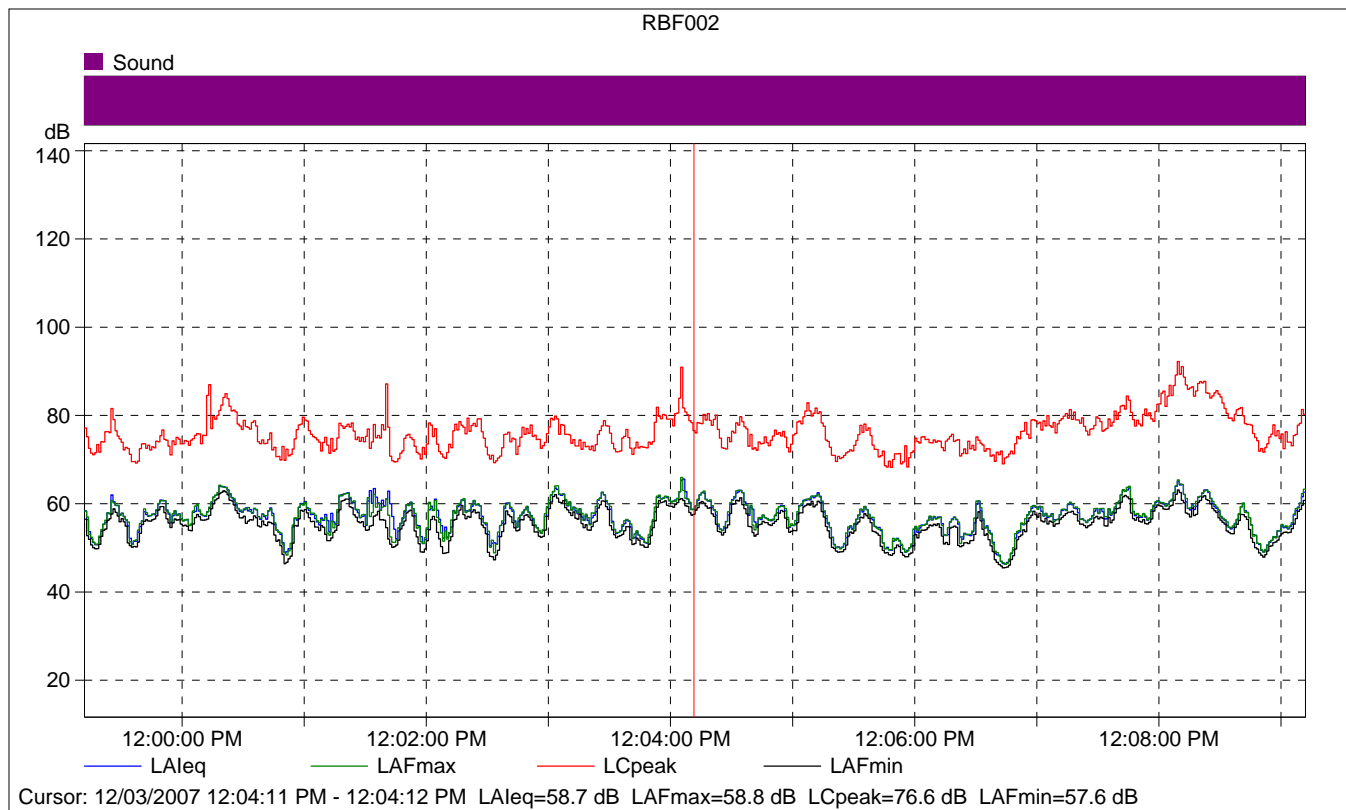
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Diffuse-field

Calibration Time:		11/14/2007 05:50:05
Calibration Type:		External reference
Sensitivity:		53.68 mV/Pa

RBF002

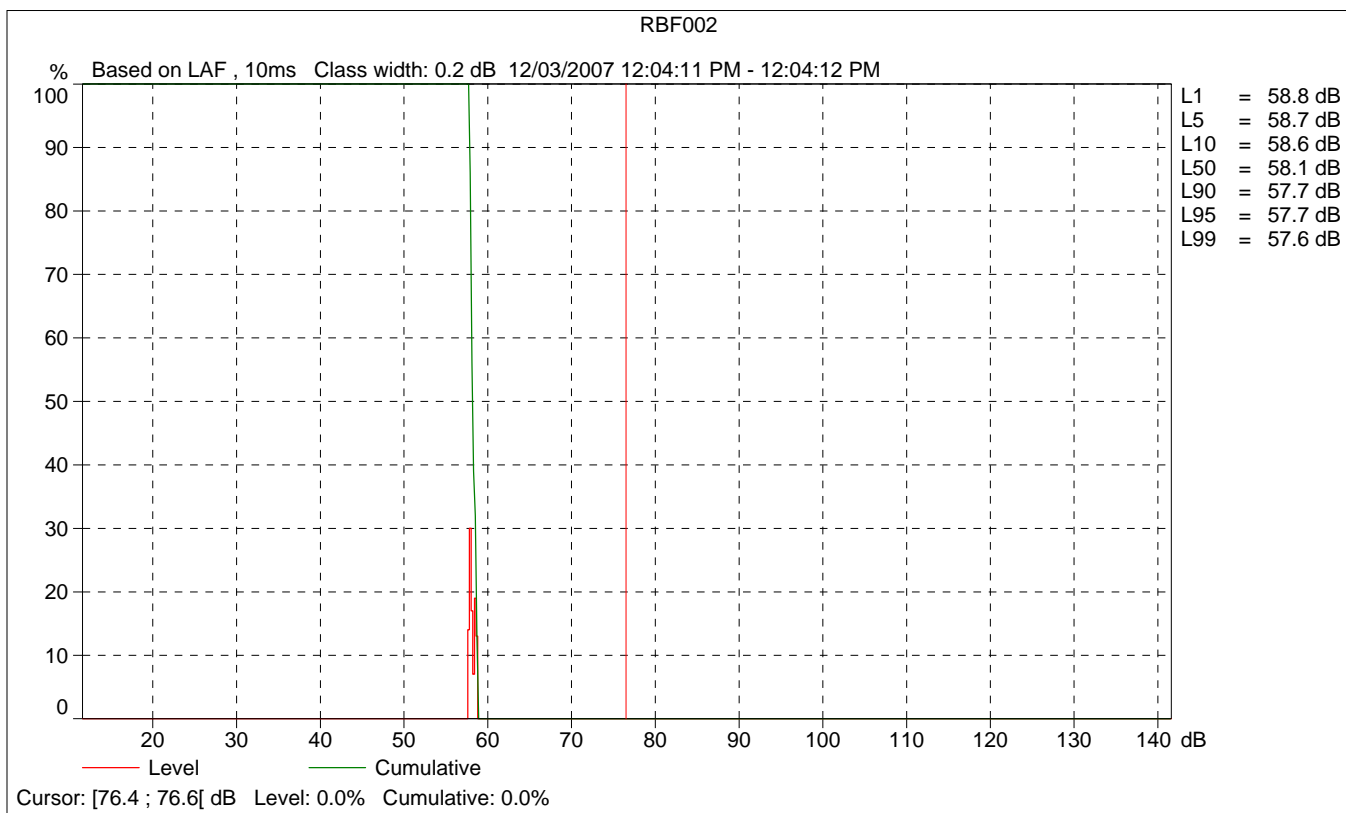
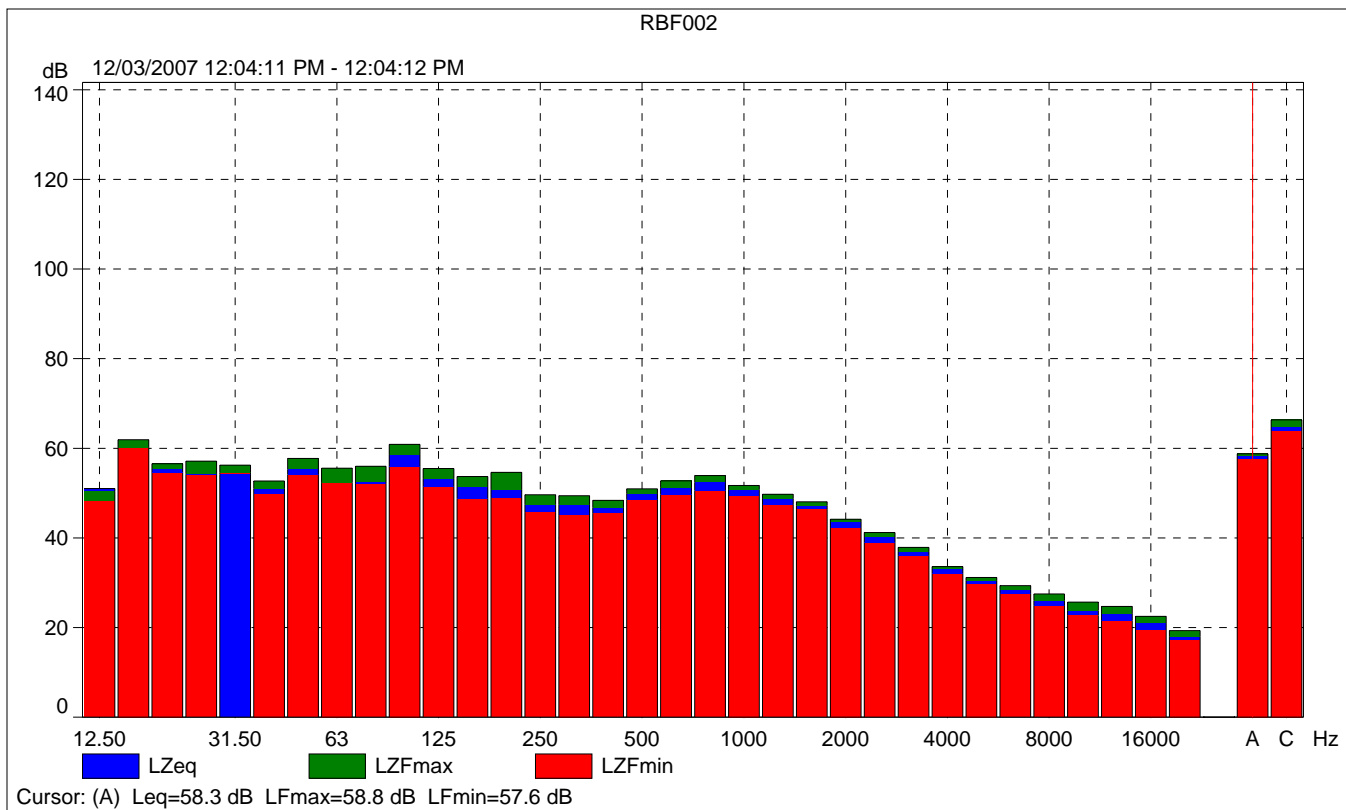
	Start time	End time	Elapsed time	Overload [%]	L _{Aeq} [dB]	L _A F _{max} [dB]	L _A F _{min} [dB]
Value				0.00	57.6	65.9	45.5
Time	11:59:12 AM	12:09:12 PM	0:10:00				
Date	12/03/2007	12/03/2007					

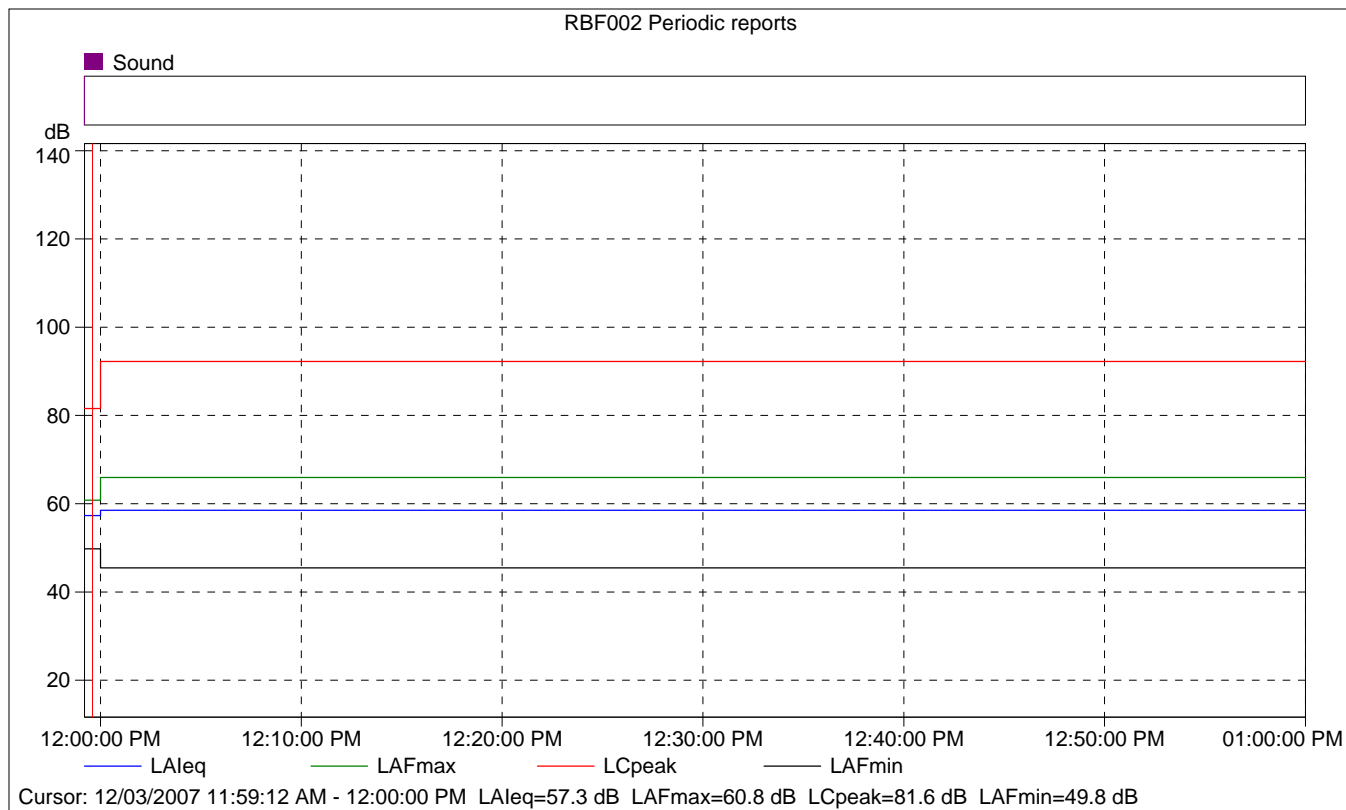




RBF002

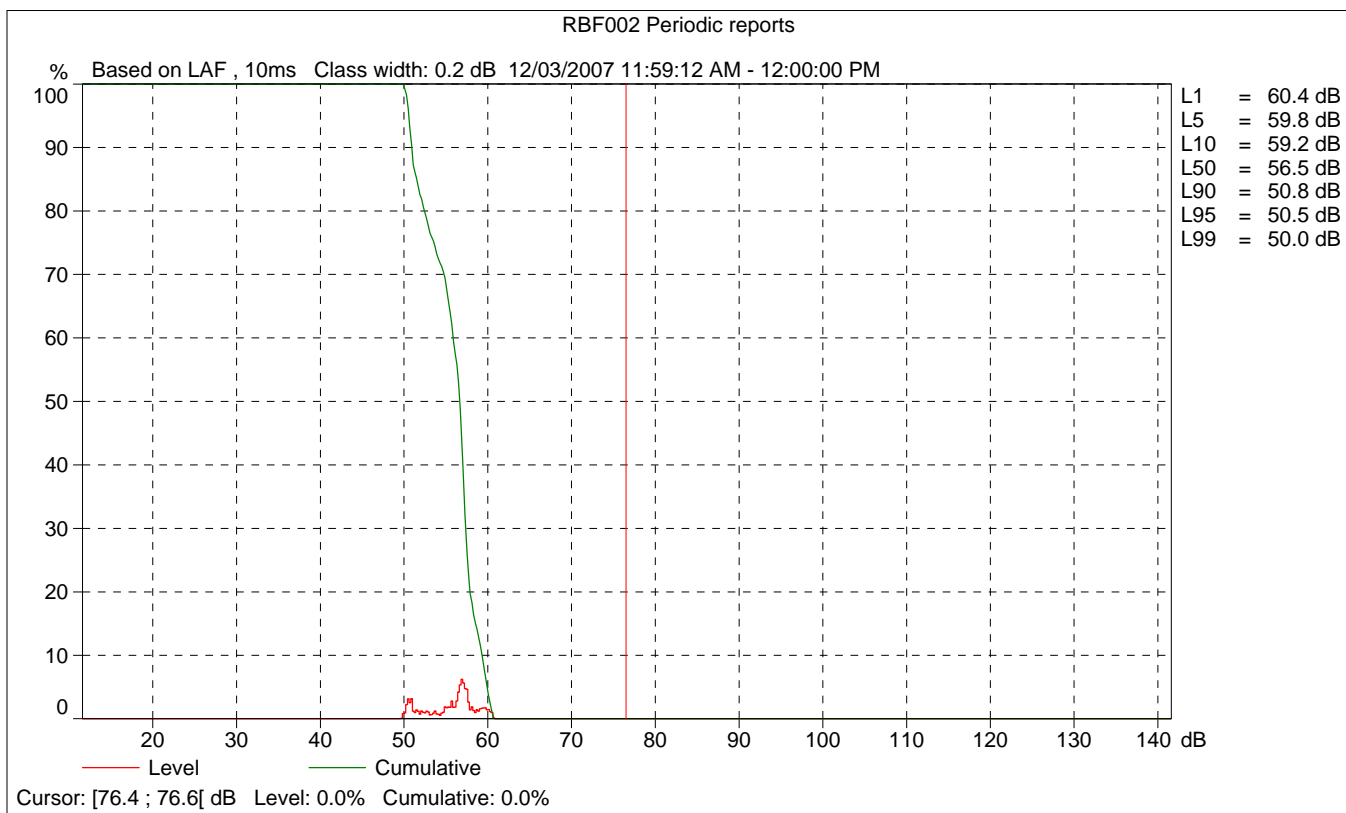
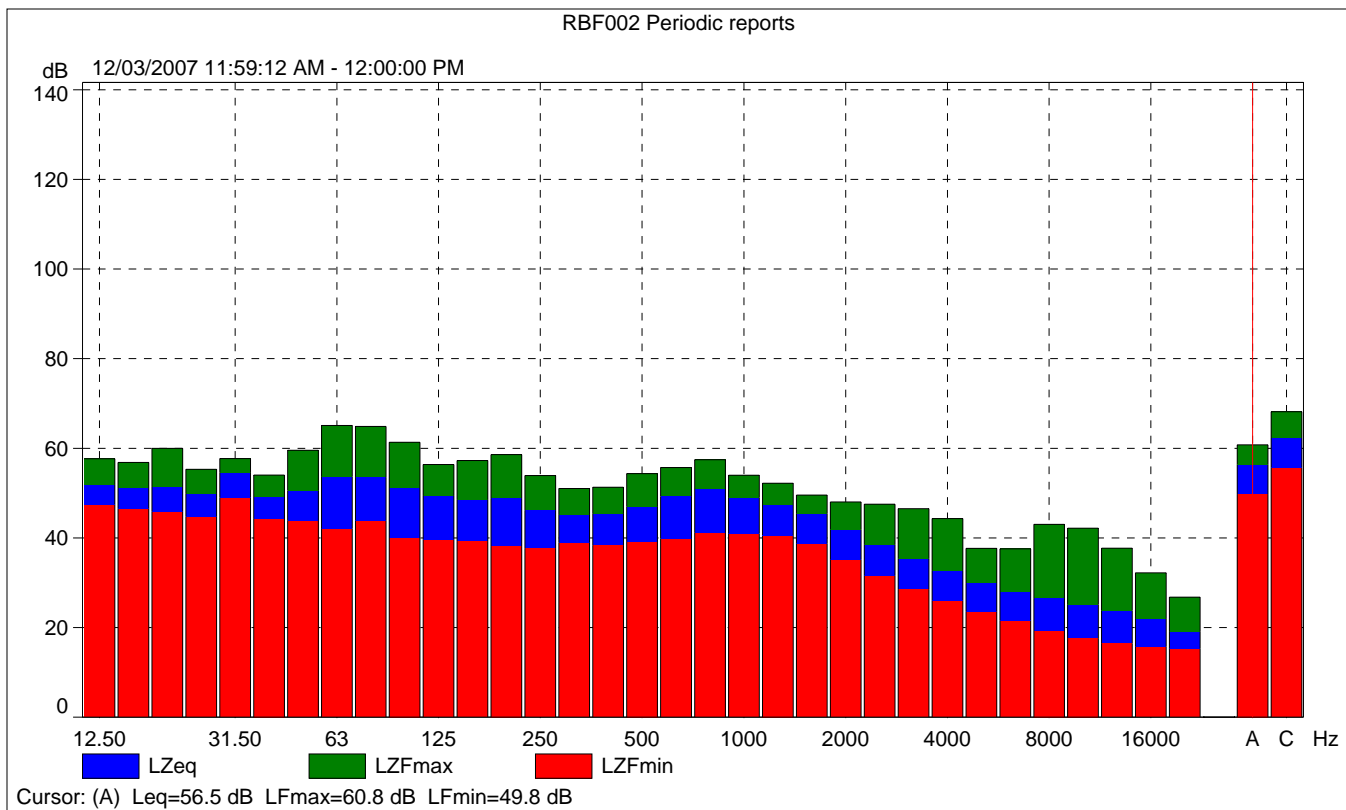
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			58.7	58.8	57.6
Time	12:04:11 PM	0:00:01			
Date	12/03/2007				

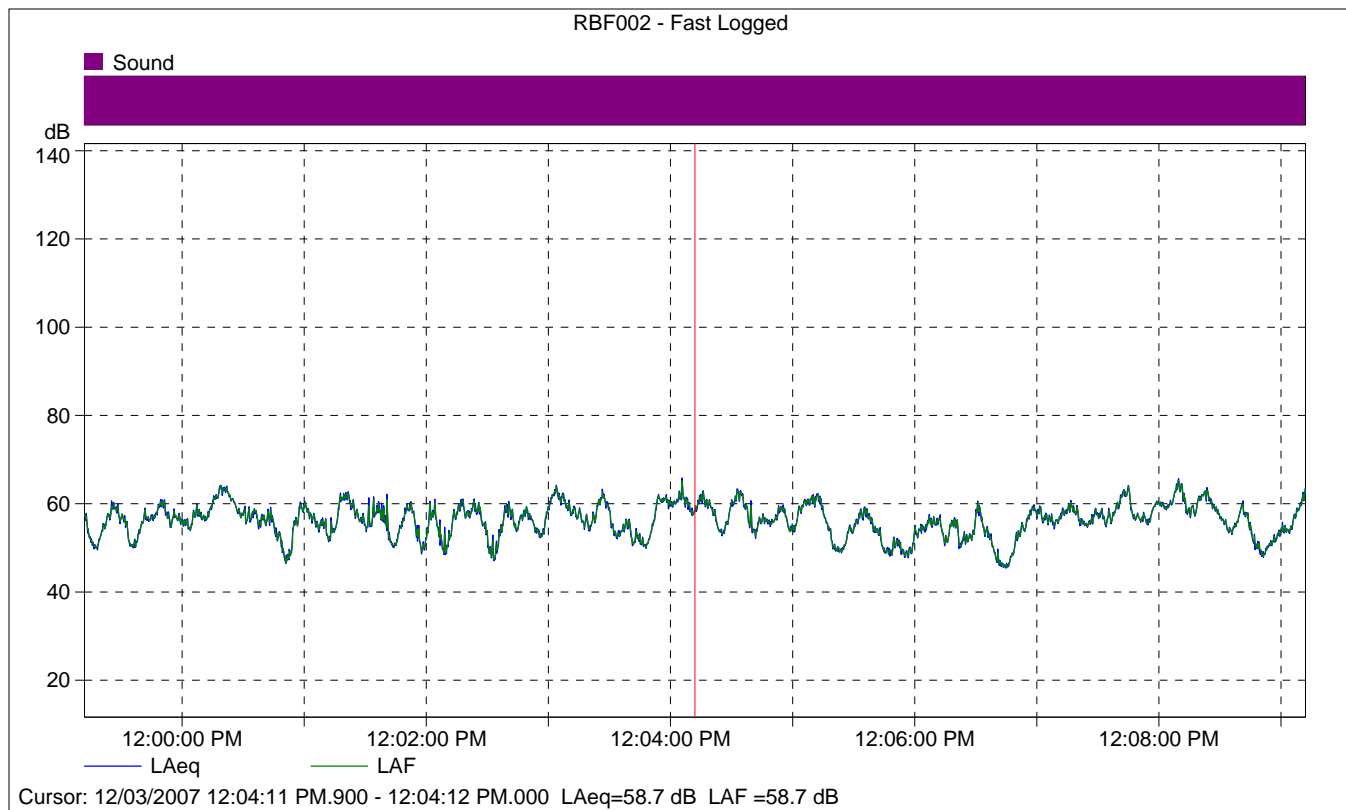




RBF002 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	57.3	60.8	49.8
Time	11:59:12 AM	0:00:48				
Date	12/03/2007					





RBF002 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			58.7
Time	12:04:11 PM.900	0:00:00.100	
Date	12/03/2007		

Site Number: 2			
Recorded By: Eddie Torres and Kristen Bogue			
Job Number: 10-106067			
Date: 12/03/2007			
Time: 12:13 PM			
Location: Southwest portion of the project site			
GPS: n/a			
Source of Peak Noise: Ambient; a car door slammed.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
55.0	42.2	63.3	71.5

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/14/2007	
	Microphone	Brüel & Kjær	4189	2543364	11/15/2007	
	Preamp	Brüel & Kjær	ZC 0032	4265	7/18/2006	
	Calibrator	Brüel & Kjær	4231	2545667	7/31/2006	
Weather Data						
Est.	Duration: 10 minutes			Sky: ☀ Partly Cloudy		
	Note: n/a			Sensor Height (ft): 5 ft		

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 2.0.2
Start Time:		12/03/2007 12:13:02
End Time:		12/03/2007 12:23:24
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		140.32

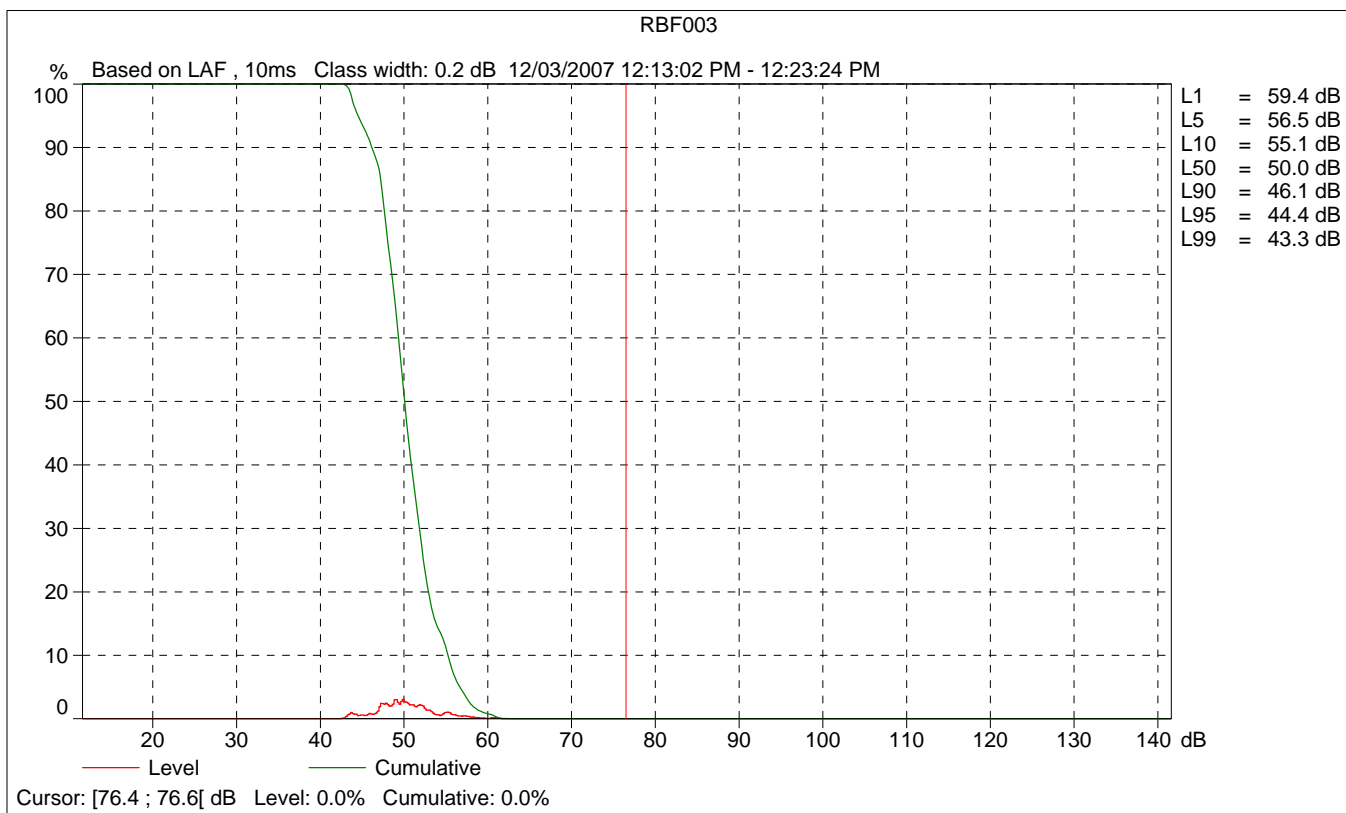
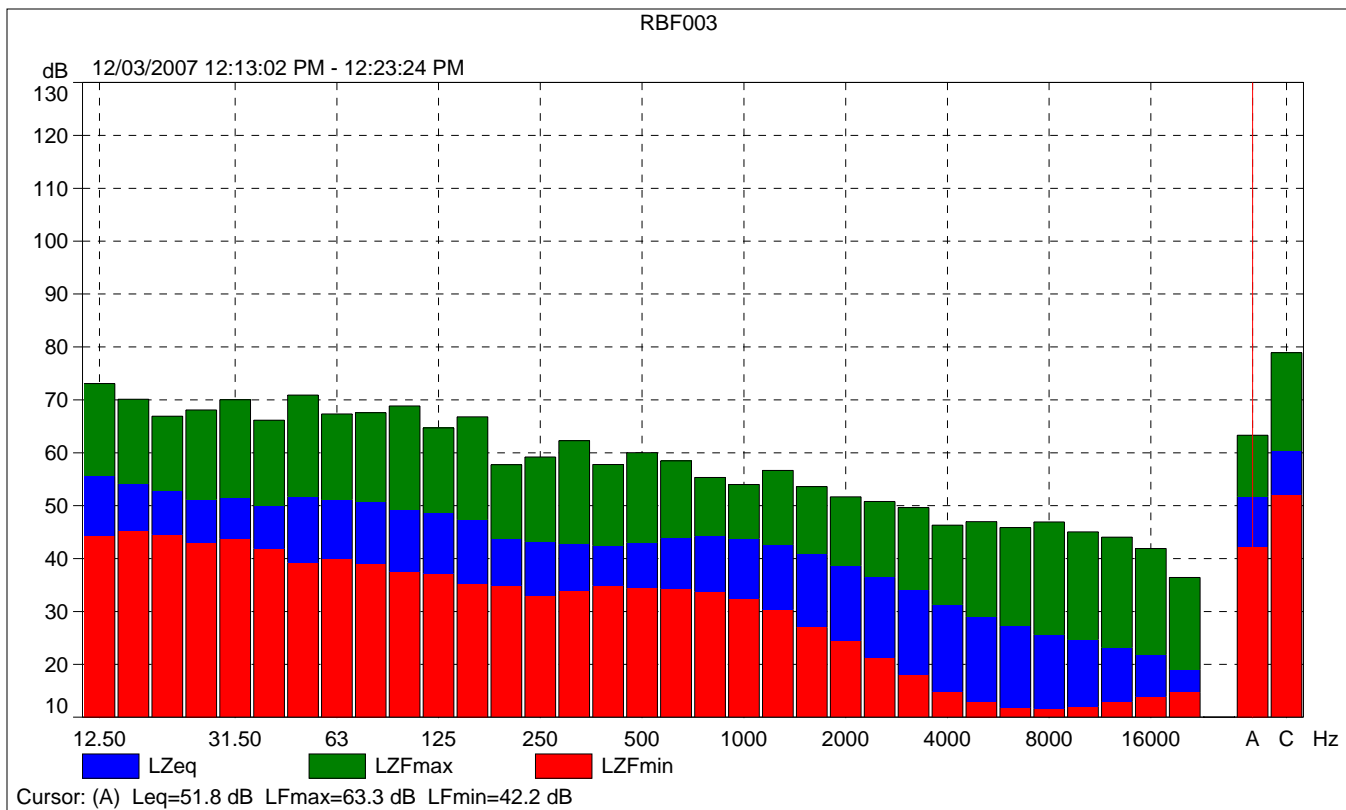
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

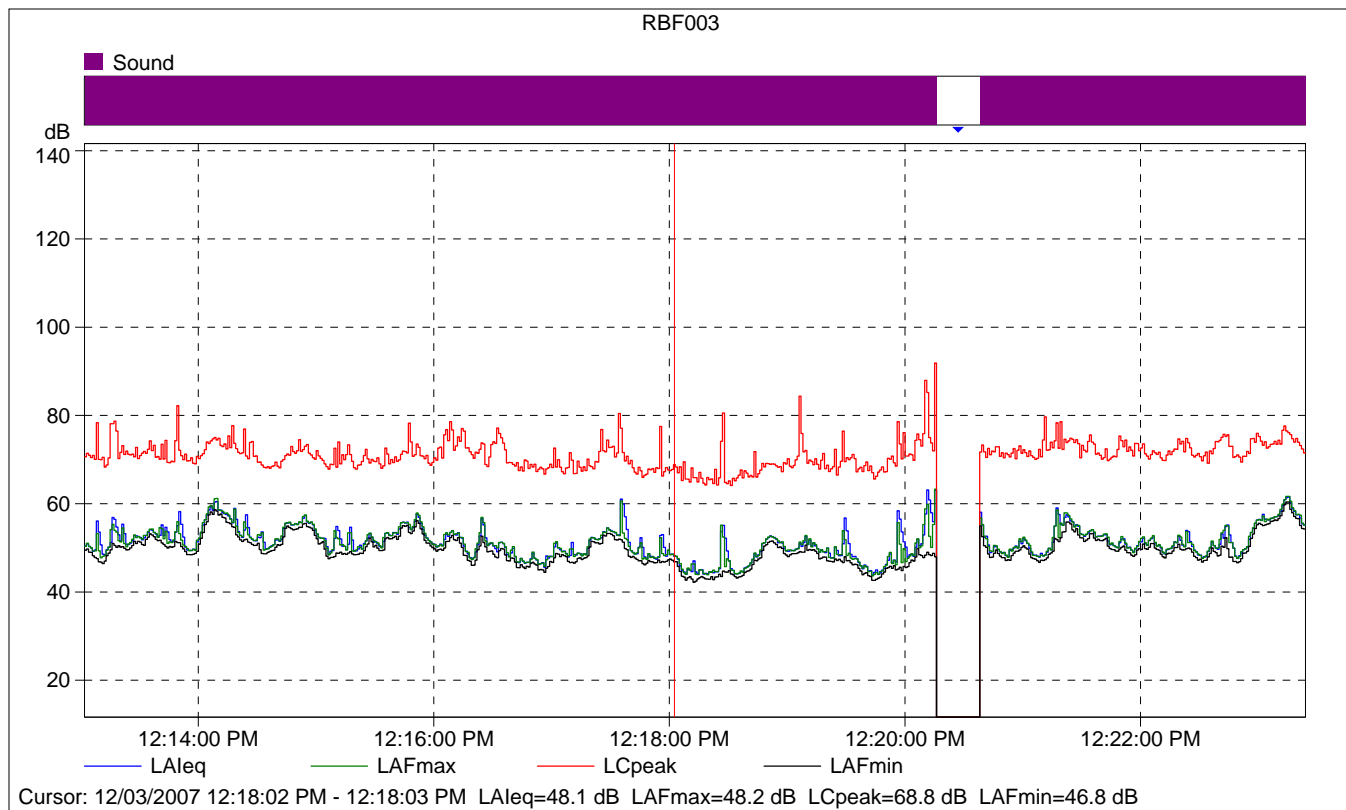
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Diffuse-field

Calibration Time:		11/14/2007 05:50:05
Calibration Type:		External reference
Sensitivity:		53.68 mV/Pa

RBF003

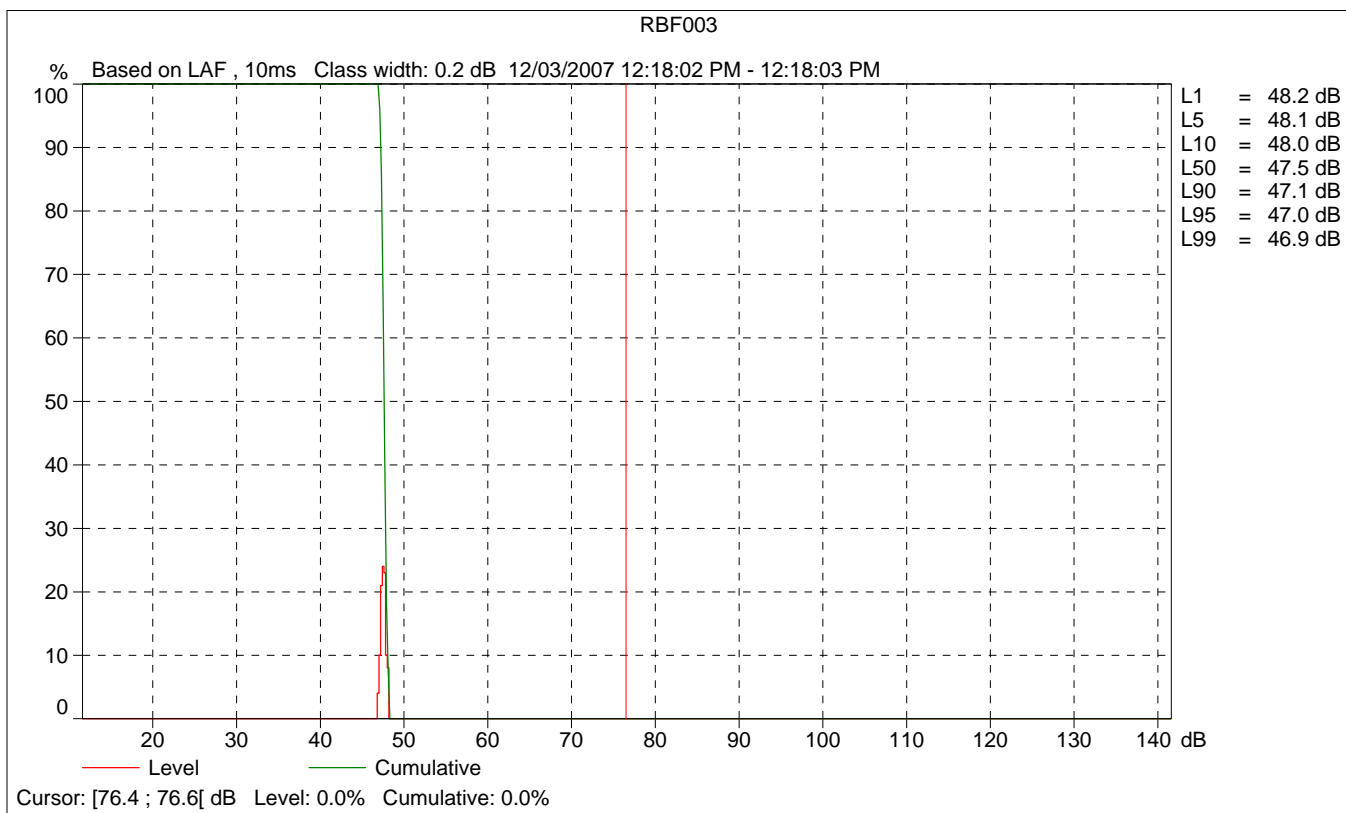
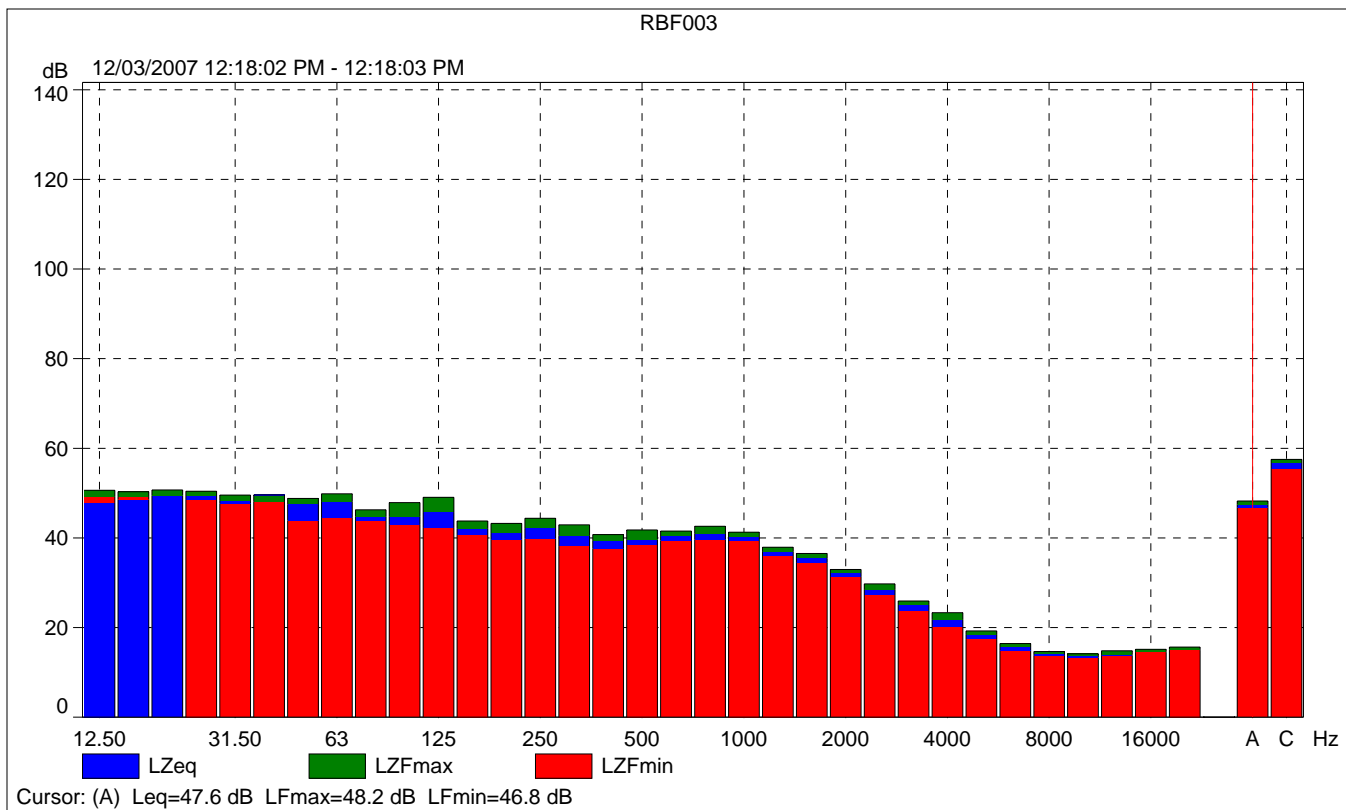
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	51.8	63.3	42.2
Time	12:13:02 PM	12:23:24 PM	0:10:00				
Date	12/03/2007	12/03/2007					

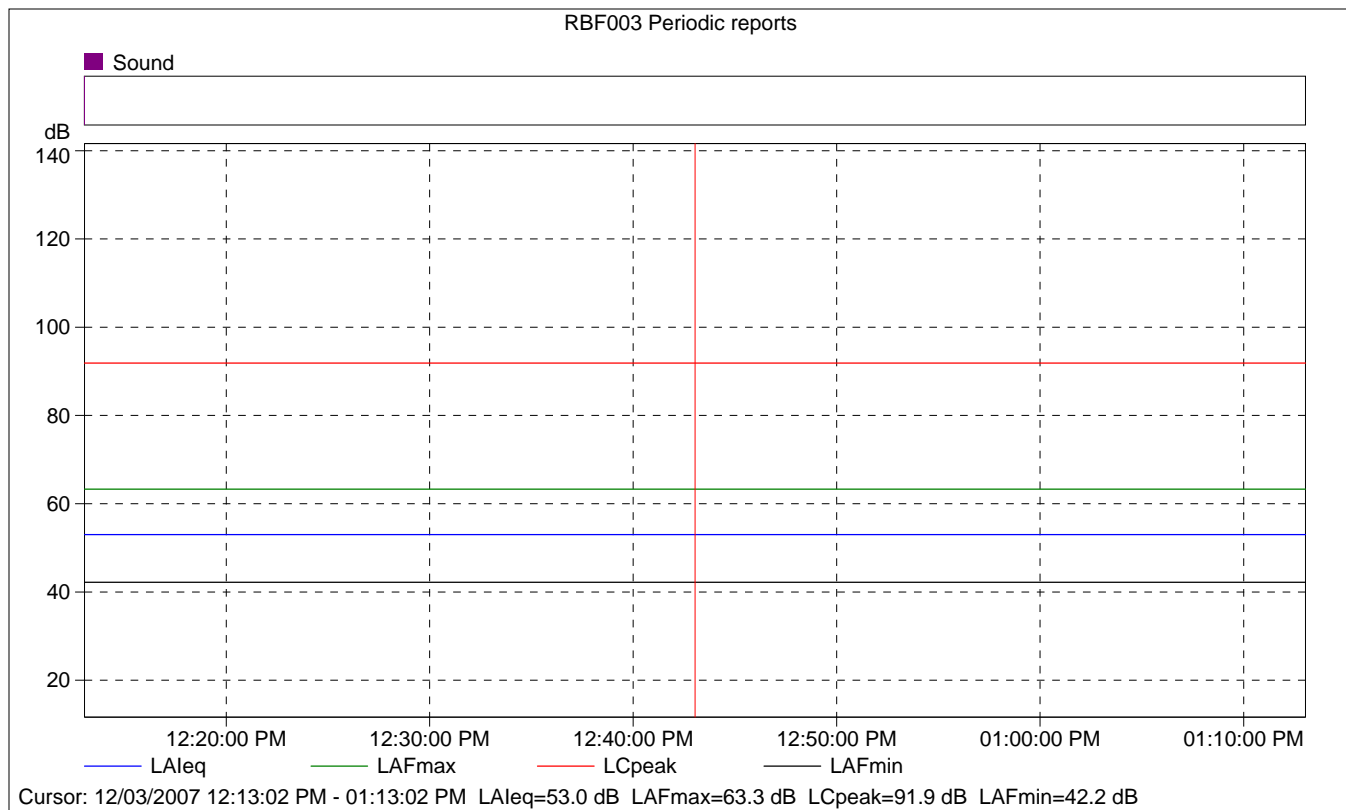




RBF003

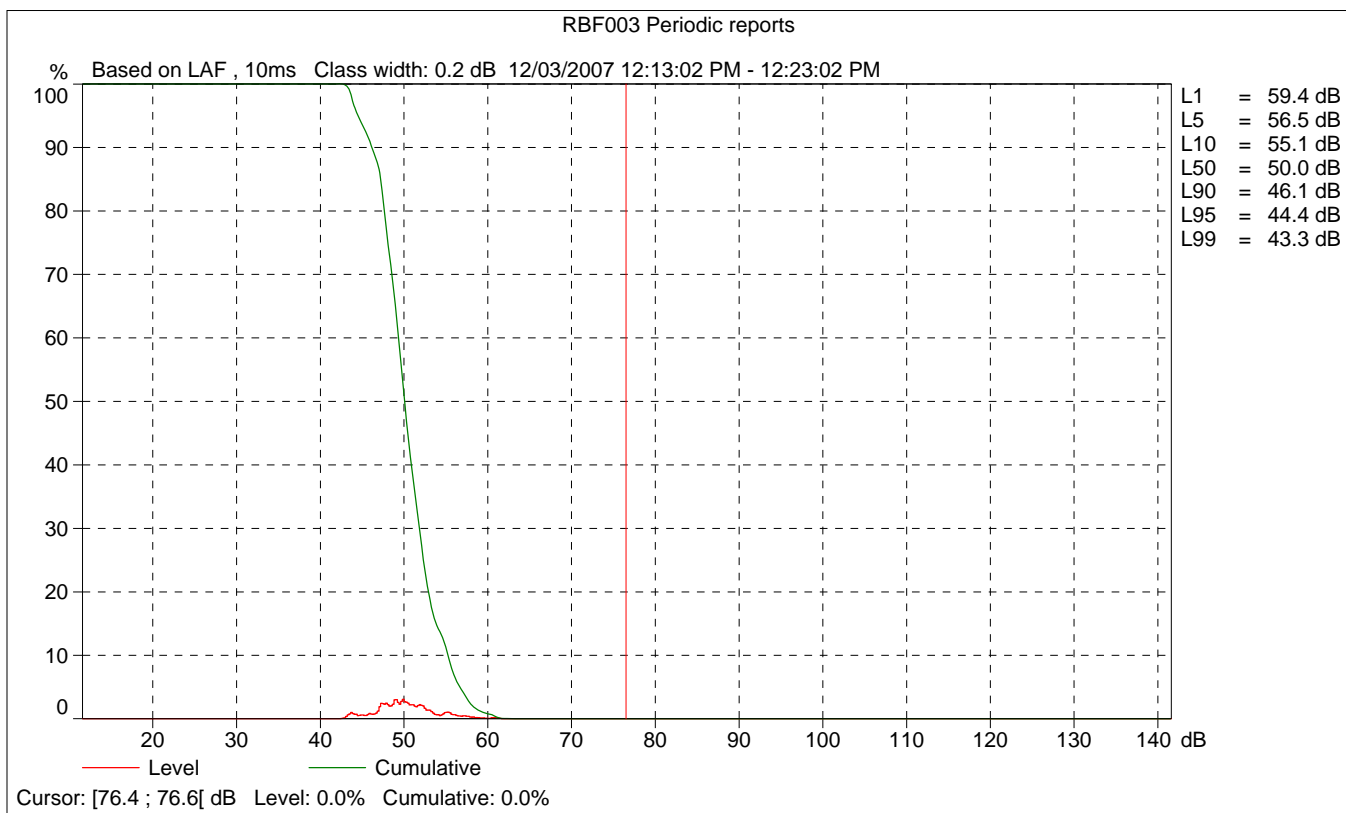
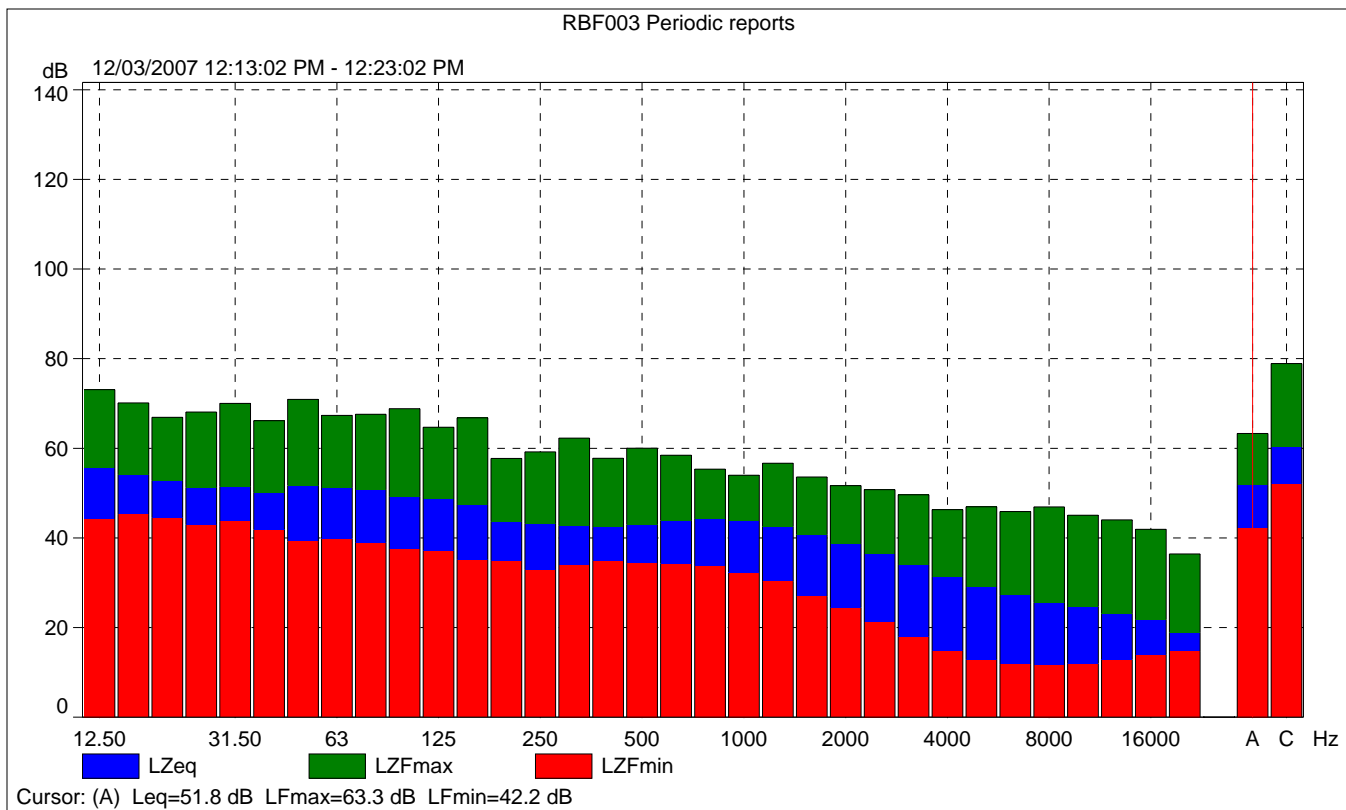
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			48.1	48.2	46.8
Time	12:18:02 PM	0:00:01			
Date	12/03/2007				

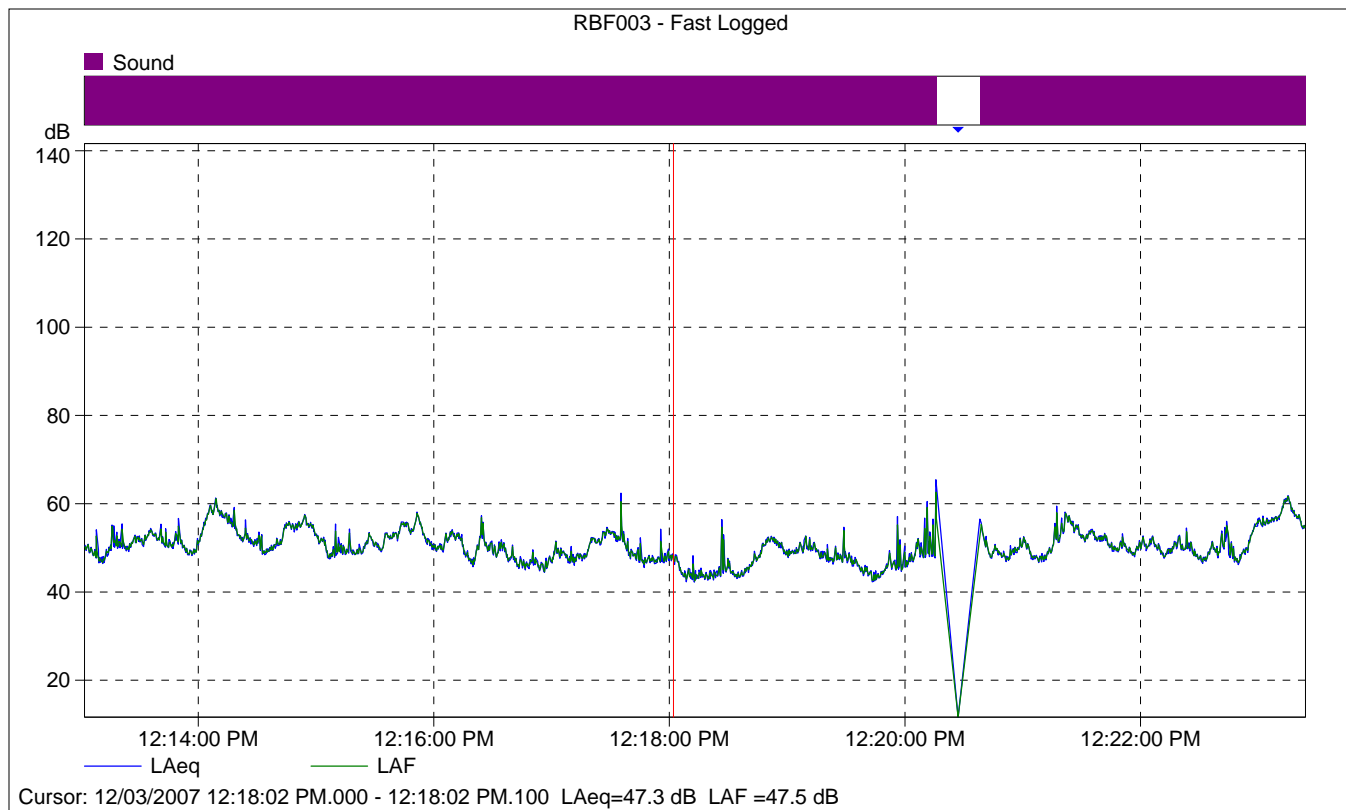




RBF003 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	53.0	63.3	42.2
Time	12:13:02 PM	0:10:00				
Date	12/03/2007					





RBF003 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			47.3
Time	12:18:02 PM	0:00:00.100	
Date	12/03/2007		

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Demolition

---- Receptor #1 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Excavator	No	40		80.7	268	0
Front End Loader	No	40		79.1	268	0
Flat Bed Truck	No	40		74.3	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	59.7	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.1	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
East	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dump Truck	No	40		76.5	185	0

Excavator	64.6	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.6	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Mass Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Excavator	No	40		80.7	268	0
Front End Loader	No	40		79.1	268	0
Front End Loader	No	40		79.1	268	0
Flat Bed Truck	No	40		74.3	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	59.7	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.1	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Dump Truck	No	40		76.5	185	0
Dump Truck	No	40		76.5	185	0
Dump Truck	No	40		76.5	185	0
Dump Truck	No	40		76.5	185	0
Dump Truck	No	40		76.5	185	0
Dump Truck	No	40		76.5	185	0
Excavator	No	40		80.7	185	0
Front End Loader	No	40		79.1	185	0
Front End Loader	No	40		79.1	185	0
Flat Bed Truck	No	40		74.3	185	0

Equipment	Results														
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Dump Truck	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Excavator	69.3	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Flat Bed Truck	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total	69.3	72.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Descriptor	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
West	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Dump Truck	No	40		76.5	320	0
Dump Truck	No	40		76.5	320	0
Dump Truck	No	40		76.5	320	0
Dump Truck	No	40		76.5	320	0

Dump Truck	No	40	76.5	320	0
Dump Truck	No	40	76.5	320	0
Excavator	No	40	80.7	320	0
Front End Loader	No	40	79.1	320	0
Front End Loader	No	40	79.1	320	0
Flat Bed Truck	No	40	74.3	320	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	60.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	64.6	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.6	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Fine Grading

---- Receptor #1 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Front End Loader	No	40		79.1	268	0
Front End Loader	No	40		79.1	268	0
Front End Loader	No	40		79.1	268	0
Flat Bed Truck	No	40		74.3	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)						
	*Lmax	Leq	Day Lmax	Evening Leq	Night Lmax	Leq	Day Lmax	Evening Leq	Night Lmax	Leq			
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	59.7	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.5	65.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
east	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Front End Loader	No	40		79.1	185	0
Front End Loader	No	40		79.1	185	0
Front End Loader	No	40		79.1	185	0
Flat Bed Truck	No	40		74.3	185	0

Results

Equipment	Calculated (dBA)	Noise Limits (dBA)	Noise Limit Exceedance (dBA)
-----------	------------------	--------------------	------------------------------

Equipment	Day				Evening				Night					
	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	67.7	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)		Daytime			Evening			Night		
Descriptor	Land Use	Daytime	Evening	Night	Daytime	Evening	Night	Daytime	Evening	Night
west	Commercial	1	1	1						

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	320	0
Front End Loader	No	40		79.1	320	0
Front End Loader	No	40		79.1	320	0
Flat Bed Truck	No	40		74.3	320	0

Equipment	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	63	64.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Equipment	Day				Evening				Night					
	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	69.3	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	69.3	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	67.7	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.3	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)		Daytime	Evening	Night
Descriptor	Land Use	1	1	1
West	Commercial			

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	320	0
Excavator	No	40		80.7	320	0
Front End Loader	No	40		79.1	320	0
Front End Loader	No	40		79.1	320	0

Results

Equipment	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Excavator	64.6	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	64.6	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.6	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Paving

---- Receptor #1 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Dump Truck	No	40		76.5	268	0
Paver	No	50		77.2	268	0
Paver	No	50		77.2	268	0
Compactor (ground)	No	20		83.2	268	0
Front End Loader	No	40		79.1	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	62.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	62.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	68.6	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.6	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
East	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dump Truck	No	40		76.5	185	0

Paver	61.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	67.1	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	67.1	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	268	0
Compressor (air)	No	40		77.7	268	0
Compressor (air)	No	40		77.7	268	0
Compressor (air)	No	40		77.7	268	0
Vibratory Concrete Mixer	No	20		80	268	0
Vibratory Concrete Mixer	No	20		80	268	0
Vibratory Concrete Mixer	No	20		80	268	0
Vibratory Concrete Mixer	No	20		80	268	0
Crane	No	16		80.6	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	66	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66	68.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
East	Commercial	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	185	0
Compressor (air)	No	40		77.7	185	0
Compressor (air)	No	40		77.7	185	0
Compressor (air)	No	40		77.7	185	0
Vibratory Concrete Mix	No	20		80	185	0
Vibratory Concrete Mix	No	20		80	185	0
Vibratory Concrete Mix	No	20		80	185	0
Vibratory Concrete Mix	No	20		80	185	0
Crane	No	16		80.6	185	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mix	68.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mix	68.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mix	68.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mix	68.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	69.2	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.2	71.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
West	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	320	0
Compressor (air)	No	40		77.7	320	0
Compressor (air)	No	40		77.7	320	0
Compressor (air)	No	40		77.7	320	0
Vibratory Concrete Mix	No	20		80	320	0
Vibratory Concrete Mix	No	20		80	320	0
Vibratory Concrete Mix	No	20		80	320	0
Vibratory Concrete Mix	No	20		80	320	0

Crane No 16 80.6 320 0

Equipment	Results														
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vibratory Concrete Mi	63.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vibratory Concrete Mi	63.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vibratory Concrete Mi	63.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vibratory Concrete Mi	63.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Crane	64.4	56.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total	64.4	66.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.0

Report date: 6/25/2008

Case Desc: Holiday Haus - Architectural Coatings

---- Receptor #1 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
North	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	268	0
Compressor (air)	No	40		77.7	268	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	63.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	63.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptor	Land Use	Daytime	Evening	Night
East	Commercial	1	1	1

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	185	0
Compressor (air)	No	40		77.7	185	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
West	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment			Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	
Compressor (air)	No	40		77.7	320	0
Compressor (air)	No	40		77.7	320	0

Equipment	Calculated (dBA)		Results						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	61.5	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	61.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.