Comprehensive Sound Survey
Alexco Keno Hill Mining Corp.
Keno Hill Silver District Operations
Yukon Territory

Revision 1

Prepared for:

Jennifer Anthony
Yukon Environmental and Socio-Economic Assessment Board

Prepared by:
Richard Patching, M.Eng., P.Eng.
Michel Freitas, PMP
Colin Spohr, Technician
Leslie Noble McCleave, Technician

of

Patching Associates Acoustical Engineering Ltd.
Consultants in Acoustics, Noise Control and Vibrations

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Executive Summary

Patching Associates Acoustical Engineering Ltd. (PAAE) was retained by the Yukon Environmental and Socio-Economic Assessment Board (YSAB) to evaluate the noise level from the existing Alexco Keno Hill Silver District Operations located around Keno City, 354 km north of Whitehorse, Yukon. Alexco Keno Hill Mining Corp (AKHM) currently operates the Bellekeno mine and Keno District Mill, and proposes to strengthen its operations by incorporating production of two new ore deposits in the Keno Hill Silver District.

The study was conducted in order to:

- Analyze and report the cumulative noise effect from Bellekeno operations and the mill - including any associated trucking activity and traffic noise on North Bypass Road, Wernecke Road, Sign Post Road, and Bellekeno Haul Rd within 2km radius from the Keno City centre.
- Comparison of noise impacts to Keno residents versus other similar sized communities (~20 residents).

Measurements were taken at five different monitoring locations between June 25, 2012 and June 29, 2012. This survey was not conducted in response to a specific noise complaint.

The sound levels presented below are for both daytime and nighttime periods during normal operations of the project in the Keno City district mining area. The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals. Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring locations, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level.

Not all of the data gathered can be considered representative, mainly due to contamination, though measurements that are representative are highlighted and tabulated. These highlighted and tabulated values are representative of both the cumulative noise effect of Keno District Mining Operations and associated trucking activity, and the ambient background noise as measured on the dates indicated.

Executive Summary (Continued)

The tables below show the measurement results for the Keno City area taken at five positions R1, 2, 3, 4, and 5, each with a B&K 2250 sound level meter. The values that are considered representative are highlighted and tabulated. The non-representative values will be explained later in this report.

Results of Measurements for All Locations (Representative)

Residence	Measured		Residual Incl. Other Facility		Measured Ambient	
	Day	Night	Day	Night	Day	Night
R02	**35**	**32**	**35**	**30**	**35**	**28**
R03	**41**	**37**	**33**	**28**	**27**	**26**
R04	**47**	**41**	**36**	**32**	**34**	**30**

Results of Measurements for All Locations (Non-Representative)

Residence	Measured		Residual Incl. Other Facility		Measured Ambient	
	Day	Night	Day	Night	Day	Night
R01	41	39	39	39	39	38
R05	37	36	35	36	34	-

Results of Measurements at R1, GPS Location: N63.90827 W135.29599

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	41	3.3	40	2.9	40	2.8
June 25 - June 26	40	9.0	40	7.9	40	4.0
June 26	41	15.0	39	11.7	39	11.1
June 26 - June 27	39	9.0	39	8.2	38	6.7
June 27	43	15.0	42	13.2	41	12.4
June 27 - June 28	40	9.0	39	8.0	39	7.5
June 28	42	9.6	39	13.1	39	8.2
June 28 - June 29	41	3.3	40	2.9	40	2.8

Executive Summary (Continued)

Results of Measurements at R2, GPS Location: N63.91019 W135.29968

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	**35**	**2.8**	**35**	**2.3**	**35**	**2.0**
June 25 - June 26	38	9.0	37	8.1	32	1.7
June 26	40	15.0	38	11.0	29	2.7
June 26 - June 27	35	9.0	35	7.2	32	2.1
June 27	49	15.0	38	7.9	36	2.1
June 27 - June 28	**32**	**9.0**	**30**	**7.8**	**28**	**6.2**
June 28	43	10.1	30	5.0	28	3.4

Results of Measurements at R3, GPS Location: N63.91023 W135.30205

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	38	6.1	40	2.2	32	0.0
June 25 - June 26	38	9.0	36	7.6	32	0.7
June 26	42	15.0	41	8.8	30	4.0
June 26 - June 27	35	9.0	34	4.4	29	1.5
June 27	39	15.0	37	5.3	32	2.5
June 27 - June 28	**37**	**9.0**	**28**	**2.3**	**26**	**1.4**
June 28	**41**	**15.0**	**33**	**6.1**	**27**	**4.2**
June 28 - June 29	35	9.0	31	1.8	27	1.5
June 29	46	7.1	37	1.0	32	0.6

Results of Measurements at R4, GPS Location: N63.91239 W135.30376

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	41	4.9	39	1.7	28	0.5
June 25 - June 26	40	9.0	36	6.7	35	0.3
June 26	44	15.0	39	6.7	32	6.3
June 26 - June 27	39	9.0	35	3.8	32	1.9
June 27	**47**	**15.0**	**36**	**3.6**	**34**	**3.3**
June 27 - June 28	**41**	**9.0**	**32**	**3.8**	**30**	**3.3**
June 28	44	15.0	44	7.5	30	6.8
June 28 - June 29	39	9.0	32	2.1	32	2.1
June 29	48	6.9	42	1.3	31	1.0

Executive Summary (Continued)

Results of Measurements at R5, GPS Location: N63.90851 W135.30993

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	37	3.6	36	1.3	39	0.0
June 25 - June 26	40	9.0	39	8.3	-	-
June 26	37	15.0	35	7.8	34	0.0
June 26 - June 27	36	9.0	36	8.2	-	-
June 27	37	15.0	36	10.0	26	0.7
June 27 - June 28	38	9.0	38	8.9	-	-
June 28	42	7.6	34	1.2	-	-

Note: The "-" denotes a period where a level could not be obtained due to the period in its entirety being contaminated by noise sources not indicative of Keno District Mining Operations and associated truck activity.

The results of this assessment indicate that the AKHM current mining and mill will have a minor noise impacts on the Keno City residences and is expected to have a minor noise level increase when compared with the same community, located in an area without industrial activity.

The LFN analysis conducted found no nights where an LFN component existed for any of the residences. The results indicate that there is no potential low frequency noise issue from the current Keno District Mining Operations and associated trucking activity in reference with the Alberta Energy Conservation Board Directive 038. The low frequency analysis showed that for the "worst case" residence (Residence 3), where a tonal component existed, the dBA-dBC level was 14.1.

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Introduction and Scope-of-Work

Patching Associates Acoustical Engineering Ltd. (PAAE) was retained by the Yukon Environmental and Socio-Economic Assessment Board (YSAB) to evaluate the noise level from the existing Alexco Keno Hill Silver District Operations located around Keno City, 354 km north of Whitehorse, Yukon. Alexco Keno Hill Mining Corp (AKHM) currently operates the Bellekeno mine and Keno District Mill, and proposes to strengthen its operations by incorporating production of two new ore deposits in the Keno Hill Silver District.

The study was conducted in order to:

- Analyze and report the cumulative noise effect from Bellekeno operations, Lucky Queen, Onek and the mill -including any associated trucking activity and traffic noise on North Bypass Road, Wernecke Road, Sign Post Road, and Bellekeno Haul Rd within 2km radius from the Keno City centre.
- Comparison of noise impacts to Keno residents versus other similar sized communities (~20 residents).

Measurements were taken at five different monitoring locations between June 25, 2012 and June 29, 2012. This survey was not conducted in response to any specific noise complaint.

Noise Criteria

Relative Noise Level Increase

A variety of sources in natural, industrial, and community settings generate sound/noise. In general, noise is defined as unwanted sound. Hearing damage is the most serious effect of noise, but the nuisance of particular sound characteristics may diminish the quality of life for those affected by the noise.

Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is just perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A doubling or halving of acoustic energy will change the resulting sound level by 3 dB, which corresponds to a change that is just perceptible. In practice, this means that a doubling of traffic volume on a roadway, doubling the number of people in a stadium, or doubling the number of wind turbines in a wind farm will, as a general rule, only result in a 3 dB, or just perceptible, increase in noise.

Relative Noise Level Increase

In order to facilitate design and discuss the potential impact for this project and in recognition of the suburban (semirural) nature of the immediate area near the existing and proposed mining operation, all the typical equipment for the current and future mining operations need to be considered, which include Bellekeno, Lucky Queen, Onek, the mill operations and the associated trucking activity and traffic noise. The sound level increase to the measured ambient that is attributed to current mining operations will be quantified to evaluate the noise impact to the Keno City area residents. The total sound level experienced in the Keno City residential area will be mining facility level combined with measured ambient noise level.

Low Frequency Noise (LFN)

LFN may be a problem in some situations where the dBA value is satisfactory but the concern is a dominant low frequency that creates a great deal of annoyance. The noise level "dBA" represents the level that a typical human listener would experience. The dBA descriptor simulates the human ear's low sensitivity to very low and very high frequency sound and is used to quantify human perception of noise at moderate levels. Another descriptor called "dBC" is sometimes used to quantify high level or lower frequency industrial noise. The dBC descriptor discounts lower frequency noise less than the dBA descriptor, and sound that is rich in lower frequency noise will have a high dBC level. In situations where noise levels are rich in Low Frequency Noise (LFN), some people may be less tolerant of the noise source.

Due to the complexity of determining LFN, this is a specialized investigation. The Alberta Energy Conservation Board (formerly Alberta Energy and Utilities Commission (AEUB)) Directive 038: Noise Control provides a procedure for determining if LFN is present. This Directive states that if the dBC-dBA sound level is greater than 20 dB and if there is a clear tonal component to the noise then there will be a potential low frequency noise concern and a 5 dBA penalty is applied to the facility sound level.

For the purposes of this study, to examine the impact of low frequency noise of the current Keno District Mining Operations and associated trucking activity, the dBC-dBA levels will be presented along with whether or not a tonal component exists for any of the residences. The dBC-dBA level and tonal components are typical metrics used to determine if there is a low frequency noise concern.

Methodology

The sound monitoring survey at all monitoring locations were conducted with Brüel & Kjær Model 2250 Precision Sound Level Meters and a Brüel & Kjær Model 4189 microphones. The microphones were mounted with windscreens to reduce the potential for wind-induced noise at the microphone, as required by the Directive. The sound level meters were calibrated at the beginning and confirmed during the survey with a Brüel & Kjær Model 4231 Sound Level Calibrator. Sound recording equipment recorded the sound at the residence for the whole period. These sound recordings were used to help identify the source of different noises.

During the sound survey, weather monitoring equipment continuously recorded the wind speed, wind direction, temperature and humidity in the vicinity of Keno City.

Table 1 shows a summary of the major equipment used for this survey and the calibration dates for this equipment.

Table 1: Instrumentation Summary

Equipment	Manufacturer	Instrument Model / SN	Microphone Model / SN	Last Calibration	Calibration Valid
Sound Level Meter 2250 #1	Bruel & Kjaer	2473172	2458606	August 9, 2010	Yes
Sound Level Meter 2250 #3	Bruel & Kjaer	2671998	2656149	July 1, 2011	Yes
Sound Level Meter 2250 #3x	Bruel & Kjaer	2449977	1783633	Nov 8, 2011	Yes
Sound Level Meter 2250 #5x	Bruel & Kjaer	2548173	2573809	Feb 16, 2012	Yes
Sound Level Meter 2250 #7x	Bruel & Kjaer	2575763	2441206	July 27, 2011	Yes
Sound Meter Calibrator 4231 #5	Bruel & Kjaer	2524723	-	July 20, 2011	Yes
Weather Station #2	Nova Lynx	110-WS-18B	-	-	Yes

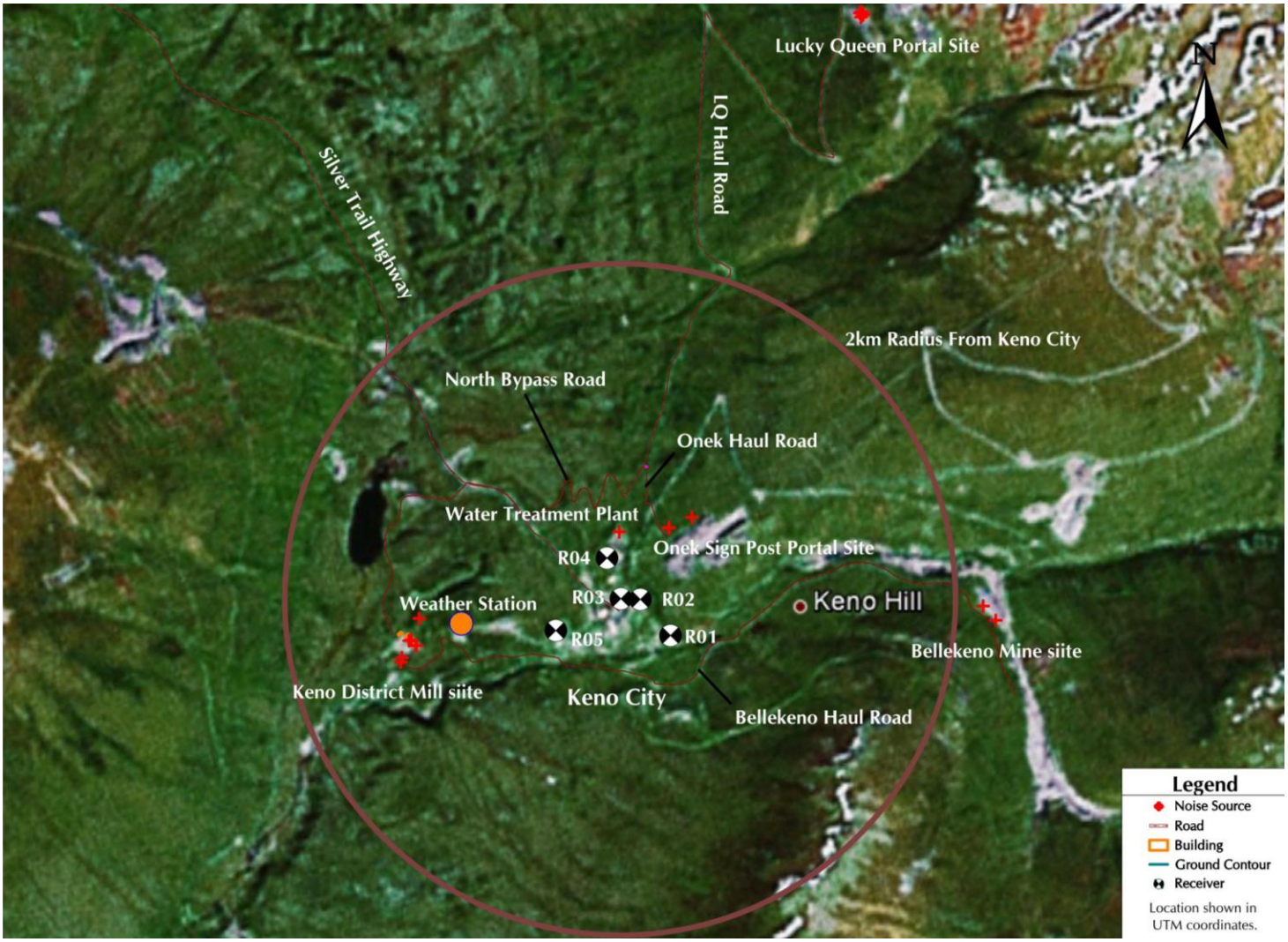
All equipment used for this study was operating according to acceptable standards.

Monitoring Locations

The project study area is located around Keno City, 354 km north of Whitehorse, Yukon. The terrain cover around the facility is mainly forested. Alexco Keno Hill Mining Corp (AKHM) currently operates the Bellekeno mine and Keno District Mill and proposes to strengthen its operation by incorporating production of two (Lucky Queen and Onek) new ore deposits in the Keno Hill Silver District. These mining operations are located around the Keno City residential area.

This study assesses the noise levels of the current facility at five receivers representing potential noise sensitive areas in the Keno City residential area Figure 1 shows a map of the study area and Table 2 describes each monitoring location.

Figure 1: Study Map



Aerial Image Courtesy of Google Earth Pro, Version 5.0.11733.9347 Licensed to Patching Associates Acoustical Engineering

Monitoring Locations (Continued)

Table 2: Monitoring Locations

Equipment	GPS Location	Residence	Comments
Sound Level Meter 2250 #5x	N63.90827 W135.29599	R01	• Located at east end residence, north side of Lightning Creek Road, 4 metres from east side of house • Area surrounding residential lot is grassy, with no direct line of site to any facilities • Microphone is 1.5 m above ground
Sound Level Meter 2250 #3x	N63.91019 W135.29968	R02	• Located at residence, east side of Sign Post Road, 24 metres east of house • Area surrounding residential lot is grassy and treed, with clear cut areas. Residential lot is backed by a hill with no direct line of site to any facilities • Microphone is 1.5 m above ground
Sound Level Meter 2250 #1	N63.91023 W135.30205	R03	• Located at the Keno City Town Center, 16 metres north from the Snack Bar • Area surrounding residential lot is mainly grassy with treed areas. There is no direct line of site to any facilities • Microphone is 1.5 m above ground
Sound Level Meter 2250 #3	N63.91239 W135.30376	R04	• Located at residence, west side of Wernecke Road, 4 metres east of house • Area surrounding residential lot is mainly treed, with no direct line of site to any facilities • Microphone is 1.5 m above ground
Sound Level Meter 2250 #7x	N63.90851 W135.30993	R05	• Located at residence, approximately 850m east from the Mill, and 14 metres from house • Area surrounding residential lot is grassy, with treed areas. Residential lot is backed by a hill with no direct line of site to any facilities • Microphone is 1.5 m above ground
Weather Station	N63.90879 W135.32158	-	• Area is rolling and mainly forested • Environmental sensors located approximately 1.75 m above grade

Environmental Conditions

The local observation records of wind velocity and direction measured in the area are presented in Appendix B. Table 3 summarizes the wind conditions for both the daytime and nighttime periods of the survey.

Table 3 – Wind Conditions for the study Period in the Keno City Area

Table 3: Wind Conditions in the Area – Nighttime Periods

Date (2012)	Average Wind Speed (kph)	General Direction	General Wind Conditions
June 25	7.4	SW	Light wind
June 25 - June 26	4.5	SW - SE	Light wind
June 26	5.5	S	Light wind
June 26 - June 27	3.8	SE	Light wind
June 27	7.3	SW	Light wind
June 27 - June 28	2.3	SE	Light wind
June 28	3.2	SE	Light wind

The environmental conditions captured during the test were valid for this type of study. Invalid conditions for this type of study are commonly due to strong wind resulting in noise contamination in the microphone.

Results and Discussion

This report is purposed to assess the noise effect of current Keno District Mining Operations and associated trucking activity as well as to compare the noise impact of the current facility to Keno residents versus the same community located in an area without industrial activity, the sound level of ambient including facility noise will be compared to a measured ambient level. The measured ambient level is taken as the background sound level of the same community located in an area without industrial activity.

The measured sound levels are presented below are first the representative levels for all residences and then for residences 1 to 5. The sound levels presented for each resident are for both the daytime and nighttime periods. In addition, a Low Frequency Noise Analysis was conducted to determine the dBA-dBC level and if a tonal component exists at the residences.

Results and Discussion (Continued)

Representative Sound Levels

Table 5 shows the measurement results for the Keno City district mining area what are considered to be representative of ambient levels for Keno City area residents and for residents of the same community, located in an area without industrial activity. These measurements were taken with a 2250 sound level meter.

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals.

Table 5: Results of Measurements for All Locations (Representative)

Residence	Measured		Residual Incl. Other Facility		Measured Ambient	
	Day	Night	Day	Night	Day	Night
R01	-	-	-	-	-	-
R02	**35**	**32**	**35**	**30**	**35**	**28**
R03	**41**	**37**	**33**	**28**	**27**	**26**
R04	**47**	**41**	**36**	**32**	**34**	**30**
R05	-	-	-	-	-	-

As shown above there are no representative results for Residences 1 and 5, this is primarily due to the proximity of the Residences to noise sources that contaminated the measurements. This proximity artificially inflates first the ambient noise level, and in turn, misrepresents residual level that includes other facility noise. For Residences 2, 3 and 4, the measured levels are considered representative for those measurement positions.

The daytime L_{eq} ("average") sound levels which include noise indicative of the Keno District Mining Operations and associated truck activity range from 33 dBA to 36 dBA, and the nighttime L_{eq} ("average") sound levels, which include noise indicative of the Keno District Mining Operations and associated truck activity range from 28 dBA to 32 dBA. Furthermore, the daytime L_{eq} ("average") ambient sound levels, which would be representative of the same community, located in an area without industrial activity, range from 27 dBA to 35 dBA, and the nighttime L_{eq} ("average") ambient sound levels, which would be representative of the same community located in an area without industrial activity, ranges from 26 dBA to 30 dBA.

The cumulative noise effect of Keno District Mining Operations and associated truck activity and the noise impacts to Keno residents versus the same community located in an area without industrial activity, ranges from 0 dBA to 6 dBA during the daytime and is 2 dBA during the nighttime.

Results and Discussion (Continued)

Residence 1 - Measurements

Table 6 shows the measurement results for the Keno City district mining area taken at Residence 1 with a 2250 sound level meter.

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals.

Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. This sound level is representative of the cumulative noise effect of Keno District Mining Operations and associated trucking activity, as measured on the dates indicated. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring location, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level and is representative of the ambient background noise as measured on the dates indicated.

Table 6: Results of Measurements at R1, GPS Location: N63.90827 W135.29599

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	41	3.3	40	2.9	40	2.8
June 25 - June 26	40	9.0	40	7.9	40	4.0
June 26	41	15.0	39	11.7	39	11.1
June 26 - June 27	39	9.0	39	8.2	38	6.7
June 27	43	15.0	42	13.2	41	12.4
June 27 - June 28	40	9.0	39	8.0	39	7.5
June 28	42	9.6	39	13.1	39	8.2
June 28 - June 29	41	3.3	40	2.9	40	2.8

The levels presented above are not representative of the current noise impact of Keno District Mining Operations and associated trucking activity to Keno City area residents, nor are the ambient levels representative of a typical ambient level in the Keno City area. This is due to the in-ability to compare the levels obtained at this Residence, to levels obtained at other residences as Lightning creek is the dominant source at this location and is not a source at the other locations.

Residence 1 – Measurements (Continued)

See Appendix C for graphs of the sound level results for Residence 1. The graphs showing the residual sound level ***including*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Fac" suffix. The graphs showing the measured ambient sound level or residual sound level ***excluding*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Amb" suffix. Appendix E also contains the tabulated L_{eq} sound levels for each day and night when sound data was captured.

Trucking activity associated with Keno District Mining Operations was audible at times throughout the study but the levels directly attributable to this activity were not the dominant noise source. Not all of the background noise sources could be removed from the data set and the residual sound levels are still influenced by background sound sources like a local stream, local human activity, wind or animals and other environmental sounds. The noise levels due to the Keno District Mining Operations and associated trucking activity are likely lower than the residual sound levels shown above.

Residence 2 - Measurements

Table 7 shows the measurement results for the Keno City district mining area taken at Residence 2 with a 2250 sound level meter.

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals. Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. This sound level is representative of the cumulative noise effect of Keno District Mining Operations and associated trucking activity, as measured on the dates indicated. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring location, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level and is representative of the ambient background noise as measured on the dates indicated.

Table 7: Results of Measurements at R2, GPS Location: N63.91019 W135.29968

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	**35**	**2.8**	**35**	**2.3**	**35**	**2.0**
June 25 - June 26	38	9.0	37	8.1	32	1.7
June 26	40	15.0	38	11.0	29	2.7
June 26 - June 27	35	9.0	35	7.2	32	2.1
June 27	49	15.0	38	7.9	36	2.1
June 27 - June 28	**32**	**9.0**	**30**	**7.8**	**28**	**6.2**
June 28	43	10.1	30	5.0	28	3.4

Residence 2 – Measurements (Continued)

Not all of the levels presented above are representative of the current noise impact of Keno District Mining Operations and associated trucking activity to Resident 2, nor are all of the ambient levels representative of a typical ambient level in the Keno City area. This is primarily due to contamination of measurement results artificially inflating the ambient noise level, and in turn, misrepresenting the residual level that includes other facility noise. Because of this, only one daytime and one nighttime level obtained at Resident was used in the representative results table.

See Appendix D for graphs of the sound level results for Residence 2. The graphs showing the residual sound level ***including*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Fac" suffix. The graphs showing the measured ambient sound level or residual sound level ***excluding*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Amb" suffix. Appendix E also contains the tabulated L_{eq} sound levels for each day and night that sound data was captured.

The Keno District Mill and associated trucking activity was audible at times throughout the study but the levels directly attributable to this activity were not the dominant noise source. Not all of the background noise sources could be removed from the data set and the residual sound levels are still influenced by background sound sources like a local stream, local human activity, wind or animals and other environmental sounds. The noise levels due to the Keno District Mining Operations and associated trucking activity are likely lower than the residual sound levels shown above.

Residence 3 - Measurements

Table 8 shows the measurement results for the Keno City district mining area taken at Residence 3 with a 2250 sound level meter.

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals. Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. This sound level is representative of the cumulative noise effect of Keno District Mining Operations and associated trucking activity, as measured on the dates indicated. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring location, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level and is representative of the ambient background noise as measured on the dates indicated.

Residence 3 – Measurements (Continued)

Table 8: Results of Measurements at R3, GPS Location: N63.91023 W135.30205

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	38	6.1	40	2.2	32	0.0
June 25 - June 26	38	9.0	36	7.6	32	0.7
June 26	42	15.0	41	8.8	30	4.0
June 26 - June 27	35	9.0	34	4.4	29	1.5
June 27	39	15.0	37	5.3	32	2.5
June 27 - June 28	**37**	**9.0**	**28**	**2.3**	**26**	**1.4**
June 28	**41**	**15.0**	**33**	**6.1**	**27**	**4.2**
June 28 - June 29	35	9.0	31	1.8	27	1.5
June 29	46	7.1	37	1.0	32	0.6

Not all of the levels presented above are representative of the current noise impact of Keno District Mining Operations and associated trucking activity to Resident 3, nor are all of the ambient levels representative of a typical ambient level in the Keno City area. This is primarily due to contamination of measurement results artificially inflating the ambient noise level, and in turn, misrepresenting the residual level that includes other facility noise. Because of this, only one daytime and one nighttime level obtained at Resident was used in the representative results table.

See Appendix E for graphs of the sound level results for Residence 4. The graphs showing the residual sound level ***including*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Fac". The graphs showing the measured ambient sound level or residual sound level ***excluding*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Amb". Appendix E also contains the tabulated L_{eq} sound levels for each day and night that sound data was captured.

The Keno District Mill and associated trucking activity was audible at times throughout the study but the levels directly attributable to this activity were not the dominant noise source. Not all of the background noise sources could be removed from the data set and the residual sound levels are still influenced by background sound sources like a local stream, local human activity, wind or animals and other environmental sounds. The noise levels due to the Keno District Mining Operations and associated trucking activity are likely lower than the residual sound levels shown above.

Residence 4 - Measurements

Table 9 shows the measurement results for the Keno City district mining area taken at Residence 4 with a 2250 sound level meter.

Residence 4 – Measurements (Continued)

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals. Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. This sound level is representative of the cumulative noise effect of Keno District Mining Operations and associated trucking activity, as measured on the dates indicated. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring location, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level and is representative of the ambient background noise as measured on the dates indicated.

Table 9: Results of Measurements at R4, GPS Location: N63.91239 W135.30376

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	41	4.9	39	1.7	28	0.5
June 25 - June 26	**40**	**9.0**	**36**	**6.7**	**35**	**0.3**
June 26	44	15.0	39	6.7	32	6.3
June 26 - June 27	**39**	**9.0**	**35**	**3.8**	**32**	**1.9**
June 27	47	15.0	36	3.6	34	3.3
June 27 - June 28	**41**	**9.0**	**32**	**3.8**	**30**	**3.3**
June 28	44	15.0	44	7.5	30	6.8
June 28 - June 29	**39**	**9.0**	**32**	**2.1**	**32**	**2.1**
June 29	48	6.9	42	1.3	31	1.0

Not all of the levels presented above are representative of the current noise impact of Keno District Mining Operations and associated trucking activity to Resident 4, nor are all of the ambient levels representative of a typical ambient level in the Keno City area. This is primarily due to contamination of measurement results artificially inflating the ambient noise level, and in turn, misrepresenting the residual level that includes other facility noise. Because of this, only one daytime and one nighttime level obtained at Resident was used in the representative results table.

See Appendix F for graphs of the sound level results for Residence 4. The graphs showing the residual sound level ***including*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Fac". The graphs showing the measured ambient sound level or residual sound level ***excluding*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Amb". Appendix E also contains the tabulated L_{eq} sound levels for each day and night that sound data was captured.

Residence 4 – Measurements (Continued)

The Keno District Mill and associated trucking traffic was audible at times throughout the study but the levels directly attributable to the facility were not the dominant noise source. Not all of the background noise sources could be removed from the data set and the residual sound levels are still influenced by background sound sources like wind, local human activity or animals and other environmental sounds. The noise levels due to the Keno District Mining Operations and associated trucking activity are likely lower than the residual sound levels shown above.

Residence 5 - Measurements

Table 10 shows the measurement results for the Keno City district mining area taken at Residence 5 with a 2250 sound level meter.

The survey results contained short-term higher-level sound events that were not indicative of the Keno District Mining Operations and associated trucking activity and are generally attributed to local human activity, rain, wind, birds and other animals. Where possible, the non-facility short-term sounds were isolated from the comprehensive sound level data set and the remaining facility and ambient noise is represented by the "Residual Incl. Other Facility" sound level. This sound level is representative of the cumulative noise effect of Keno District Mining Operations and associated trucking activity, as measured on the dates indicated. A secondary analysis was conducted to ascertain the ambient sound level at the monitoring location, that is, any noise indicative of the Keno District Mining Operations and associated trucking activity was further isolated. This sound level is represented by the "Measured Ambient" sound level and is representative of the ambient background noise as measured on the dates indicated.

Table 10: Results of Measurements at R5, GPS Location: N63.90851 W135.30993

Date (2012)	Measured		Residual Incl. Other Facility		Measured Ambient	
	Leq (dBA)	Hours	Leq (dBA)	Hours	Leq (dBA)	Hours
June 25	37	3.6	36	1.3	39	0.0
June 25 - June 26	40	9.0	39	8.3	-	-
June 26	37	15.0	35	7.8	34	0.0
June 26 - June 27	36	9.0	36	8.2	-	-
June 27	37	15.0	36	10.0	26	0.7
June 27 - June 28	38	9.0	38	8.9	-	-
June 28	42	7.6	34	1.2	-	-

The levels presented above are not representative of the current noise impact of Keno District Mining Operations and associated trucking activity to Keno City area residents, nor are the ambient levels representative of a typical ambient level in the Keno City area. This is primarily due to the proximity of Resident 5 to some temporary drilling operations, not associated to this study. This proximity artificially inflates the ambient noise level, and in turn, misrepresents residual level that includes other facility noise.

Residence 5 – Measurements (Continued)

See Appendix G for graphs of the sound level results for Residence 5. The graphs showing the residual sound level ***including*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Fac". The graphs showing the measured ambient sound level or residual sound level ***excluding*** noise indicative of the Keno District Mining Operations and associated trucking activity are denoted with a ".Amb". Appendix E also contains the tabulated L_{eq} sound levels for each day and night that sound data was captured.

The fields without a value in the table above are a result of the inability to obtain an ambient level due to the noise produced by the temporary drilling operations in the Keno City area, trucking activity or other facility related noise. Not all of the background noise sources could be removed from the data set and the residual sound levels are still influenced by background sound sources like wind, local human activity or animals and other environmental sounds. The noise levels due to the Keno District Mining Operations and associated trucking activity are likely lower than the residual sound levels shown above.

Low Frequency Noise Analysis

A Low Frequency Noise (LFN) analysis was conducted to determine the existence of low frequency noise at Residences 1 to 5. Several periods were selected to study in greater detail, which were identified by PAAE to contain higher levels of facility noise.

Table 11.1 to 11.5 presents details of each daytime and nighttime as the dBC-dBA value and whether of not a tonal component exists for Residences 1 to 5 respectively. Appendix G contains graphs of the analysis conducted.

Low Frequency Noise Analysis (Continued)

Table 11.1: Low Frequency Noise Summary, Residence 1

Date (2012)	Tonal Component (< 250Hz)	dBC-dBA
June 25	No	5.2
June 25 - June 26	No	4.2
June 26	No	6.2
June 26 - June 27	No	4.4
June 27	No	6.1
June 27 - June 28	No	3.7
June 28	No	6.5

As shown above there was no tonal components present during the study periods, and the dBA-dBC ranged from 3.7 to 6.5. Though these measurements are not considered representative as the ambient sound levels were artificially inflated, due to contamination.

Table 11.2: Low Frequency Noise Summary, Residence 2

Date (2012)	Tonal Component (< 250Hz)	dBC-dBA
June 25	No	10.2
June 25 - June 26	No	5.4
June 26	No	12.1
June 26 - June 27	No	5.9
June 27	No	11.8
June 27 - June 28	No	6.1
June 28	No	15.3

As shown above there was no tonal components present during the study periods, and the dBA-dBC ranged from 5.4 to 15.3.

Table 11.3: Low Frequency Noise Summary, Residence 3

Date (2012)	Tonal Component (< 250Hz)	dBC-dBA
June 25	No	13.1
June 25 - June 26	No	7.8
June 26	No	11.4
June 26 - June 27	No	10
June 27	No	16.8
June 27 - June 28	**Yes**	**14.1**
June 28	No	17.5
June 28 - June 29	**Yes**	**13.7**
June 29	No	16.6

Low Frequency Noise Analysis (Continued)

As shown above there was a tonal component present during two nights of the study, and the dBA-dBC ranged from 7.8 to 16.8.

Table 11.4: Low Frequency Noise Summary, Residence 4

Date (2012)	Tonal Component (< 250Hz)	dBC-dBA
June 25	No	7.9
June 25 - June 26	No	5.7
June 26	**Yes**	**10.7**
June 26 - June 27	Yes	6.1
June 27	No	10.6
June 27 - June 28	**Yes**	**8.2**
June 28	**Yes**	**7.7**
June 28 - June 29	No	8.8
June 29	No	8.7

As shown above there was a tonal component present during two days and one night of the study, and the dBA-dBC ranged from 5.7 to 10.7.

Table 11.5: Low Frequency Noise Summary, Residence 5

Date (2012)	Tonal Component (< 250Hz)	dBC-dBA
June 25	**Yes**	**9.9**
June 25 - June 26	**Yes**	**6.4**
June 26	No	14.7
June 26 - June 27	**Yes**	**7.9**
June 27	**Yes**	**11.4**
June 27 - June 28	**Yes**	**5.9**
June 28	**Yes**	**12.4**

As shown above there was a tonal component present during three days and three nights of the study, and the dBA-dBC ranged from 5.9 to 14.7. Though these measurements are not considered representative as the ambient sound levels were artificially inflated, due to contamination.

The LFN analysis conducted found no nights where an LFN component existed for any of the residences. The results indicate that there is no potential low frequency noise issue from the current Keno District Mining Operations and associated trucking activity in reference with the Alberta Energy Conservation BoardDirective 038.

Conclusion

The results of this assessment indicate that the AKHM current mining and mill will have a minor noise impacts on the Keno City residences and is expected to have a minor noise level increase when compared with the same community, located in an area without industrial activity.

For the daytime, the results showed an increase of 0dBA to 6 dBA and for the nighttime the results showed an increase of 2 dBA.

The LFN analysis conducted found no nights where an LFN component existed for any of the residences. The results indicate that there is no potential low frequency noise issue from the current Keno District Mining Operations and associated trucking activity in reference with the Alberta Energy Conservation Board Directive 038. The low frequency analysis showed that for the "worst case" residence (Residence 3), where a tonal component existed, the dBA-dBC level was 14.1.

APPENDIX A

Explanation of Technical Details Regarding Sound Measurement and Analysis

Technical Details

Sound is the phenomena of vibrations transmitted through air, or other medium such as water or a building structure. The range of pressure amplitudes, intensities, and frequencies of the sound energy is very wide, and many specialized fields have developed using different ranges of these variables, such as room acoustics and medical ultrasound.

Due to the wide range of intensities, which are perceived as sound, standard engineering units become inconvenient. Sound levels are commonly measured on a logarithmic scale, with the level (in decibels, or dB) being proportional to ten times the common logarithm of the sound energy or intensity. Normal human hearing covers a range of about twelve to fourteen orders of magnitude in energy, from the threshold of hearing to the threshold of pain. On the decibel scale, the threshold of hearing is set as zero, written as 0 dB, while the threshold of pain varies between 120 to 140 dB. The most usual measure of sound is the sound pressure level (SPL), with 0 dB SPL set at 2.0×10^{-5} N/m^2 (also written 20 μPa), which corresponds to a sound intensity of 10^{-12} Watts per square metre (or 1 picoWatt per square metre, written 1 pW/m^2).

Normal human hearing spans a frequency range from about 20 Hertz (Hz, or cycles per second) to about 20,000 Hz (written 20 KHz). However, the sensitivity of human hearing is not the same at all frequencies. To accommodate the variation in sensitivity, various frequency-weighting scales have been developed. The most common is the A-weighting scale, which is based on the sensitivity of human hearing at moderate levels; this scale reflects the low sensitivity to sounds of very high or very low frequencies. Sound levels measured on the A-weighted scale are written in A-weighted decibels, commonly shown as dBA or dB(A).

When sound is measured using the A-weighting scale, the reading is often called the "Noise level"; to confirm that human sensitivity and reactions are being addressed. A table of some common noise sources and their associated noise levels are shown in Table A1.

When the A-weighting scale is not used, the measurement is said to have a "linear" weighting, or to be unweighted, and may be called a "linear" level. As the linear reading is an accurate measurement of the physical (sound) pressure, the term "Sound Pressure Level", or SPL, is usually (but not universally) reserved for unweighted measurements.

Noise is usually defined as "unwanted sound", which indicates that it is not just the physical sound that is important, but also the human reaction to the sound that leads to the perception of sound as noise. It implies a judgment of the quality or quantity of sound experienced. As a human reaction to sound is involved, noise levels are usually given in A-weighted decibels (dBA). An alternate definition of noise is "sound made by somebody else", which emphasizes that the ability to control the level of the sound alters the perception of noise.

Table A2- Noise Levels of Familiar Sources

Source Or Environment	Noise Level (dBA)
High Pressure Steam Venting To Atmosphere (3m)	121
Steam Boiler (2m)	90-95
Drilling Rig (10m)	80-90
Pneumatic Drill (15m)	85
Pump Jack (10m)	68-72
Truck (15m)	65-70
Business Office	65
Conversational Speech (1m)	60
Light Auto Traffic (30m)	50
Living Room	40
Library	35
Soft Whisper (5m)	20-35

The single number A-weighted level is often inadequate for engineering purposes, although it does supply a good estimate of people's reaction to a noise environment. As noise sources, control measures, and materials differ in the frequency dependence of their noise responses or production, sound is measured with a narrower frequency bandwidth; the specific methodology varies with the application. For most work, the acoustic frequency range is divided into frequency bands where the centre frequency of each band is twice the frequency of the next lower band; these are called "Octave" bands, as their frequency relation is called an "Octave" in music, where the field of acoustics has its roots. For more detailed work, the octave bands, and certain standard octave and 1/3 octave bands have been specified by international agreements.

Where the noise at the receiver is steady, it is easy to assess the noise level. However, both the production of noise at the source and the transmission of noise can vary with time; most noise levels are not constant, either because of the motion of the noise source (as in traffic noise), because the noise source itself varies, or because the transmission of sound to the receiver location is not steady as over long distances. This is almost always the case for environmental noise studies. Several single number descriptors have been developed and are used to assess noise in these conditions.

The most common is the measurement of the "equivalent continuous" sound level, or L_{eq}, which is the level of a hypothetical source of a constant level which would give the same total sound energy as is measured during the sampling period. This is the "energy" average noise level. Typical sampling periods are one hour, nighttime (9 hours) or one day (24 hours); the sampling period used must be reported when using this unit.

The greatest value of the L_{eq} is that the contributions of different sources to the total noise level can be assessed, or in a case where a new noise source is to be added to an existing environment, the total noise level from new and old sources can be easily calculated. It is also sensitive to short term high noise levels.

Statistical noise levels are sometimes used to assess an unsteady noise environment. They indicate the levels that are exceeded a fixed percentage of the measurement time period measured. For example, the 10%-ile level, written L_{10}, is the levels exceeded 10% of the time; this level is a good measure of frequent noisy occurrences such as steady road traffic. The 90% level, L_{90}, is the level exceeded 90% of the time, and is the background level, or noise floor. A steady noise source will modify the background level, while an intermittent noise source such as road or rail traffic will affect the short-term levels only.

One disadvantage with the L_{eq} measure, when used alone, is that nearby loud sources (e.g. dogs barking, or birds singing) can confuse the assessment of the situation when it is the noise from a distant plant that is the concern. For this reason, the equivalent level and the statistical levels can be used together to better understand the noise environment. One such indication is the difference between the L_{eq} and the L_{90} levels. A large difference between the L_{eq} and L_{90}, greater than 10 dB, indicates the intrusion of short-term noise events on the general background level. A small difference, less than 5 dB, indicates a very steady noise environment. If the L_{eq} value exceeds the L_{10} value this indicates the presence of significant short-term loud events.

For most noise measurement, instruments are adjusted so that the time response of the instrument is similar to the response of the human ear; this is the "Fast" setting. Measurement with the "Fast" setting therefore assesses the sound environment according to the way humans would hear it and react to it. Where the noise level varies substantially and an average level is wanted without the complexity of and L_{eq} or statistical measurement, the "Slow" setting is used on the sound level meter. The "Slow" setting is also typically used in industrial settings where hearing damage is a concern. Where the noise level changes very rapidly, for example due to impacts or detonations, the "Fast" and "Slow" settings do not respond quickly enough to assess the maximum levels, and the "Impulse" meter setting us used.

The Sound Power Level (abbreviated L_w, SWL or PWL) is the decibel equivalent of the total energy emitted from a source in the form of noise. The reference level for the sound power is 10^{-12} Watts, or 1 picoWatt (abbreviated pW). The sound power level is given by:

$$L_w, \text{SWL, PWL} = 10 \times \log_{10} (\text{Emitted Power} / 1\ \text{pW})\ \text{dB}$$

Therefore, a source emitting 1 Watt of power in the form of sound would have a sound power level of 120 dB. Sound power levels can be expressed in terms of frequency bands, an overall linear-weighted level or A-weighted, as is the case for sound pressure levels. However, sound power levels are inherent to the source of noise, whereas the sound pressure level is dependent on the source, but also on the distance from the source and other environmental factors.

APPENDIX B

Wind Measurement Data

Figure C.1 - 2012-3379 Wind Condition Analysis for Keno City Area

25/06/2012 14:30 - 22:00

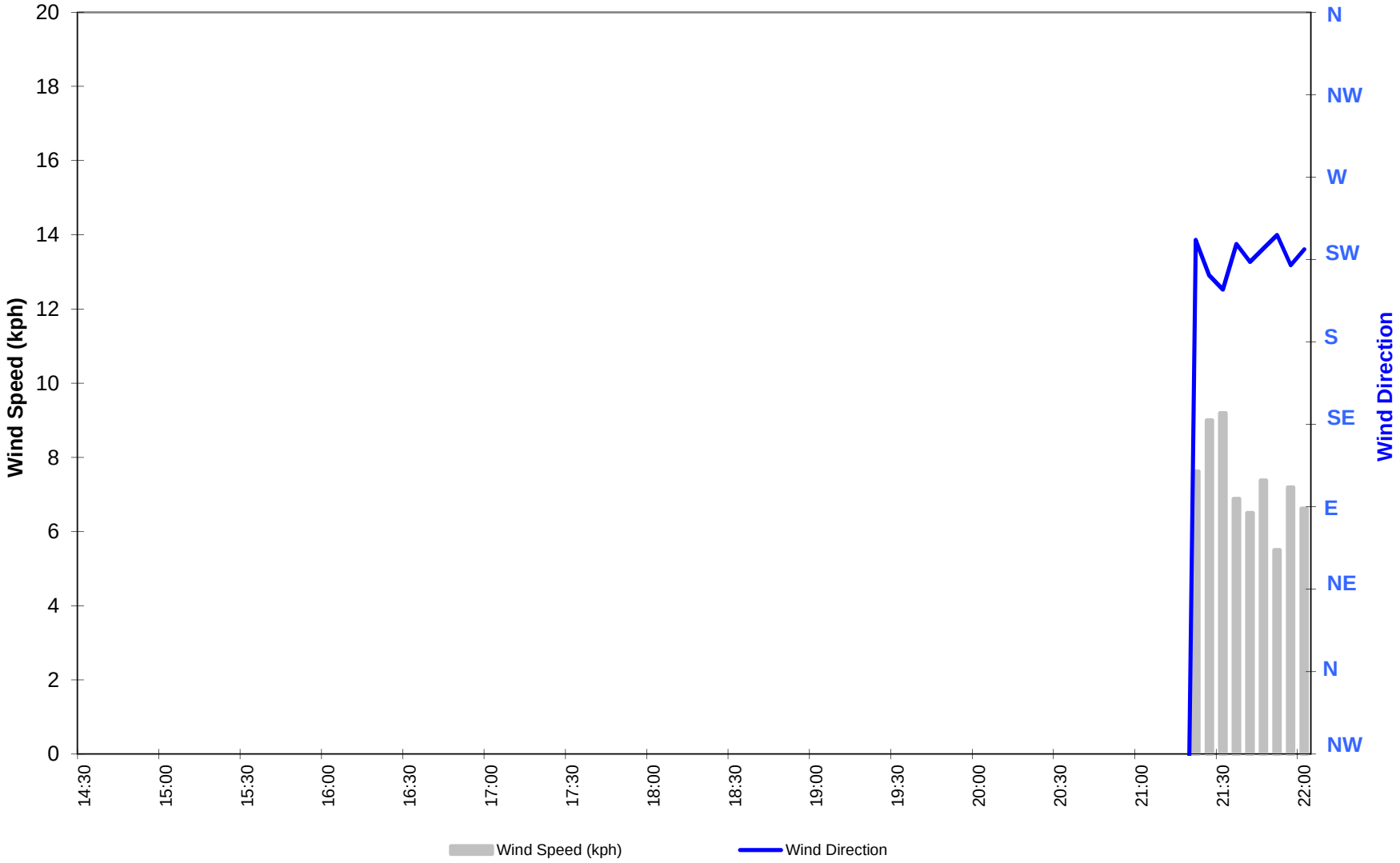


Figure C.2 - 2012-3379 Wind Condition Analysis for Keno City Area

25/06/2012 22:00 - 26/06/2012 7:00

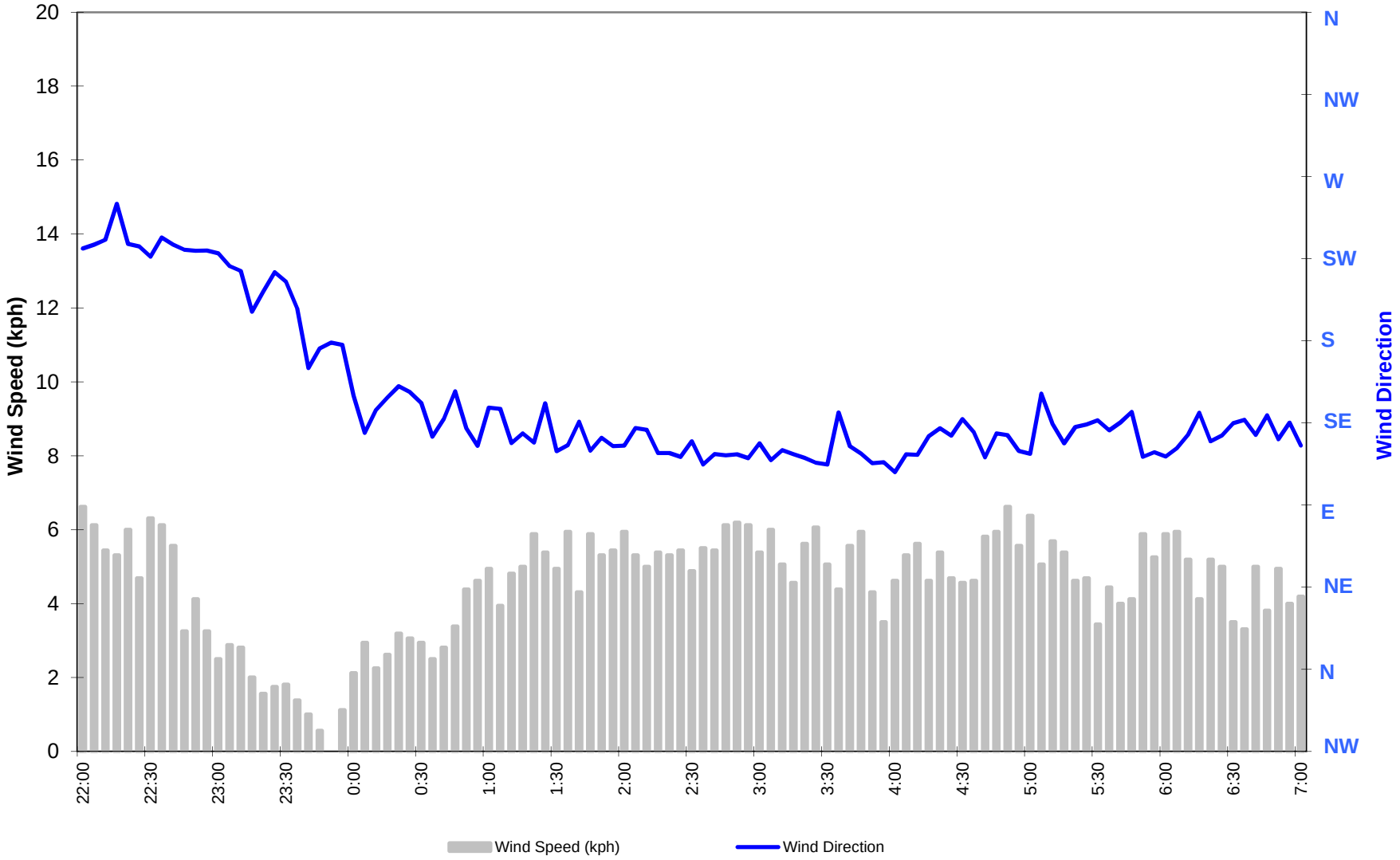


Figure C.3 - 2012-3379 Wind Condition Analysis for Keno City Area

26/06/2012 7:00 -14:30

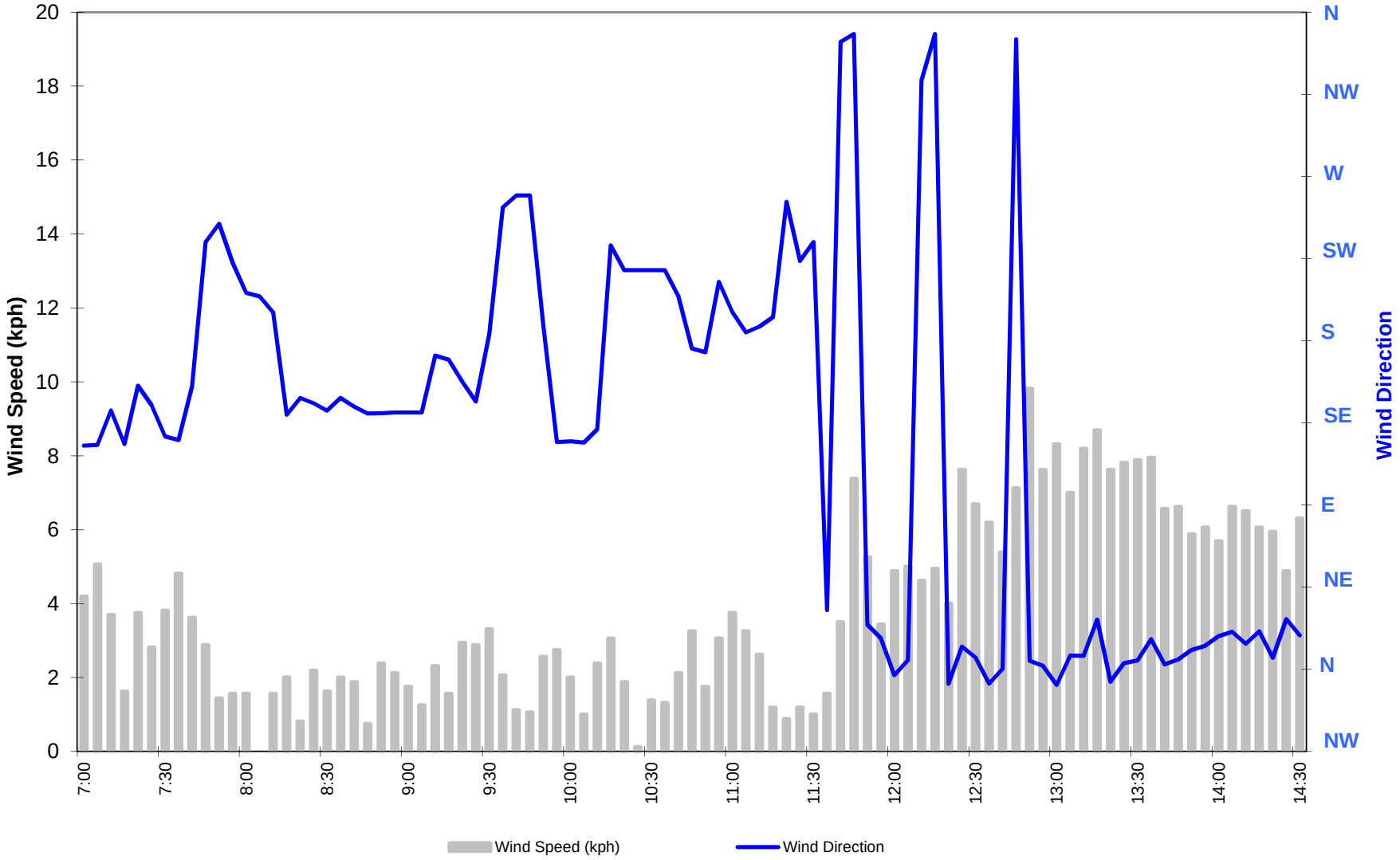


Figure C.4 - 2012-3379 Wind Condition Analysis for Keno City Area

26/06/2012 14:30 - 22:00

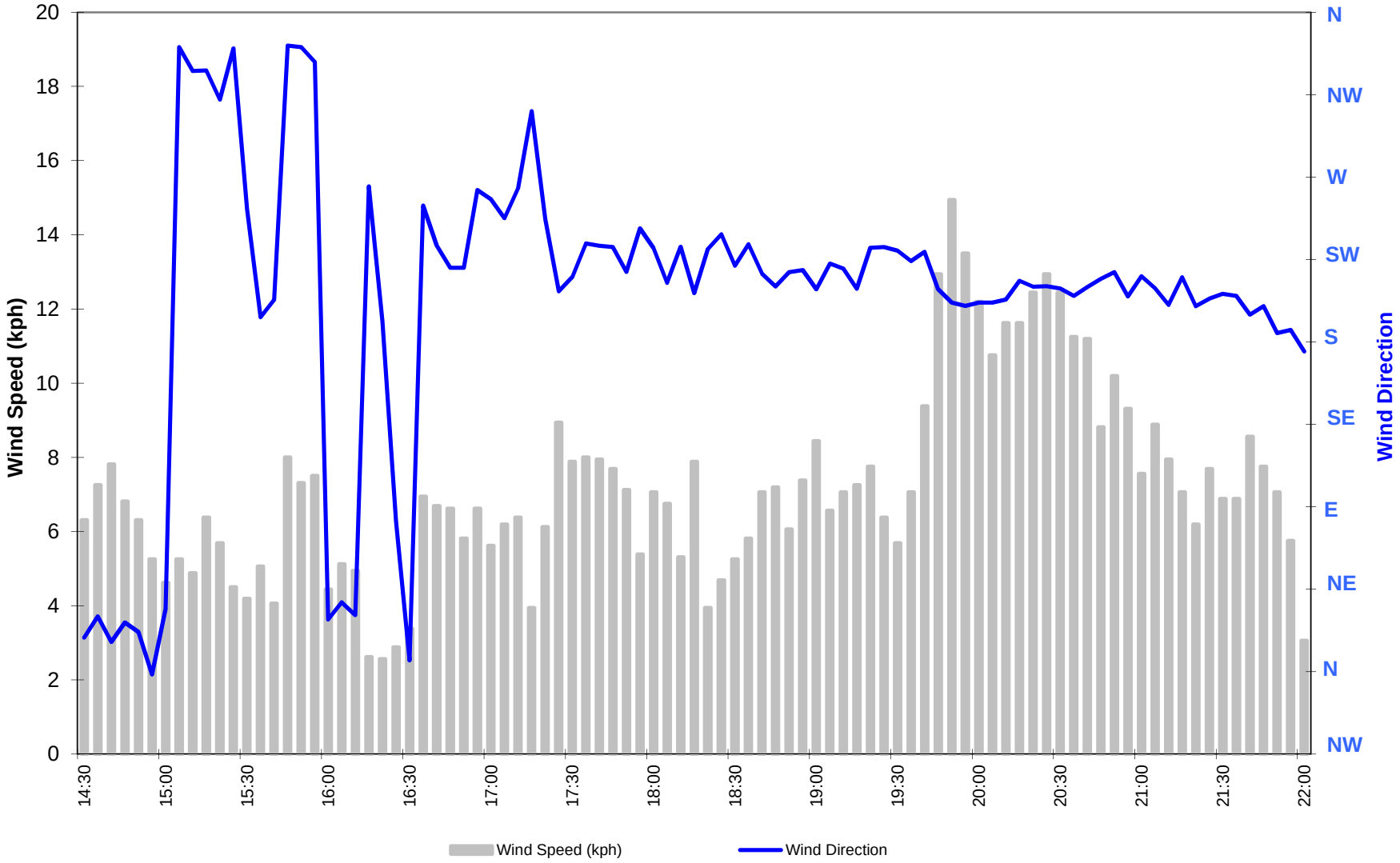


Figure C.5 - 2012-3379 Wind Condition Analysis for Keno City Area

26/06/2012 22:00 - 27/06/2012 7:00

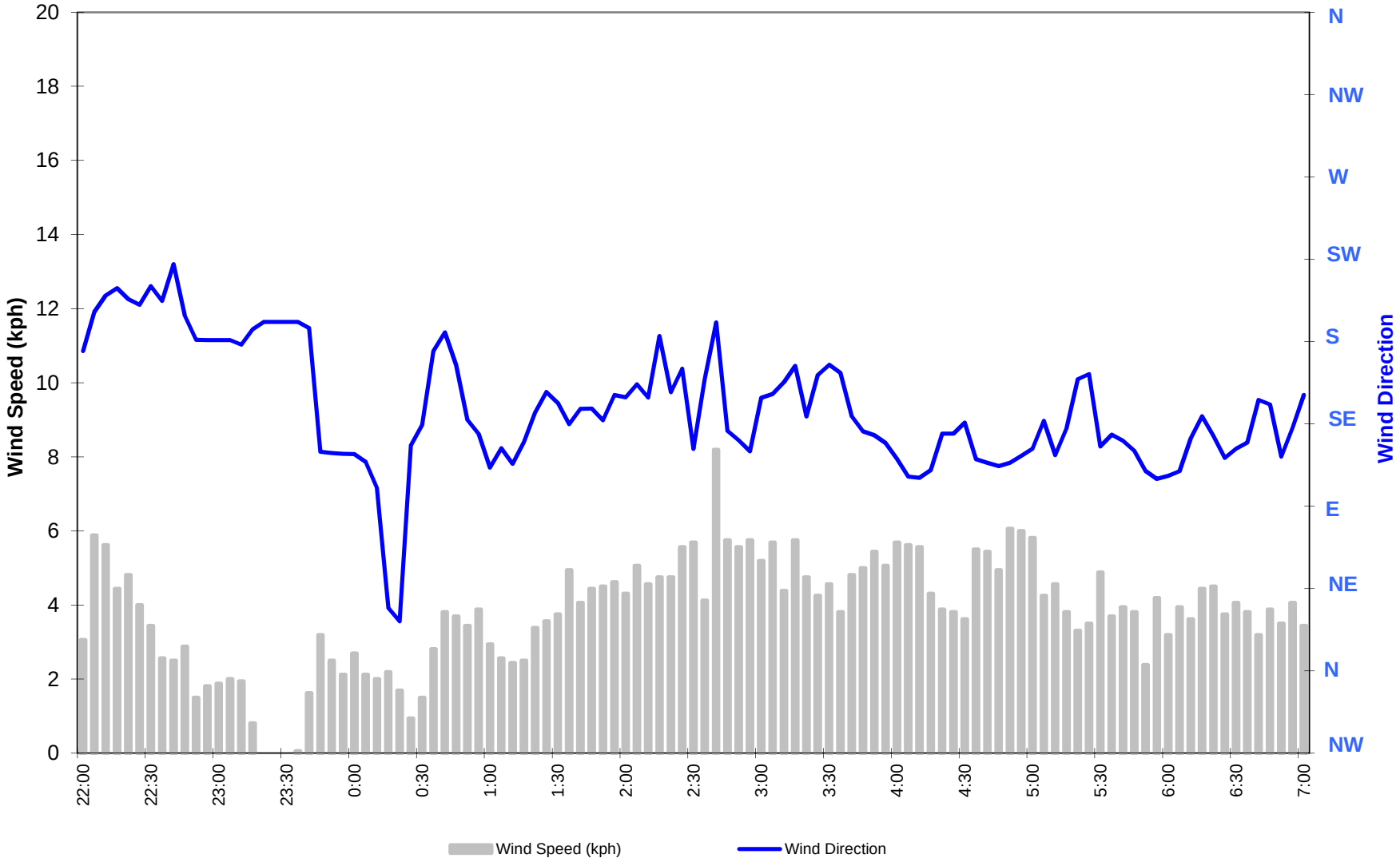


Figure C.6 - 2012-3379 Wind Condition Analysis for Keno City Area

27/06/2012 7:00 -14:30

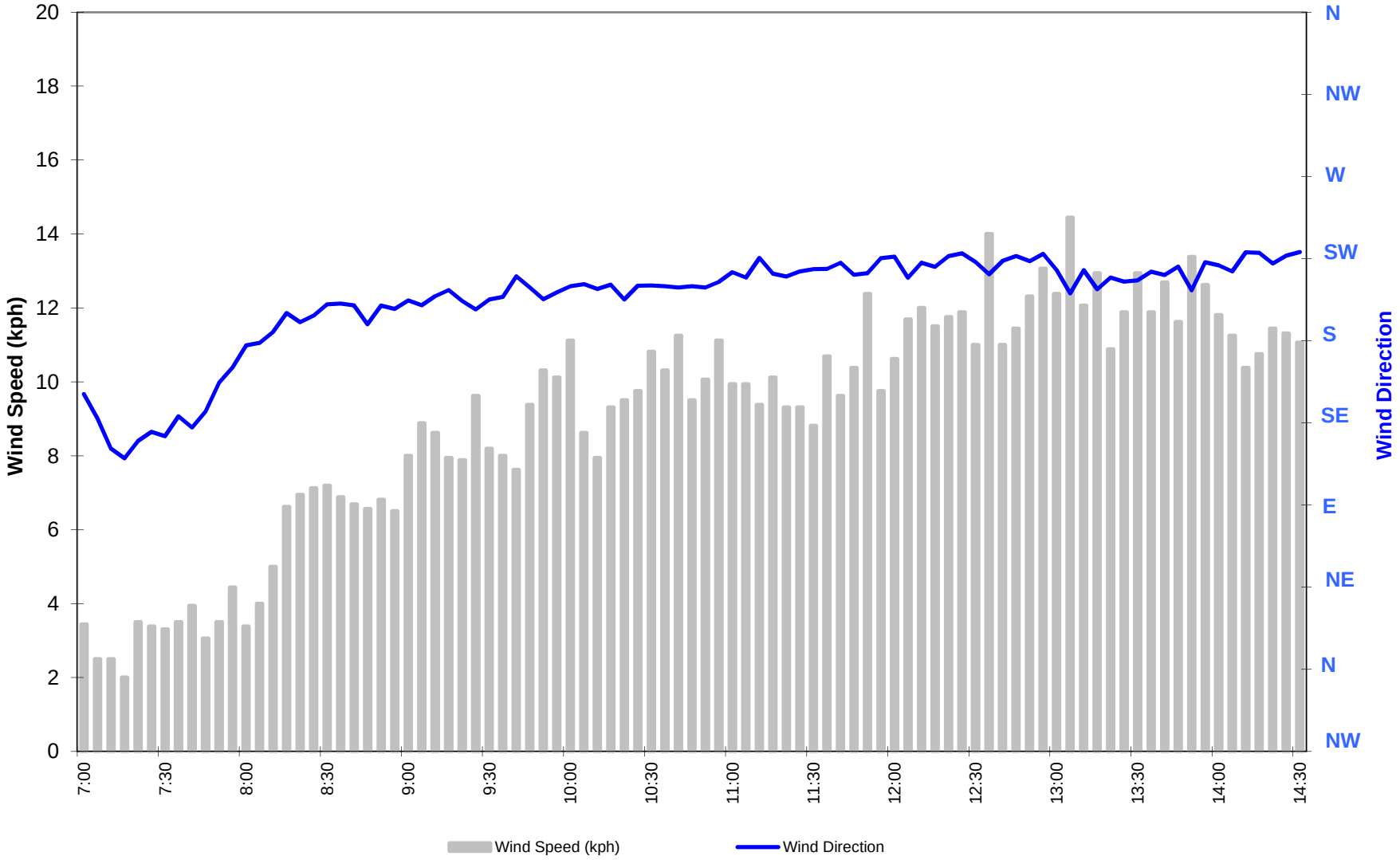


Figure C.7 - 2012-3379 Wind Condition Analysis for Keno City Area

27/06/2012 14:30 - 22:00

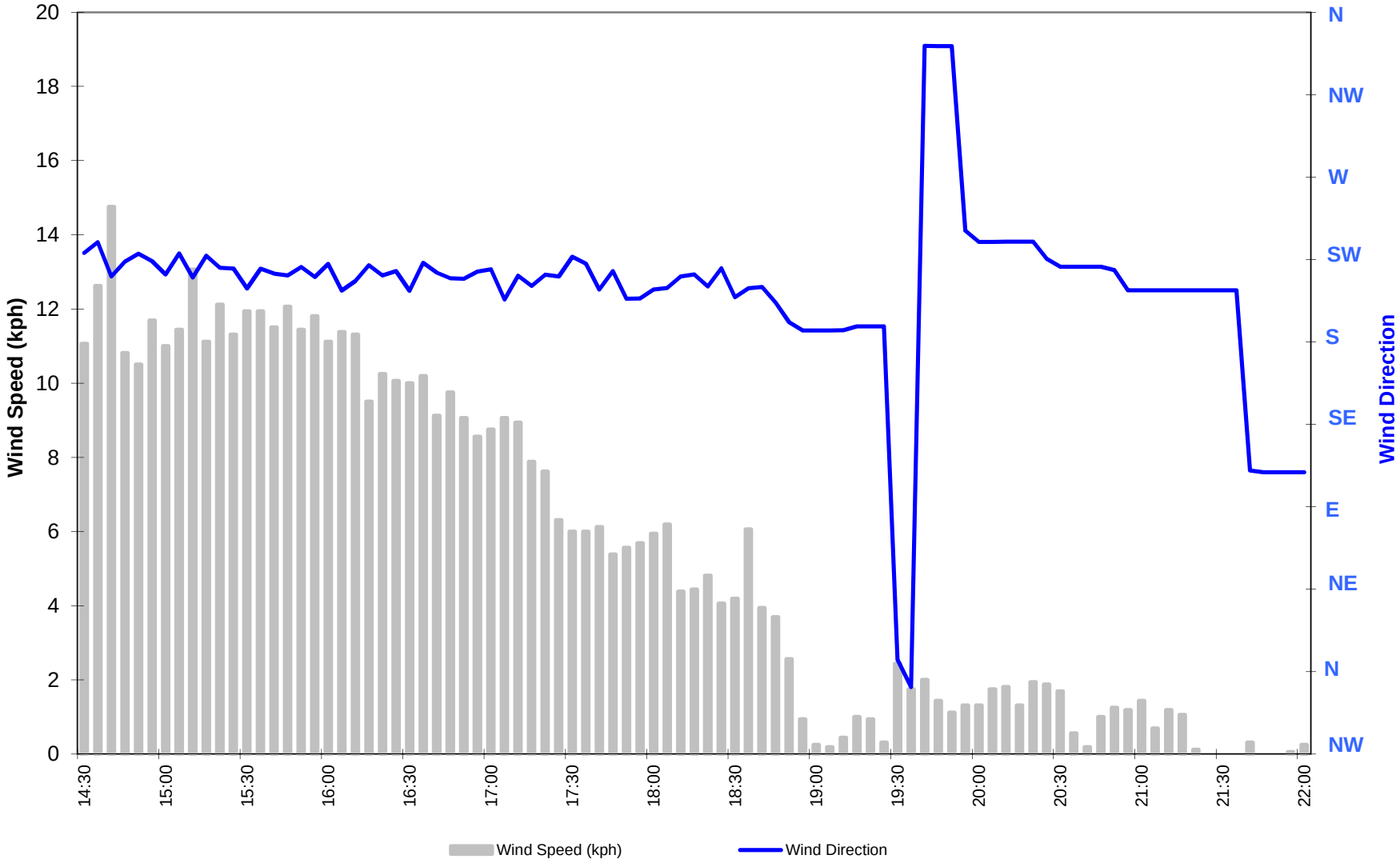


Figure C.8 - 2012-3379 Wind Condition Analysis for Keno City Area

27/06/2012 22:00 - 28/06/2012 7:00

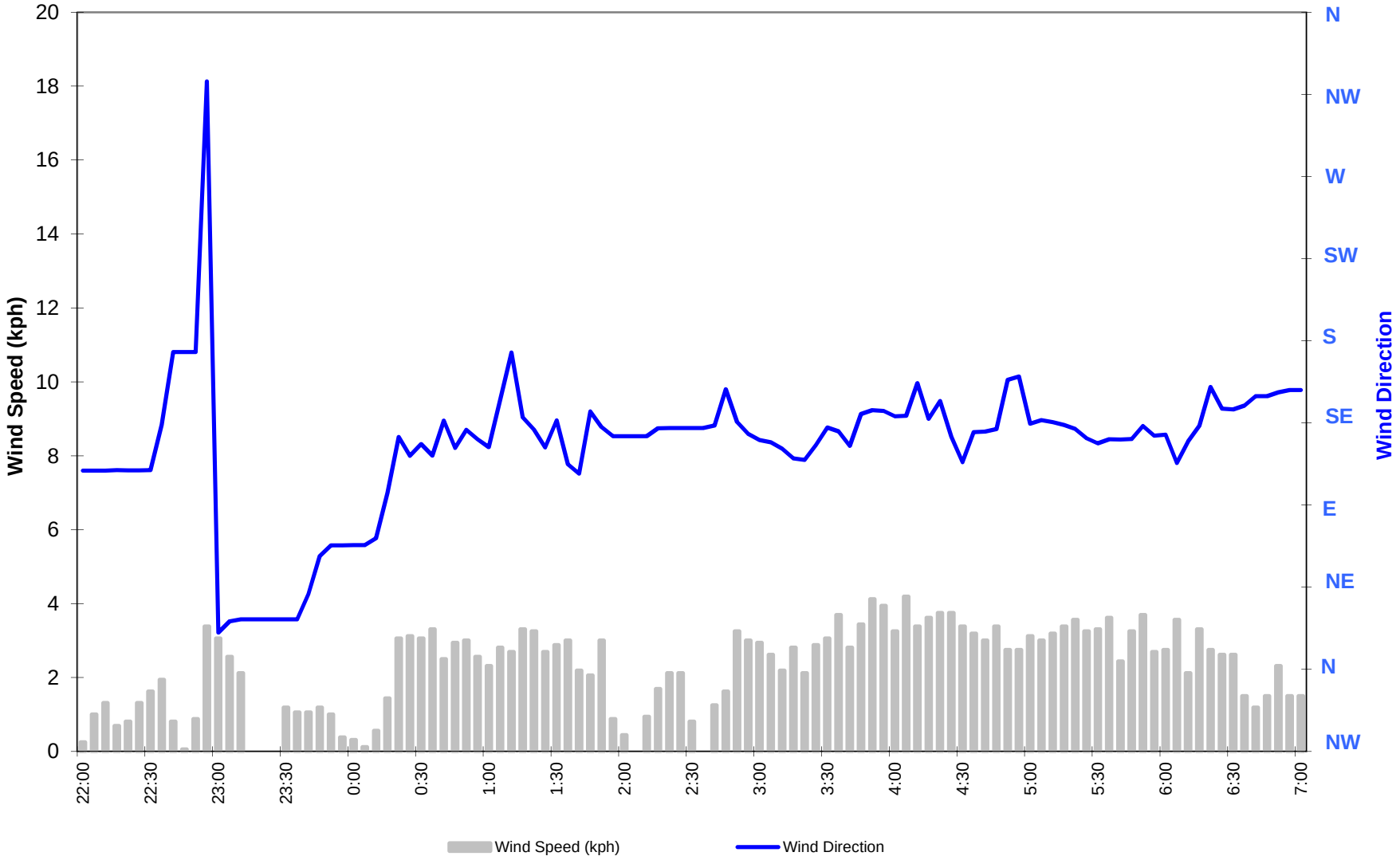


Figure C.9 - 2012-3379 Wind Condition Analysis for Keno City Area

28/06/2012 7:00 -14:30

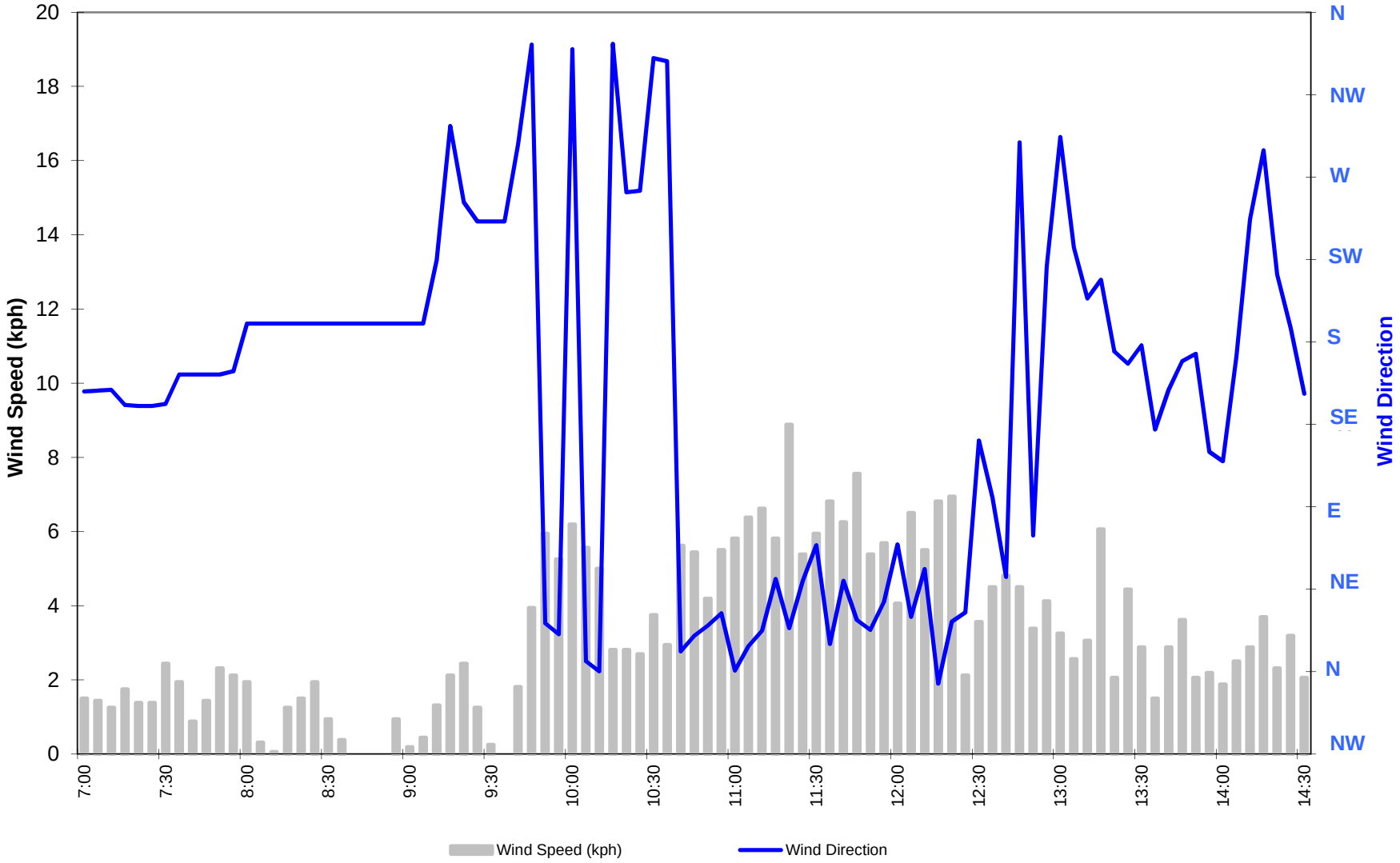
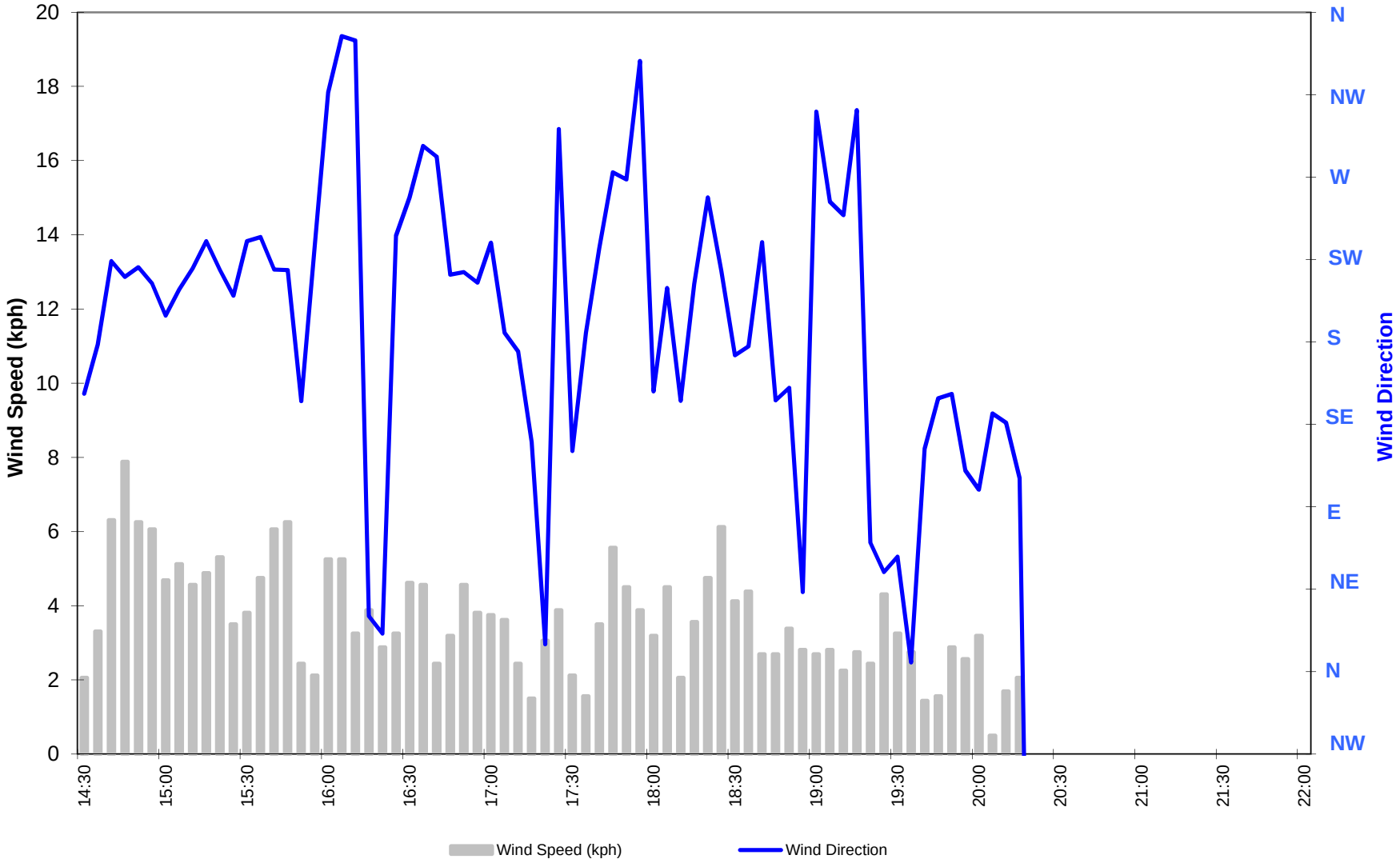


Figure C.10 - 2012-3379 Wind Condition Analysis for Keno City Area

28/06/2012 14:30 - 22:00



APPENDIX C

Measurement Results
Graphs of 1-Minute Sound Data
Residence 1

Patching Associates Acoustical Engineering Ltd.

Consultants in Acoustics, Noise Control and Vibrations

Table C.1
YESAB Keno Hill Silver District Operations
R1 Noise Survey
Daily Leq Values

Date	Time	Measured		Incl. Other Facility		Measured Ambient	
		Leq	Hours	Leq	Hours	Leq	Hours
Jun. 25, 2012	07:00 - 21:59	41	3.3	40	2.9	40	2.8
Jun. 25, 2012 - Jun. 26, 2012	22:00 - 06:59	40	9.0	40	7.9	40	4.0
Jun. 26, 2012	07:00 - 21:59	41	15.0	39	11.7	39	11.1
Jun 26, 2012 - Jun 27, 2012	22:00 - 06:59	39	9.0	39	8.2	38	6.7
Jun. 27, 2012	07:00 - 21:59	43	15.0	42	13.2	41	12.4
Jun. 27, 2012 - Jun. 28, 2012	22:00 - 06:59	40	9.0	39	8.0	39	7.5
Jun. 28, 2012	07:00 - 21:59	42	9.6	39	13.1	39	8.2

Figure C.1

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 14:30 - 21:59

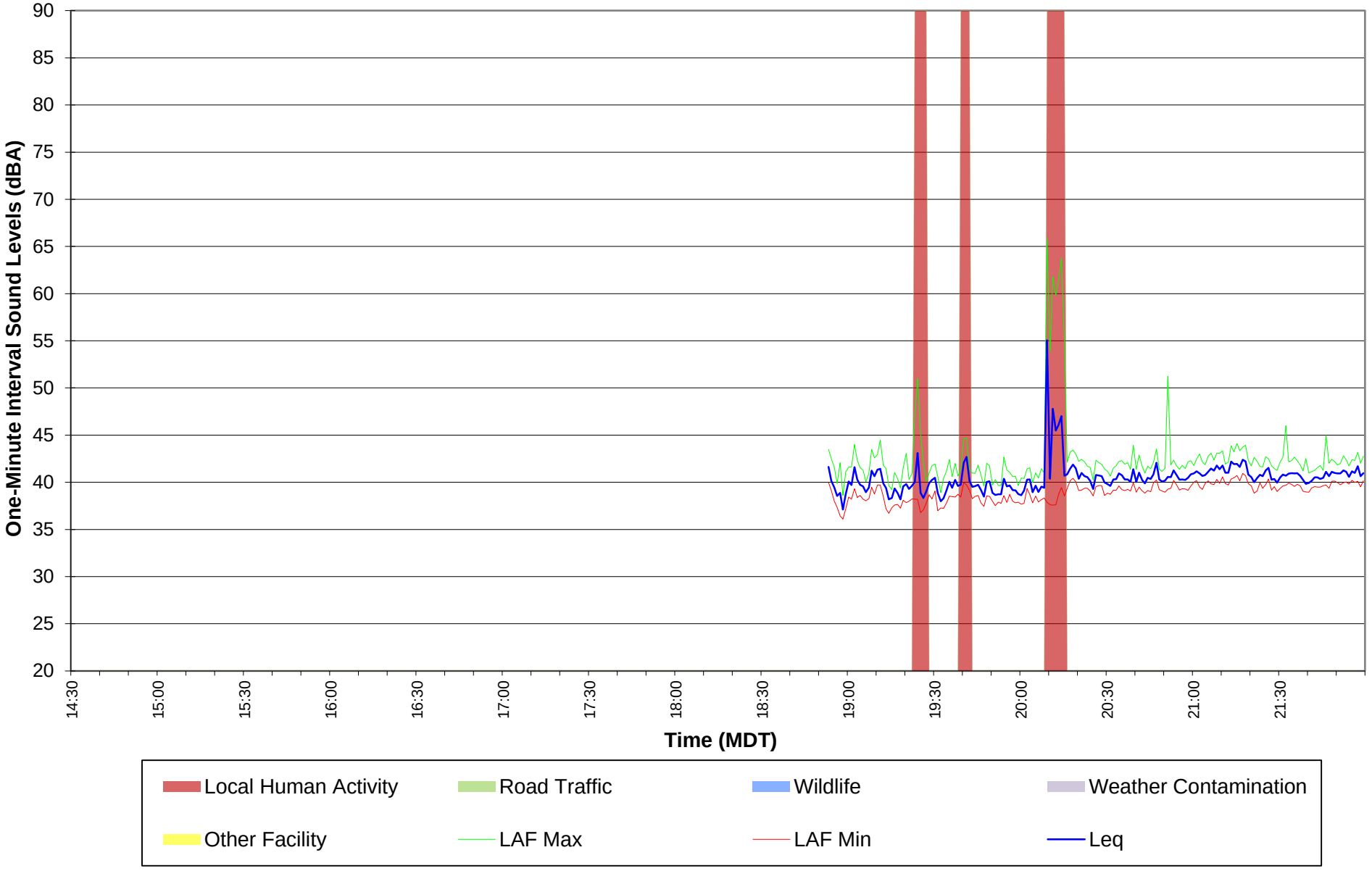


Figure C.1.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 14:30 - 21:59

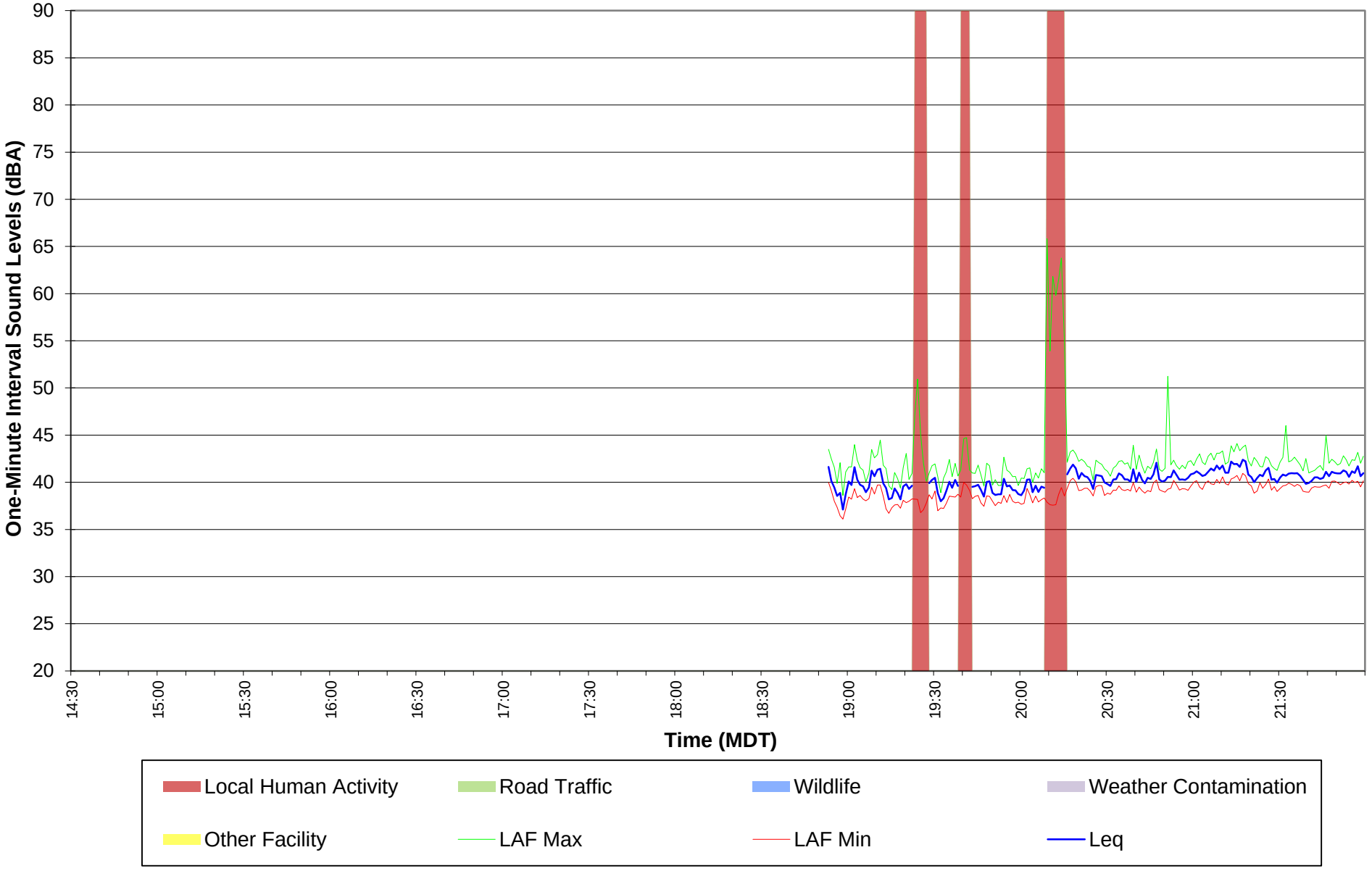


Figure C.1.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 14:30 - 21:59

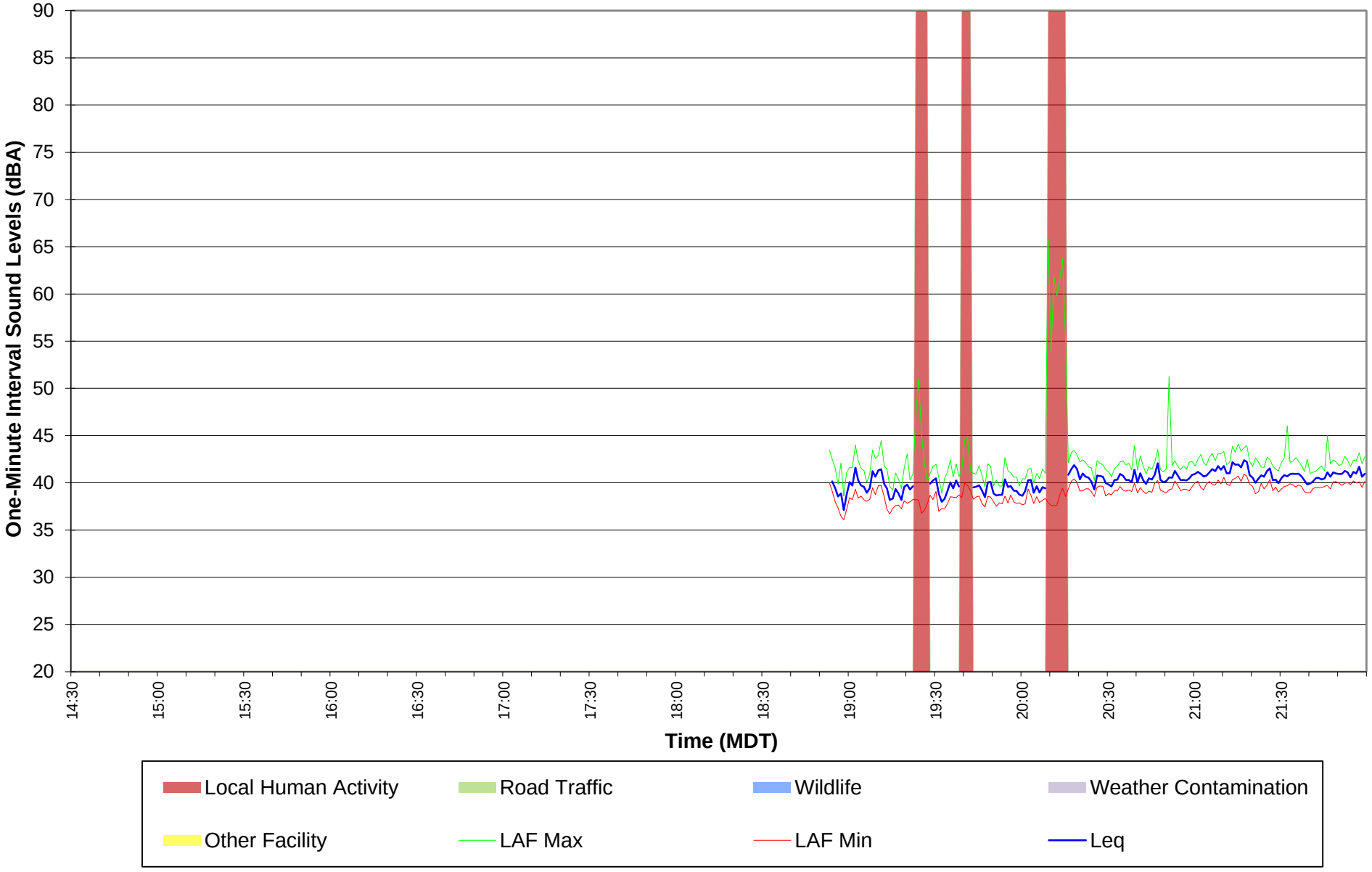


Figure C.2

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

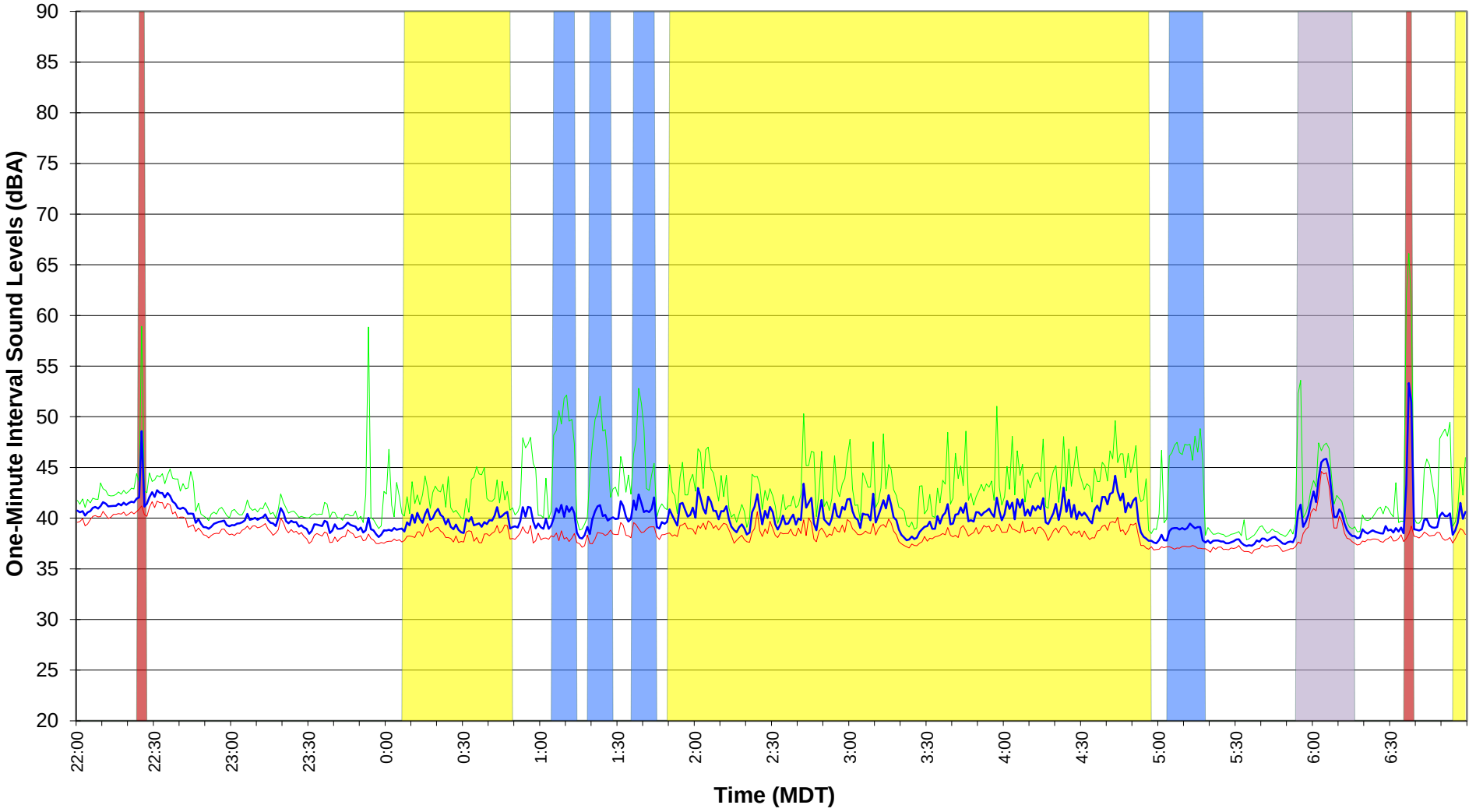


Figure C.2.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

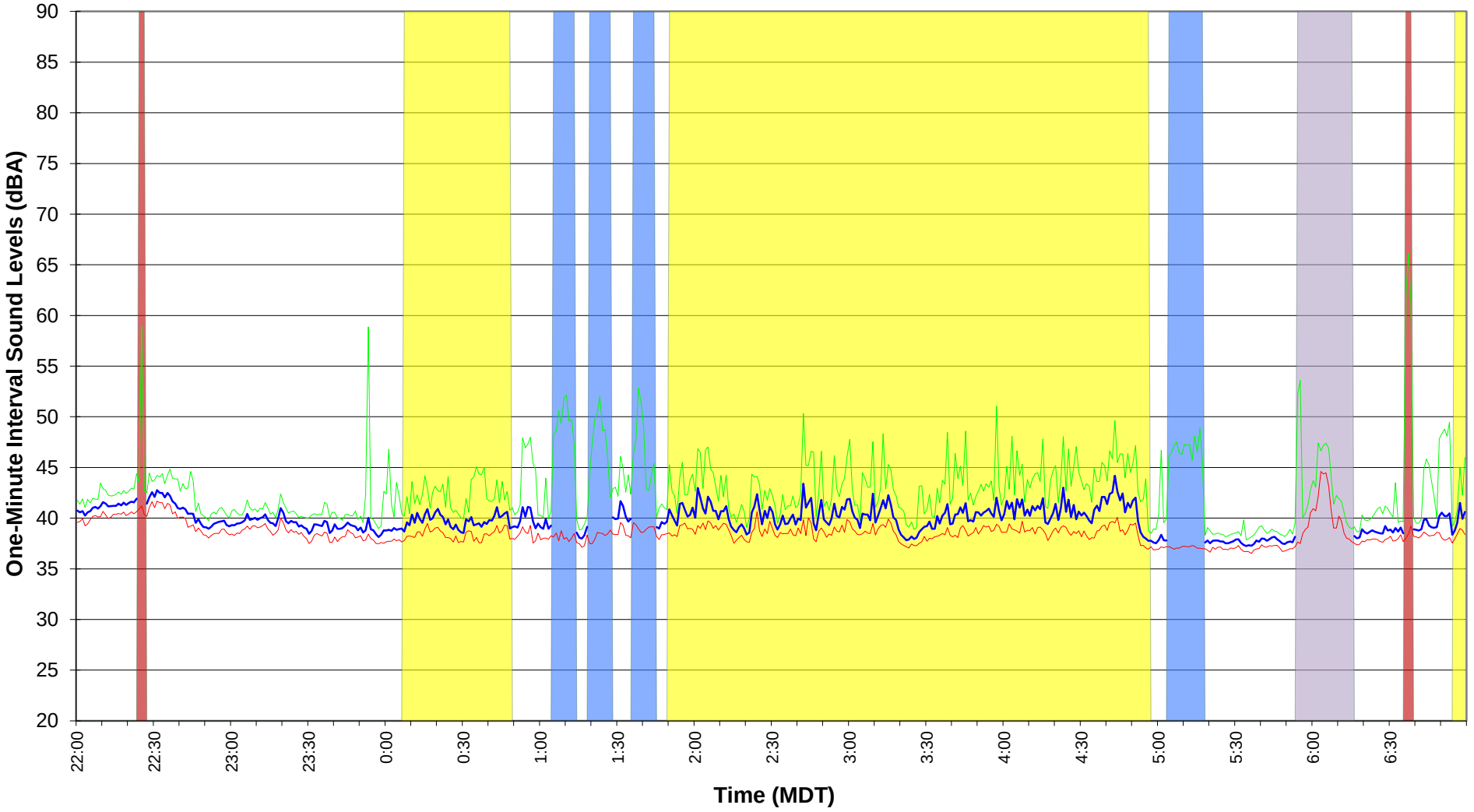


Figure C.2.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

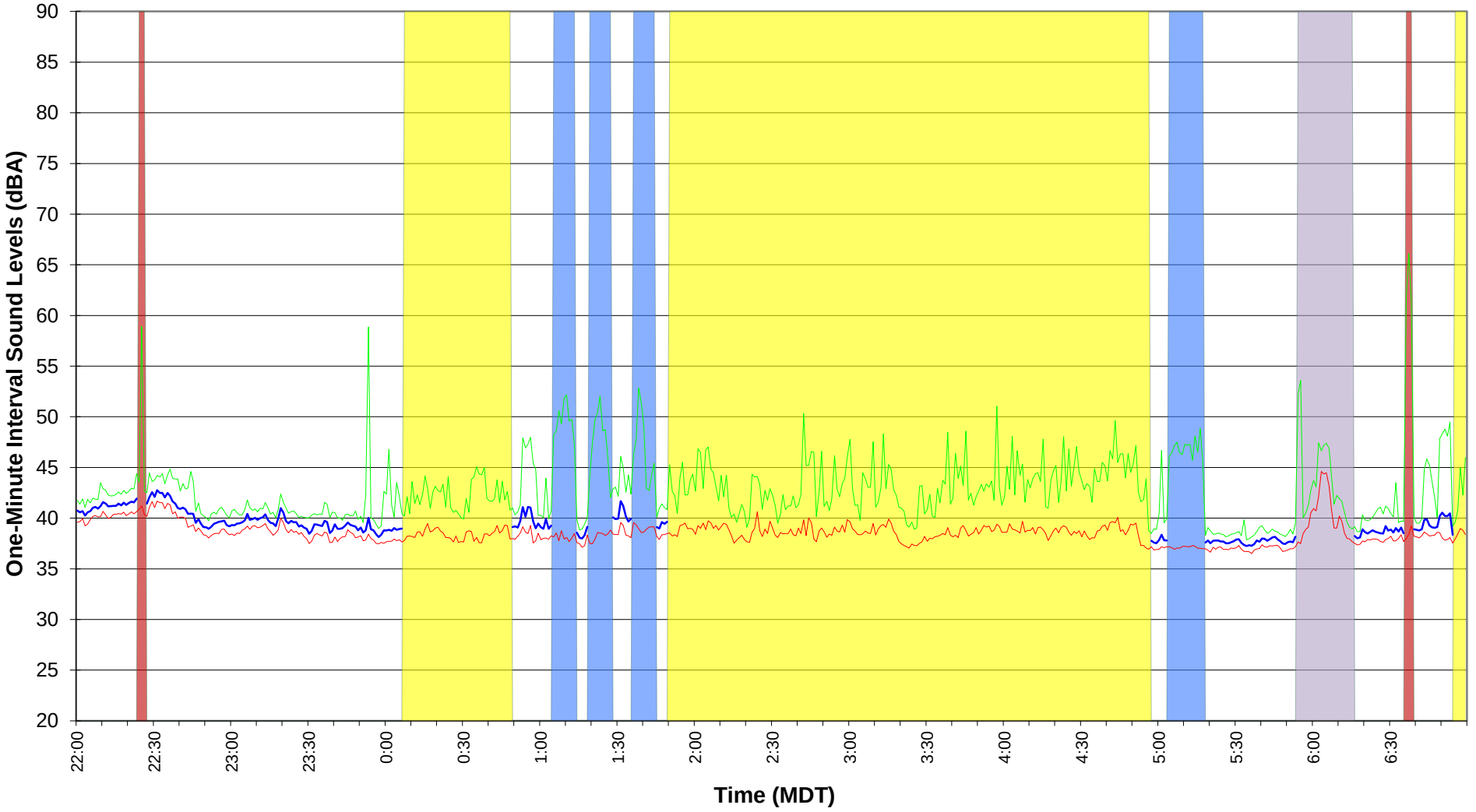


Figure C.3

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 07:00 - 14:29

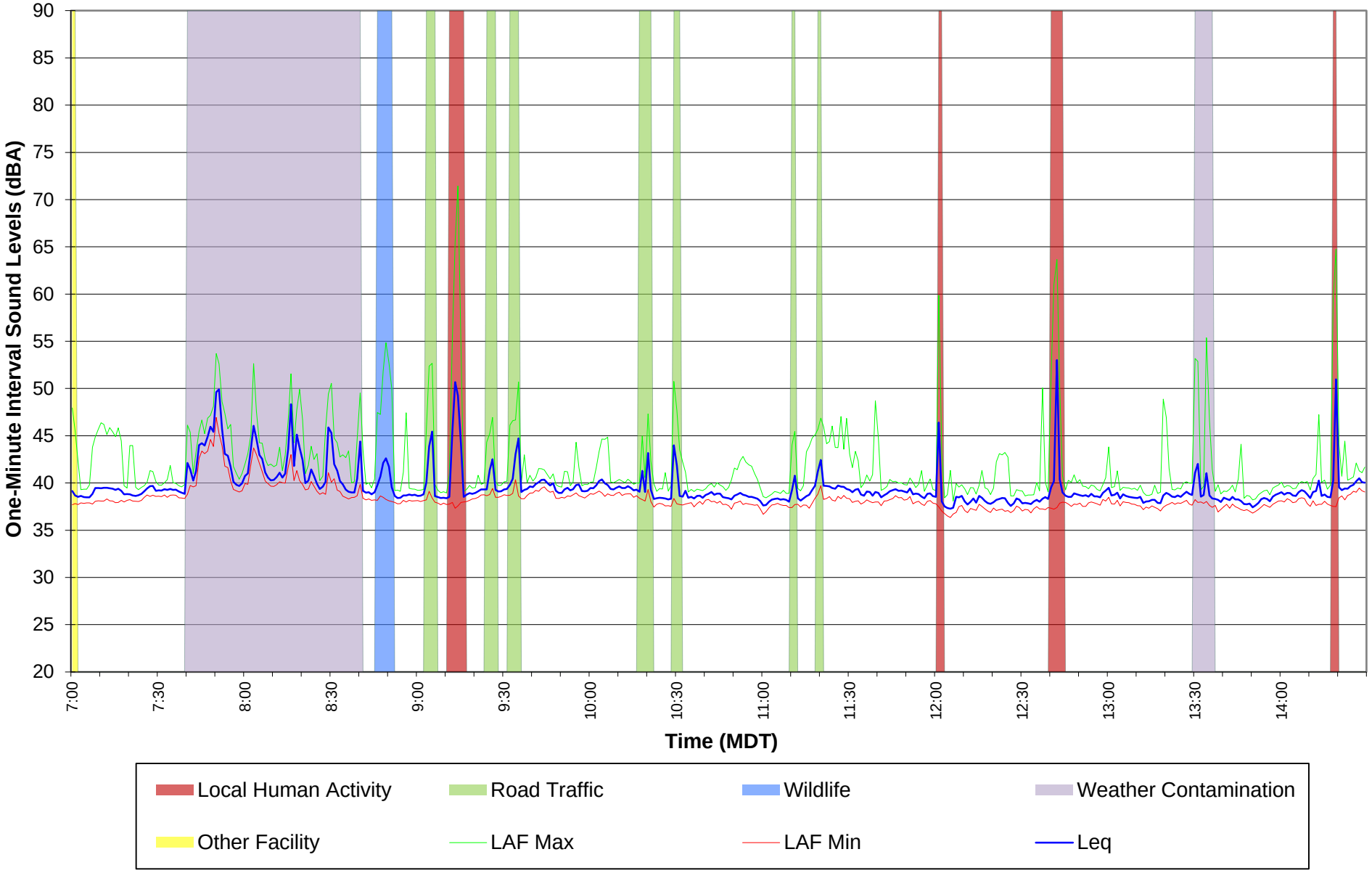


Figure C.3.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 07:00 - 14:29

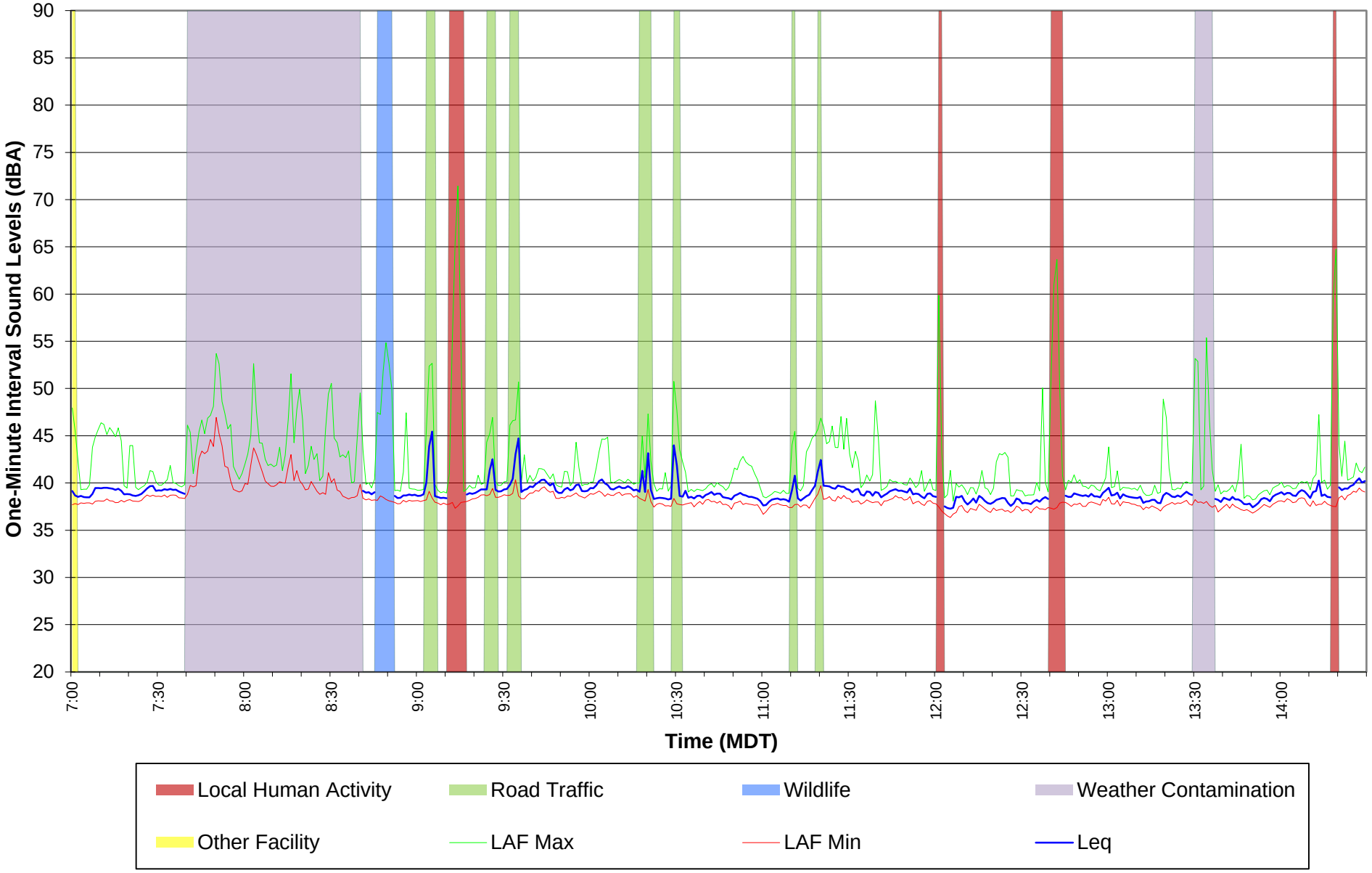


Figure C.3.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 07:00 - 14:29

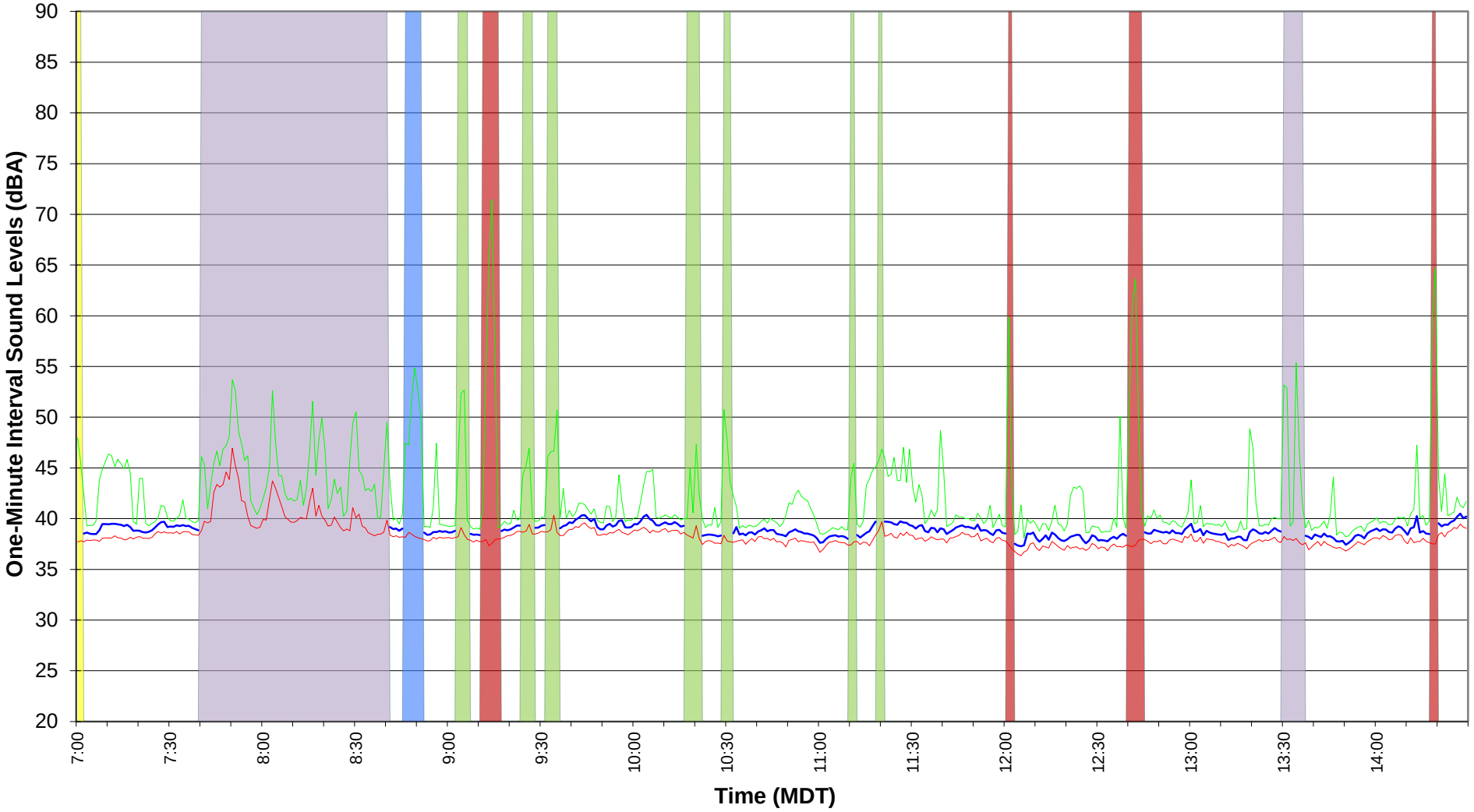


Figure C.4

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 14:30 - 21:59

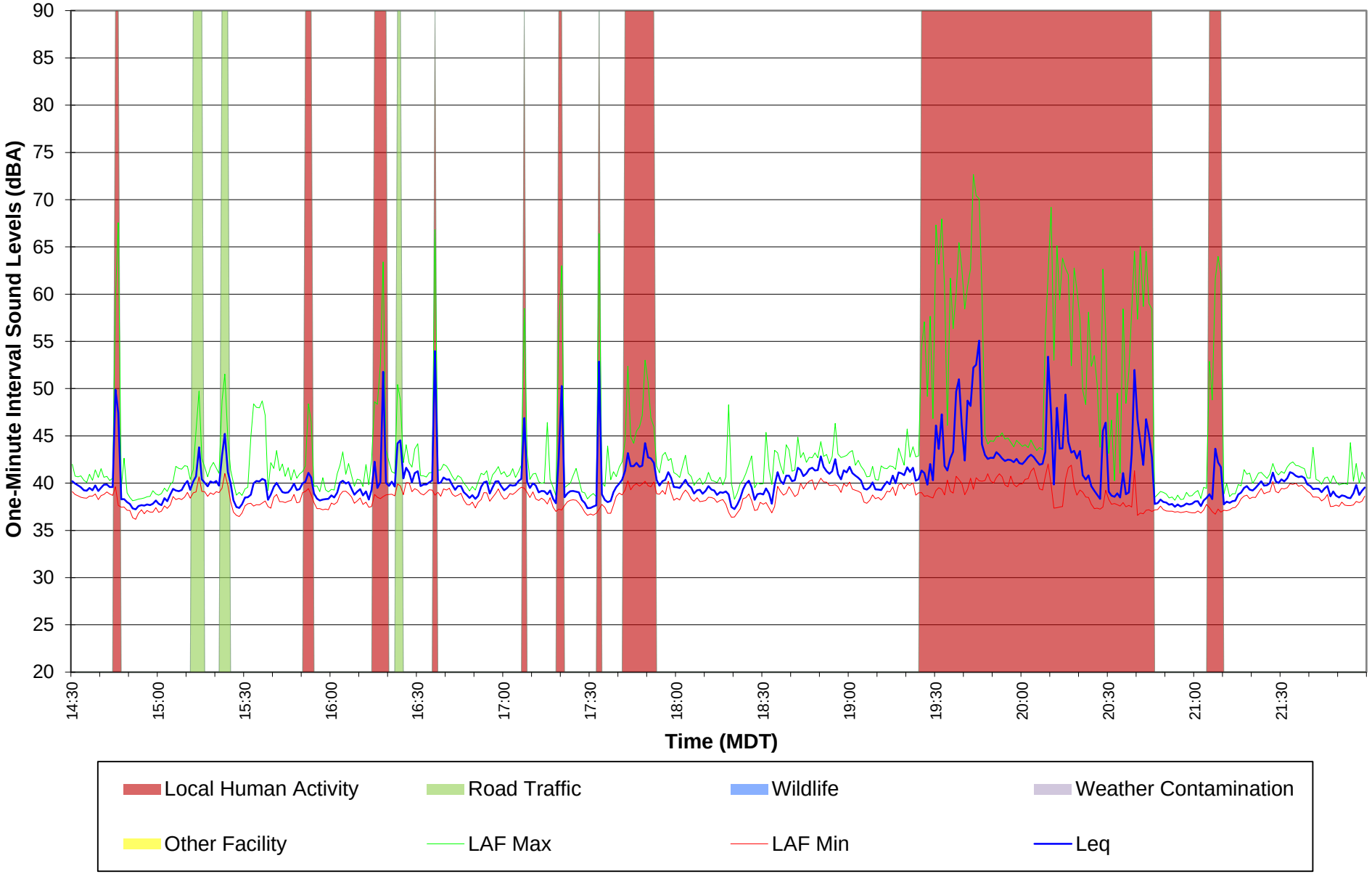


Figure C.4.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 14:30 - 21:59

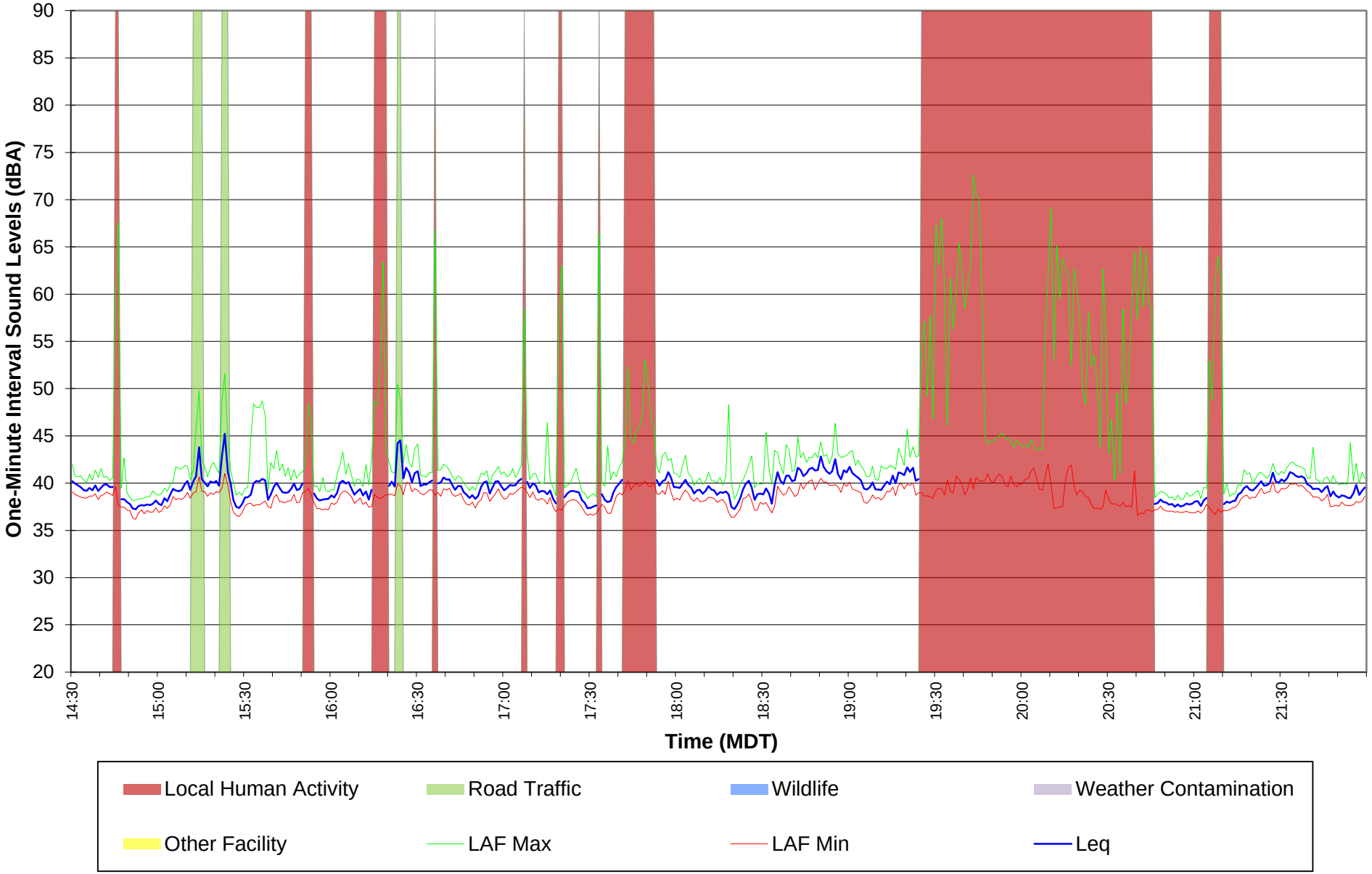
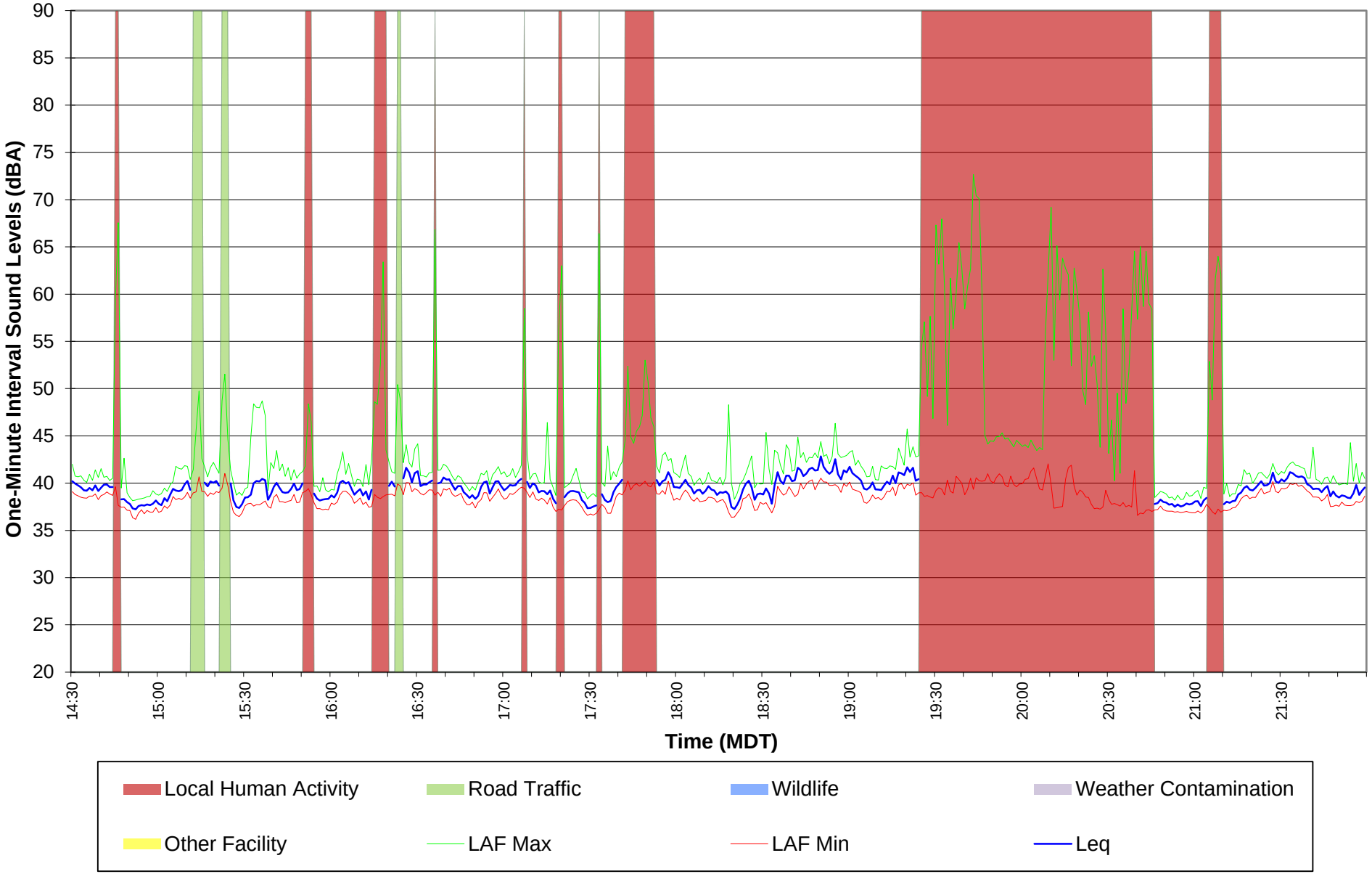


Figure C.4.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 26, 2012 14:30 - 21:59



R1 CSS 2250/D2(2Bac)

16/07/2012

Figure C.5

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

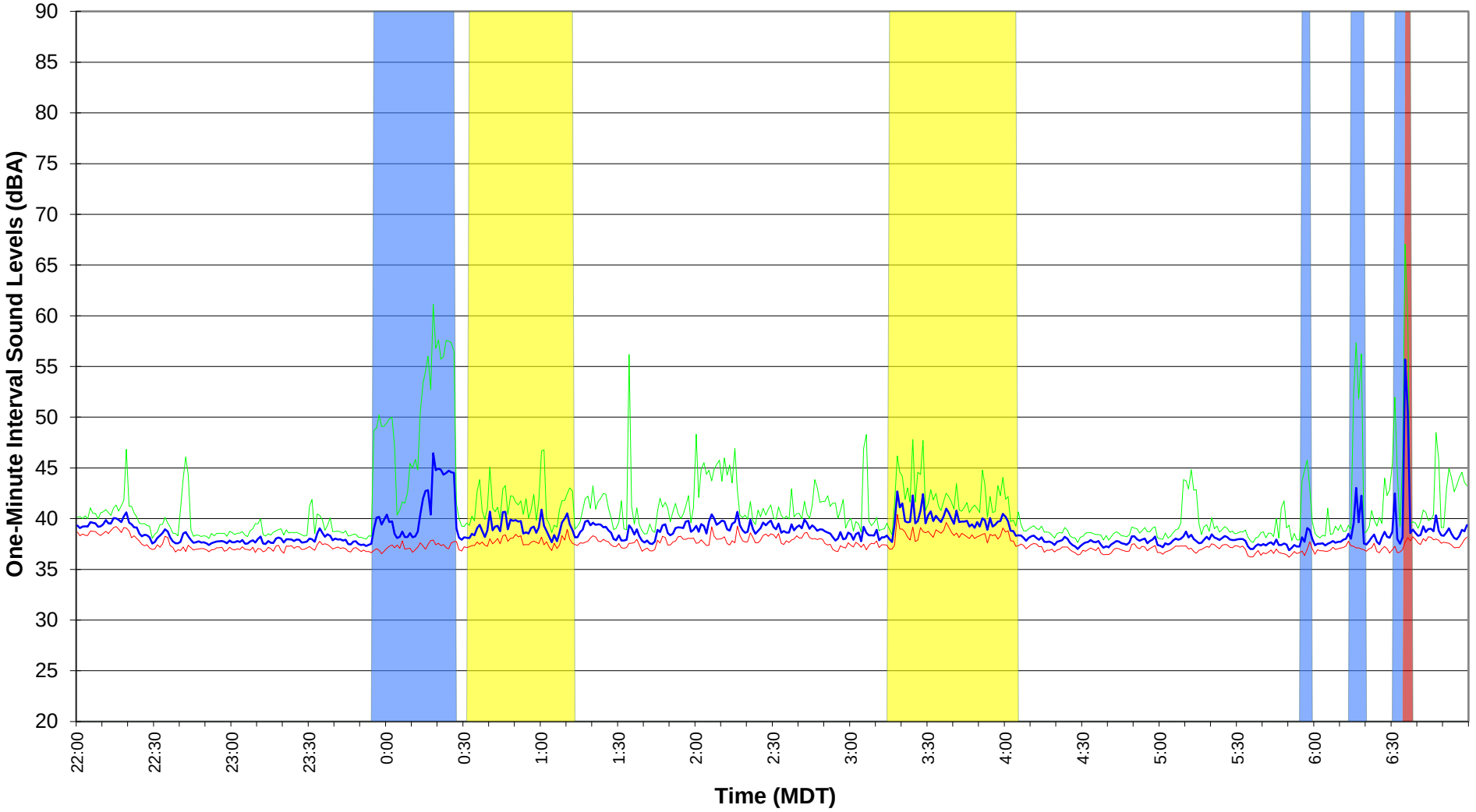


Figure C.5.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

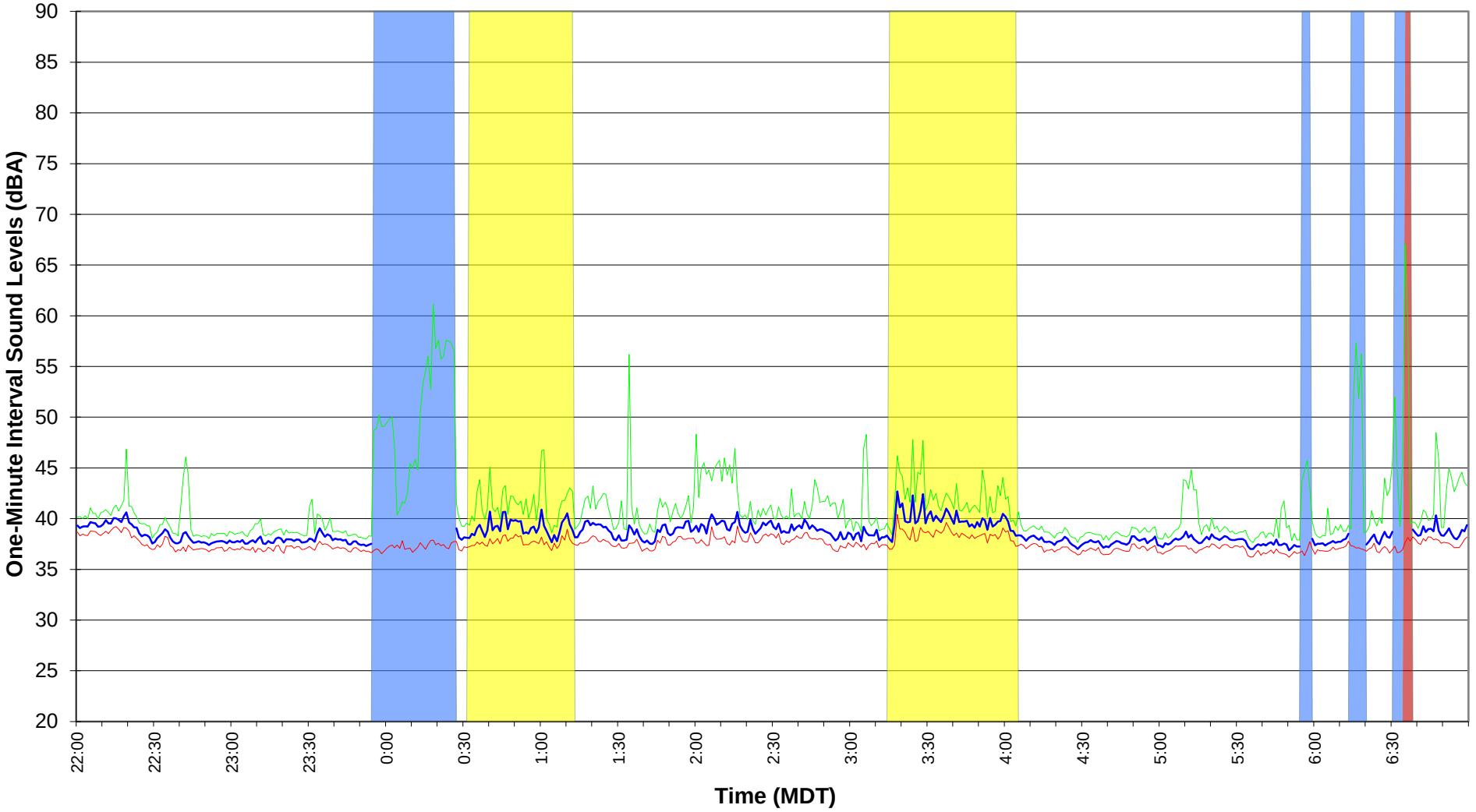
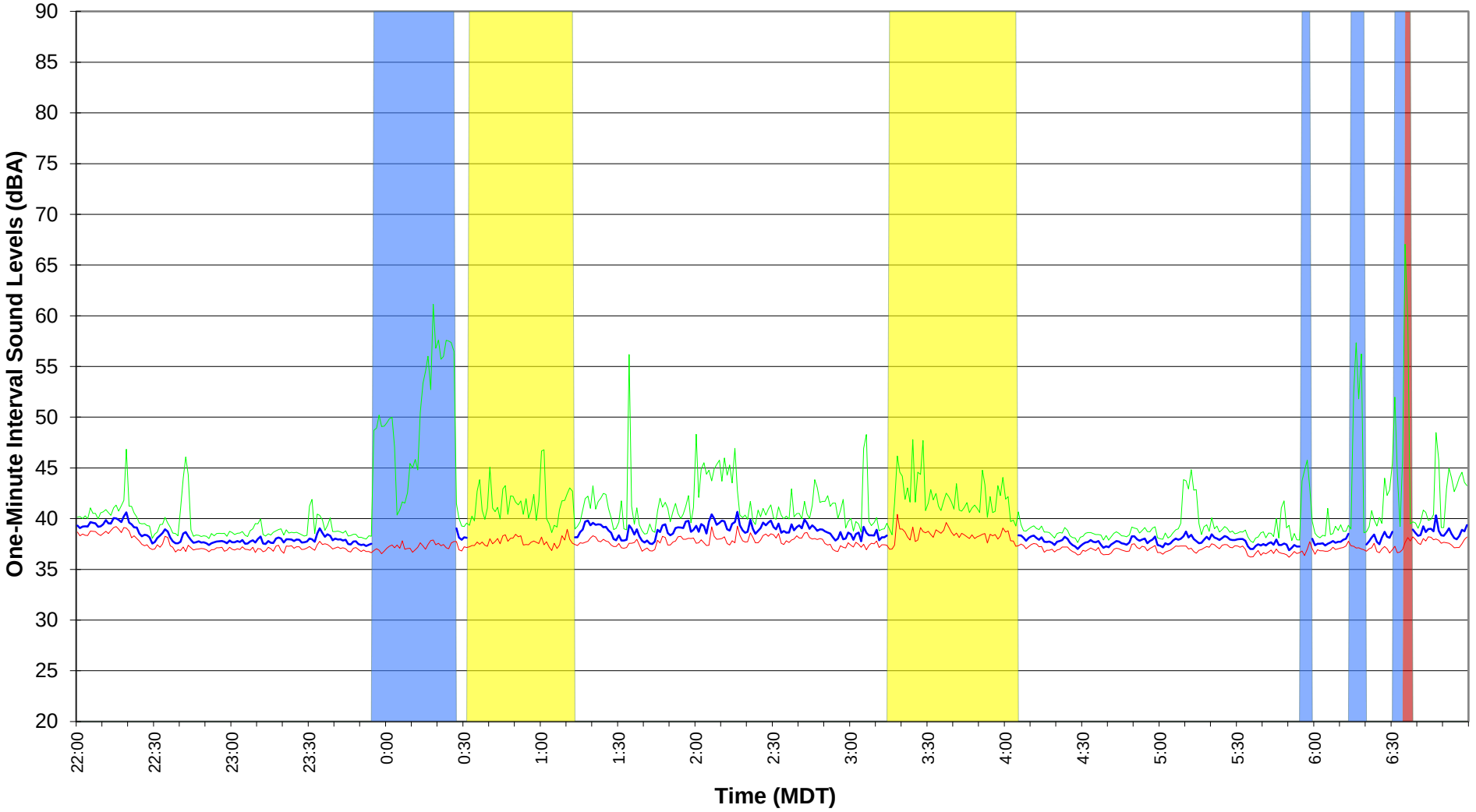


Figure C.5.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59



R1 CSS 2250/N2 (Bac)

16/07/2012

Figure C.6

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 07:00 - 14:29

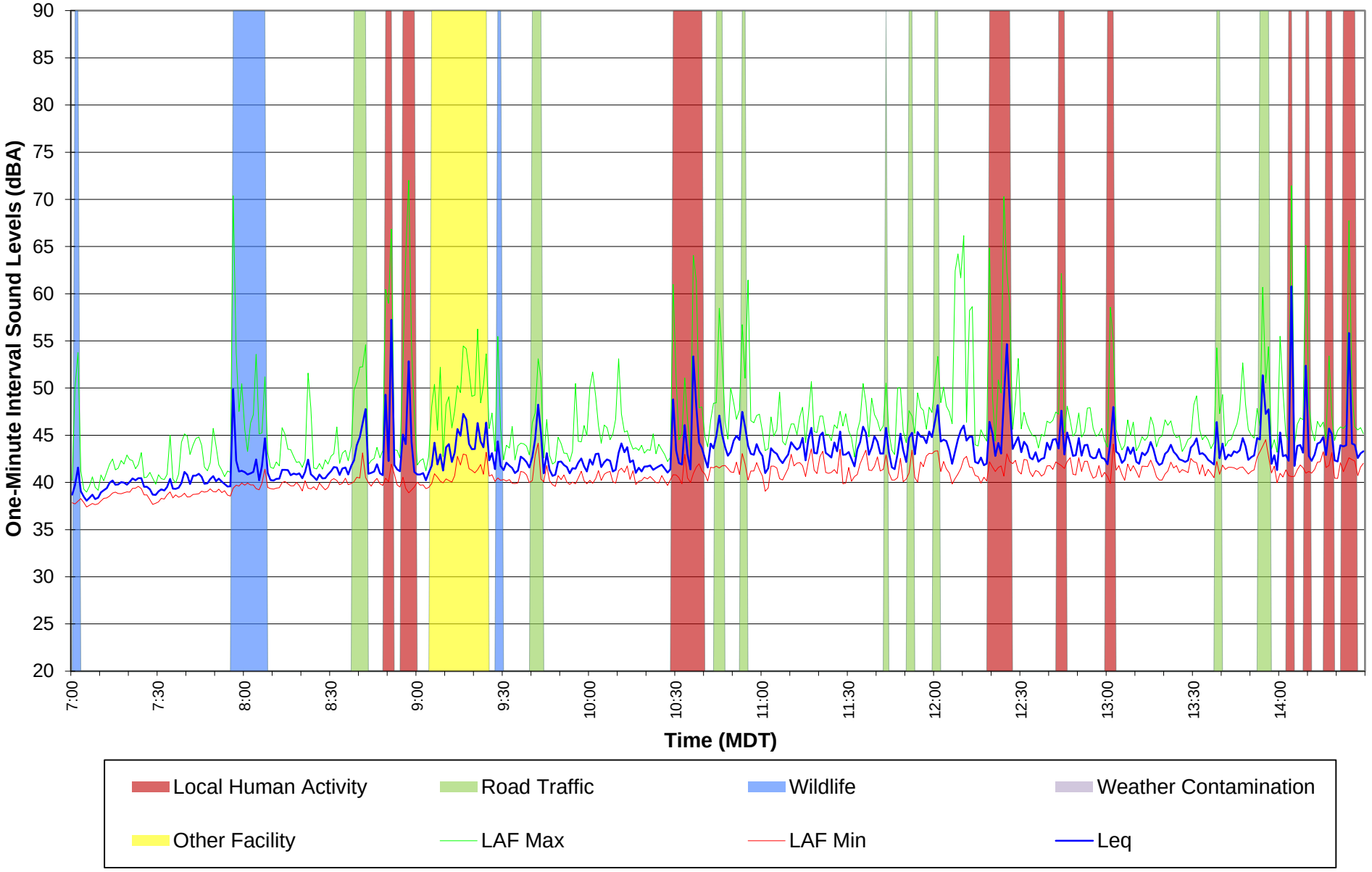


Figure C.6.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 07:00 - 14:29

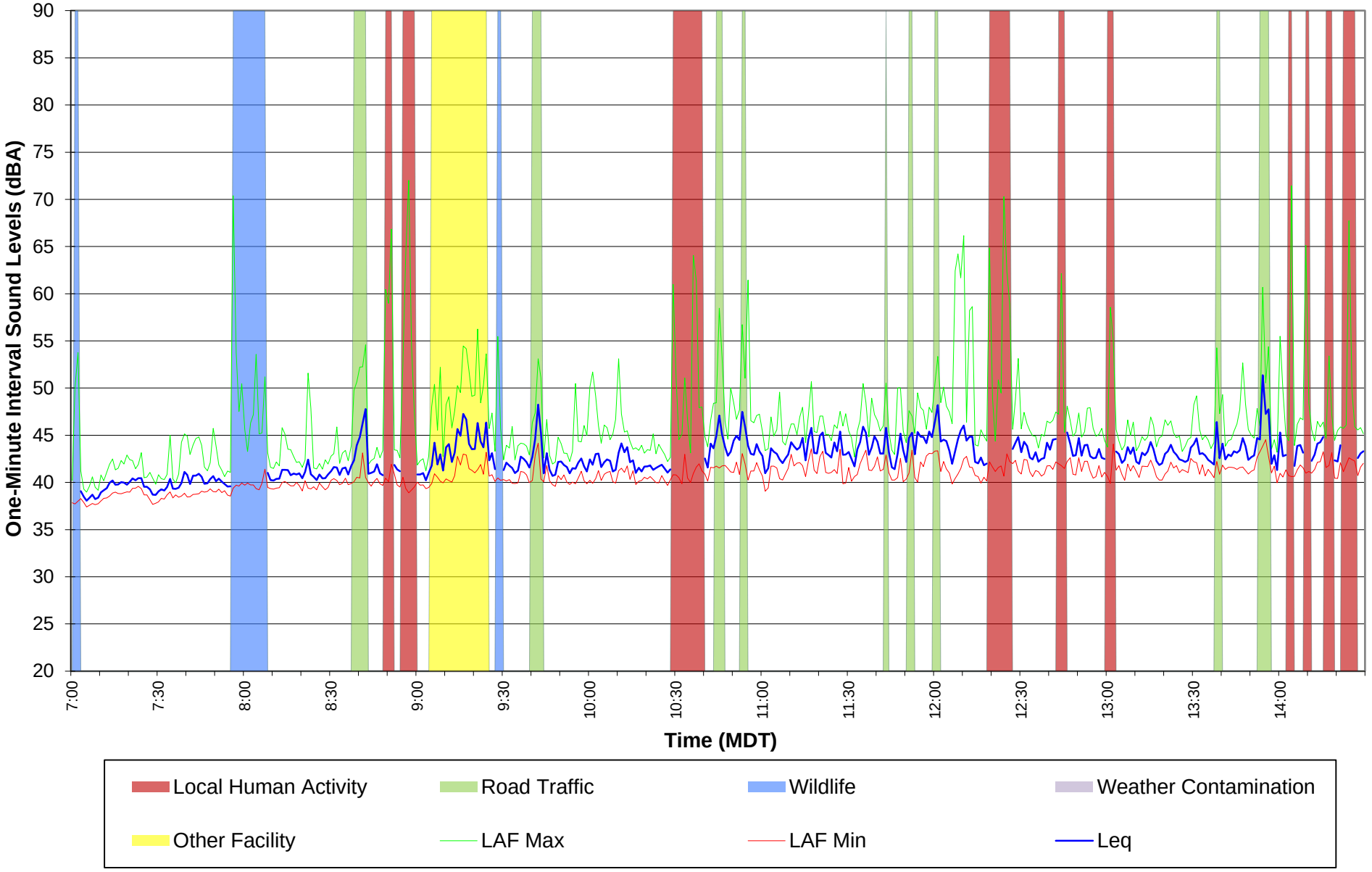


Figure C.6.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 07:00 - 14:29

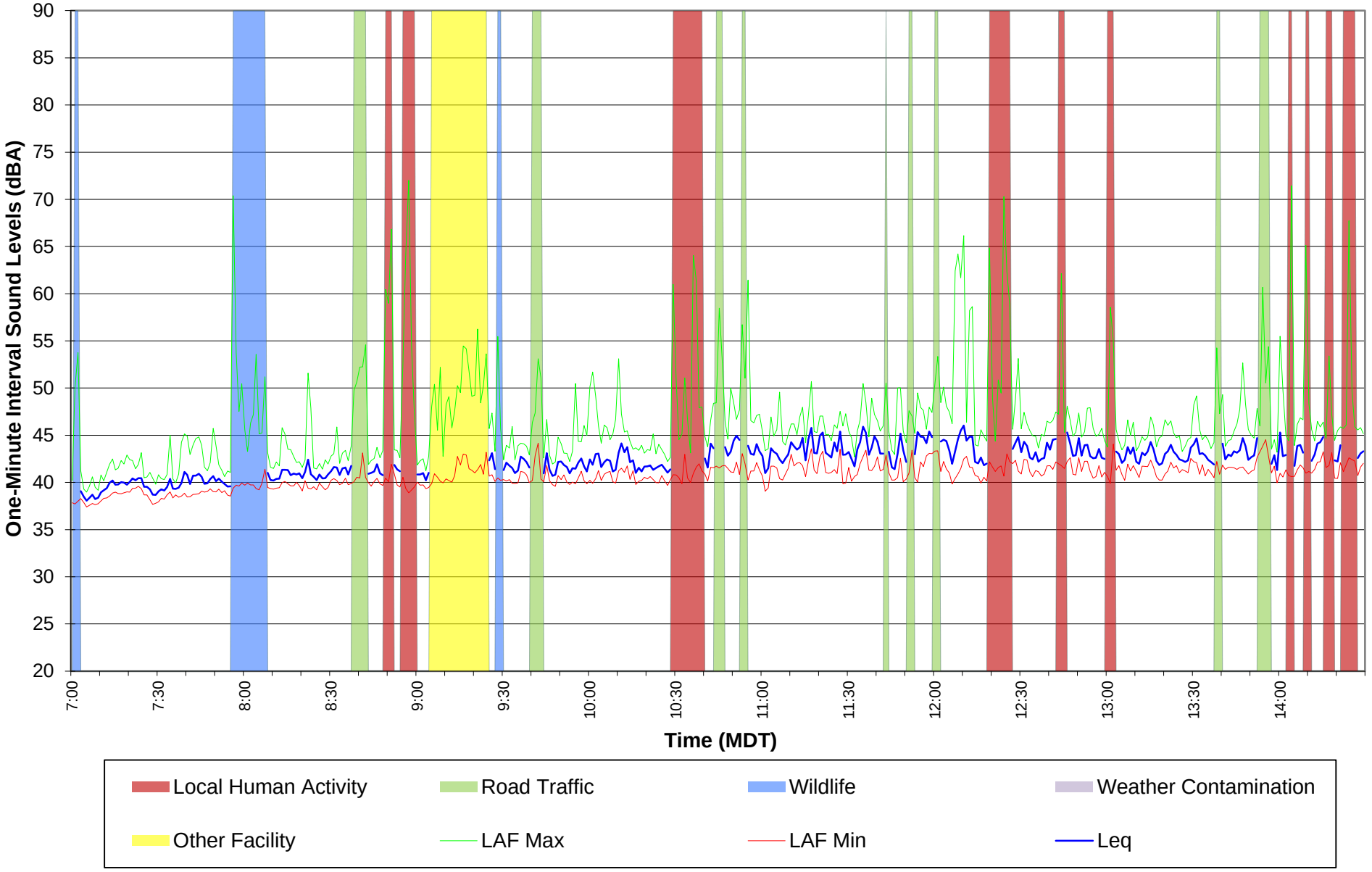


Figure C.7

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 14:30 - 21:59

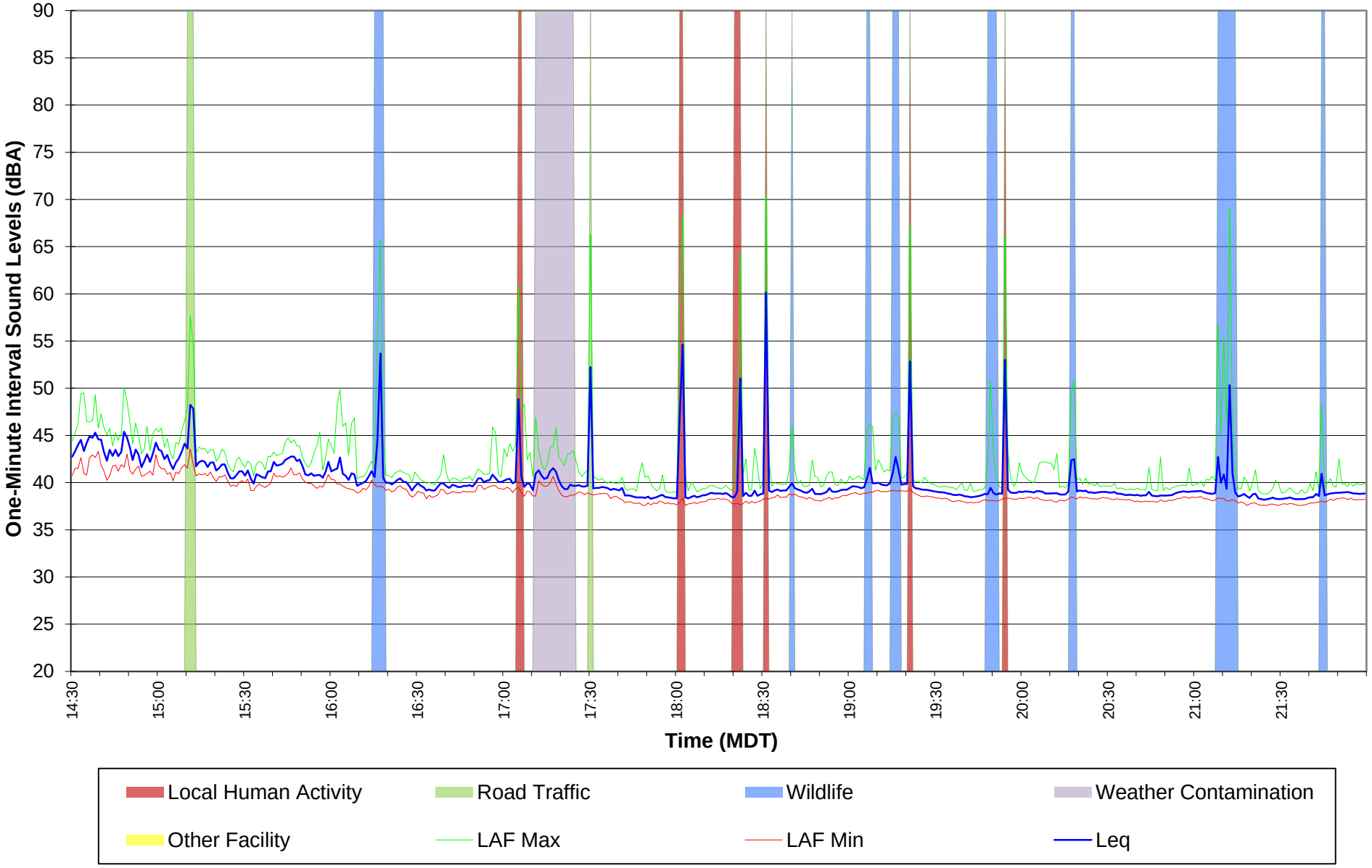


Figure C.7.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 14:30 - 21:59

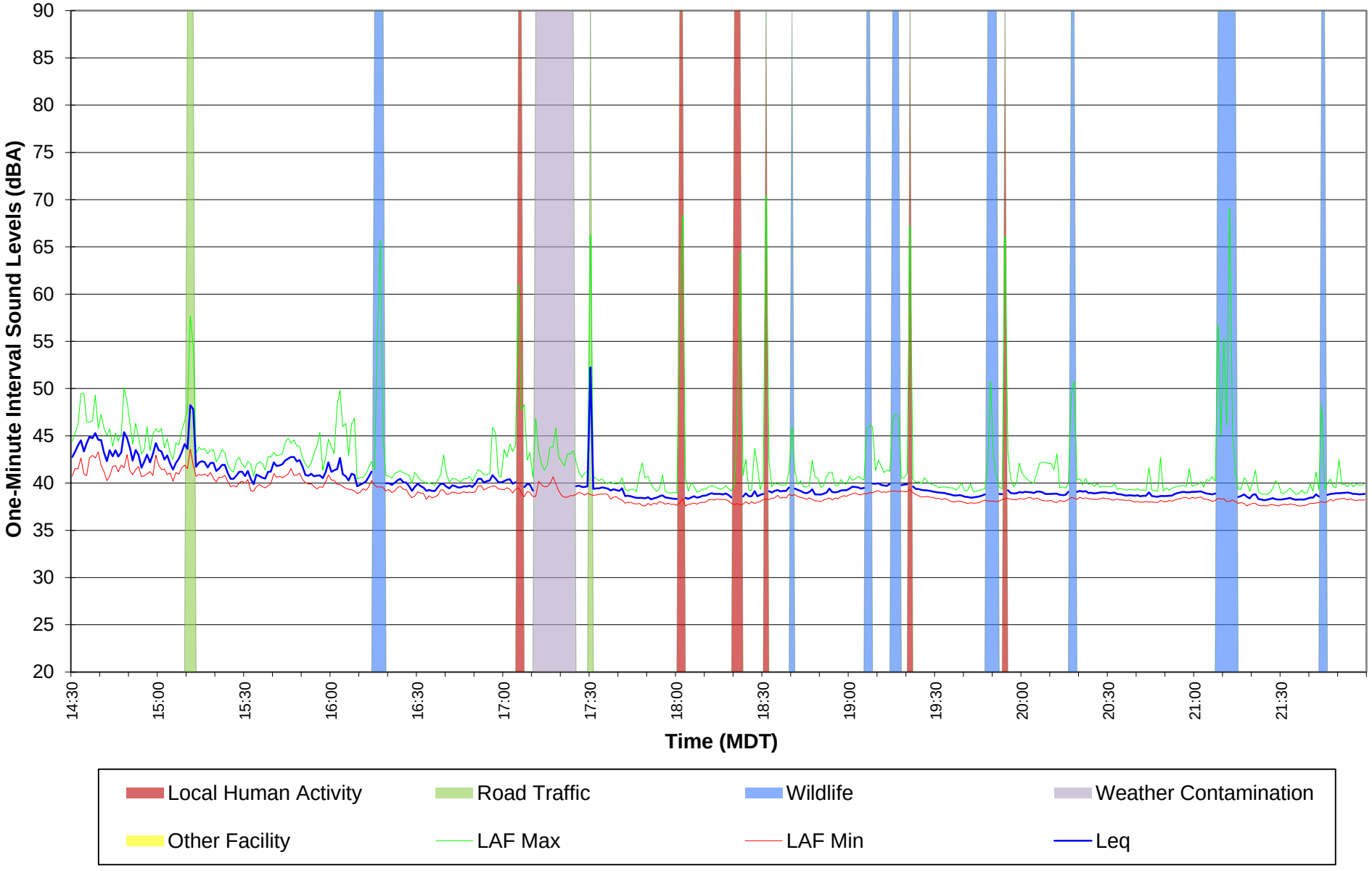


Figure C.7.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 14:30 - 21:59

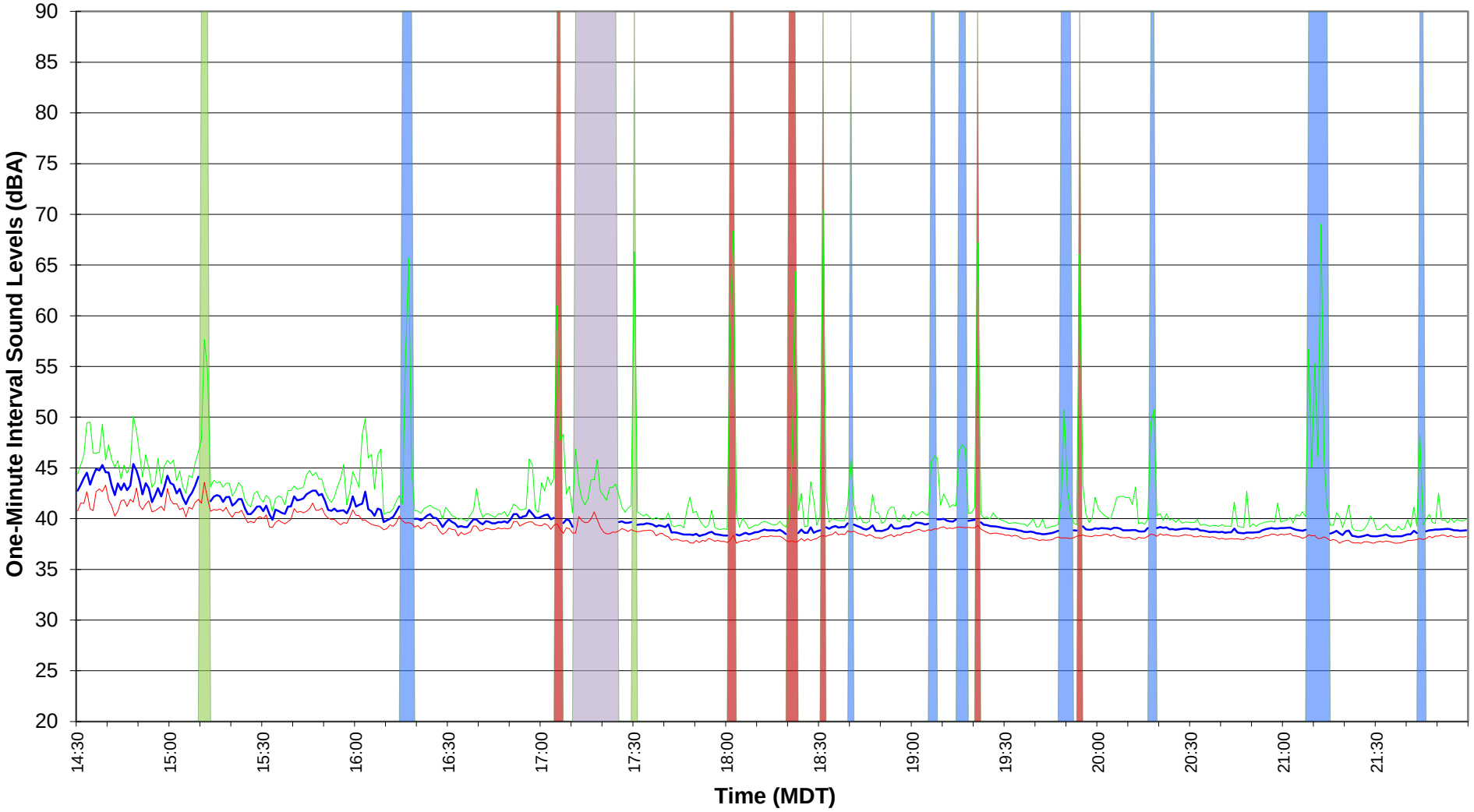


Figure C.8

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

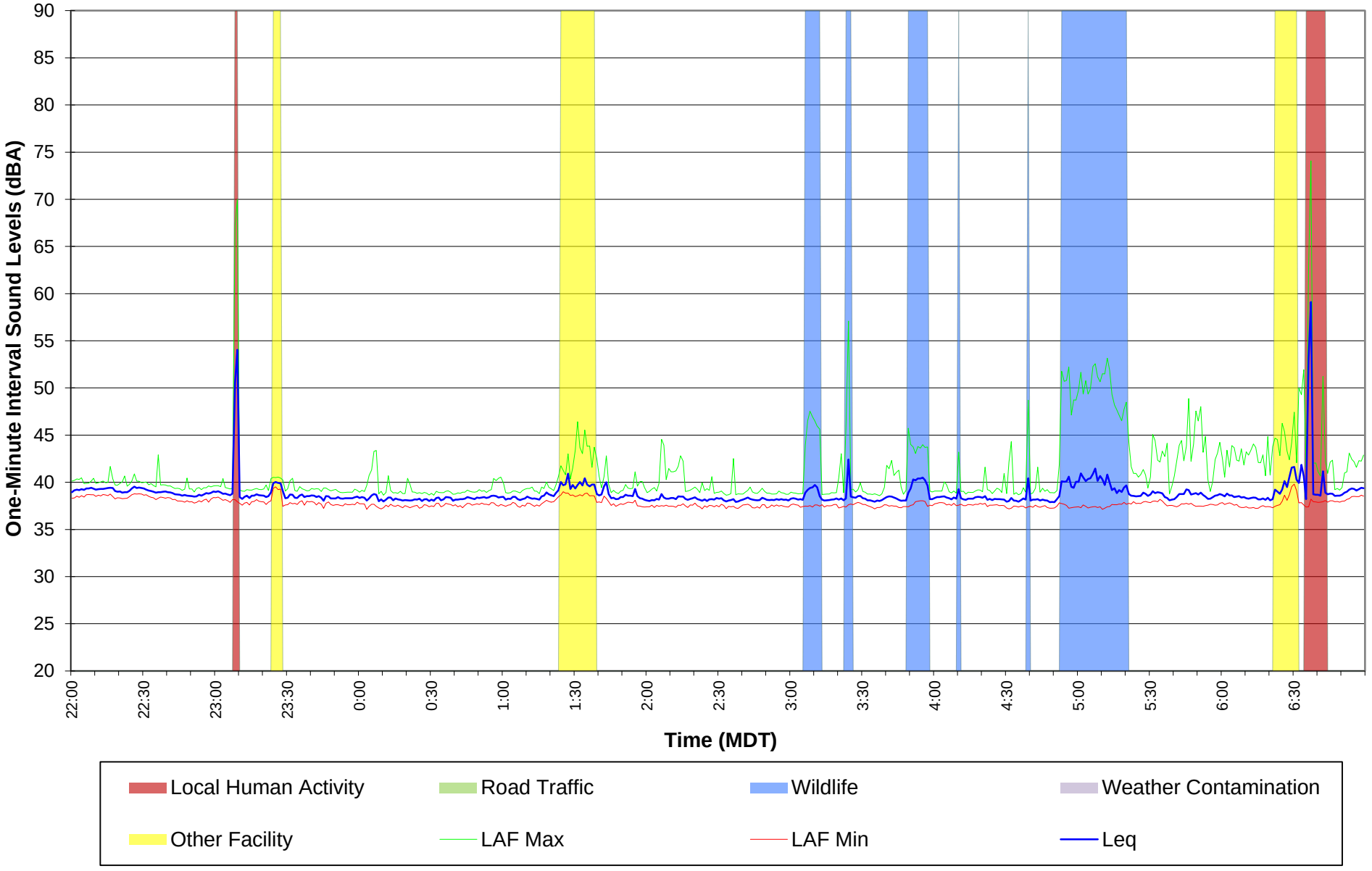


Figure C.8.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

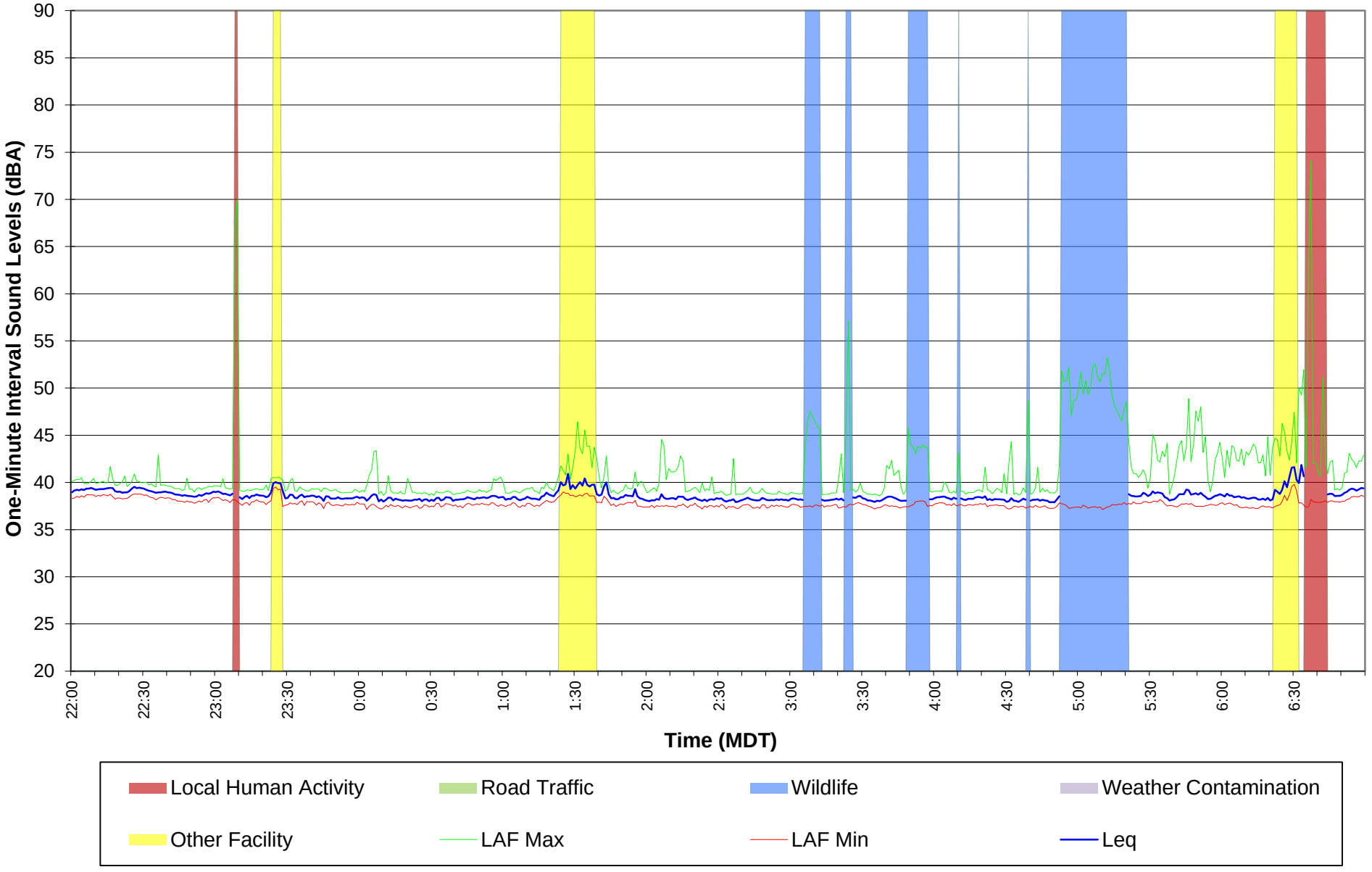


Figure C.8.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

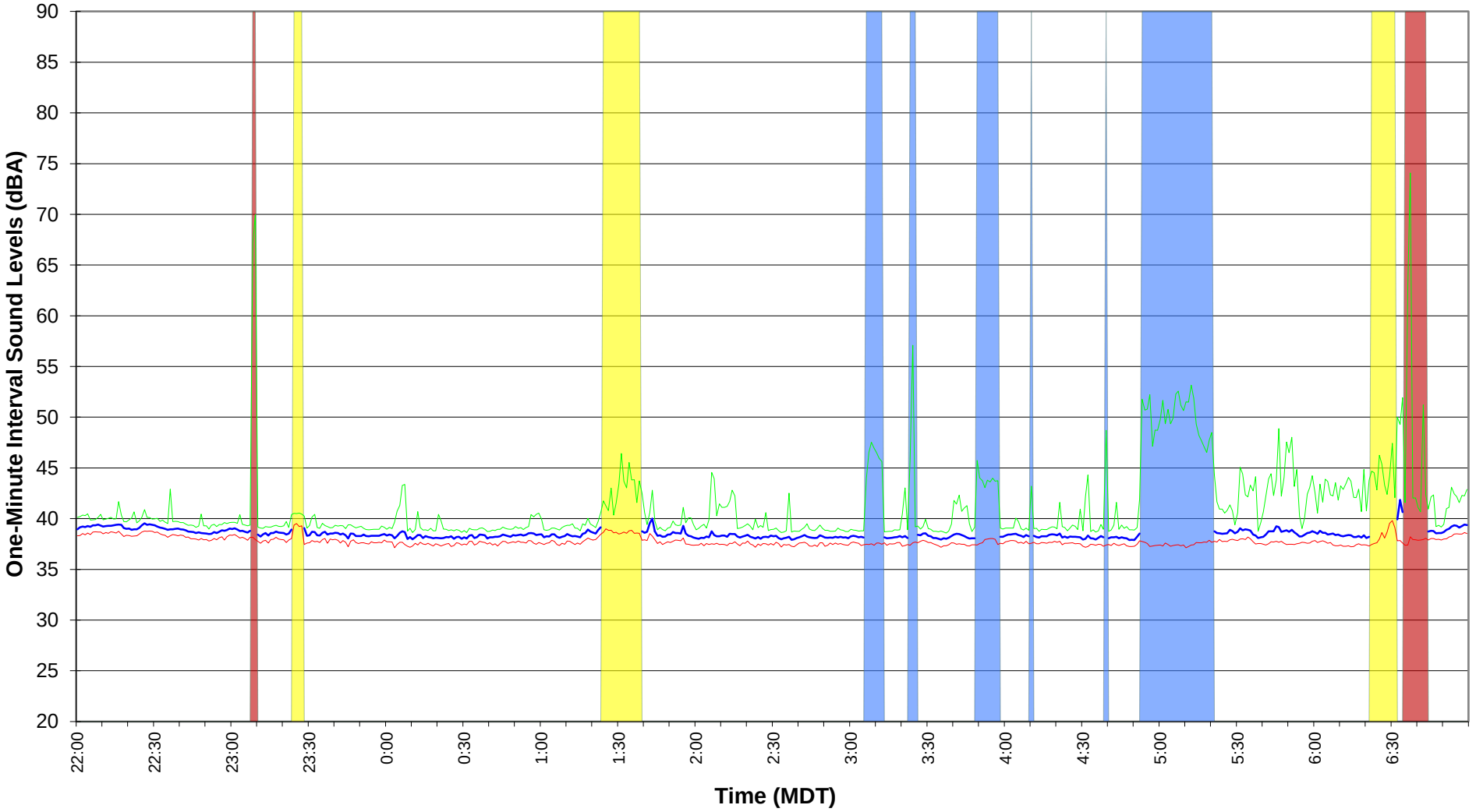


Figure C.9

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 07:00 - 14:29

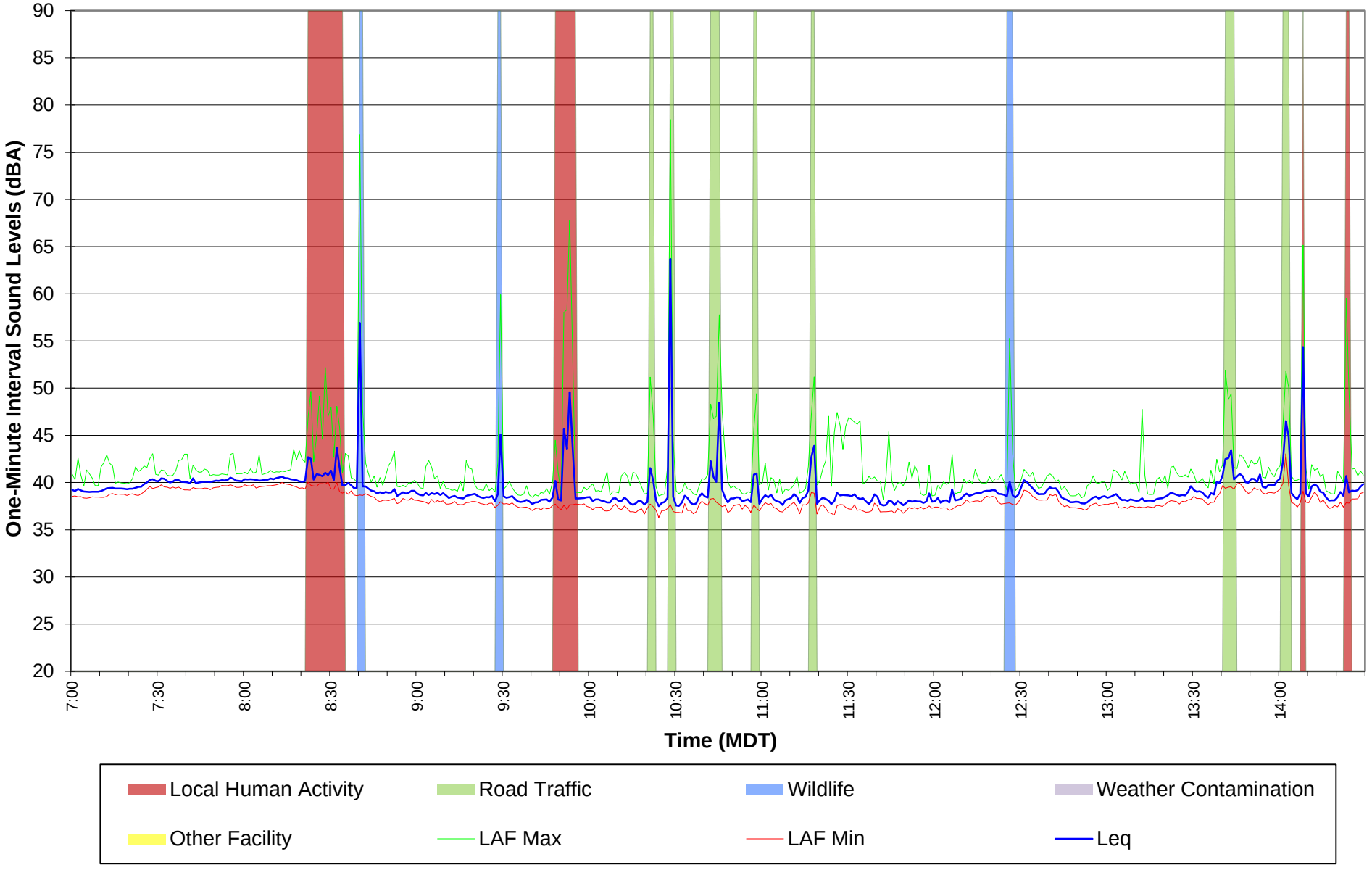


Figure C.9.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 07:00 - 14:29

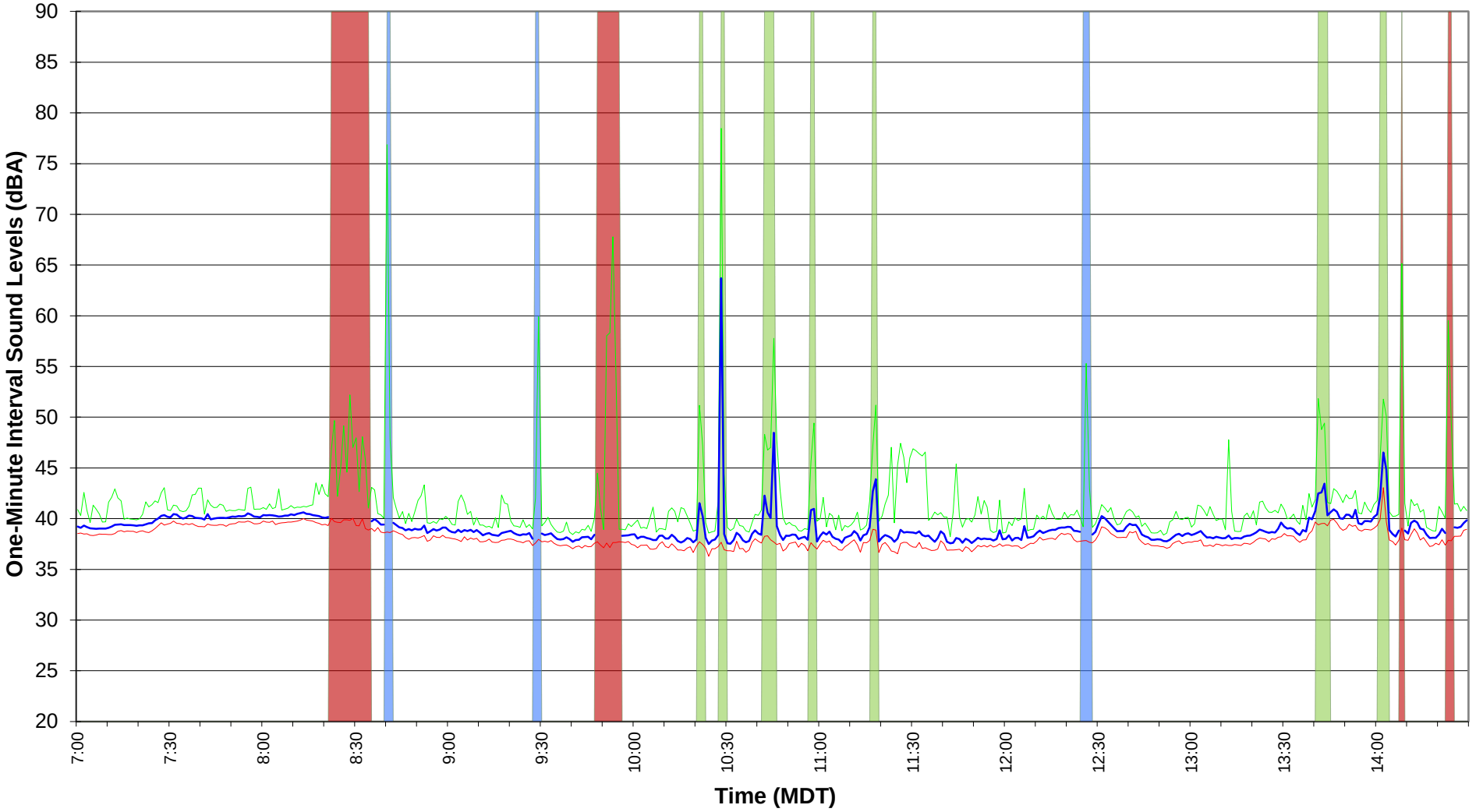


Figure C.9.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 07:00 - 14:29

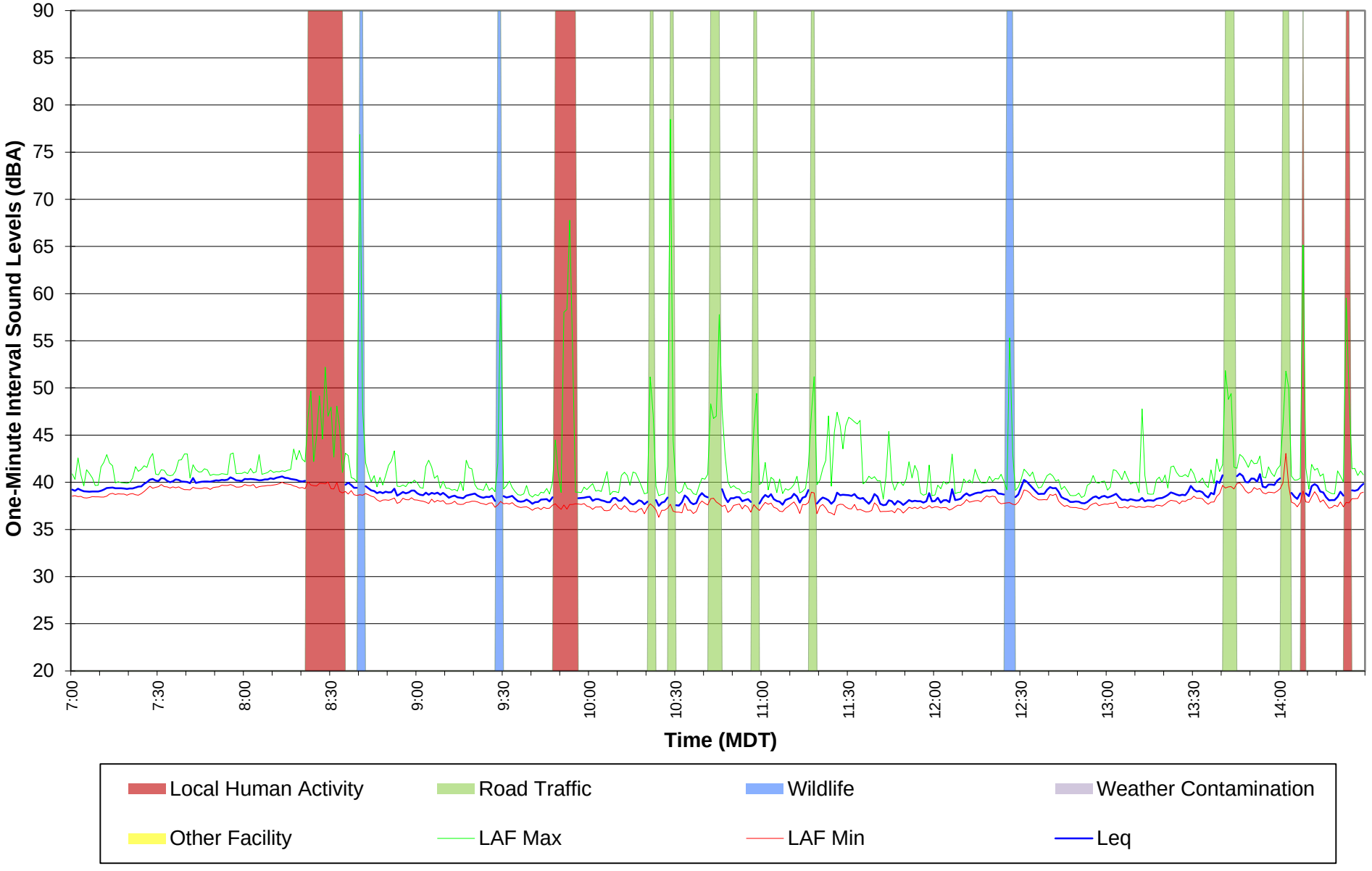


Figure C.10

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 14:30 - 21:59

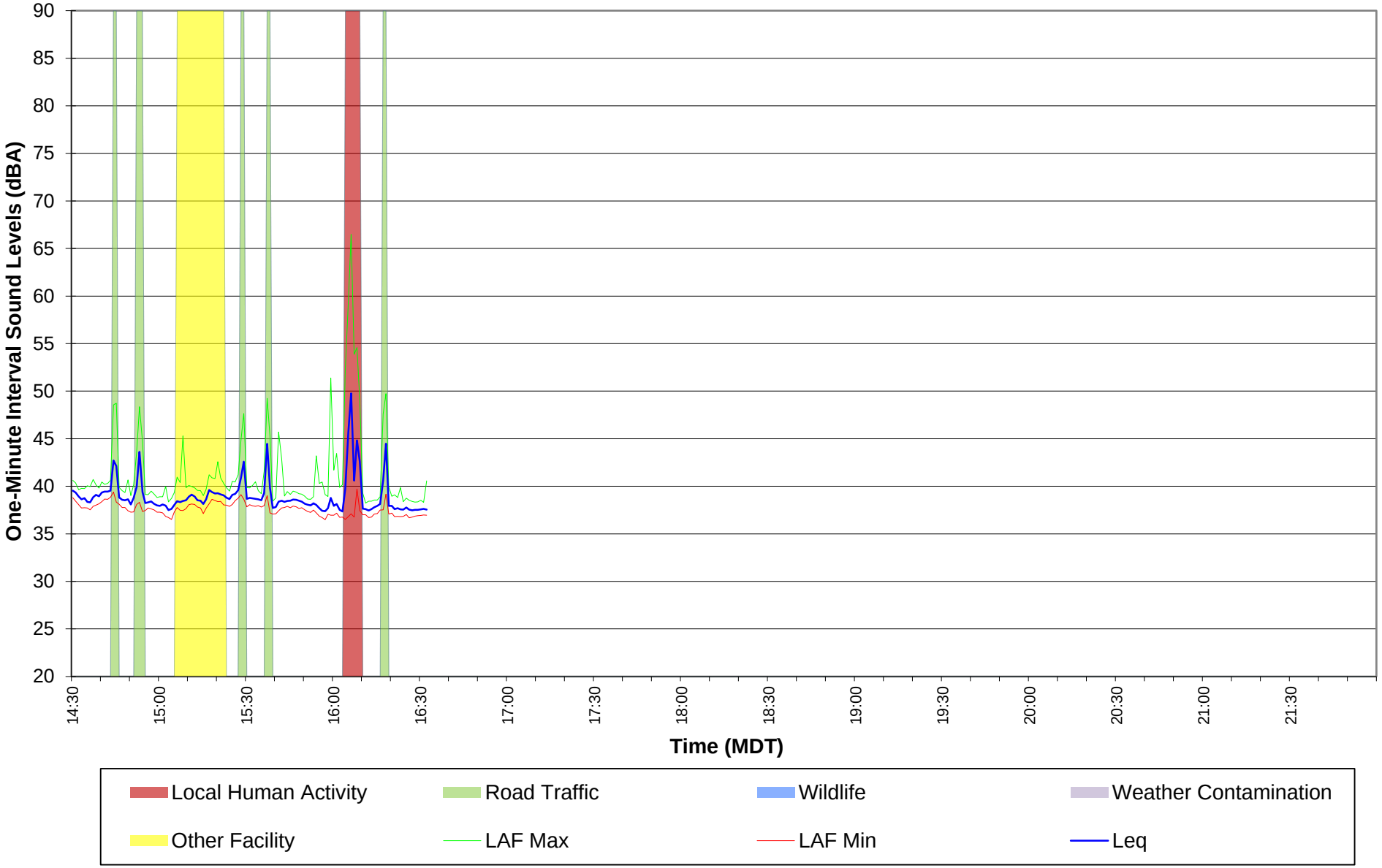


Figure C.10.Fac

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 14:30 - 21:59

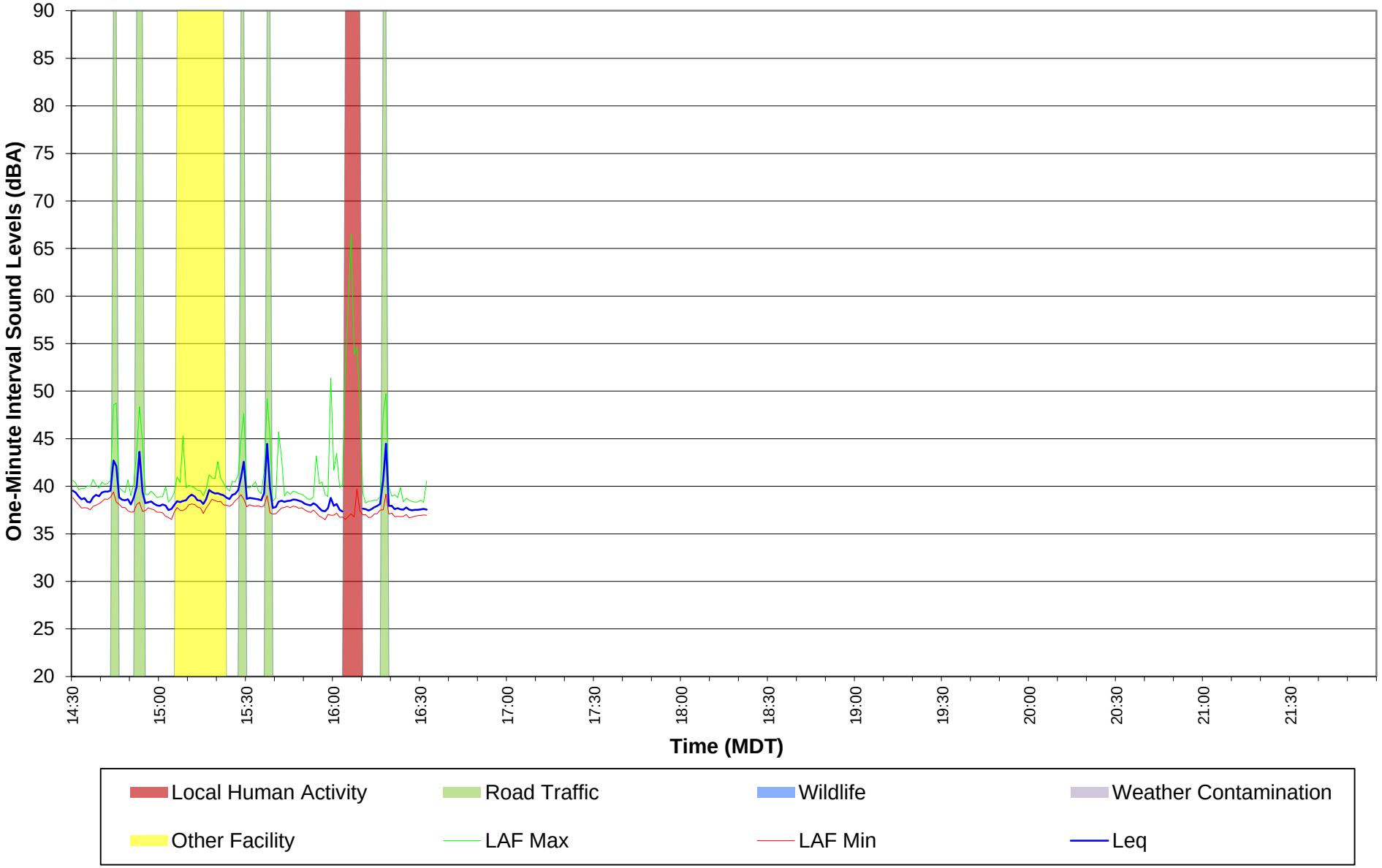
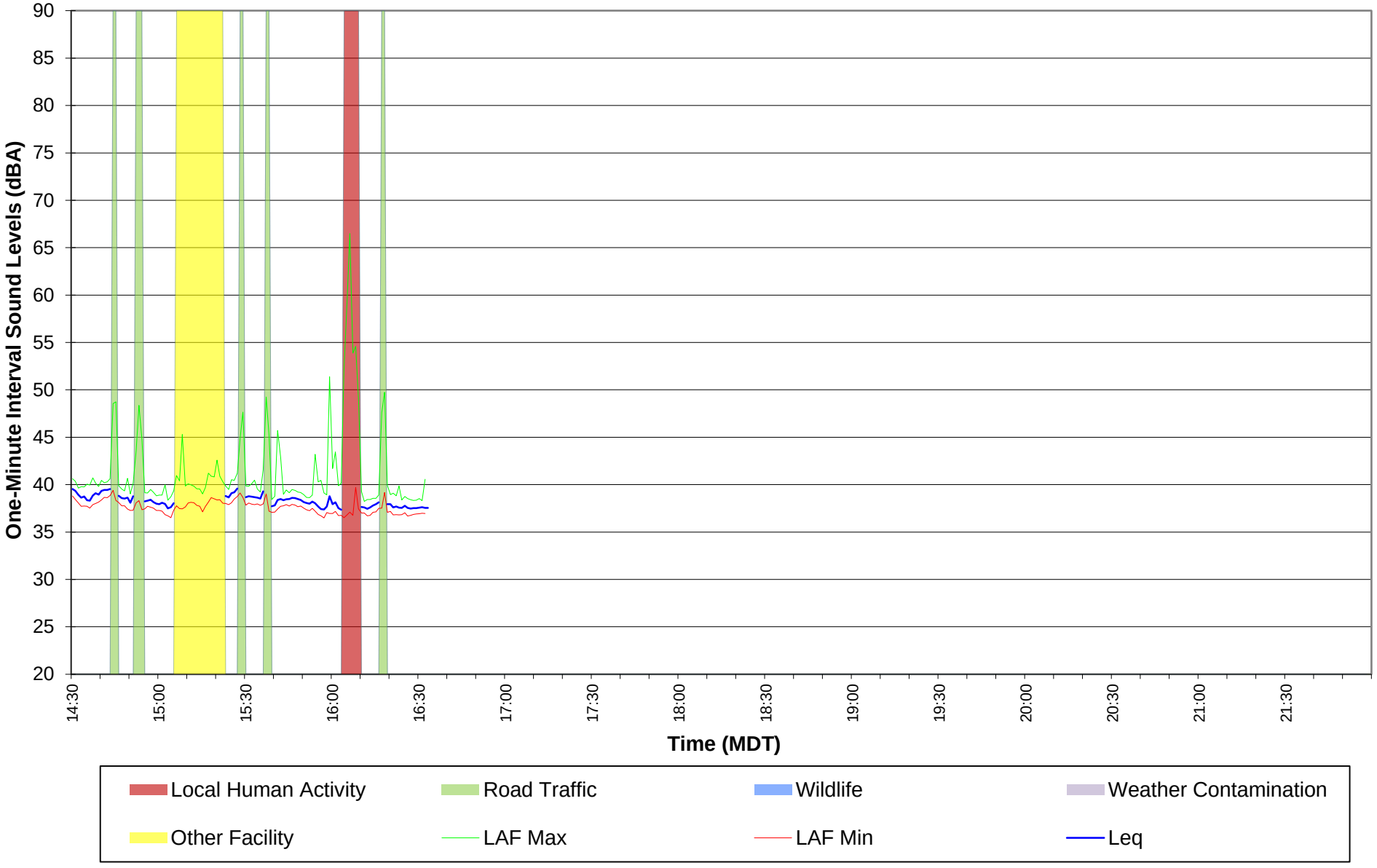


Figure C.10.Amb

YESAB Keno Hill Silver District Operations

R1 Noise Survey

Jun. 28, 2012 14:30 - 21:59



APPENDIX D

Measurement Results
Graphs of 1-Minute Sound Data
Residence 2

Patching Associates Acoustical Engineering Ltd.

Consultants in Acoustics, Noise Control and Vibrations

Table D.1
YESAB Keno Hill Silver District Operations
R2 Noise Survey
Daily Leq Values

Date	Time	Measured		Incl Other Facility		Measured Ambient	
		Leq	Hours	Leq	Hours	Leq	Hours
Jun. 25, 2012	**07:00 - 21:59**	**35**	**2.8**	**35**	**2.3**	**35**	**2.0**
Jun. 25, 2012 - Jun. 26, 2012	22:00 - 06:59	38	9.0	37	8.1	32	1.7
Jun. 26, 2012	07:00 - 21:59	40	15.0	38	11.0	29	2.7
Jun 26, 2012 - Jun 27, 2012	22:00 - 06:59	35	9.0	35	7.2	32	2.1
Jun. 27, 2012	07:00 - 21:59	49	15.0	38	7.9	36	2.1
Jun. 27, 2012 - Jun. 28, 2012	**22:00 - 06:59**	**32**	**9.0**	**30**	**7.8**	**28**	**6.2**
Jun. 28, 2012	07:00 - 21:59	43	10.1	30	5.0	28	3.4

Figure D.1

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 14:30 - 21:59

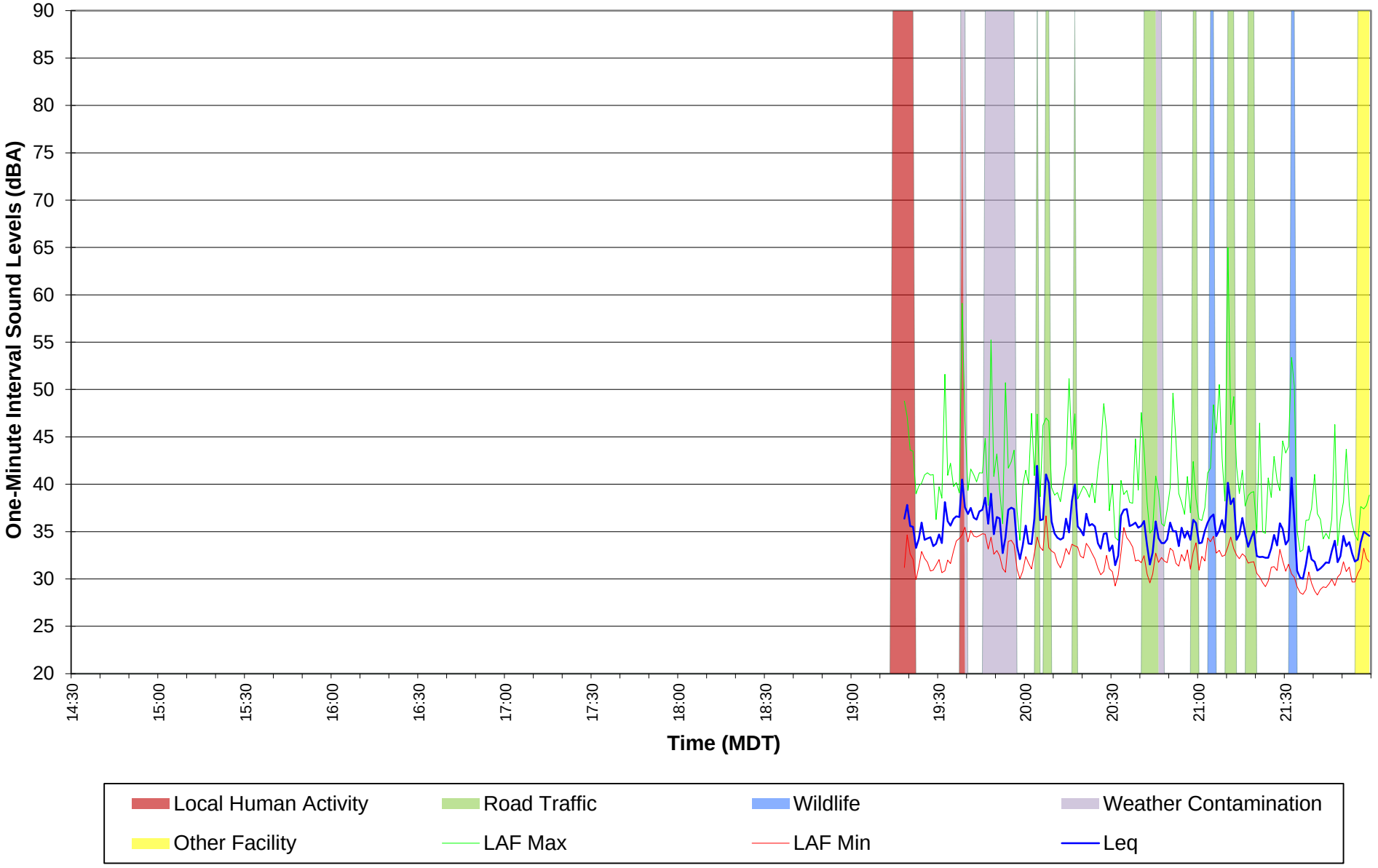


Figure D.1.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 14:30 - 21:59

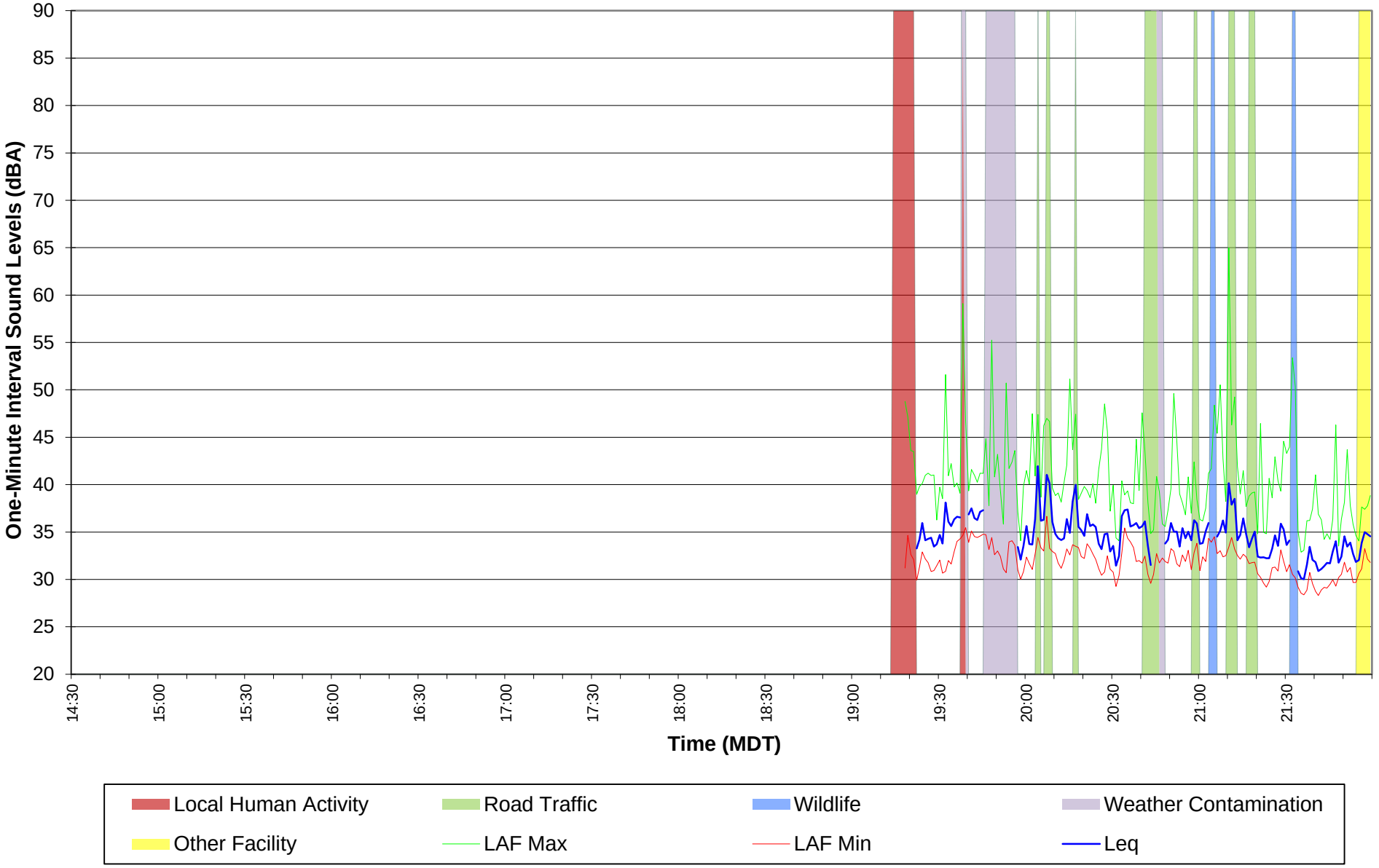


Figure D.1.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 14:30 - 21:59

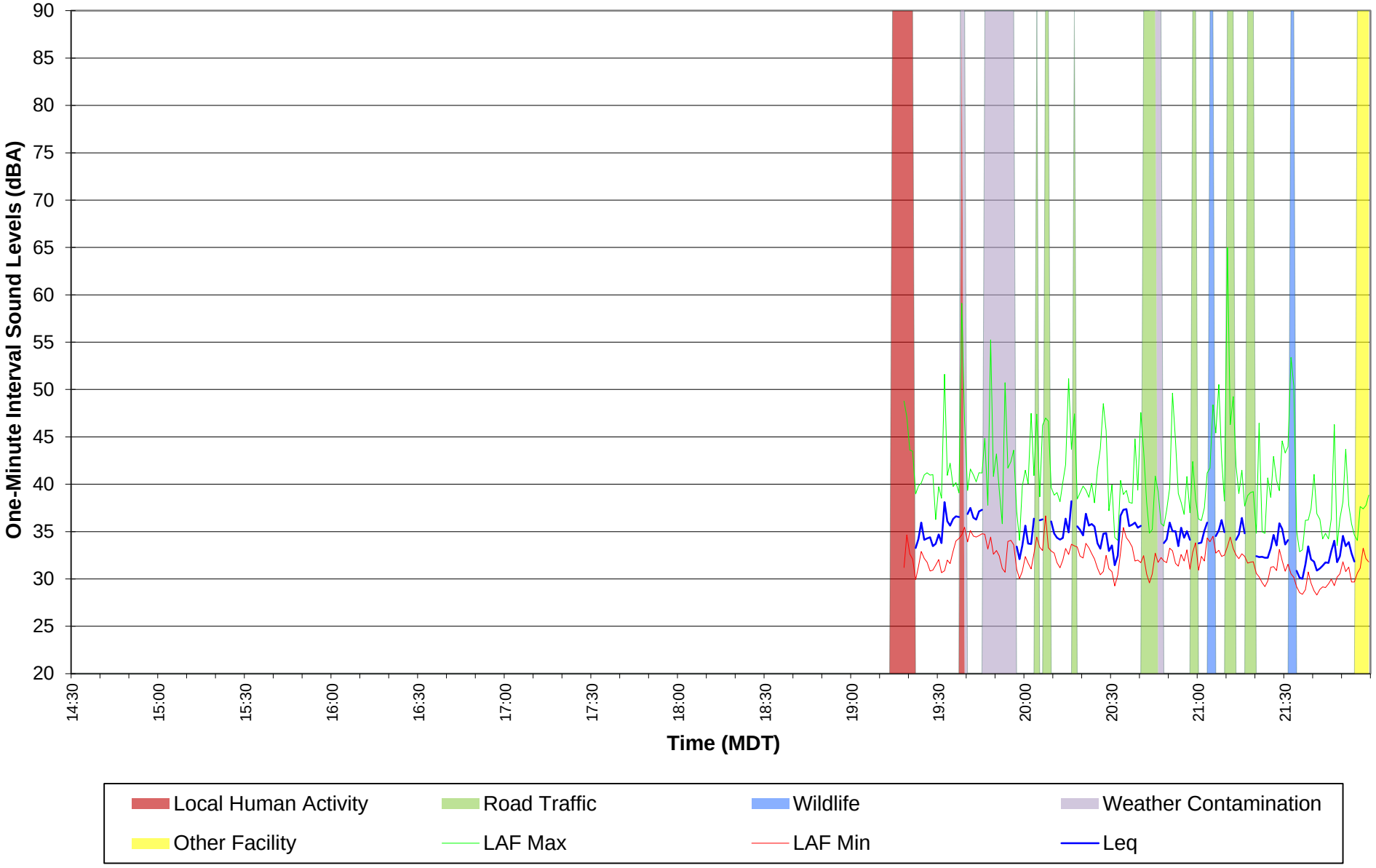


Figure D.2

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

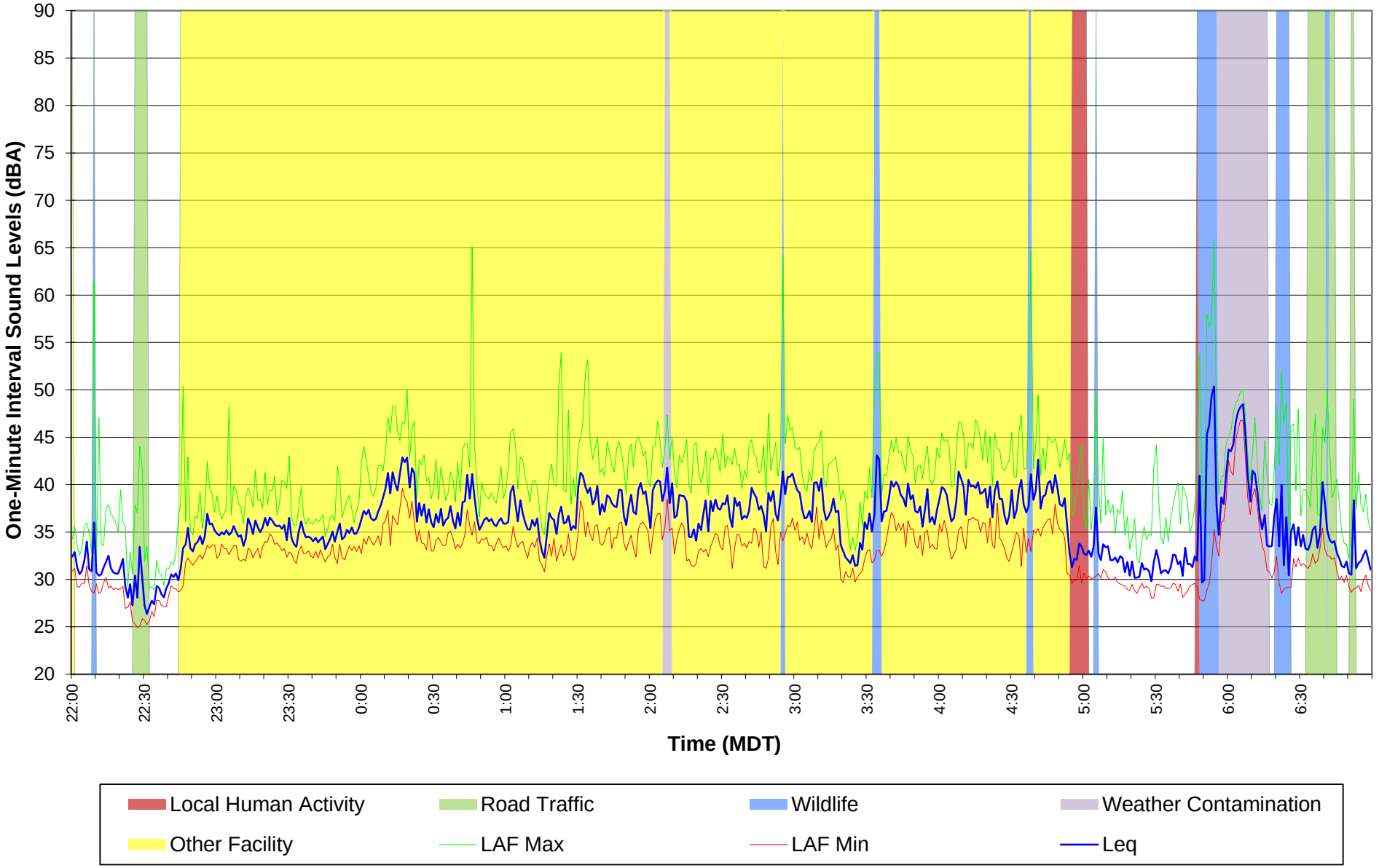


Figure D.2.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

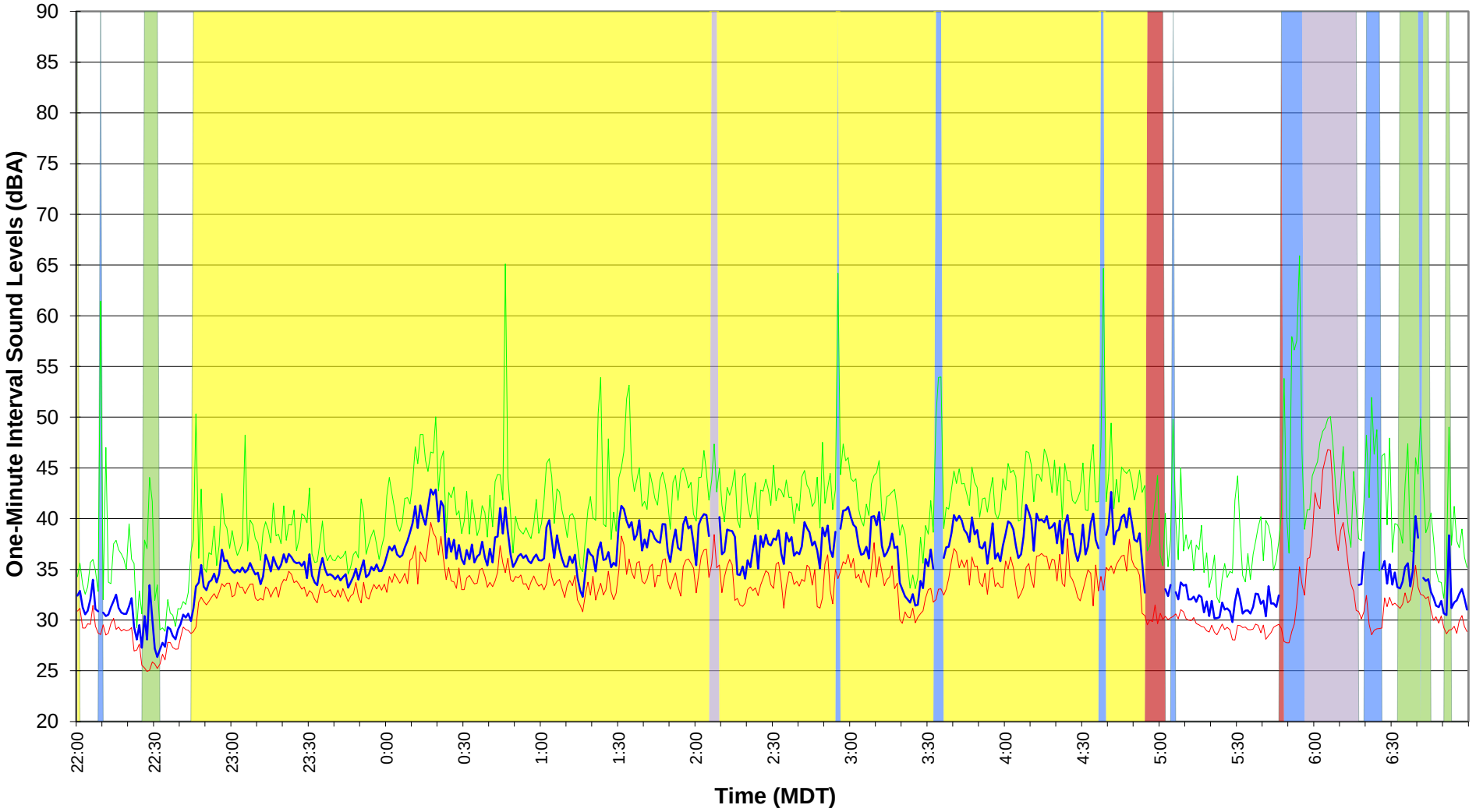


Figure D.2.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

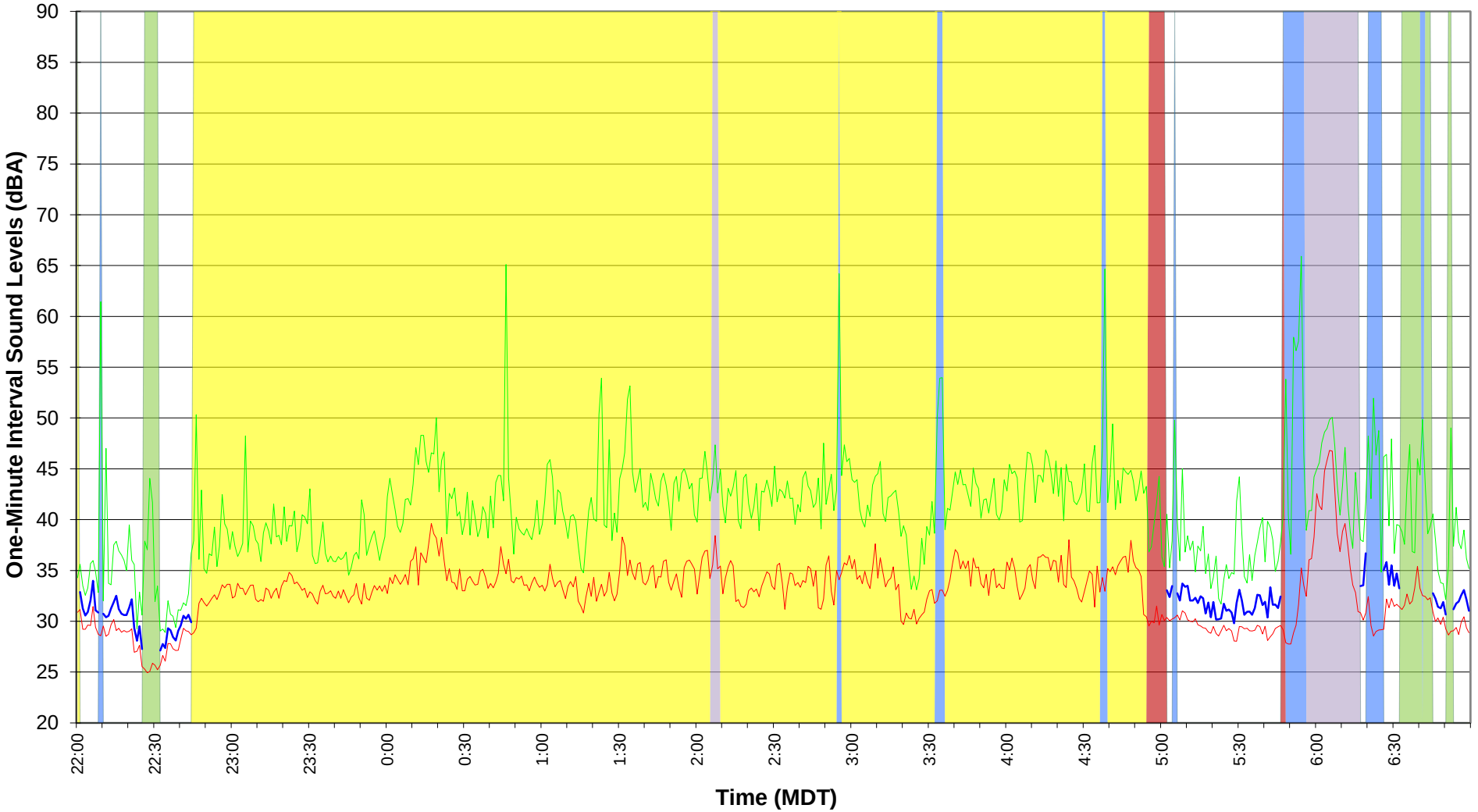


Figure D.3

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 07:00 - 14:29

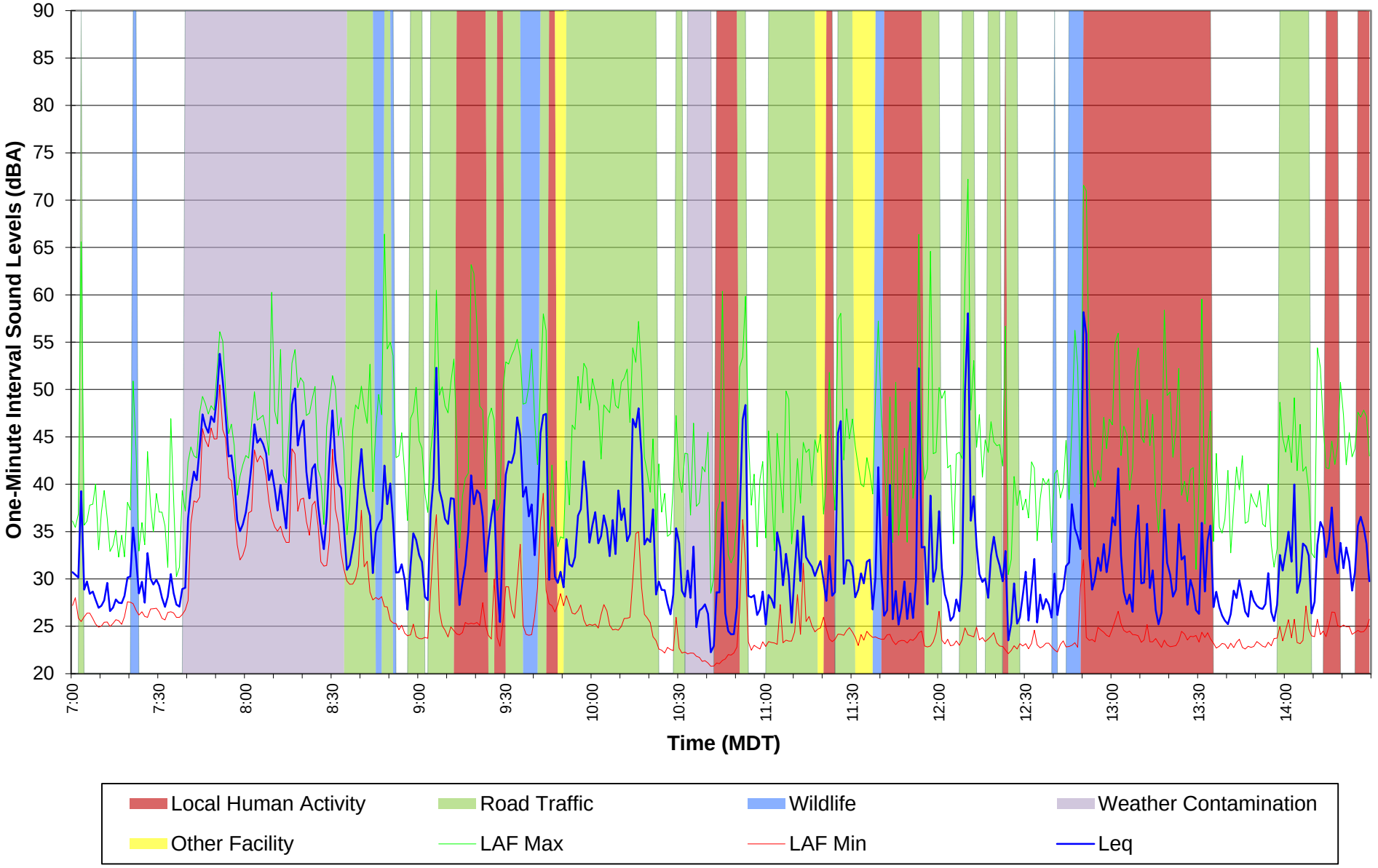


Figure D.3.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 07:00 - 14:29

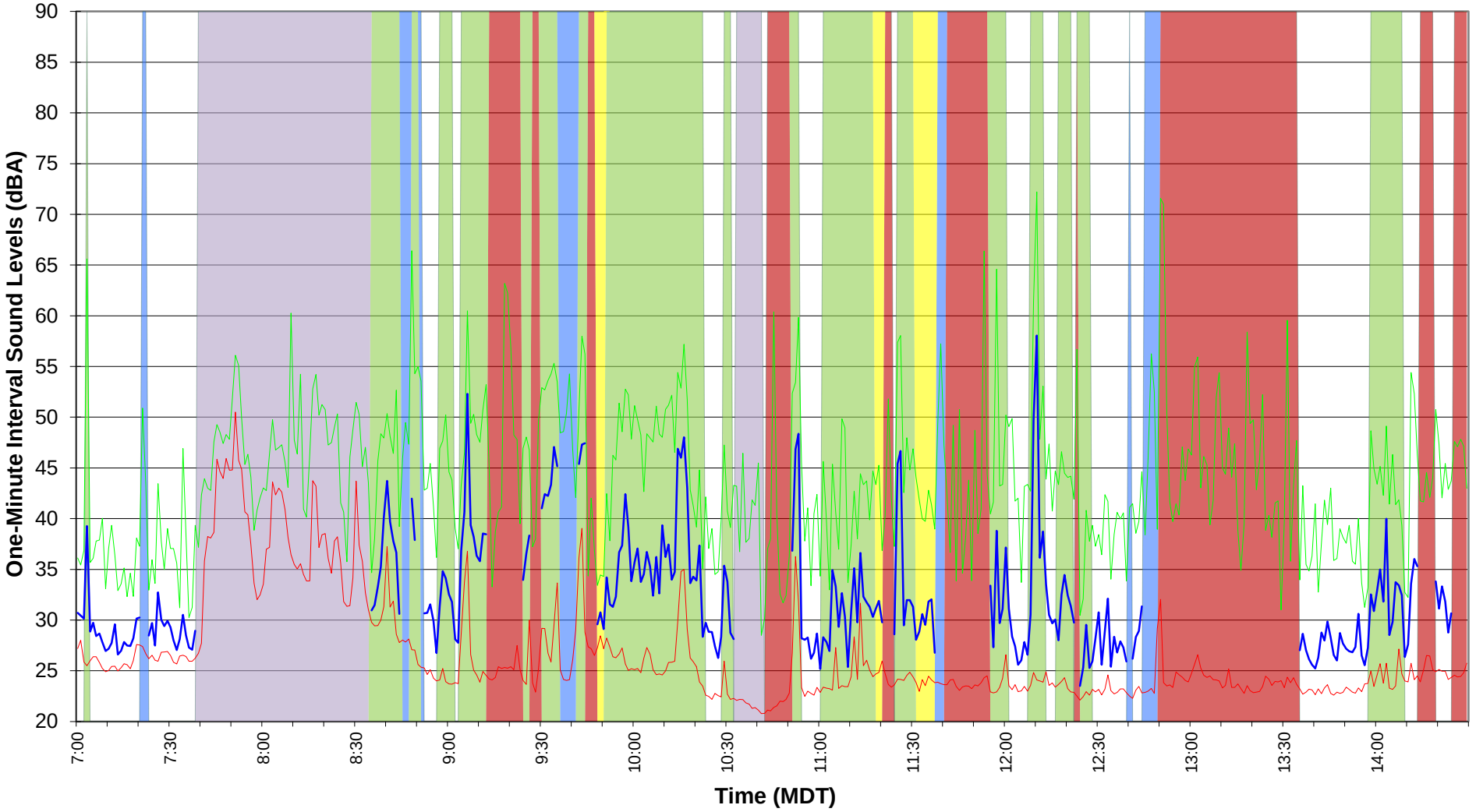


Figure D.3.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 07:00 - 14:29

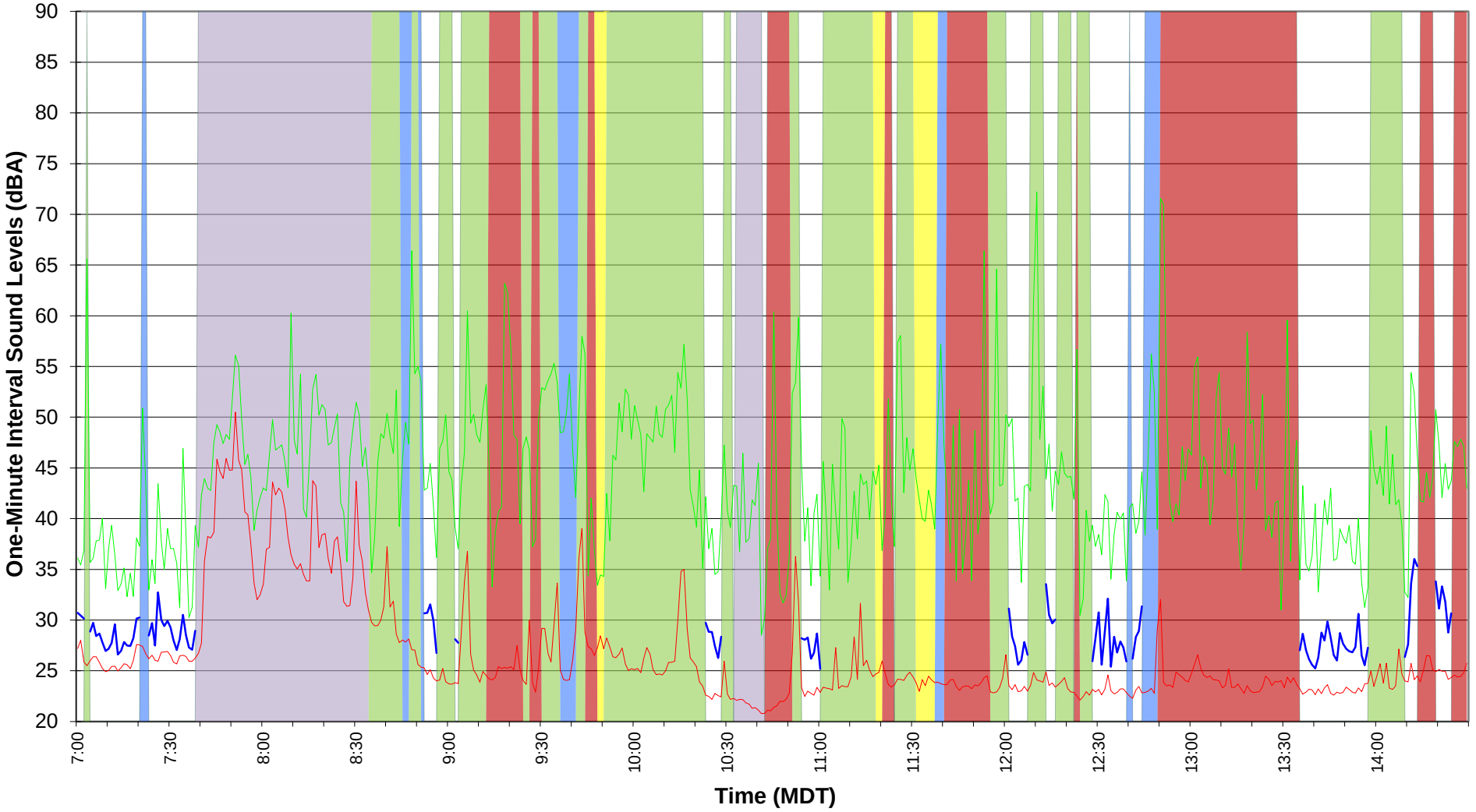


Figure D.4

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 14:30 - 21:59

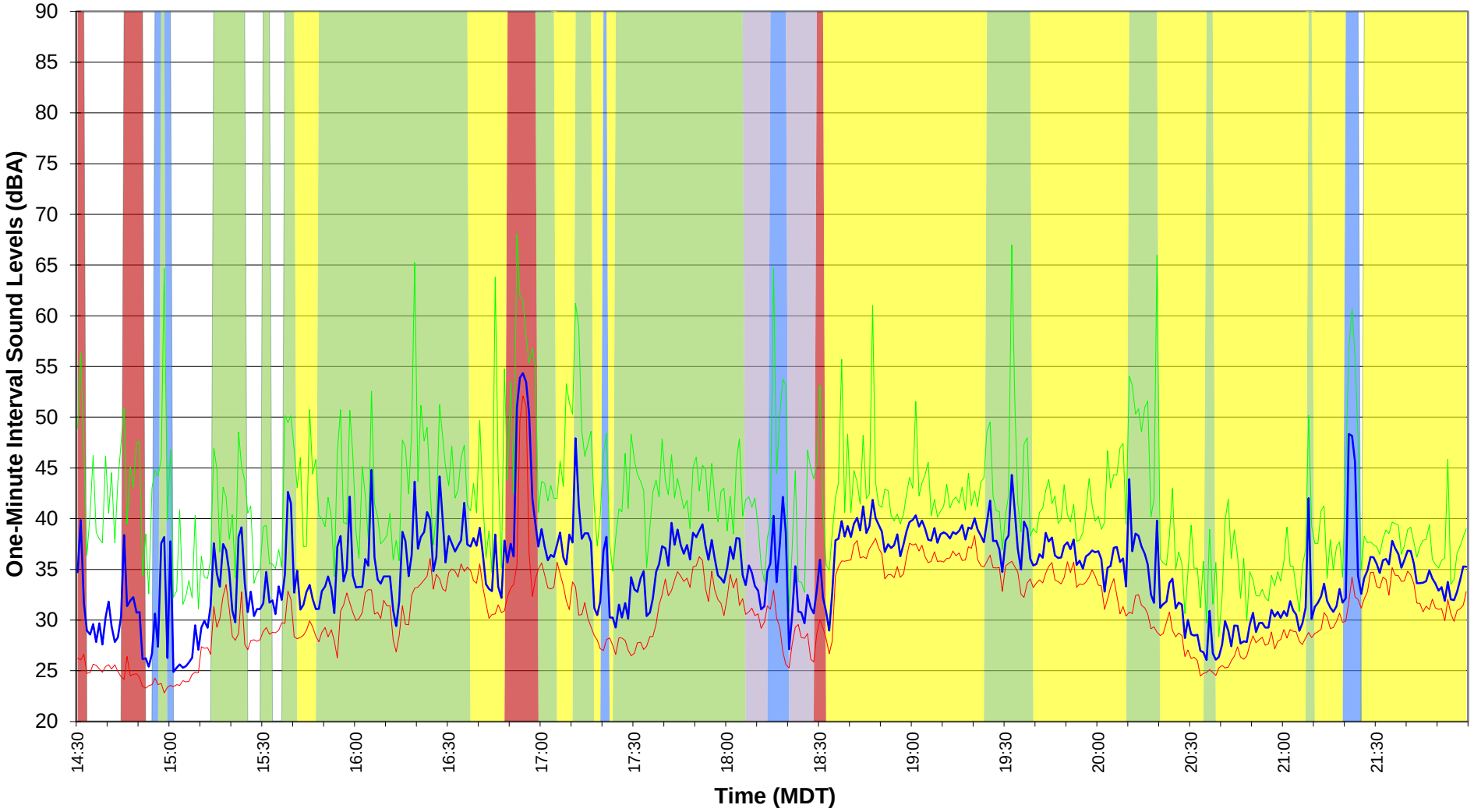


Figure D.4.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 14:30 - 21:59

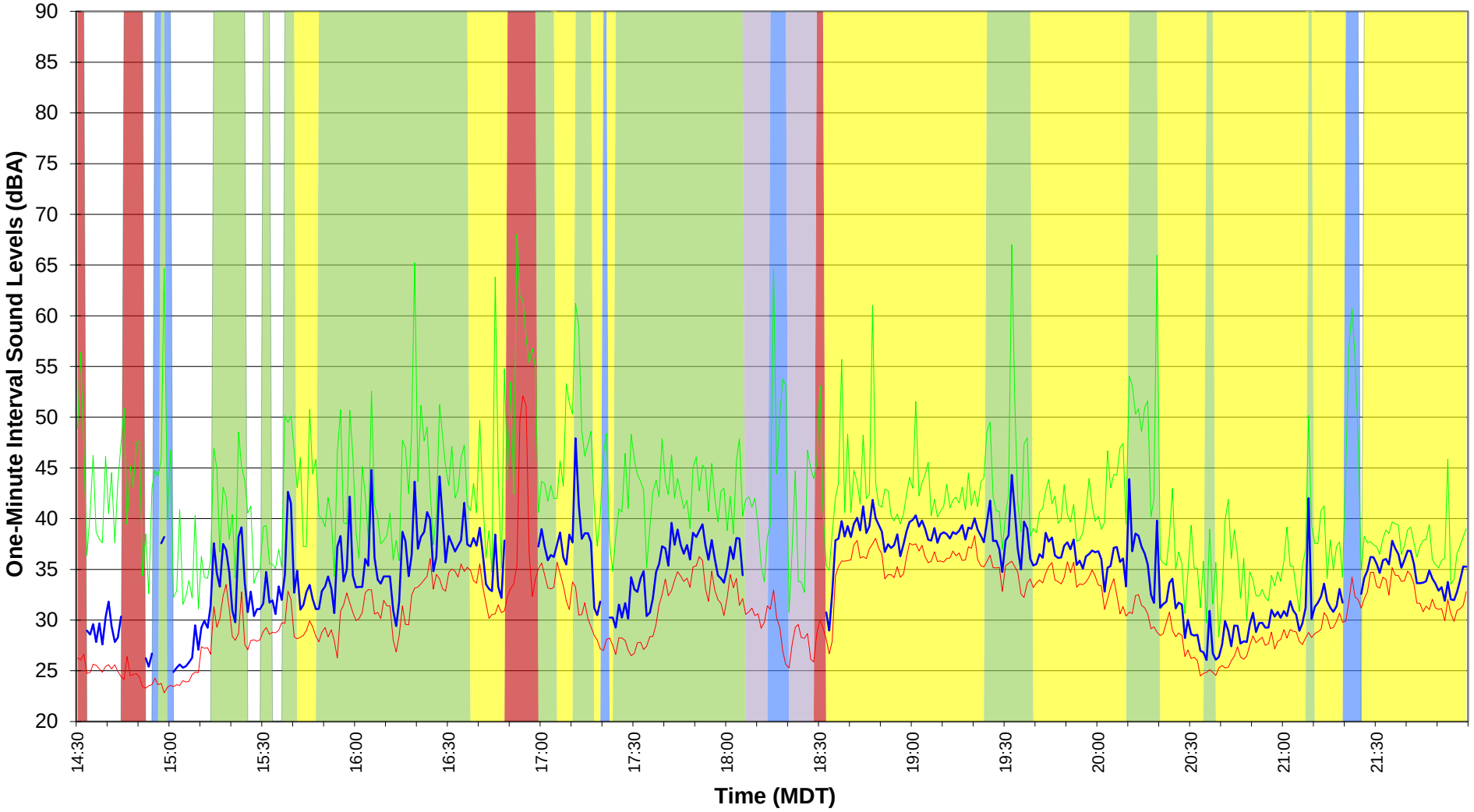


Figure D.4.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 26, 2012 14:30 - 21:59

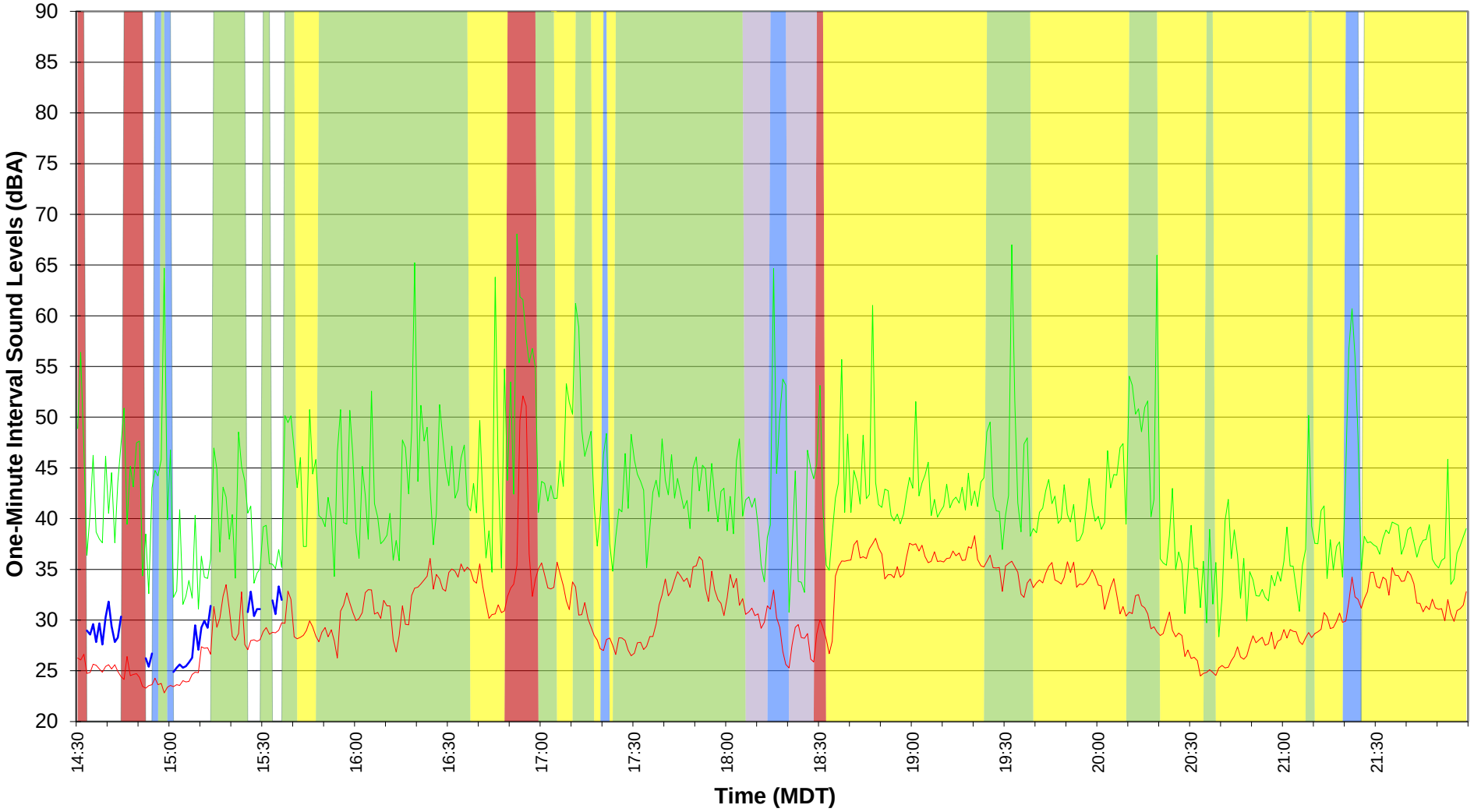


Figure D.5

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

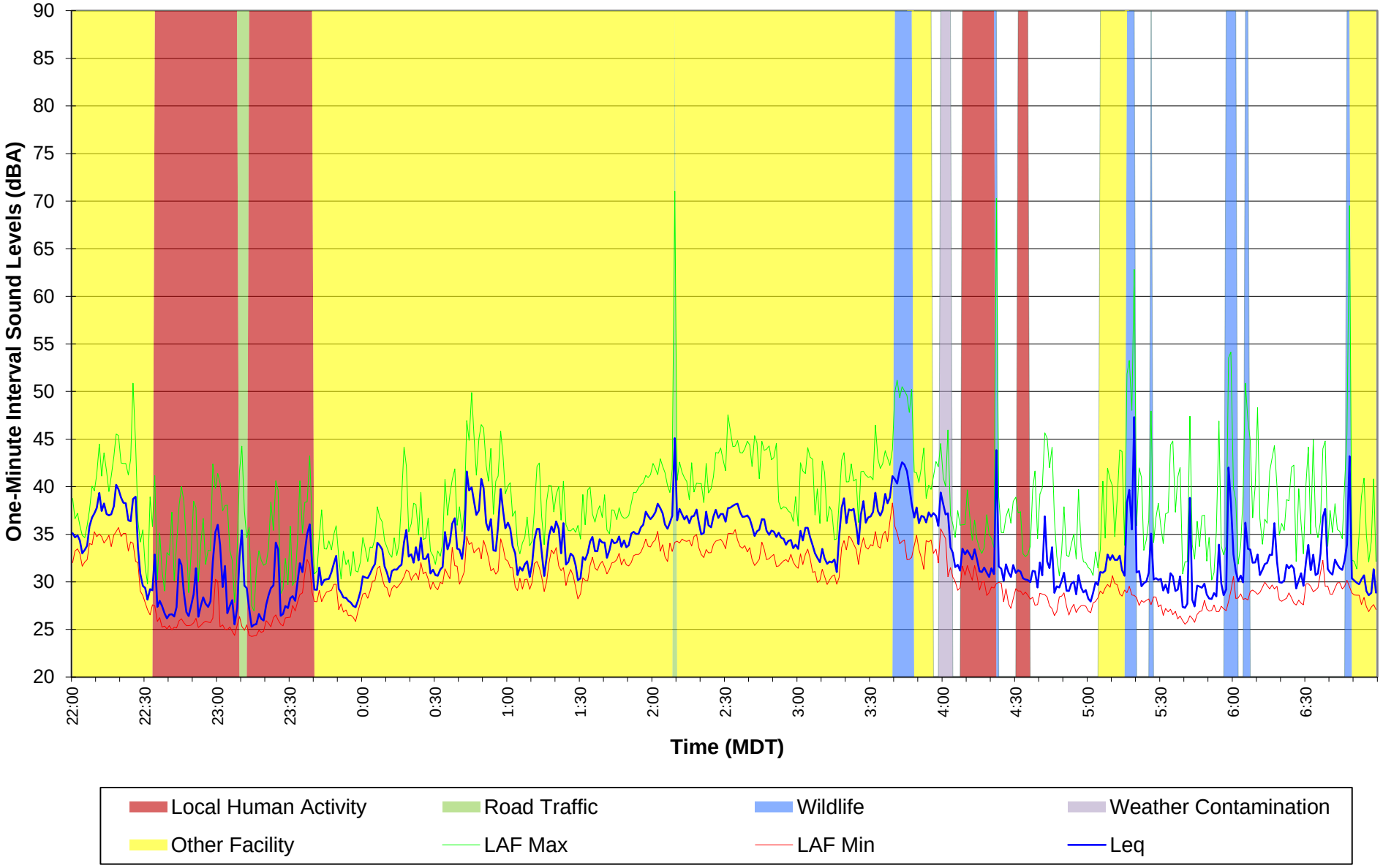


Figure D.5.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

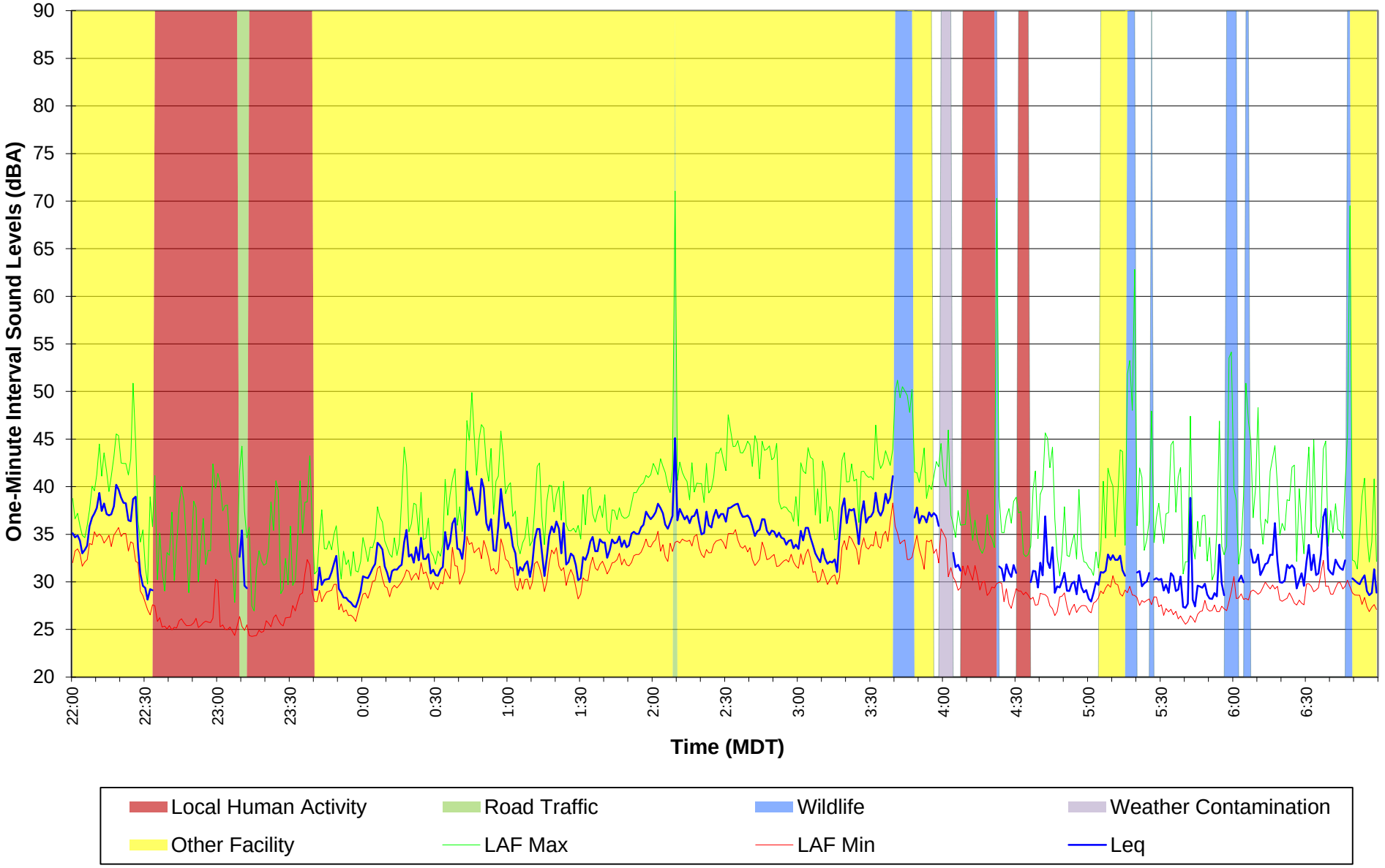


Figure D.5.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

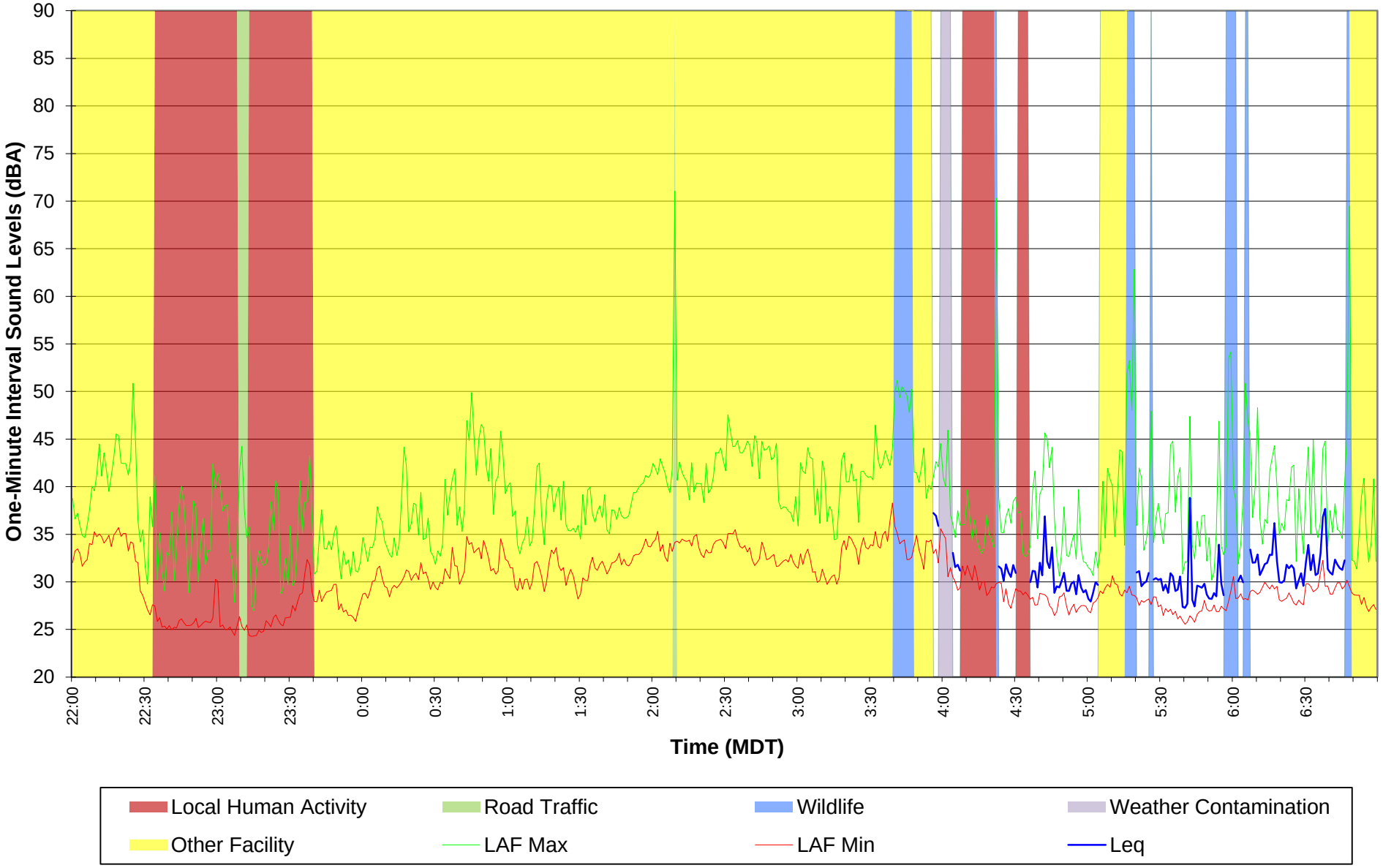


Figure D.6

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 07:00 - 14:29

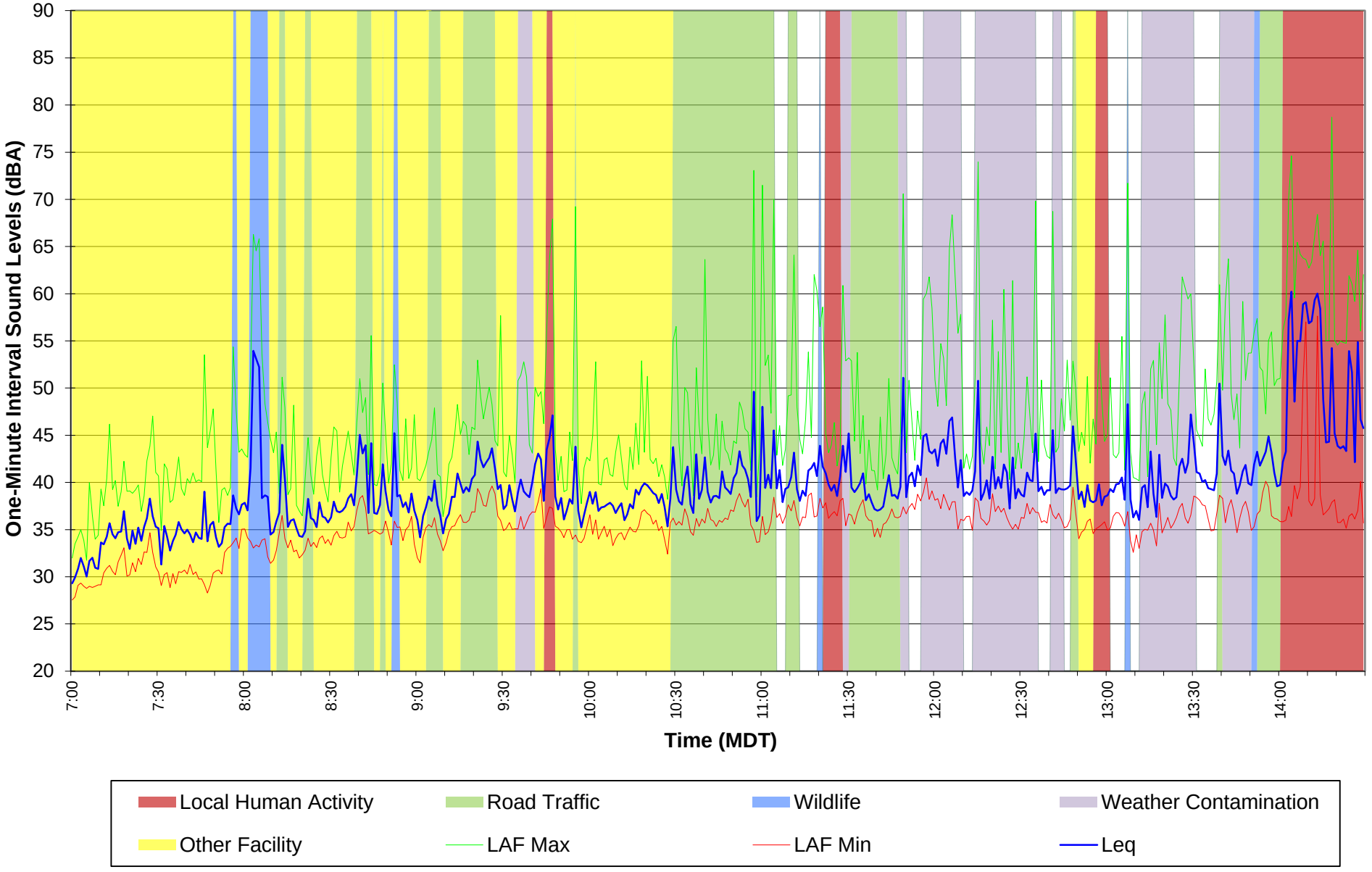


Figure D.6.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 07:00 - 14:29

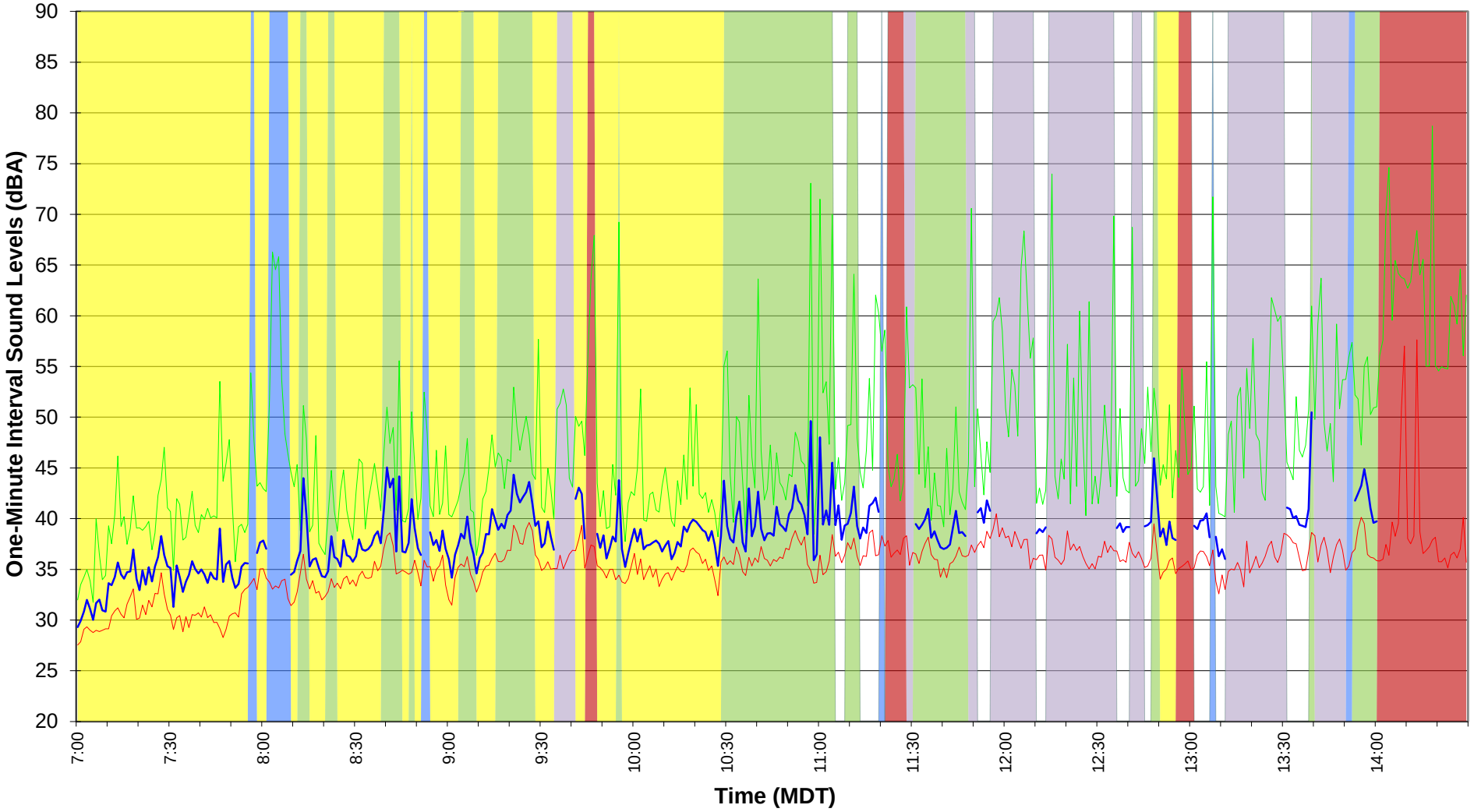


Figure D.6.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 07:00 - 14:29

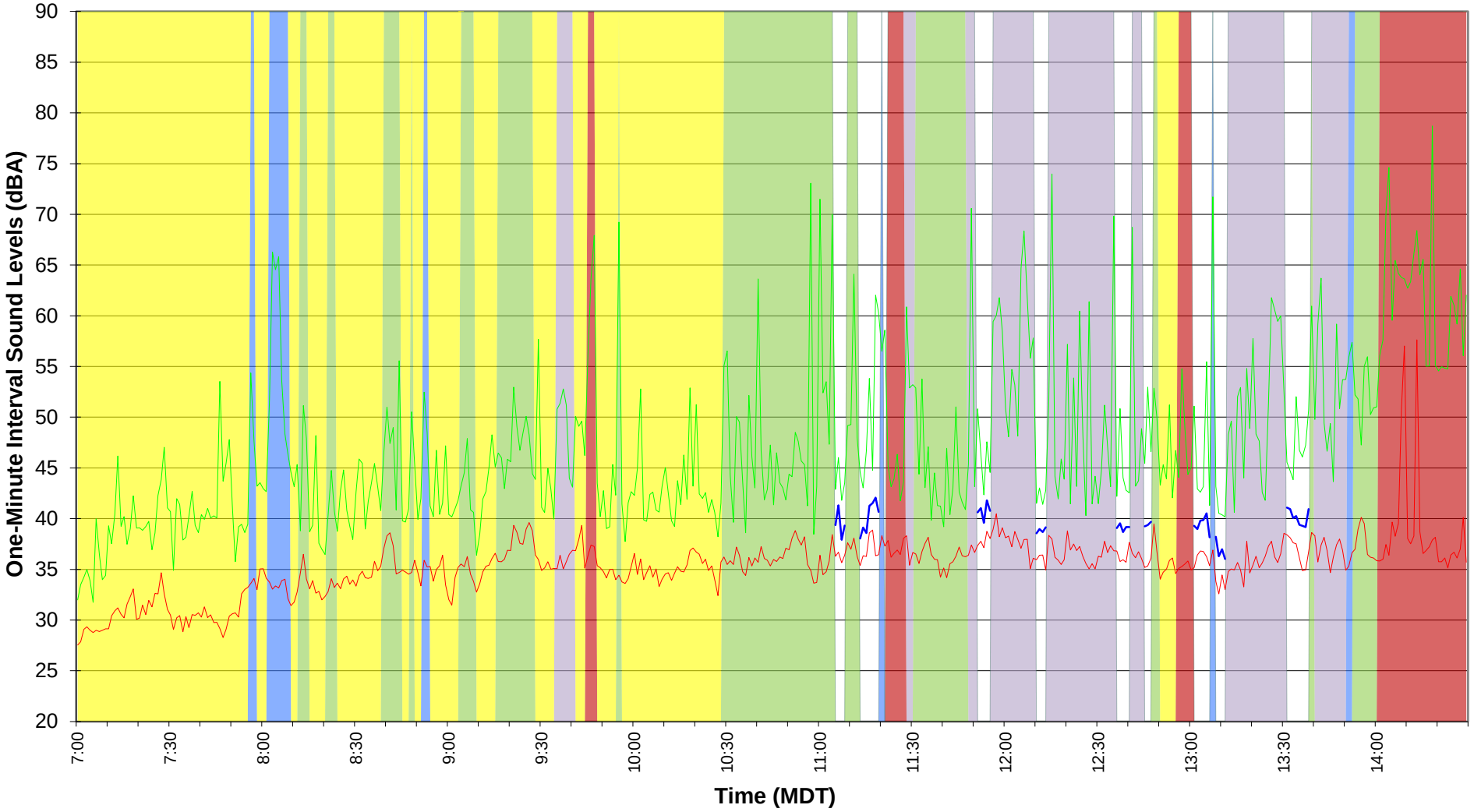


Figure D.7

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 14:30 - 21:59

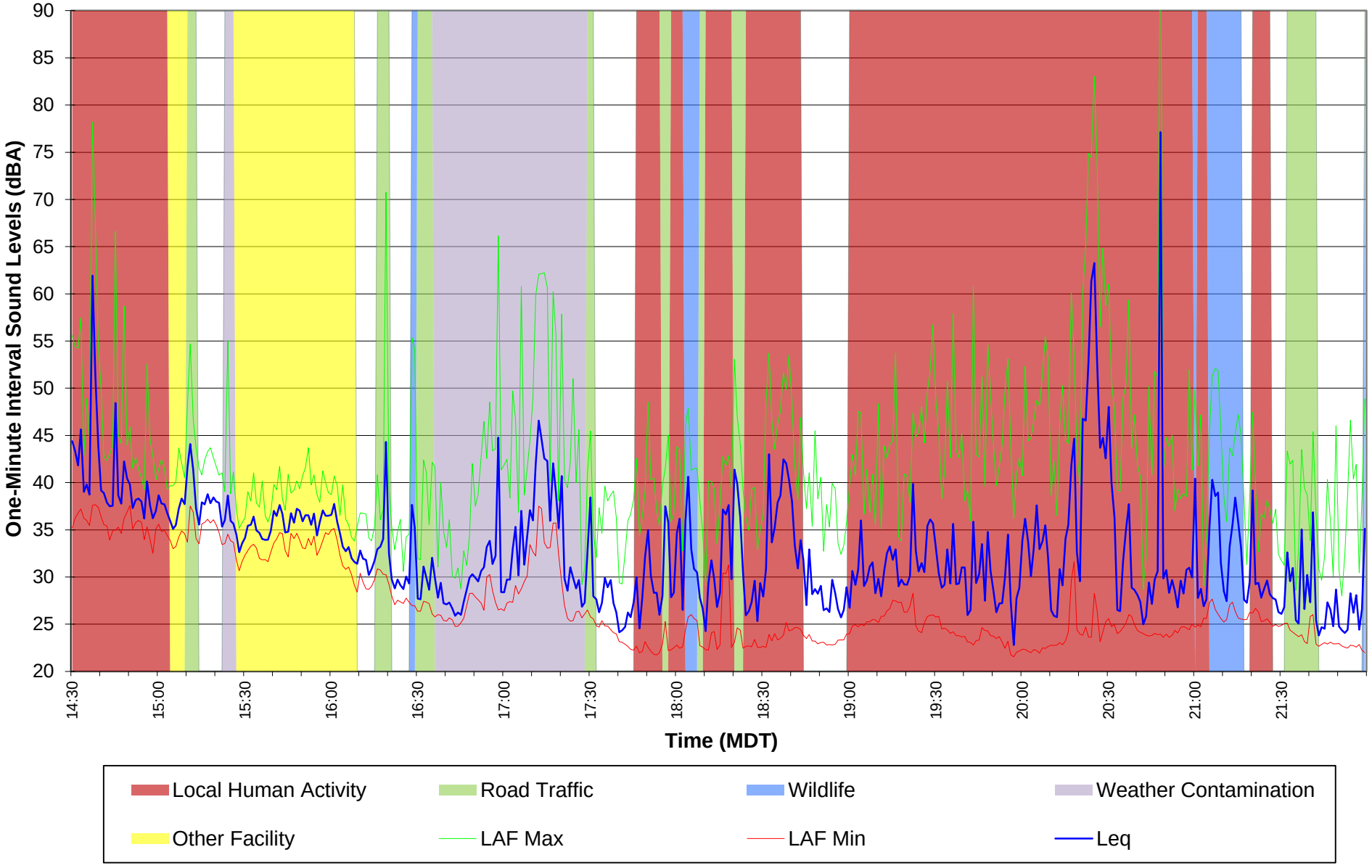


Figure D.7.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 14:30 - 21:59

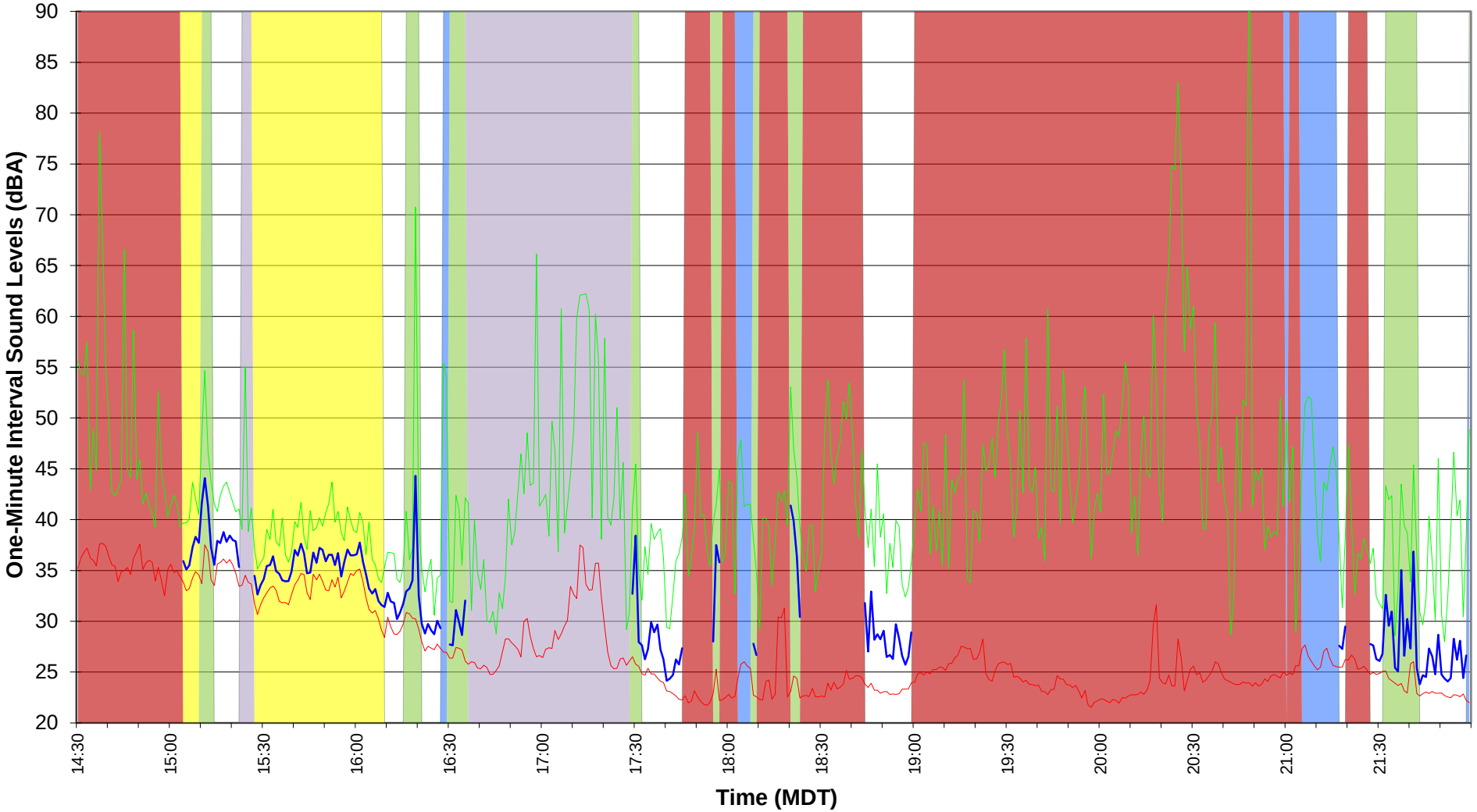


Figure D.7.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 14:30 - 21:59

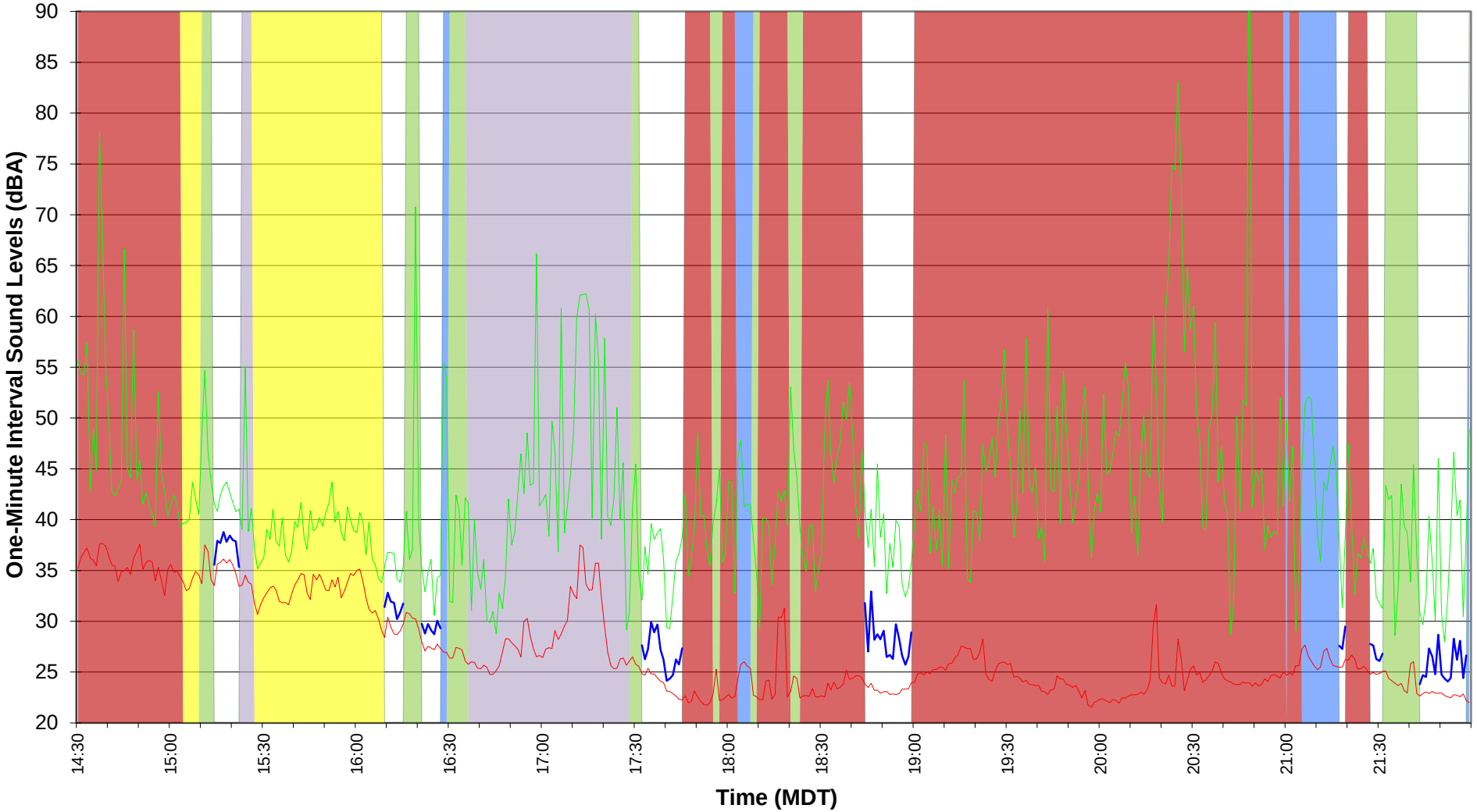


Figure D.8

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

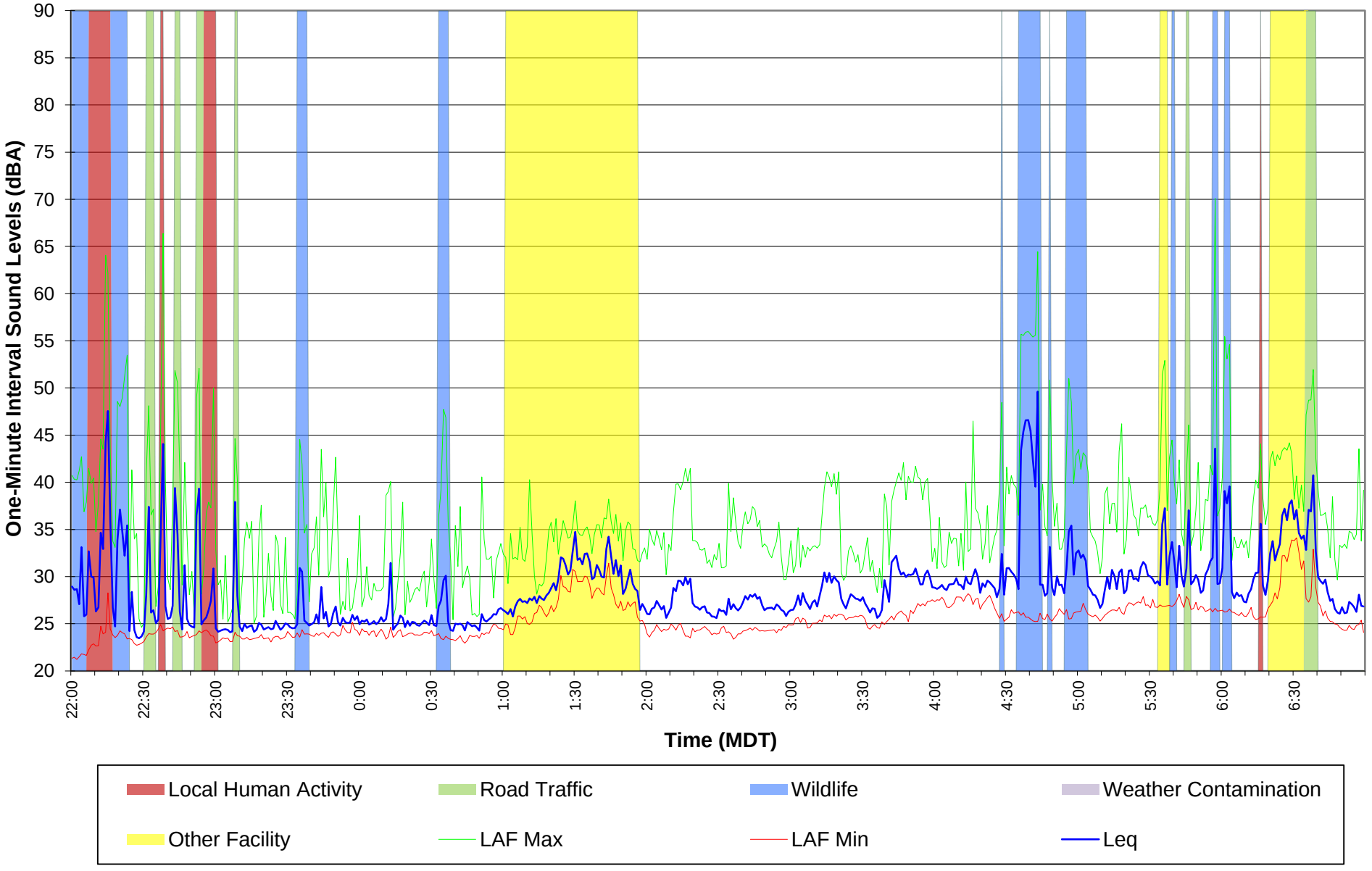


Figure D.8.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

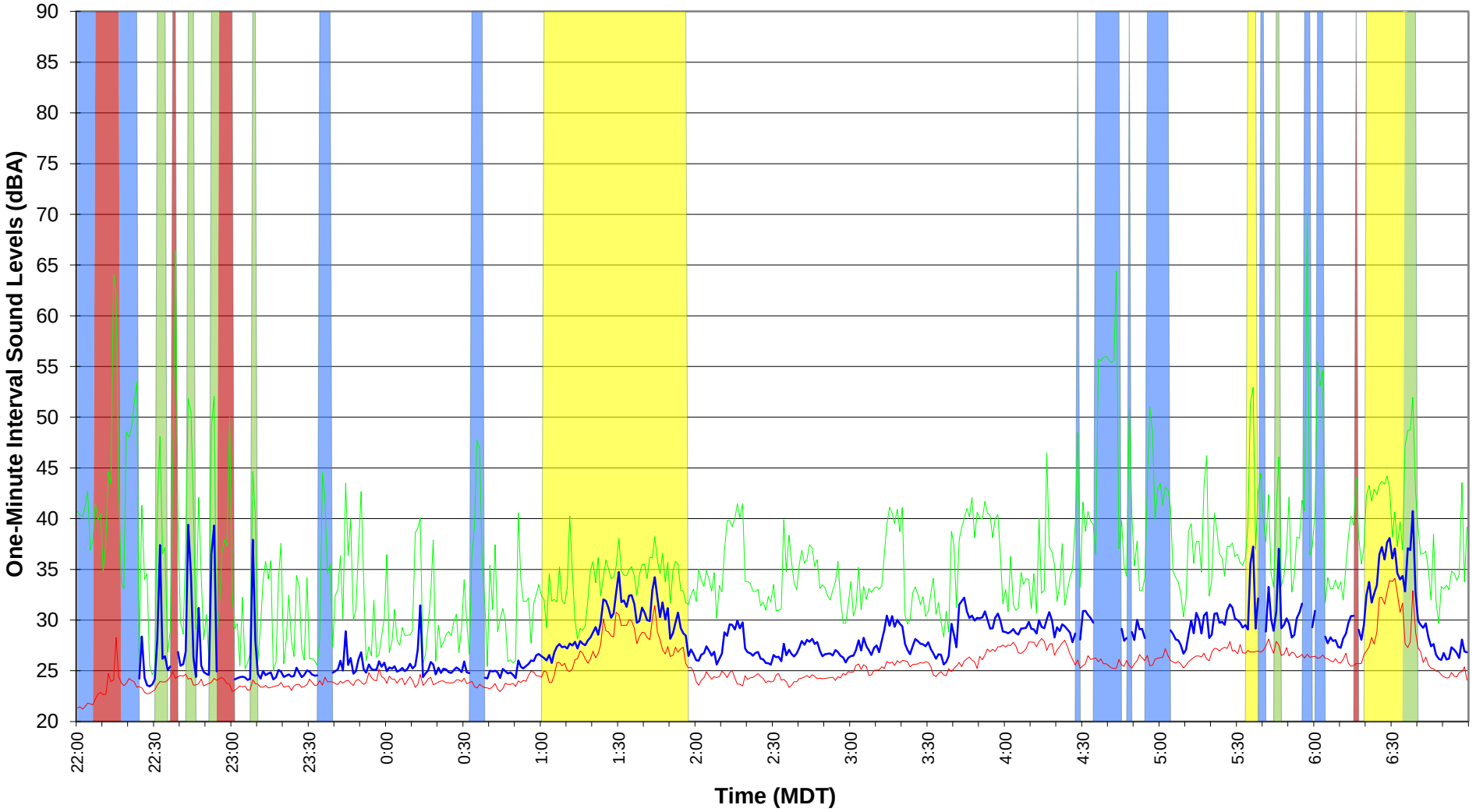


Figure D.8.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

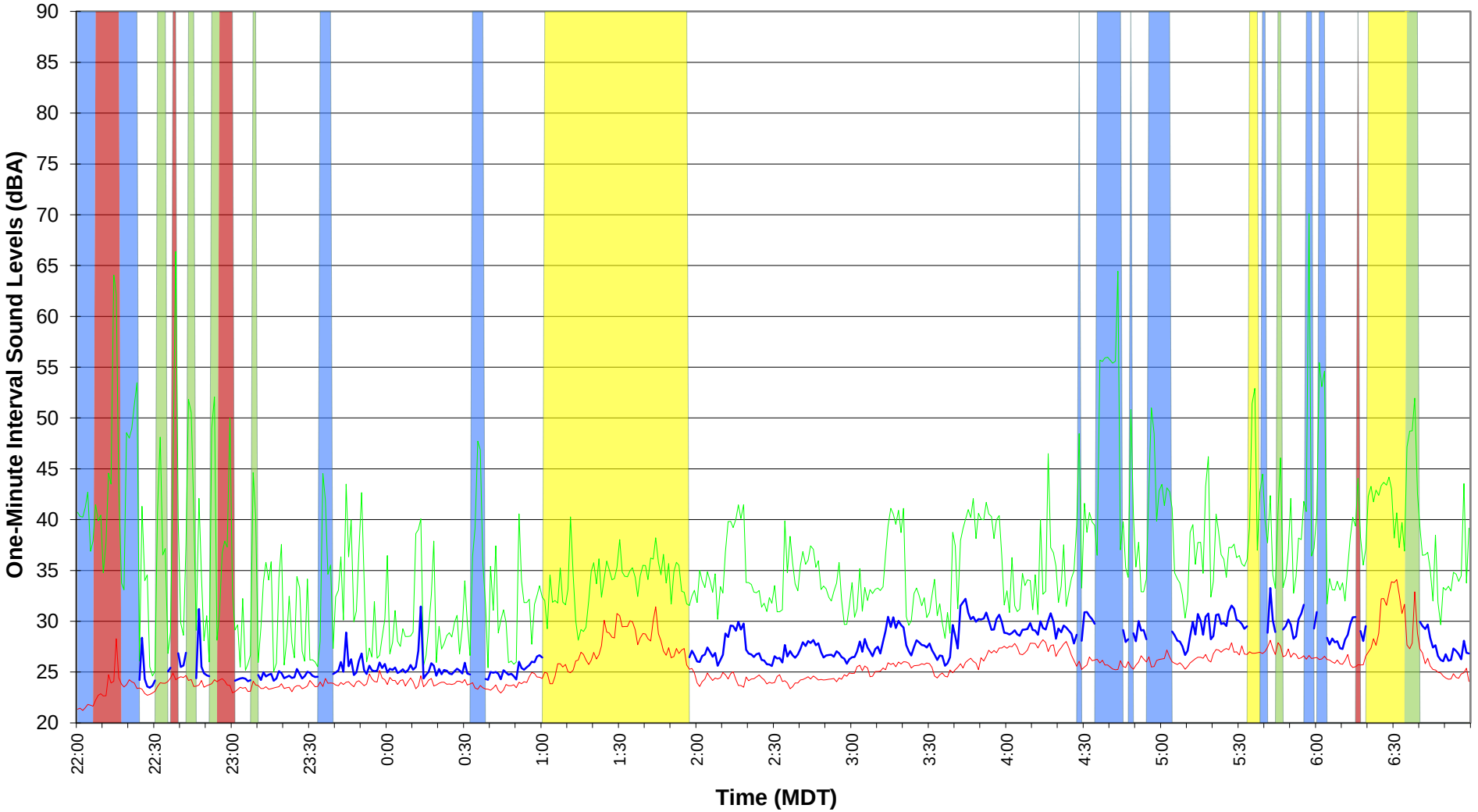


Figure D.9

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 07:00 - 14:29

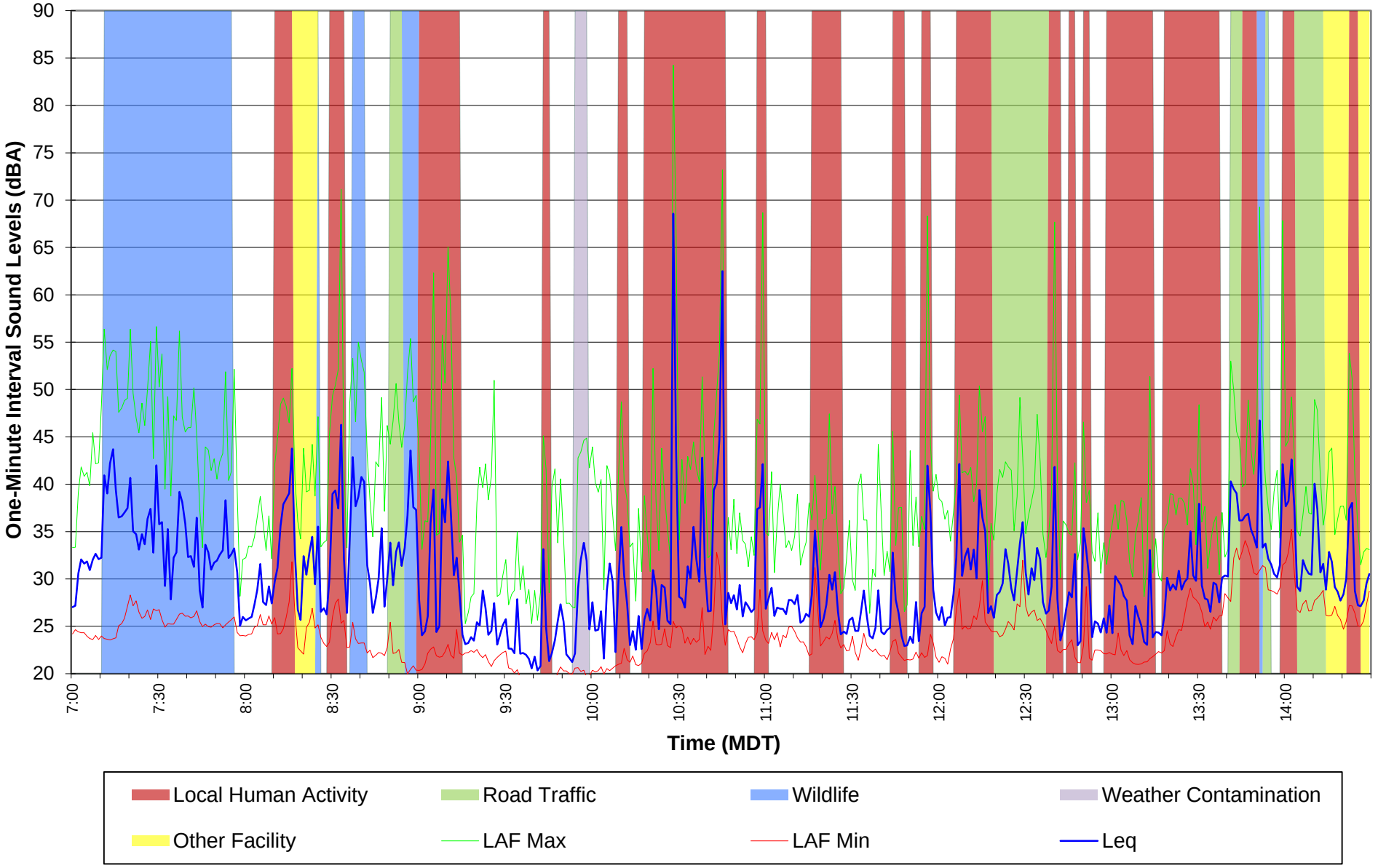


Figure D.9.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 07:00 - 14:29

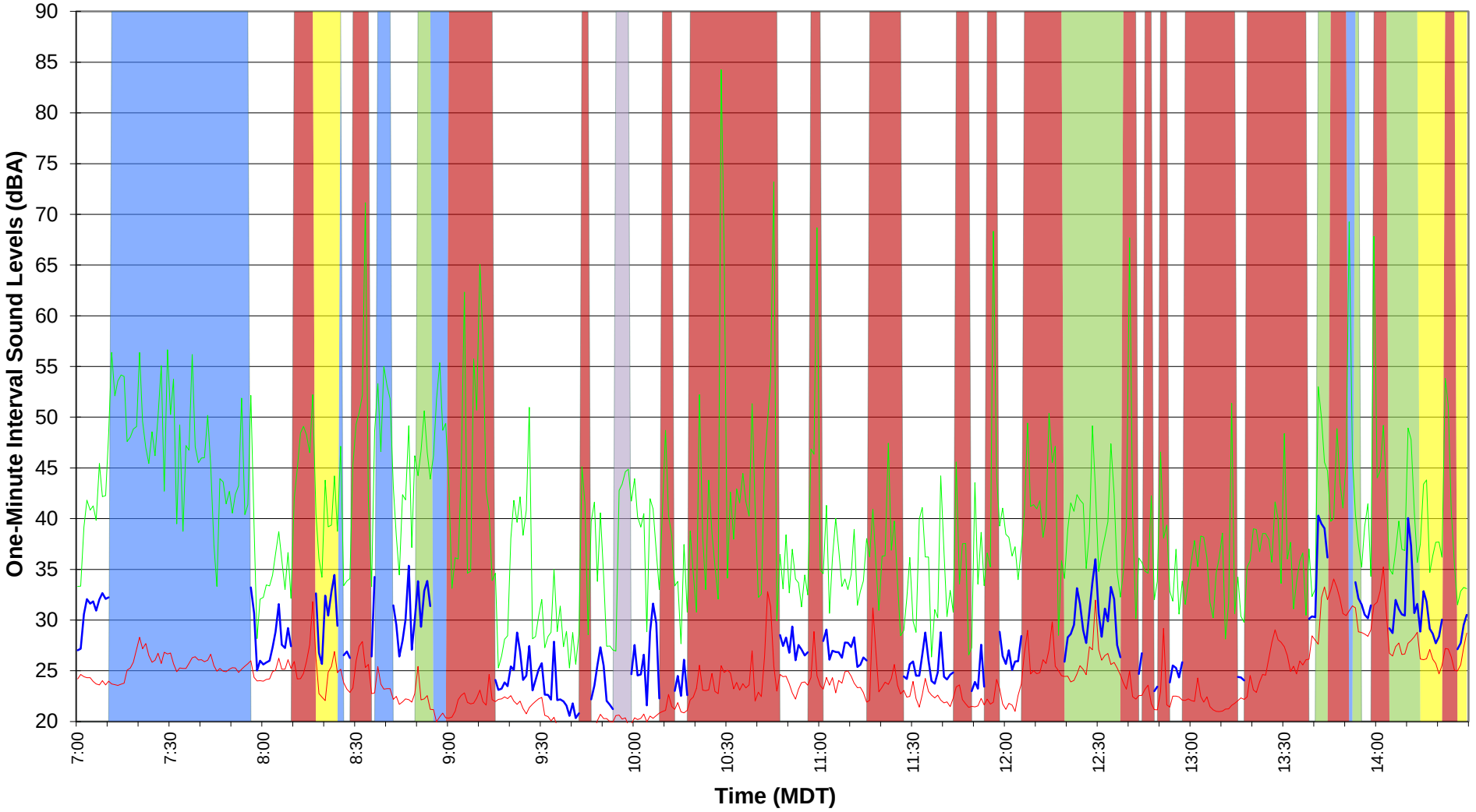


Figure D.9.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 07:00 - 14:29

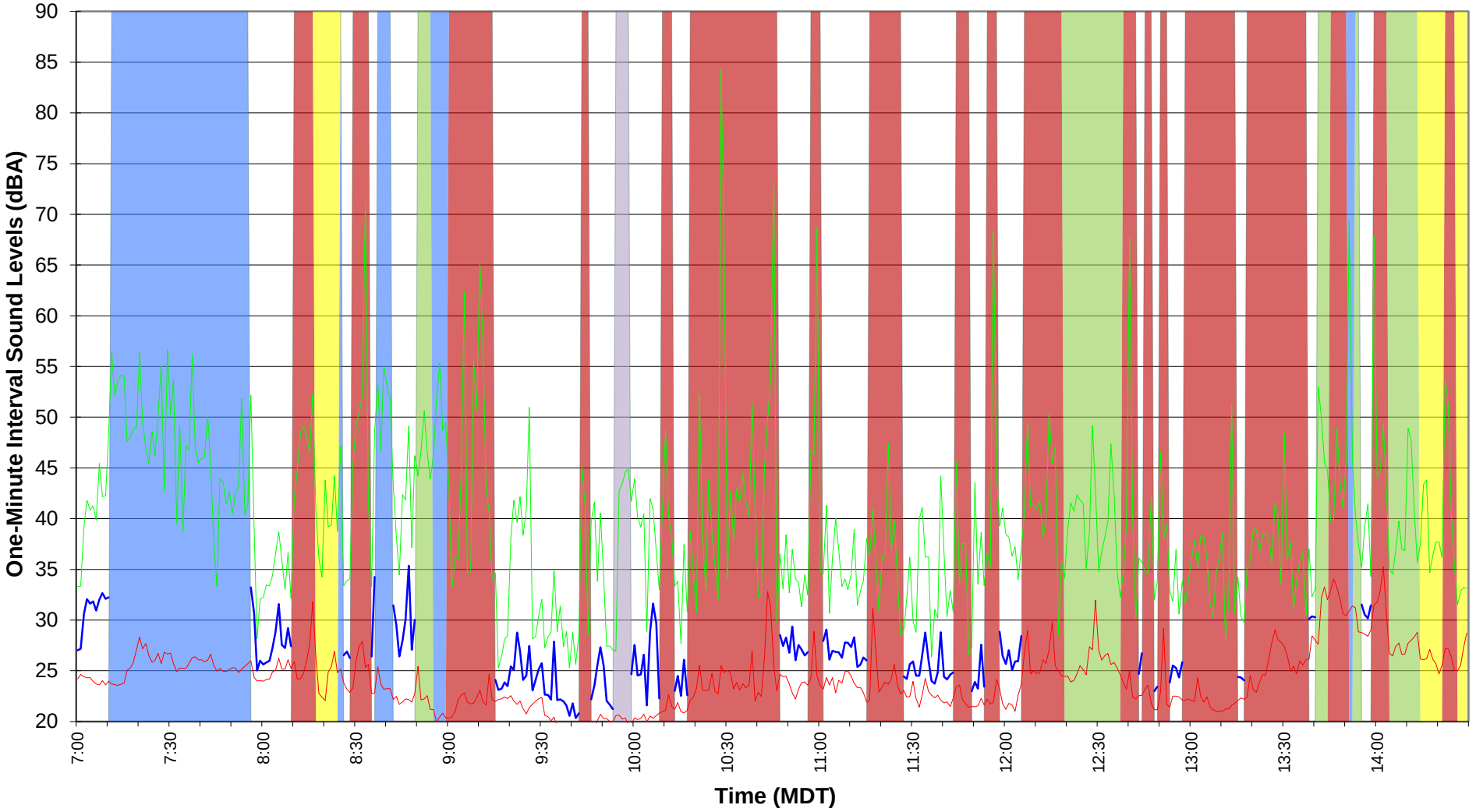


Figure D.10

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 14:30 - 21:59

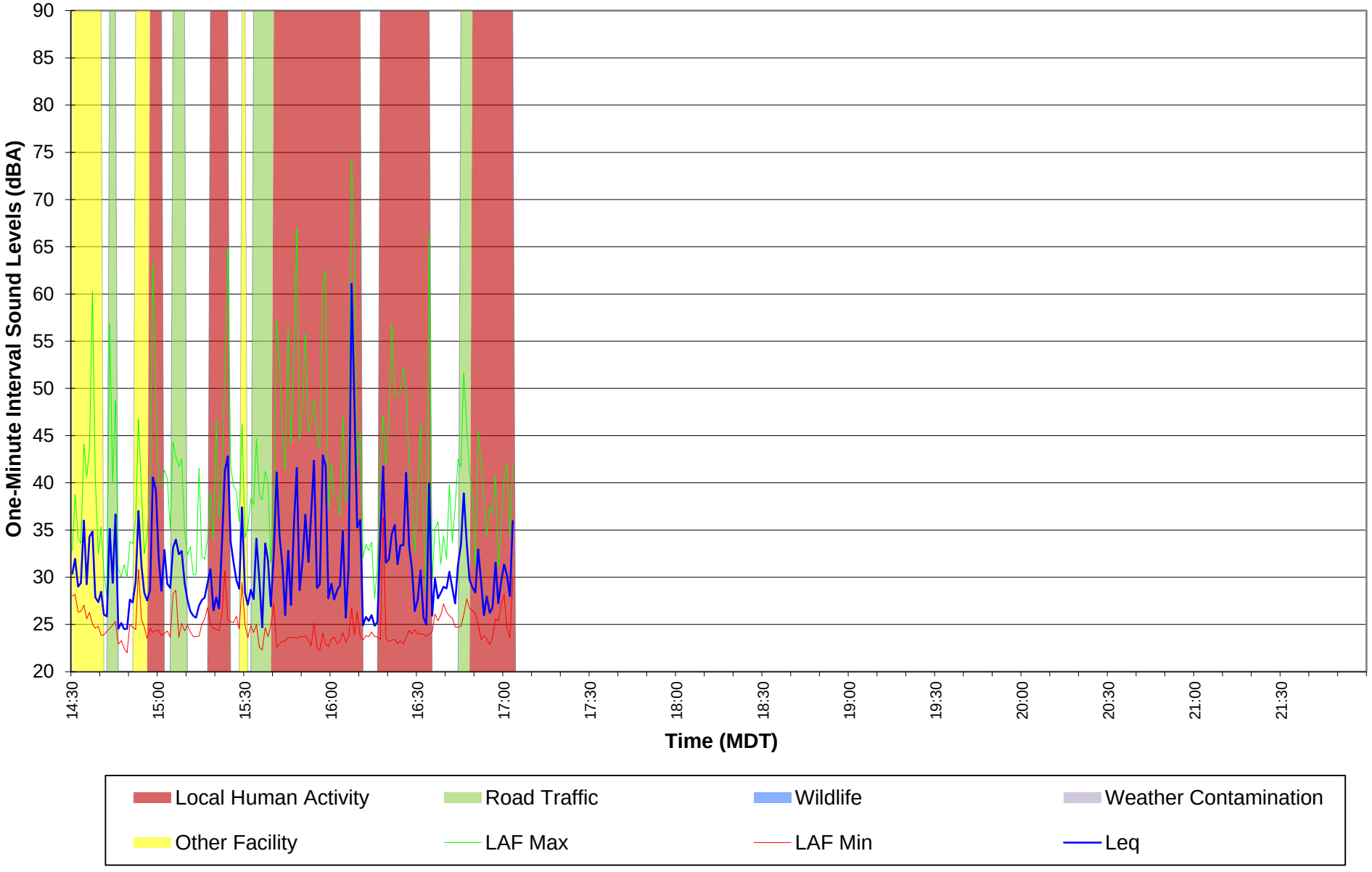


Figure D.10.Fac

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 14:30 - 21:59

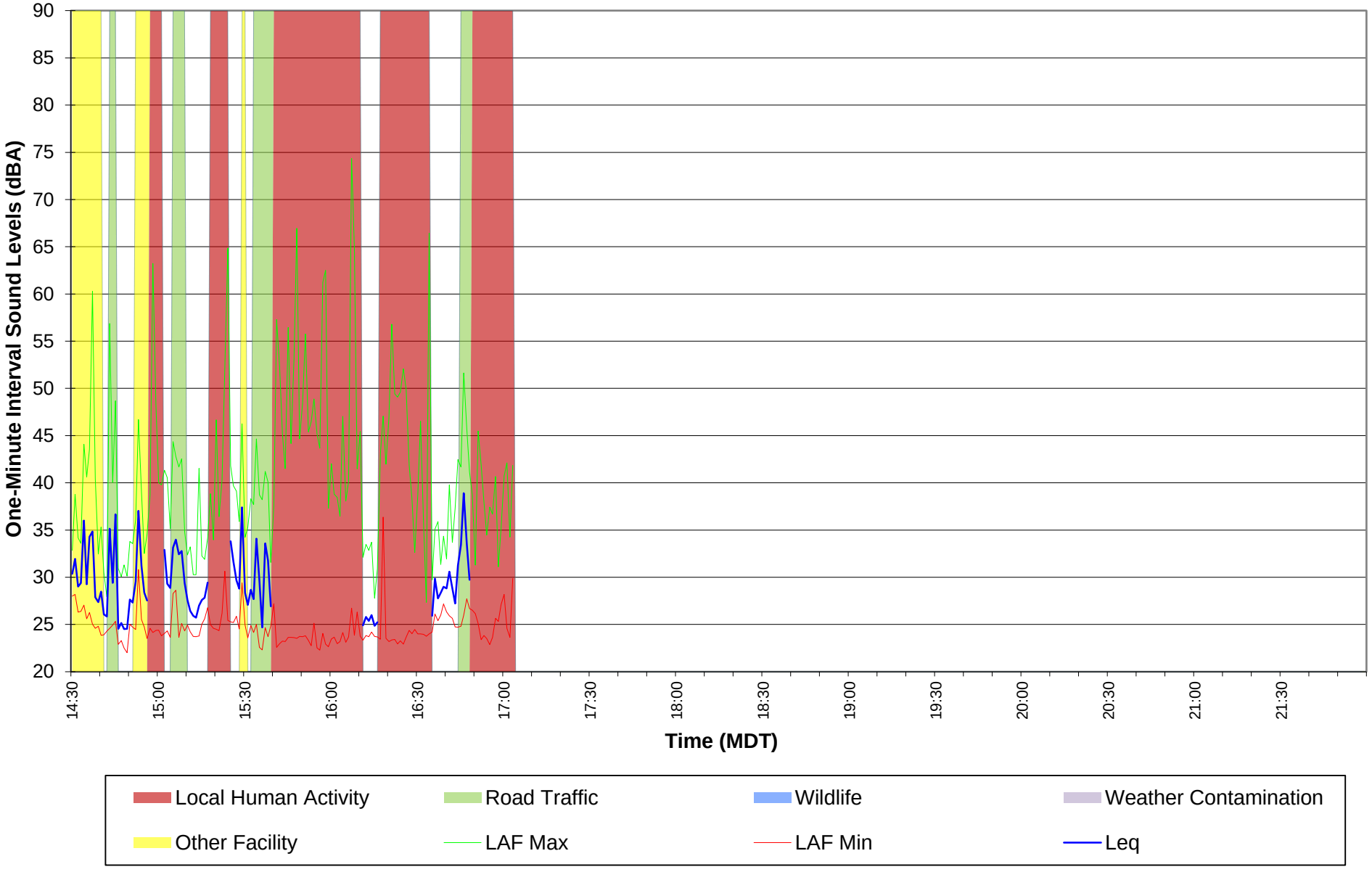
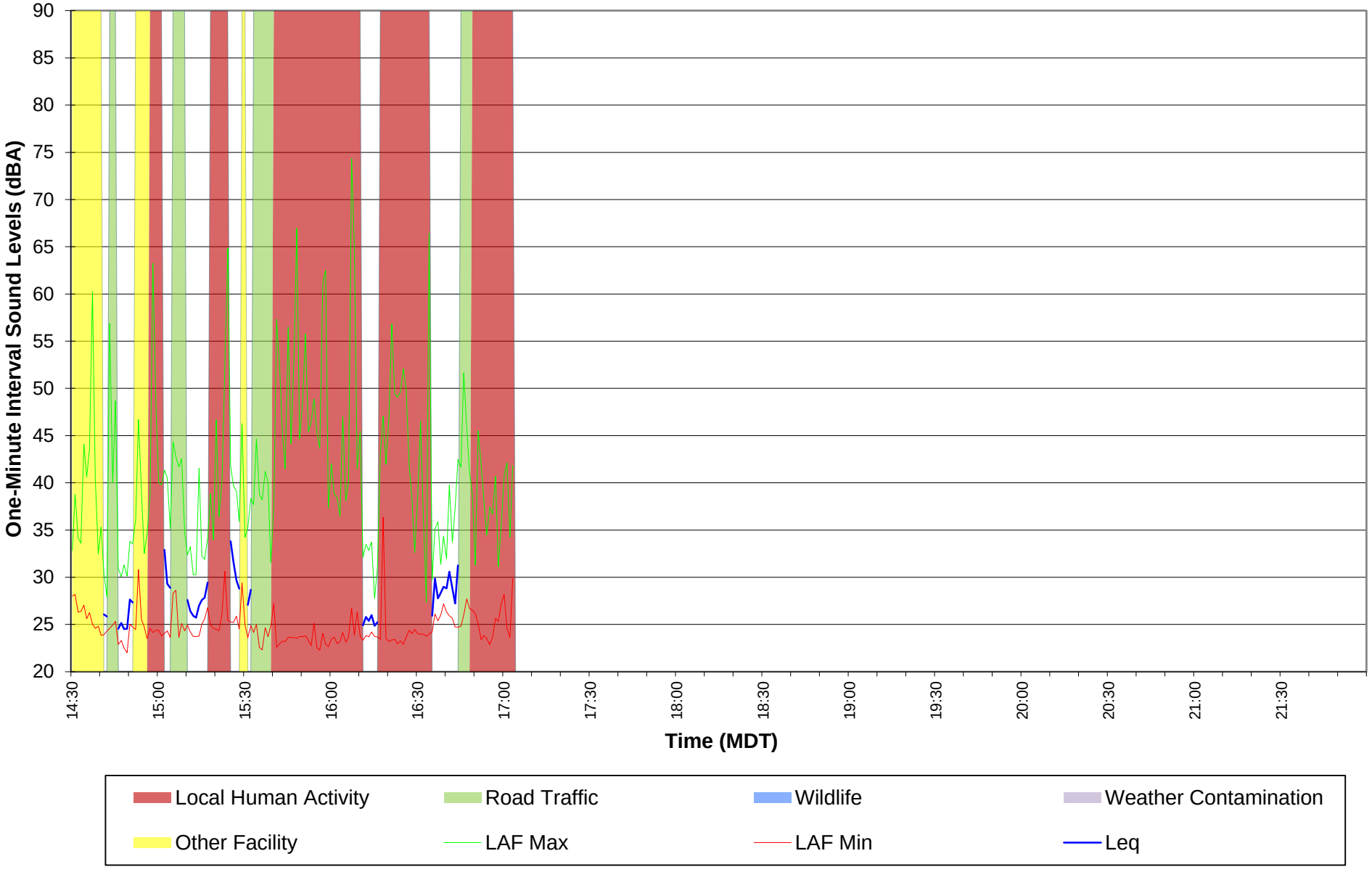


Figure D.10.Amb

YESAB Keno Hill Silver District Operations

R2 Noise Survey

Jun. 28, 2012 14:30 - 21:59



APPENDIX E

Measurement Results
Graphs of 1-Minute Sound Data
Residence 3

Patching Associates Acoustical Engineering Ltd.

Consultants in Acoustics, Noise Control and Vibrations

Table E.1
YESAB Keno Hill Silver District Operations
R3 Noise Survey
Daily Leq Values

Date	Time	Measured		Residual Incl. Faclity		Measured Ambient	
		Leq	Hours	Leq	Hours	Leq	Hours
Jun. 25, 2012	07:00 - 21:59	38	6.1	40	2.2	32	0.0
Jun. 25, 2012 - Jun. 26, 2012	22:00 - 06:59	38	9.0	36	7.6	32	0.7
Jun. 26, 2012	07:00 - 21:59	42	15.0	41	8.8	30	4.0
Jun 26, 2012 - Jun 27, 2012	22:00 - 06:59	35	9.0	34	4.4	29	1.5
Jun. 27, 2012	07:00 - 21:59	39	15.0	37	5.3	32	2.5
Jun. 27, 2012 - Jun. 28, 2012	**22:00 - 06:59**	**37**	**9.0**	**28**	**2.3**	**26**	**1.4**
Jun. 28, 2012	**07:00 - 21:59**	**41**	**15.0**	**33**	**6.1**	**27**	**4.2**
Jun 28, 2012 - Jun 29, 2012	22:00 - 06:59	35	9.0	31	1.8	27	1.5
Jun. 29, 2012	07:00 - 21:59	46	7.1	37	1.0	32	0.6

Figure E.1

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 14:30 - 21:59

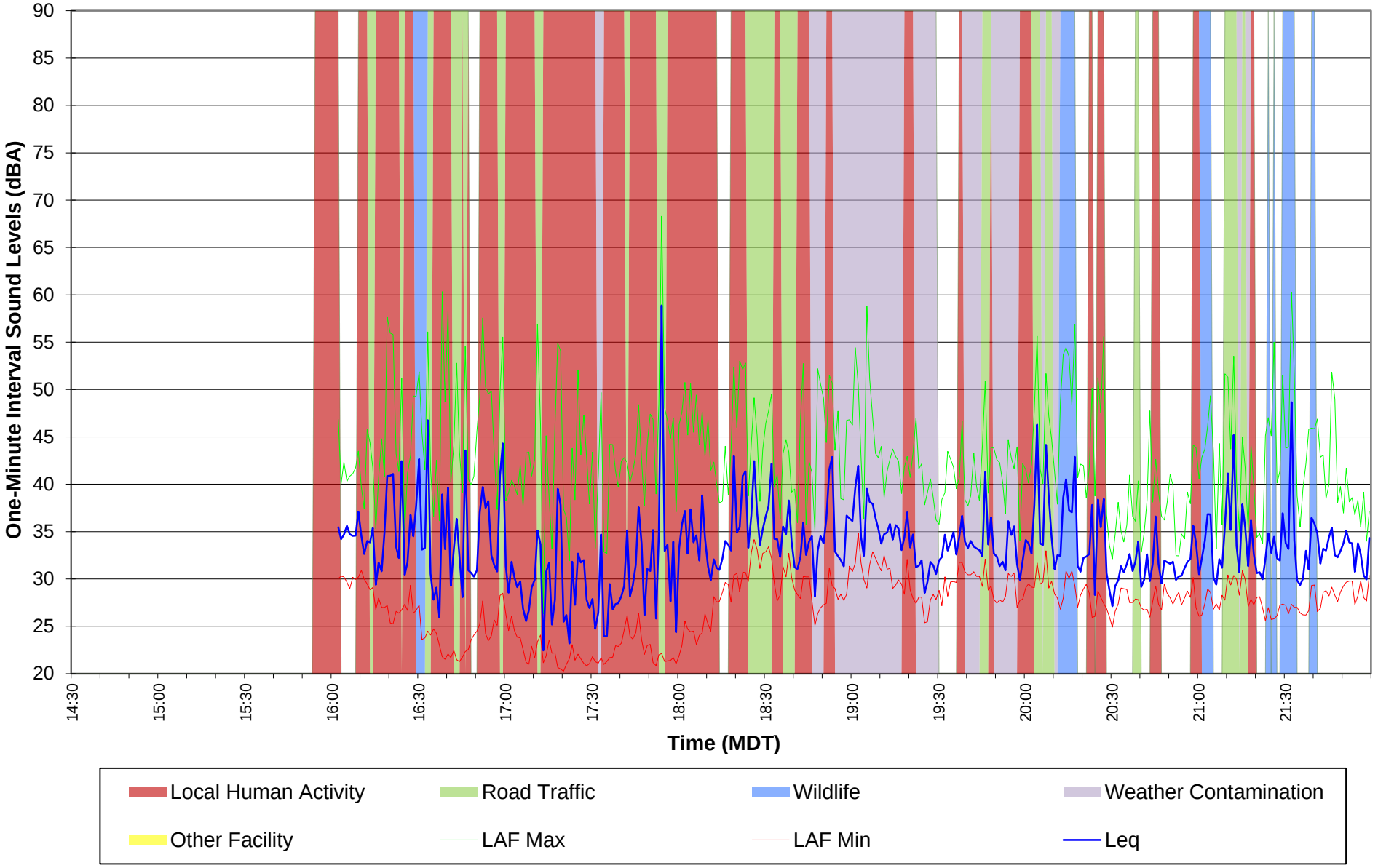


Figure E.1.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 14:30 - 21:59

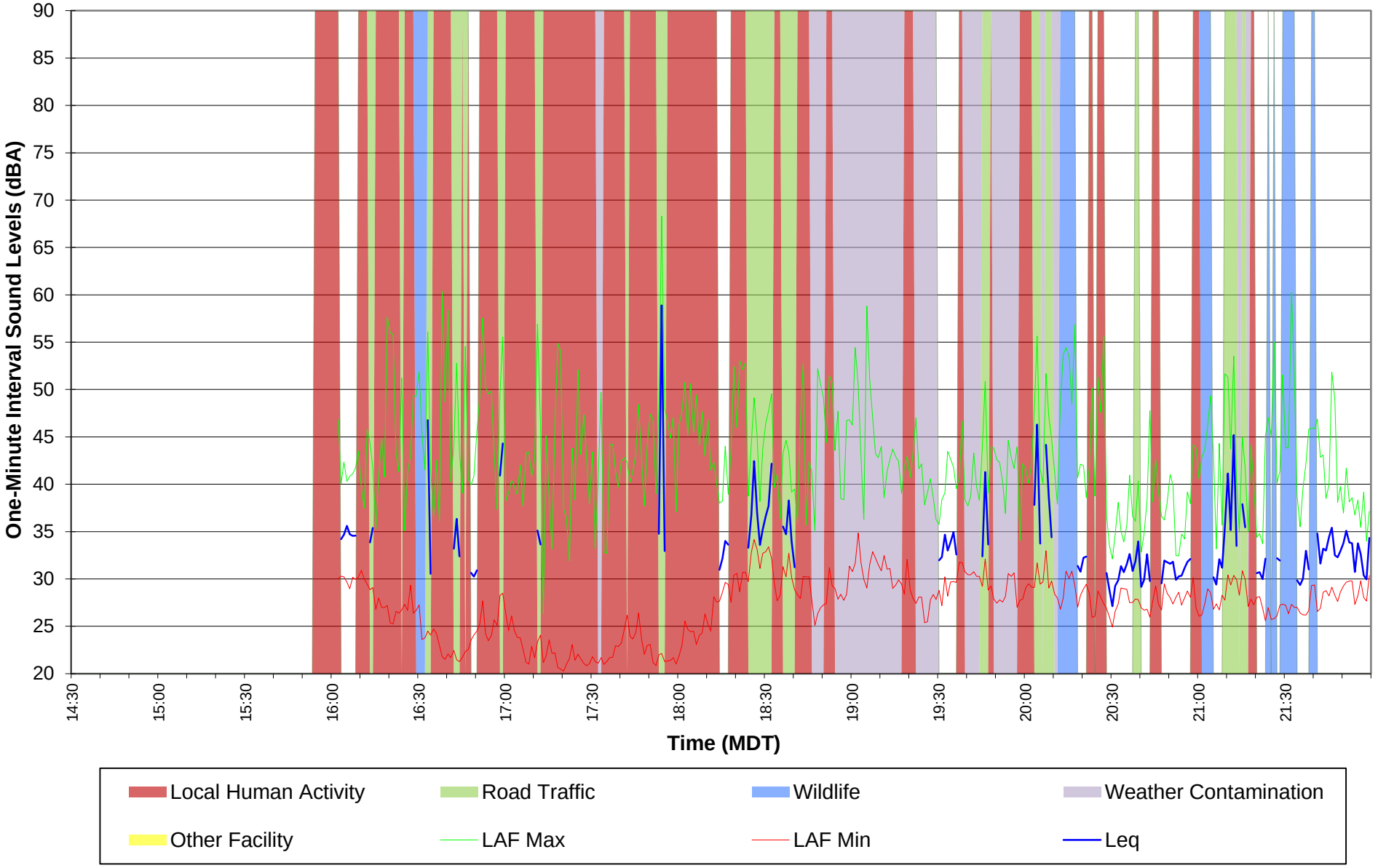


Figure E.1.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 14:30 - 21:59

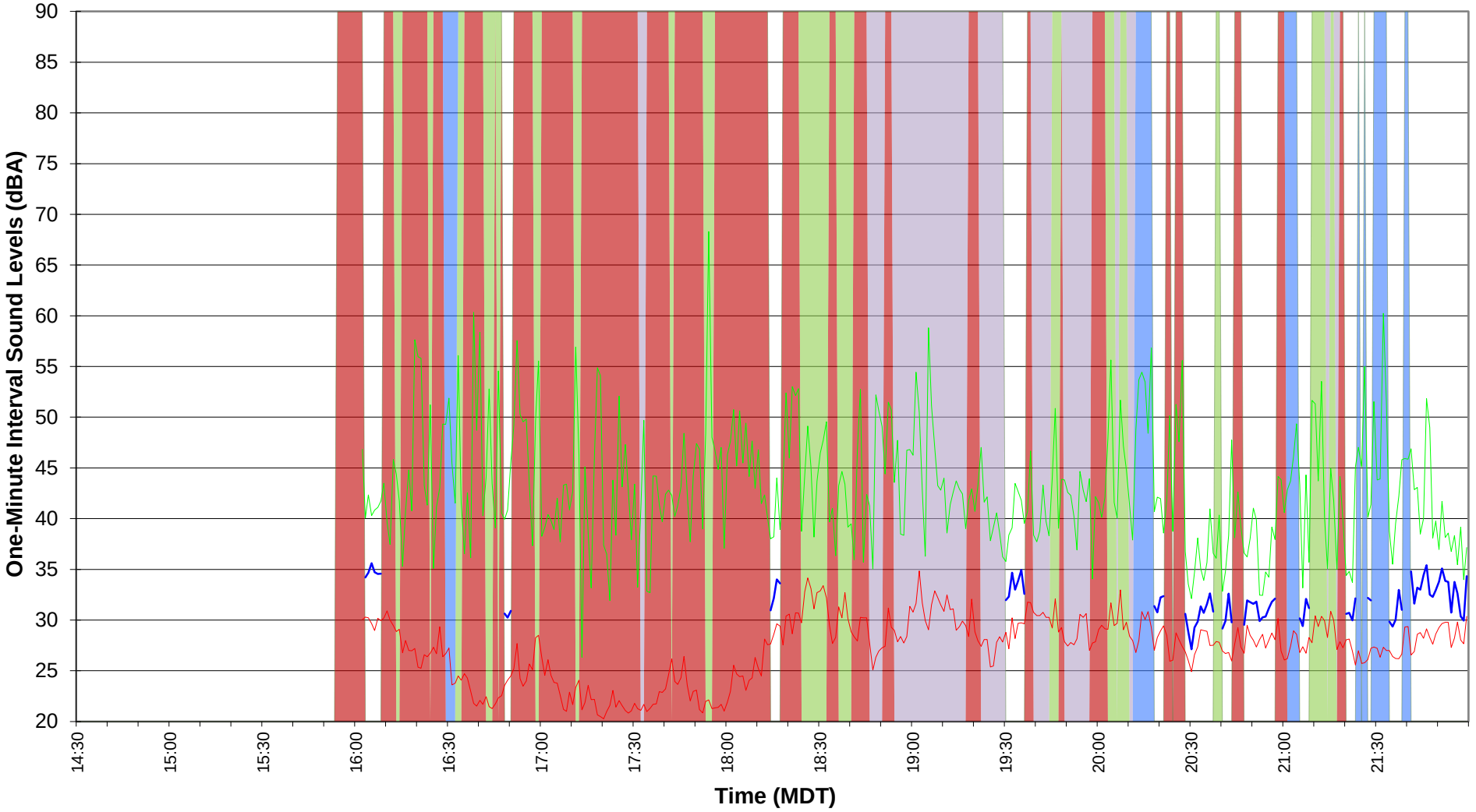


Figure E.2

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

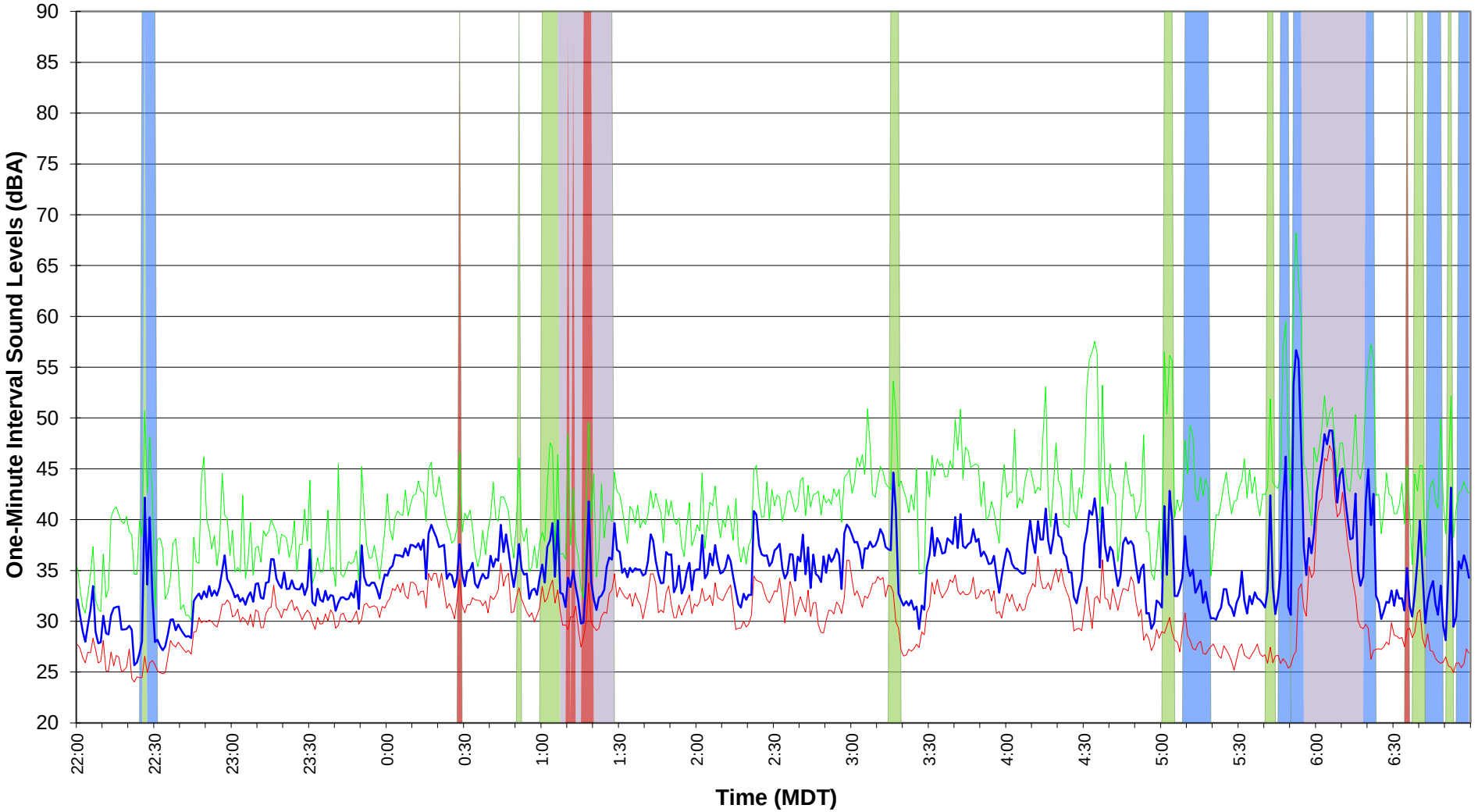


Figure E.2.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

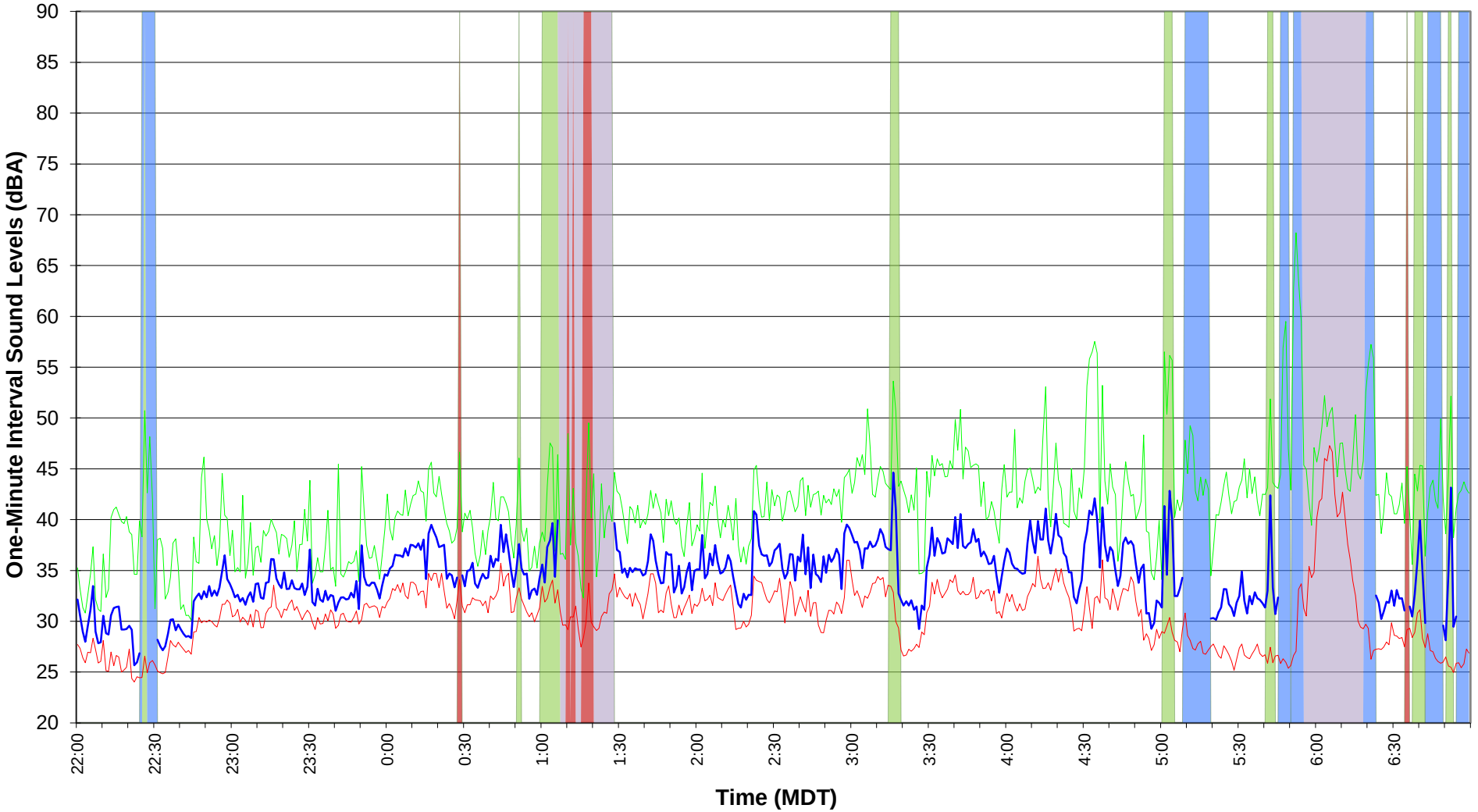


Figure E.2.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

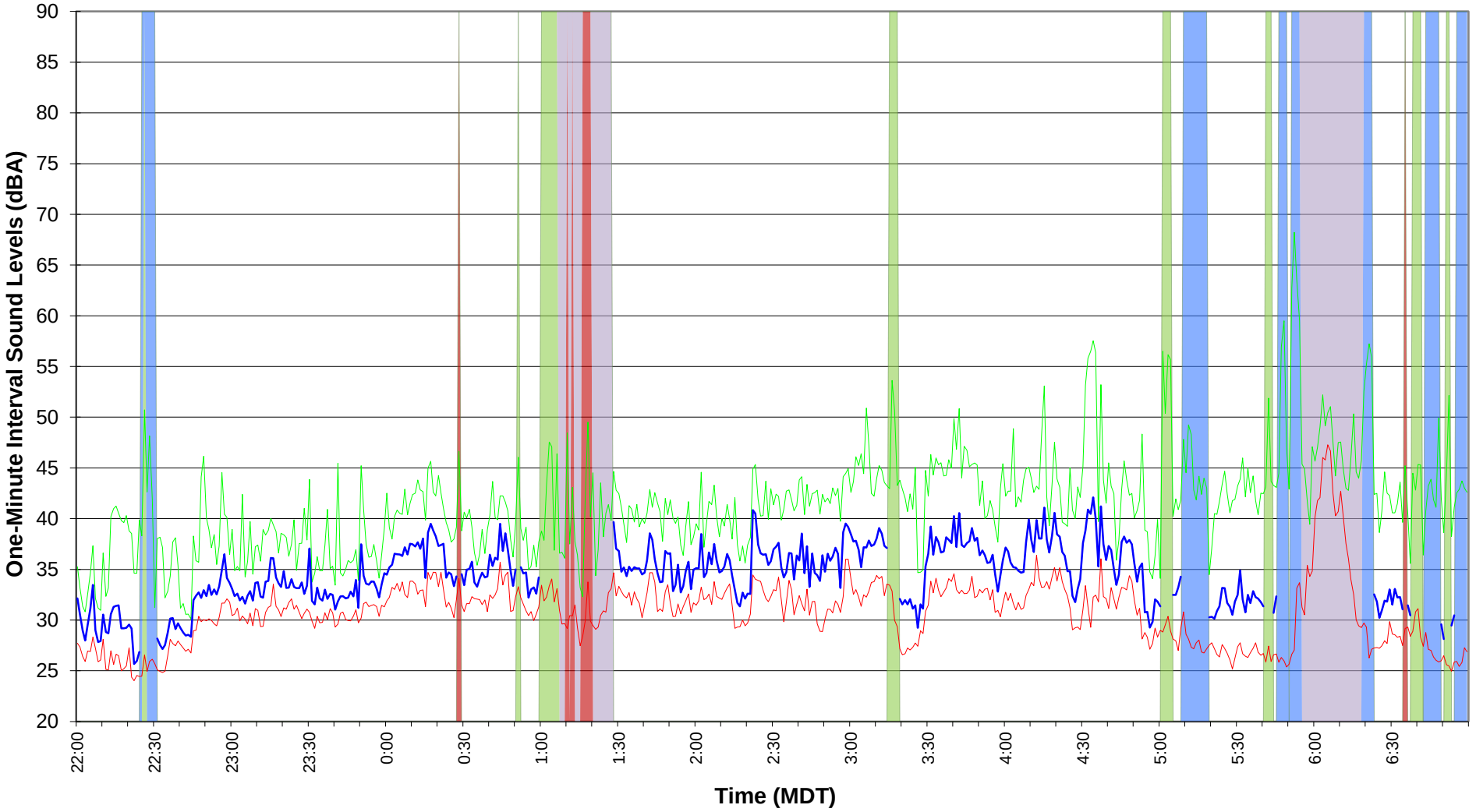


Figure E.3

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 07:00 - 14:29

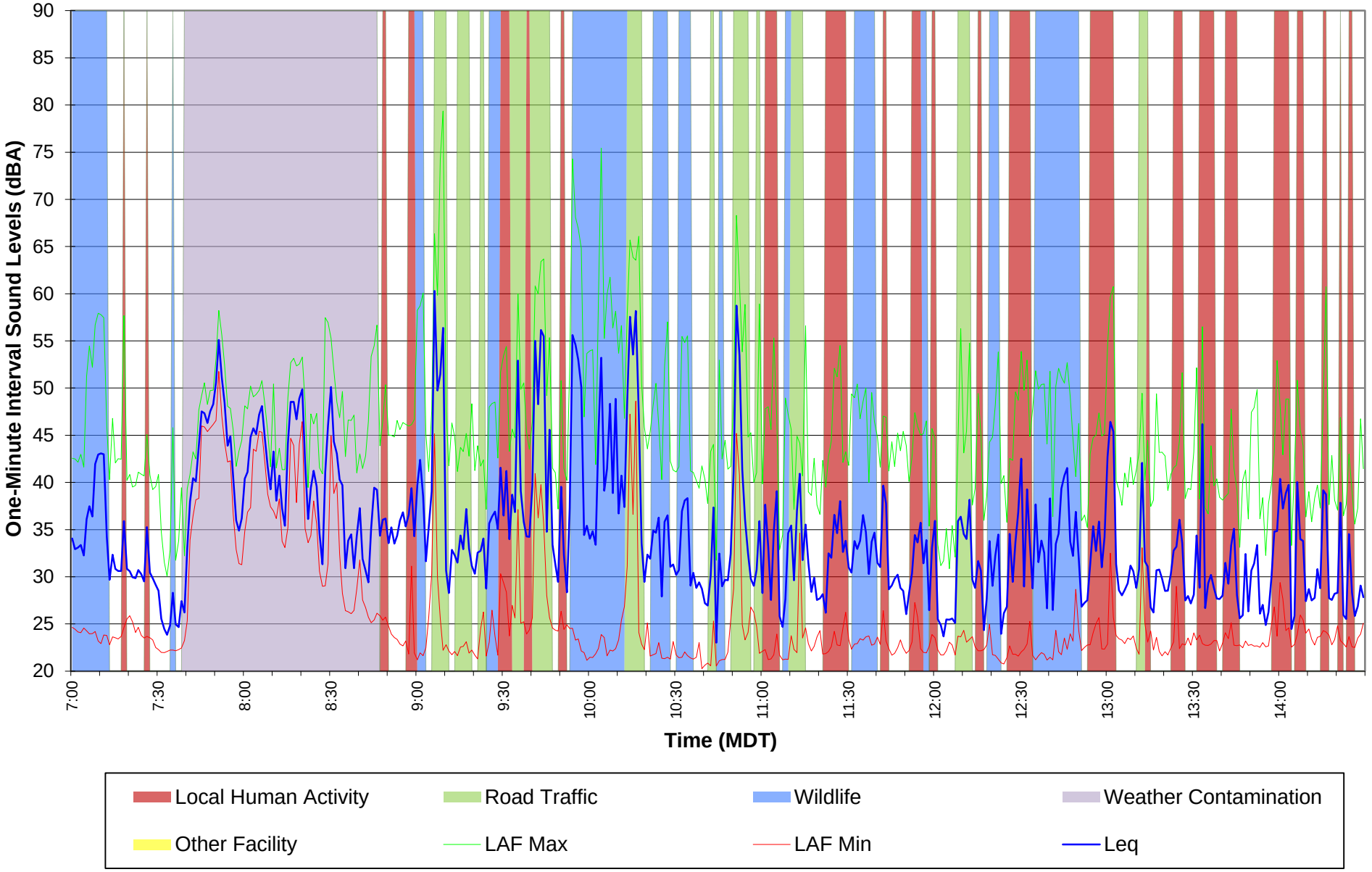


Figure E.3.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 07:00 - 14:29

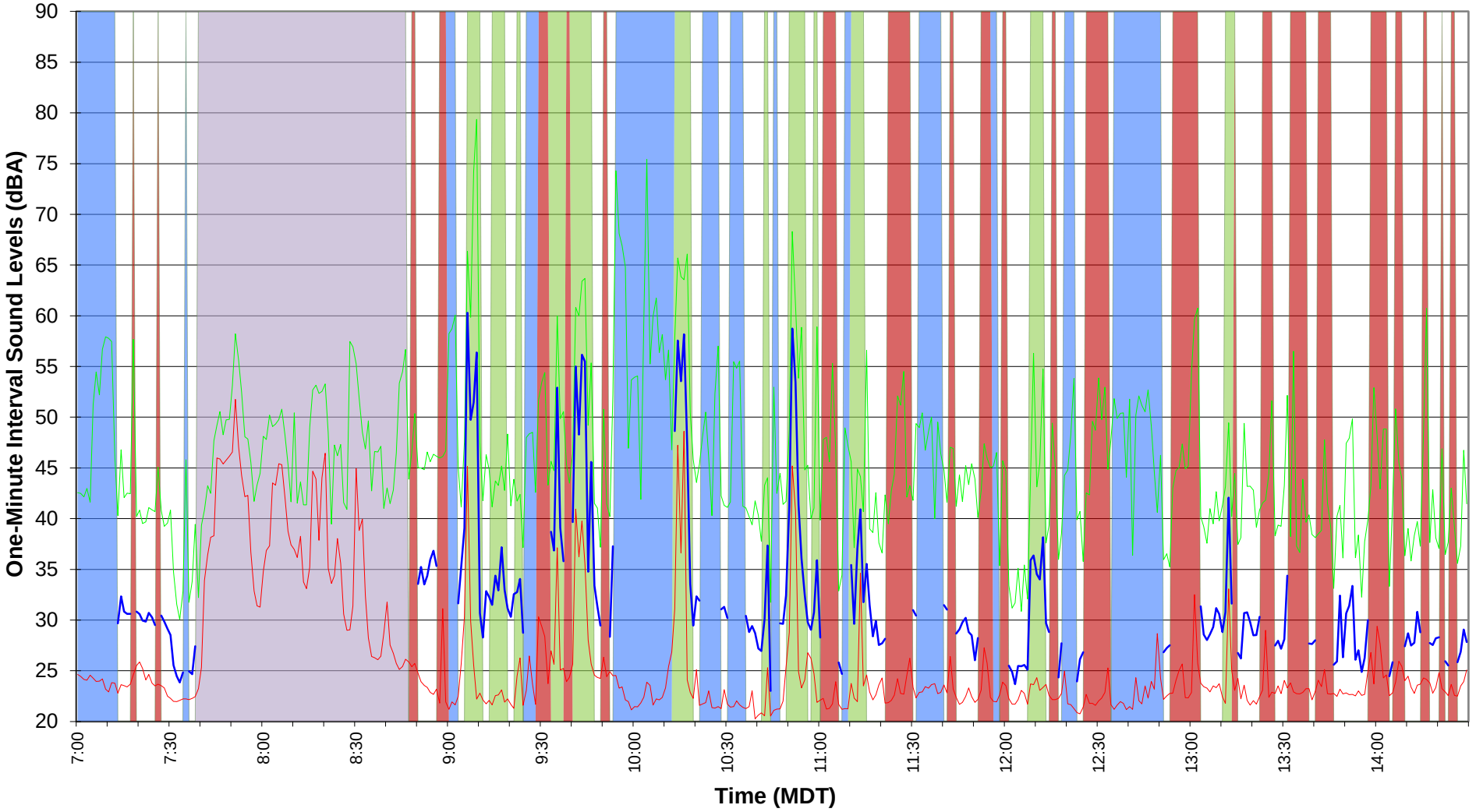


Figure E.3.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 07:00 - 14:29

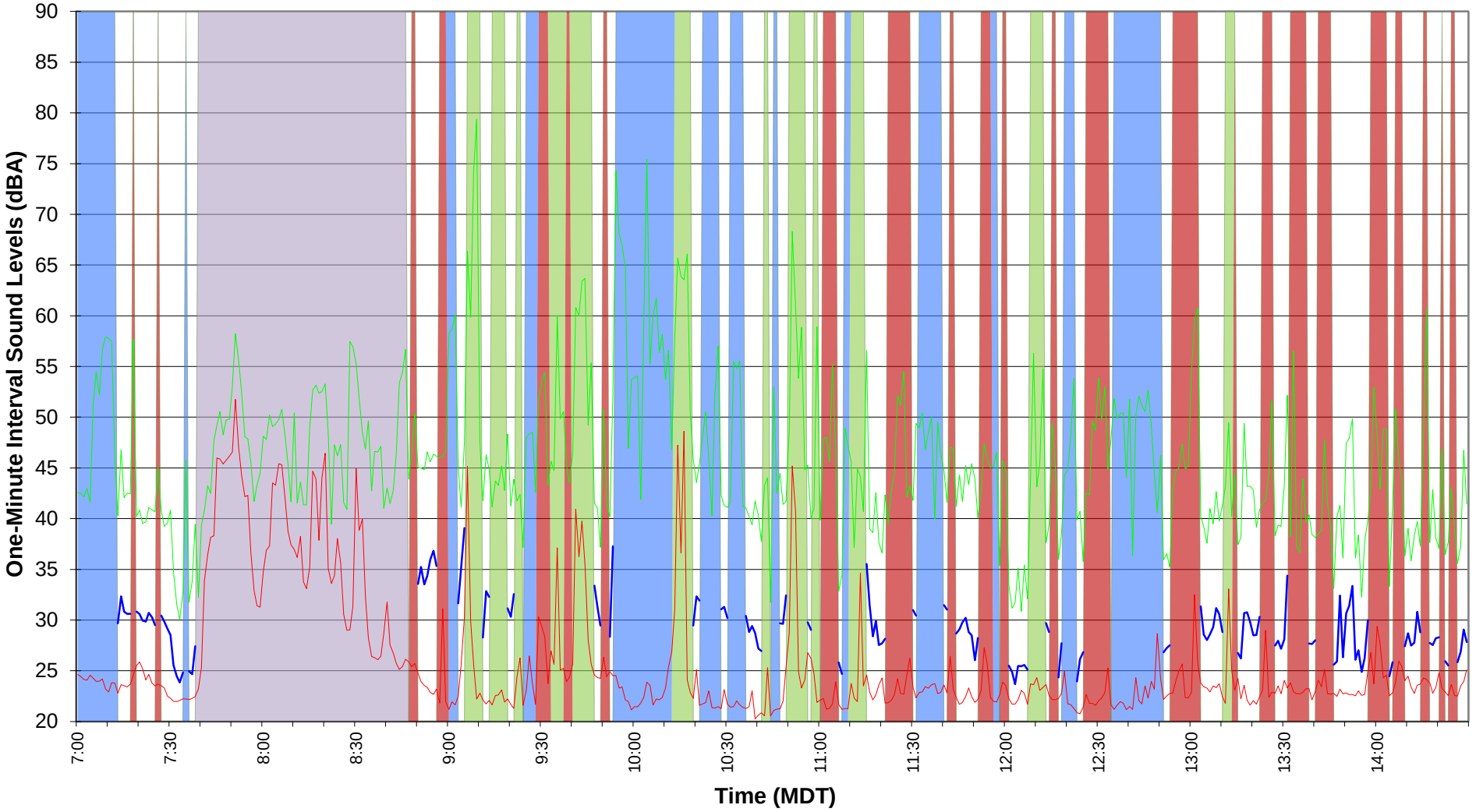


Figure E.4

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 14:30 - 21:59

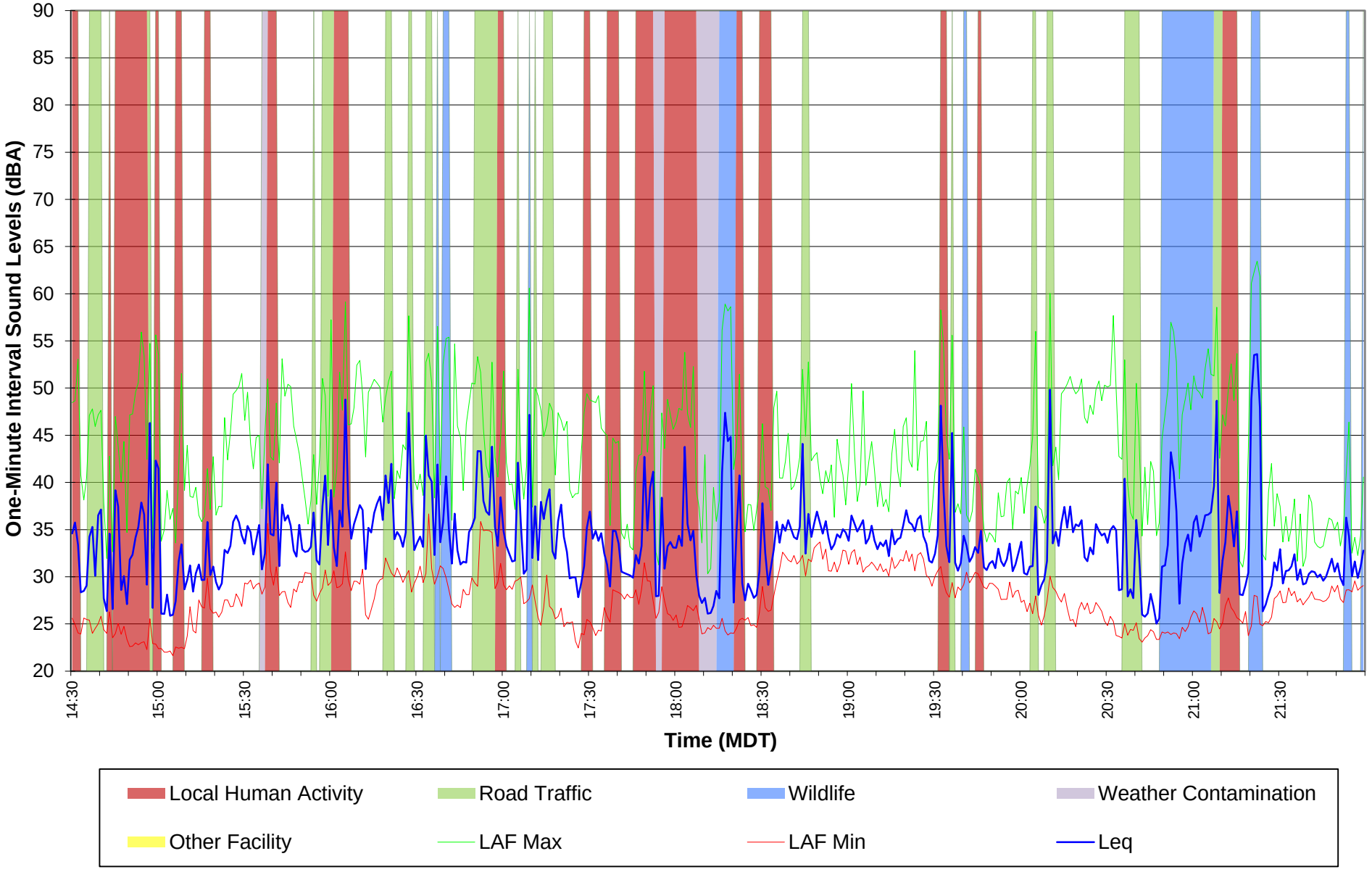


Figure E.4.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 14:30 - 21:59

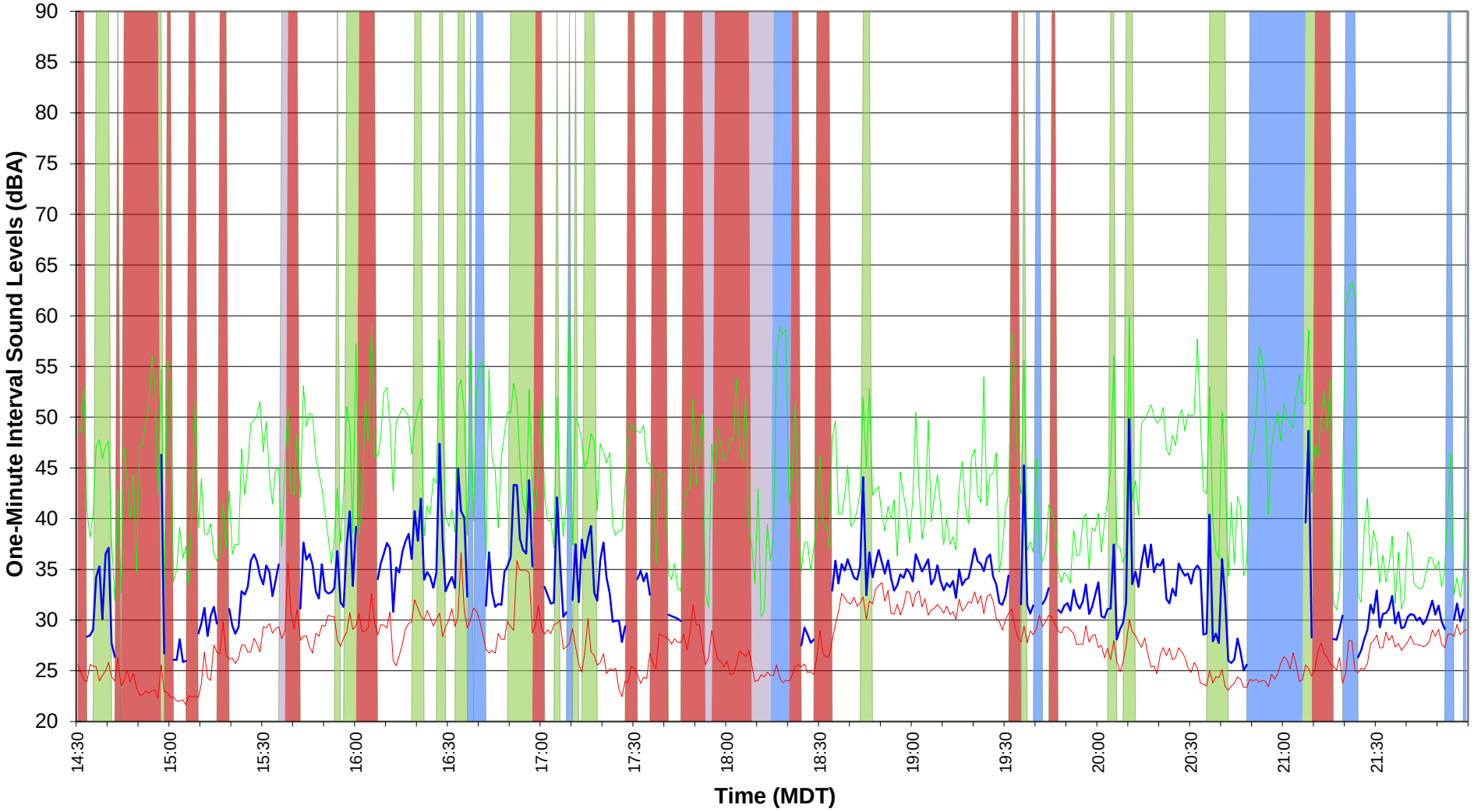


Figure E.4.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 26, 2012 14:30 - 21:59

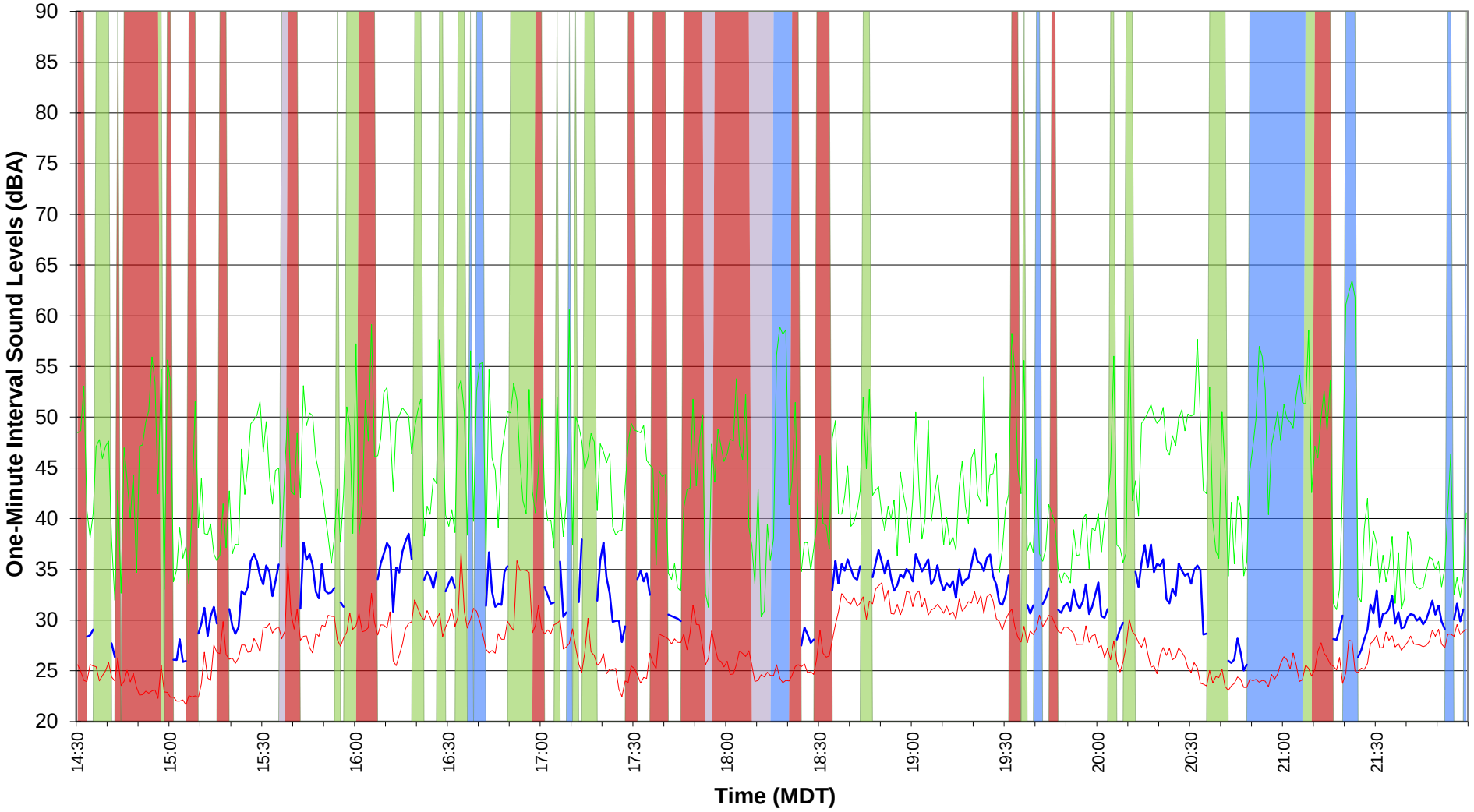


Figure E.5

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

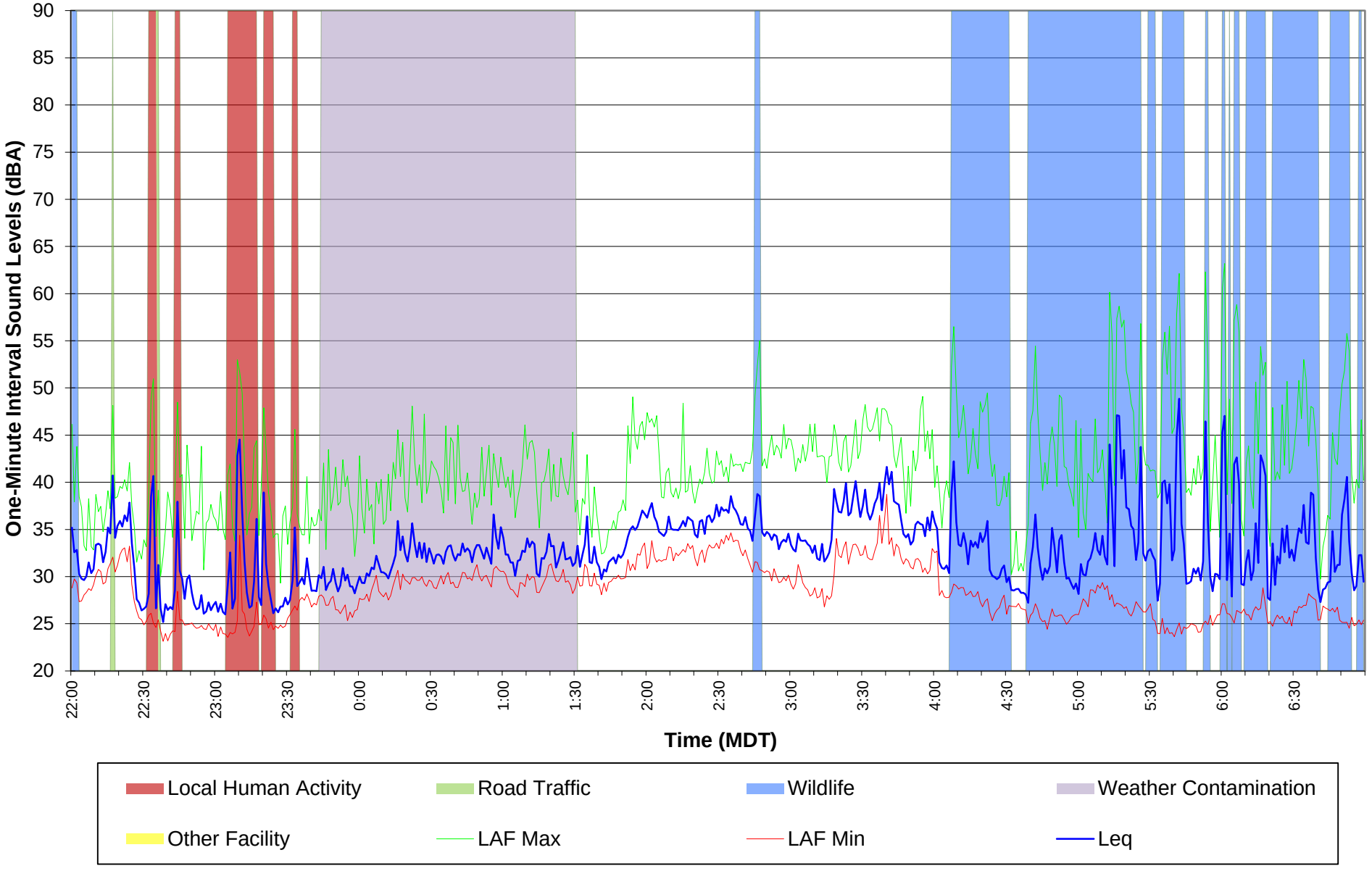


Figure E.5.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

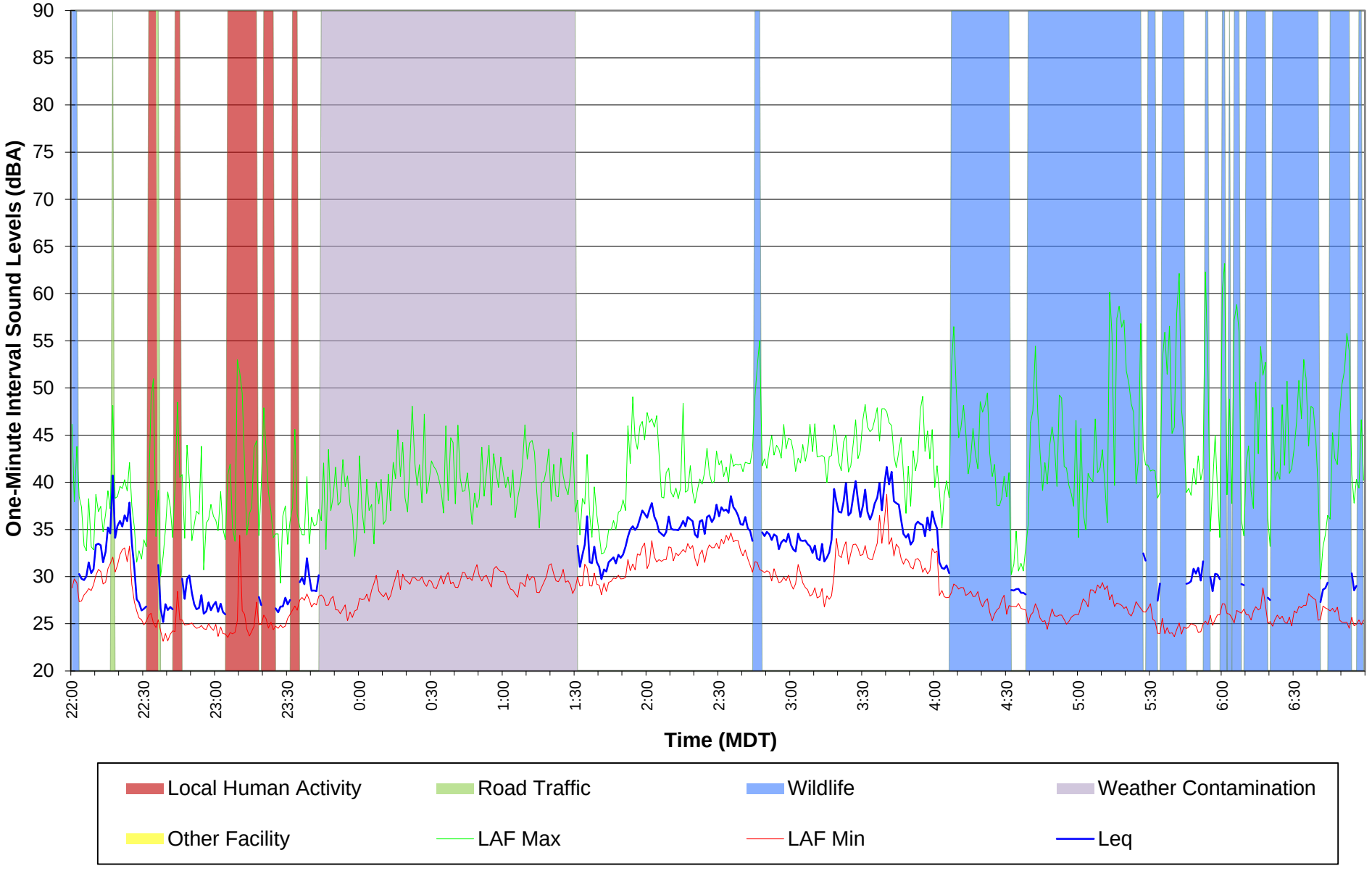


Figure E.5.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

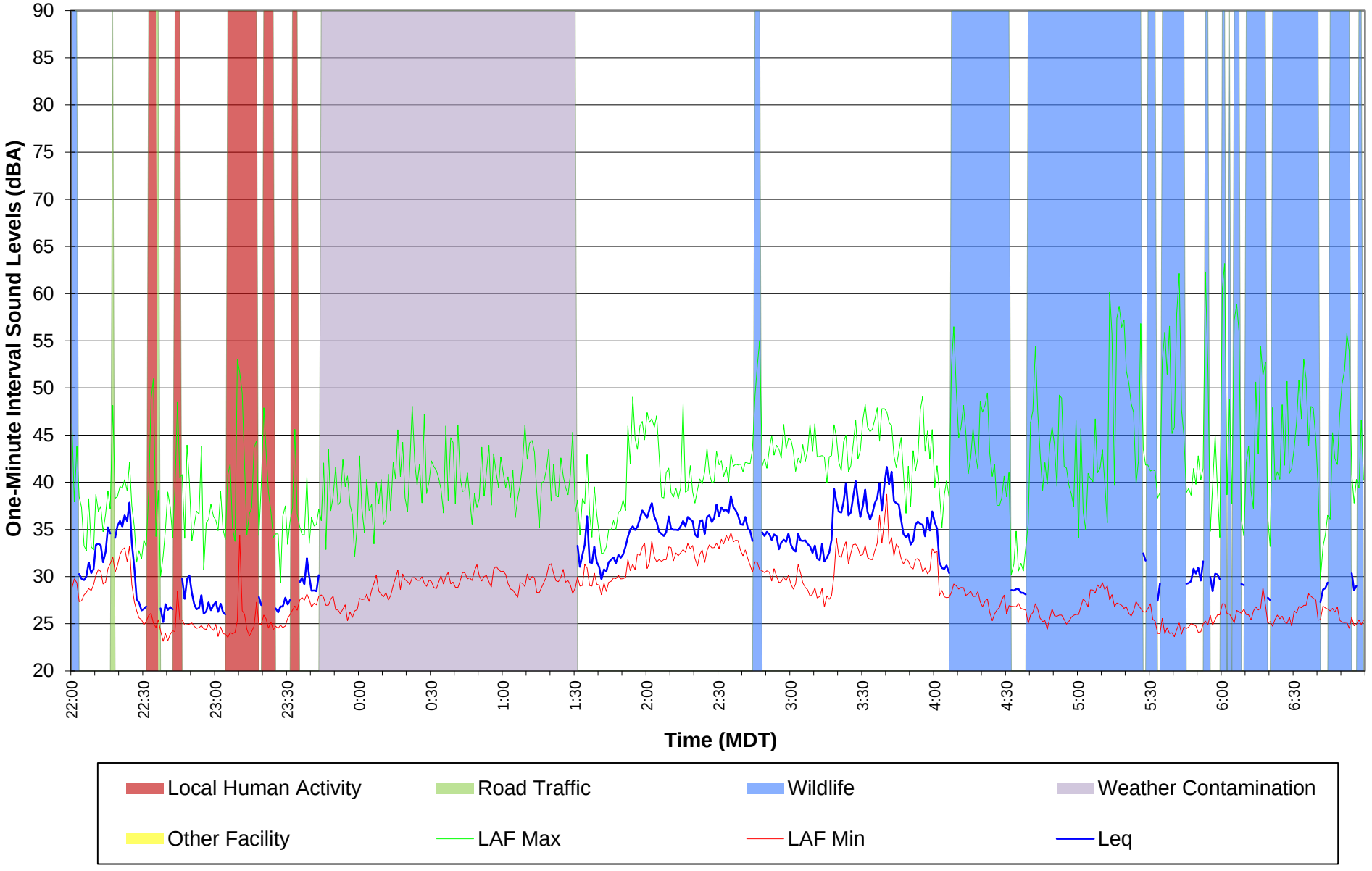


Figure E.6

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 07:00 - 14:29

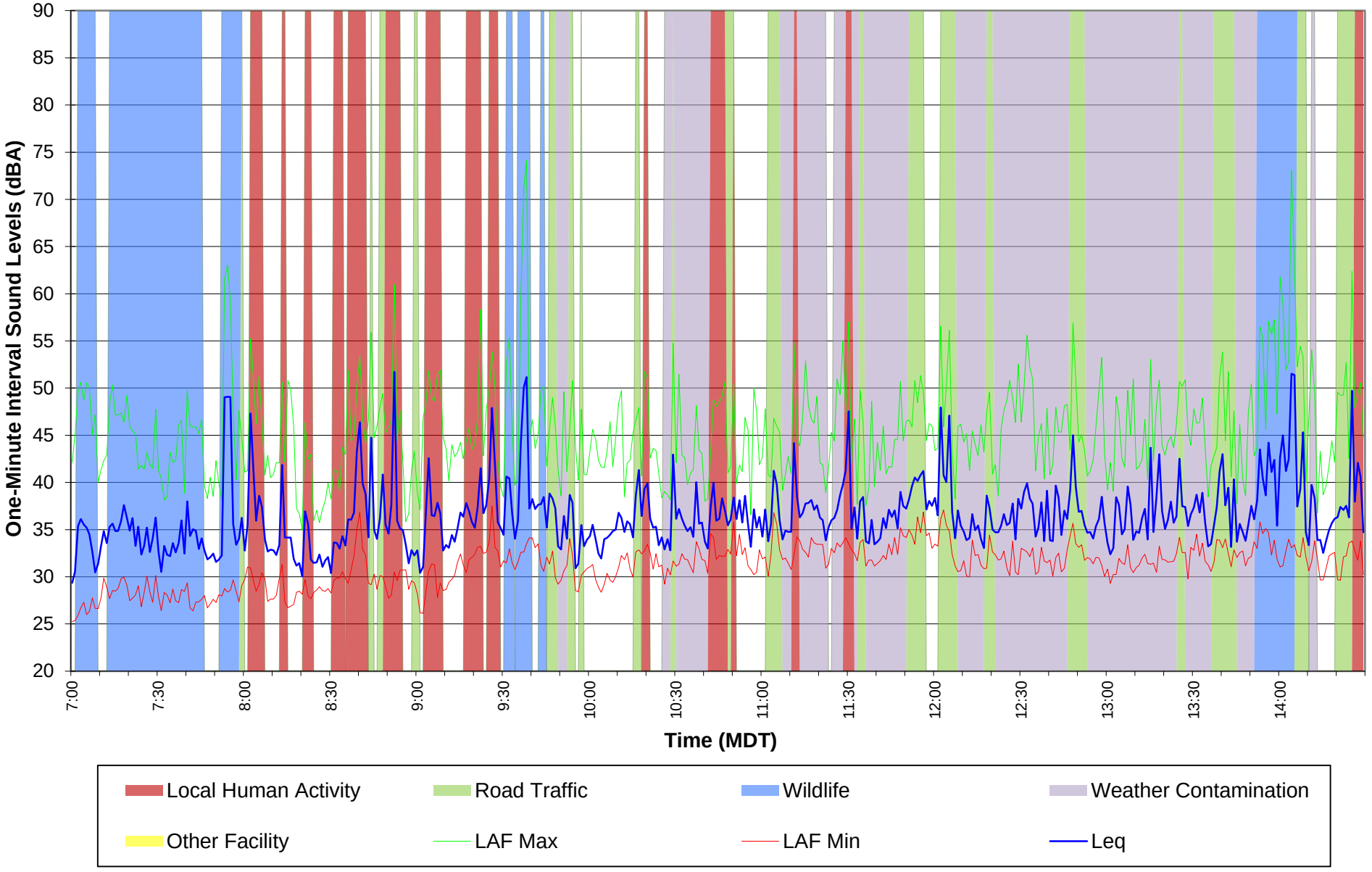


Figure E.6.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 07:00 - 14:29

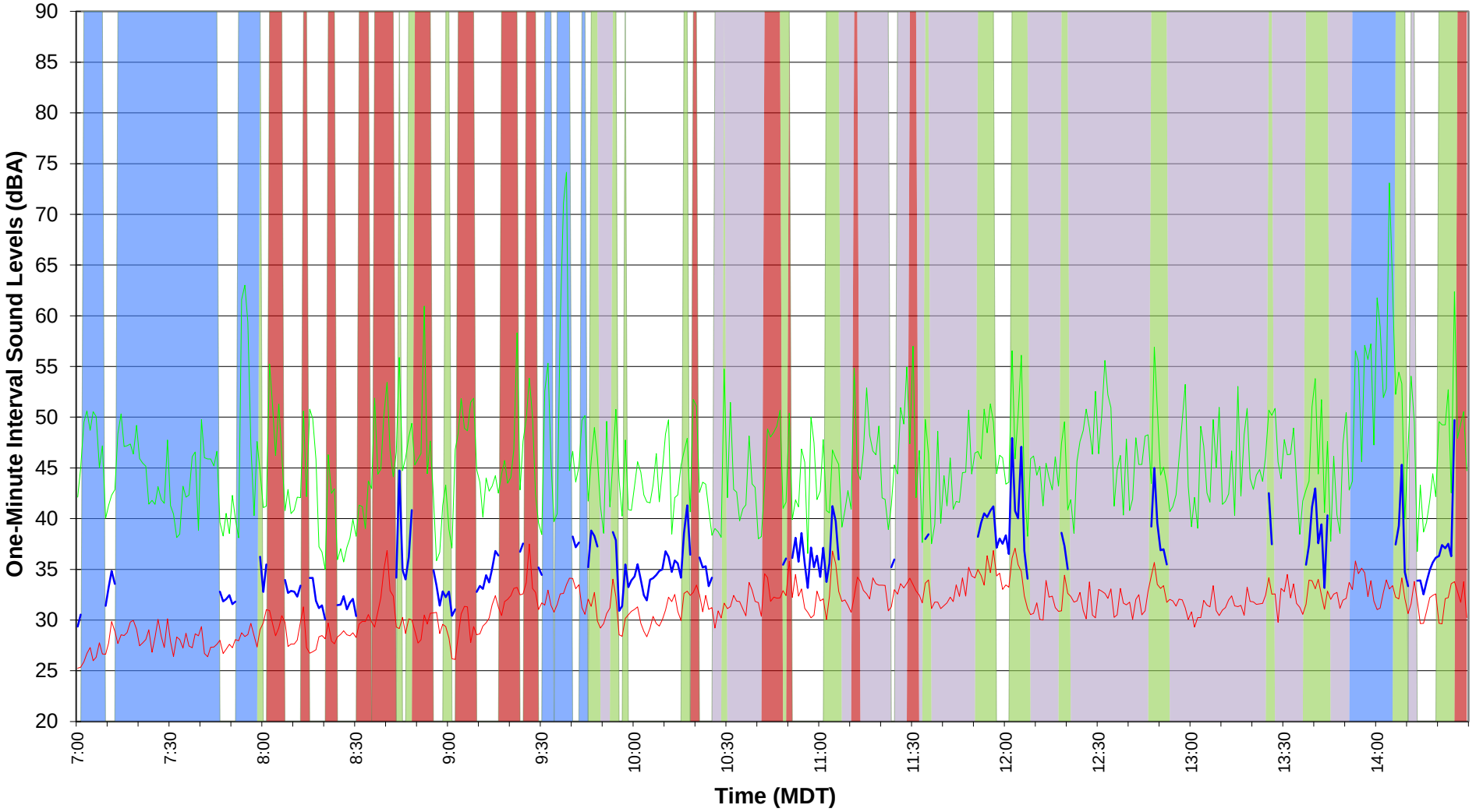


Figure E.6.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 07:00 - 14:29

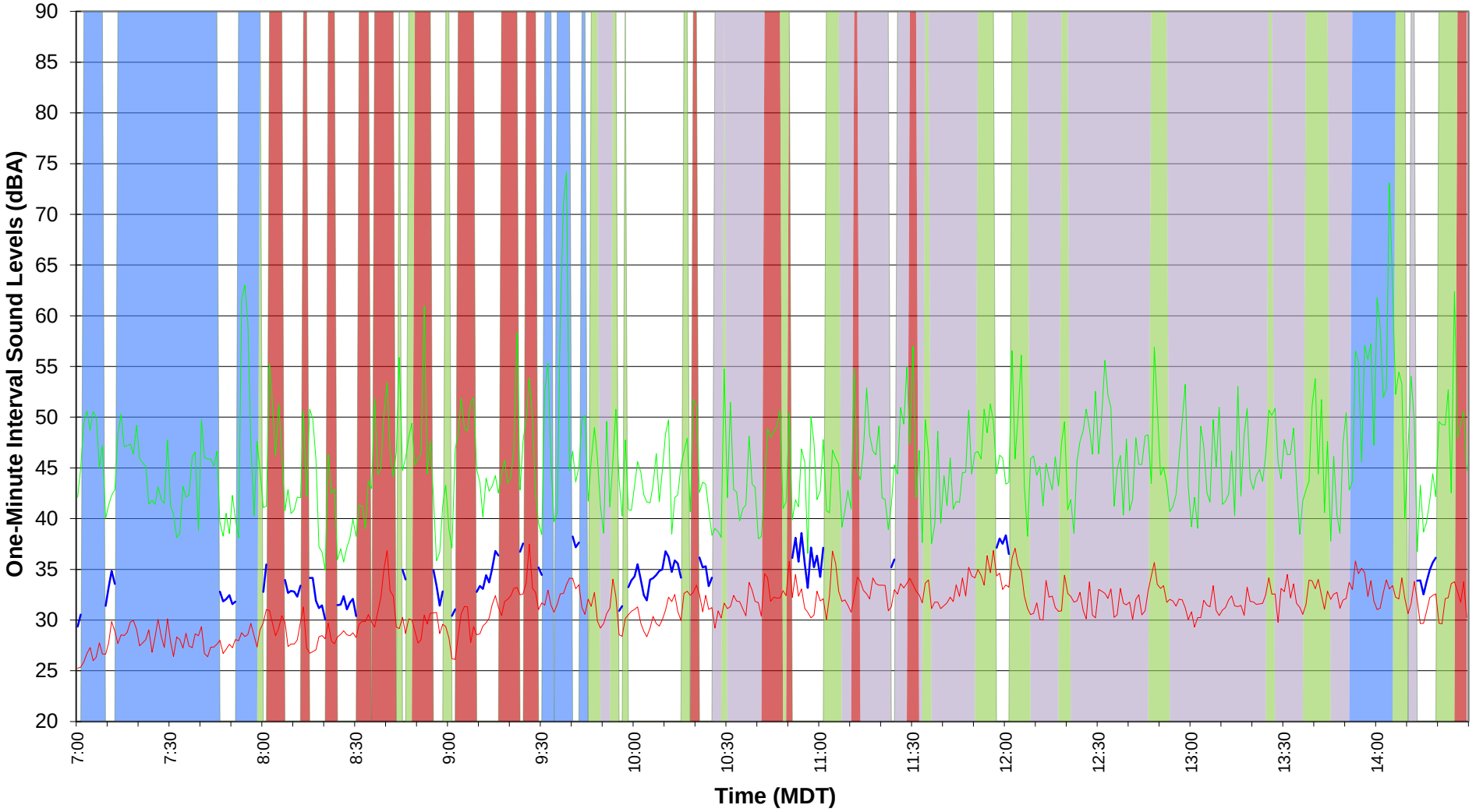


Figure E.7

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 14:30 - 21:59

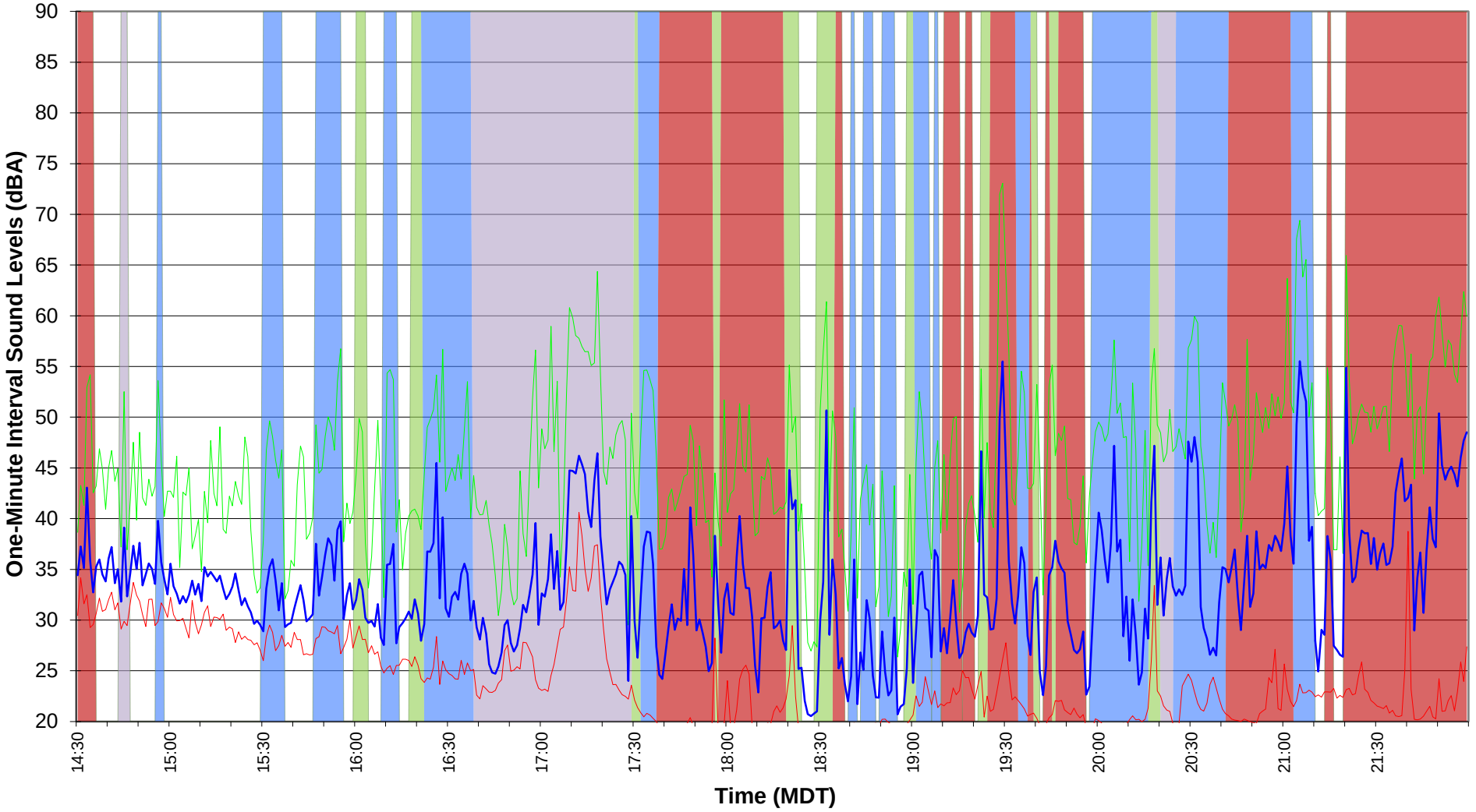


Figure E.7.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 14:30 - 21:59

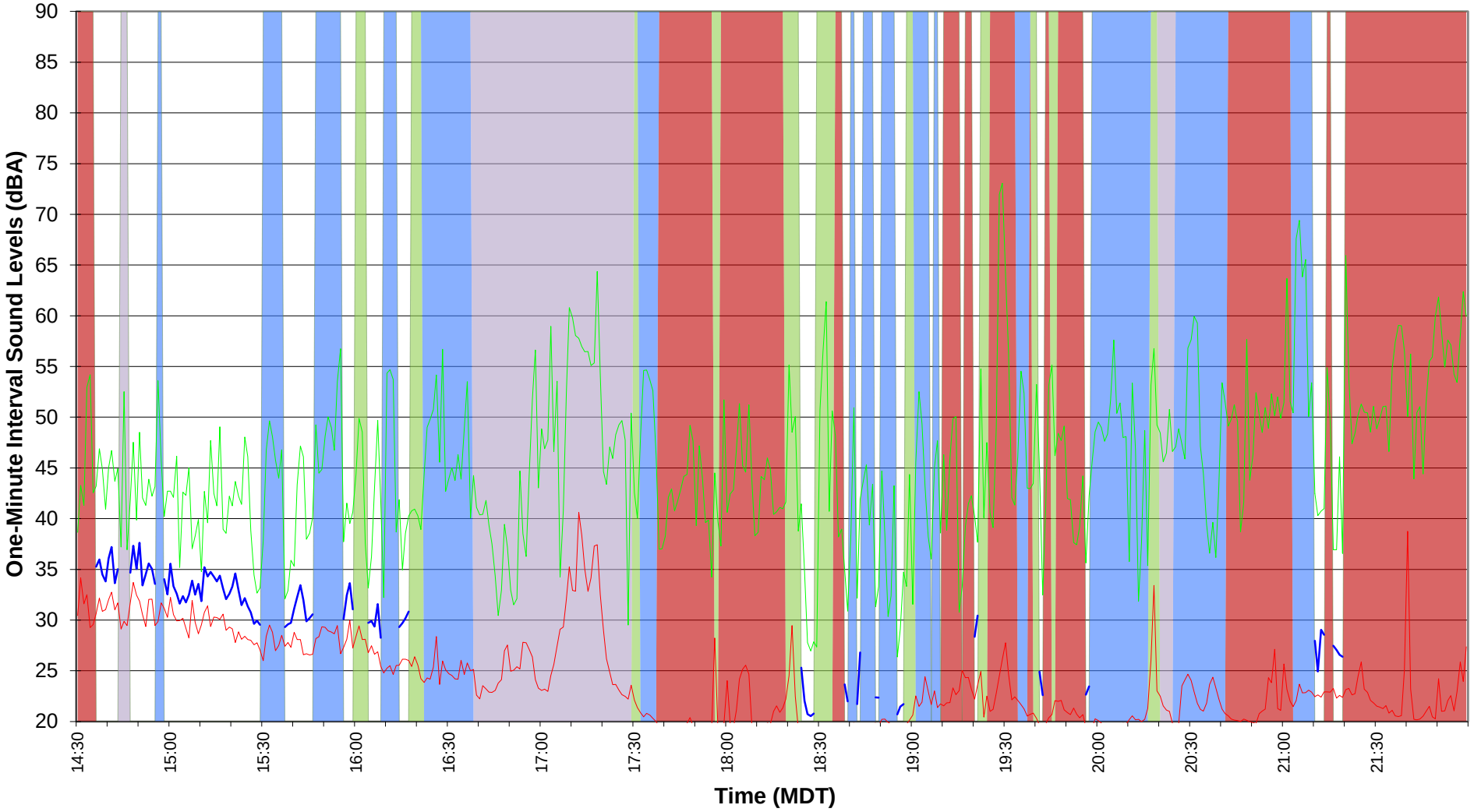


Figure E.7.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 14:30 - 21:59

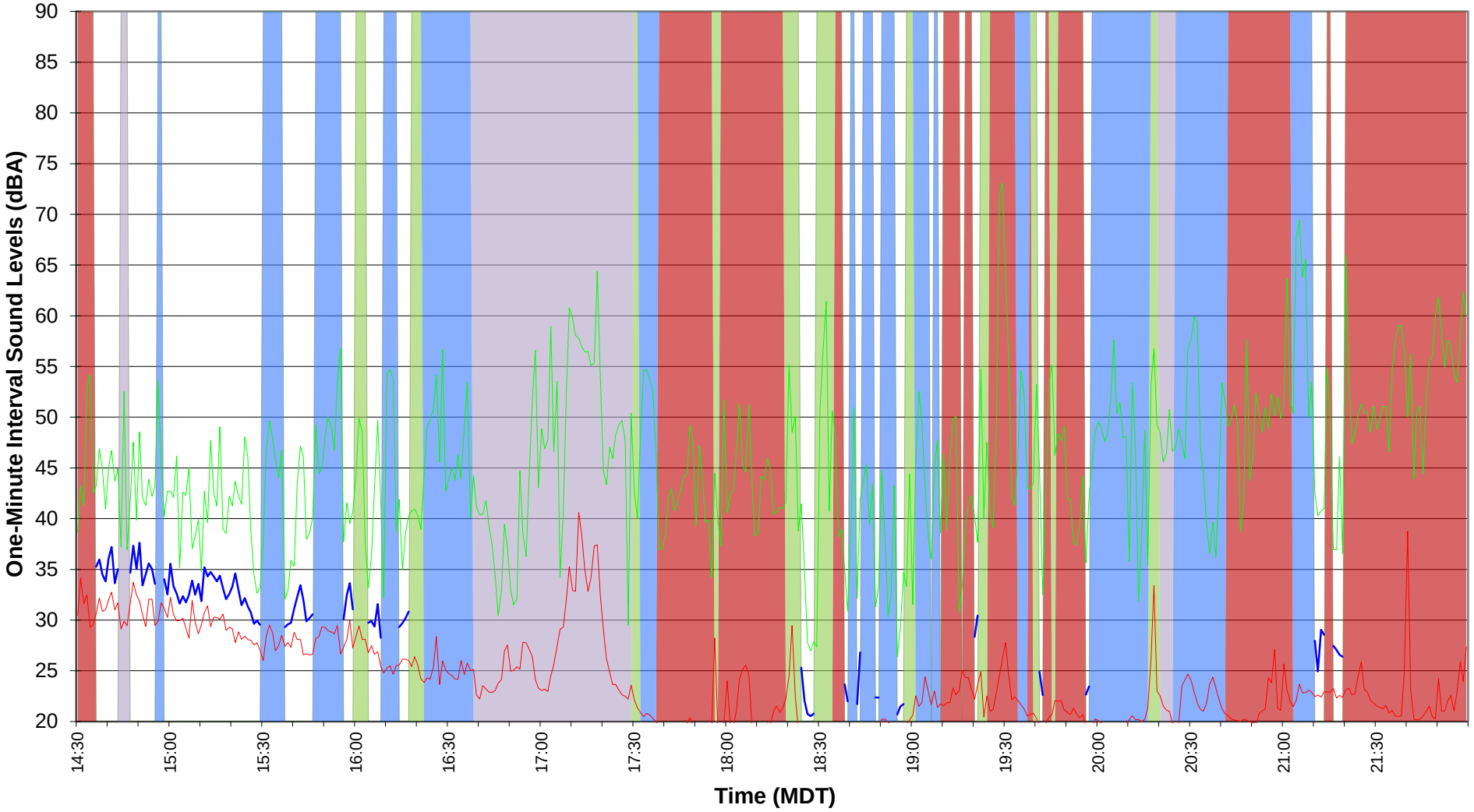


Figure E.8

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

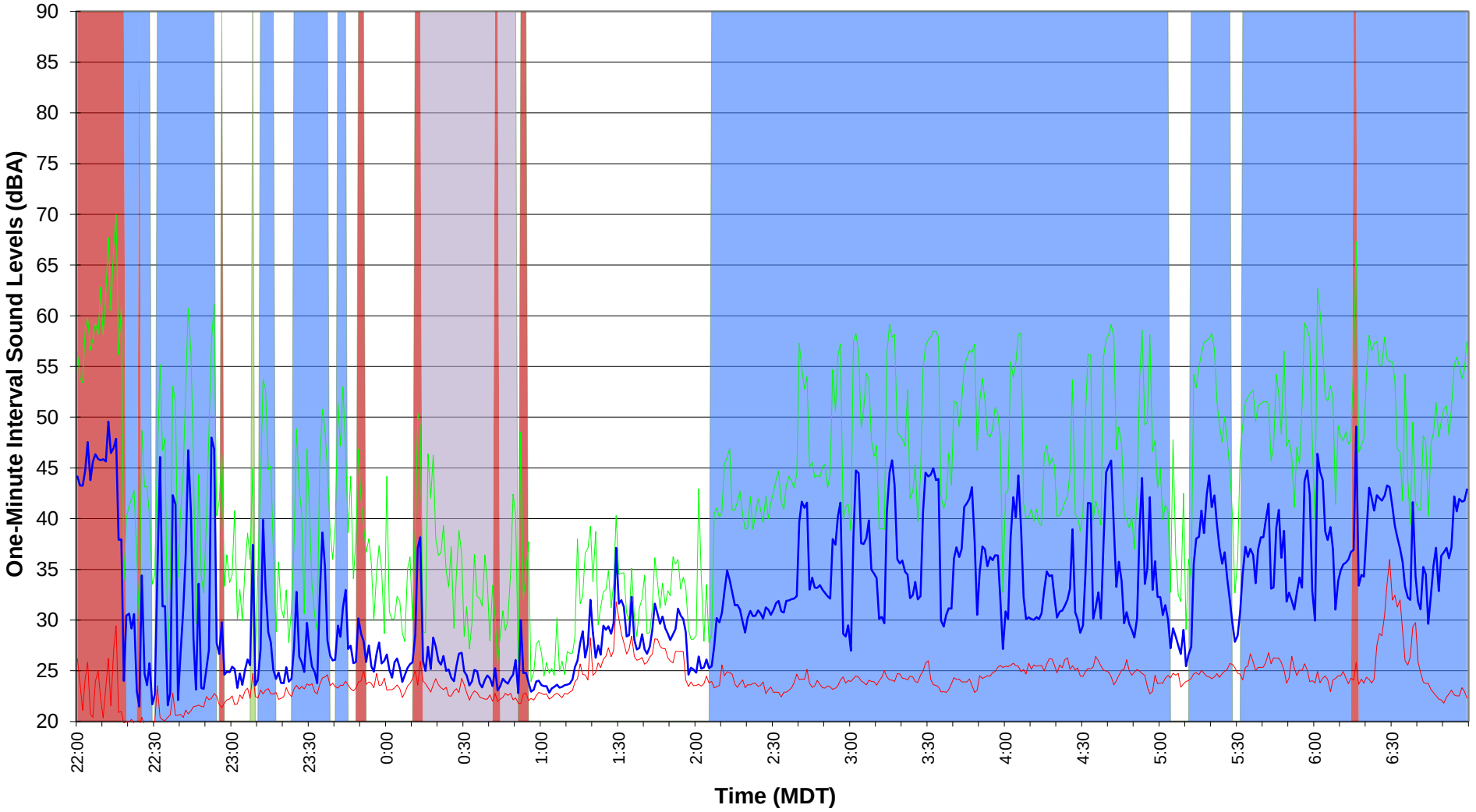


Figure E.8.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

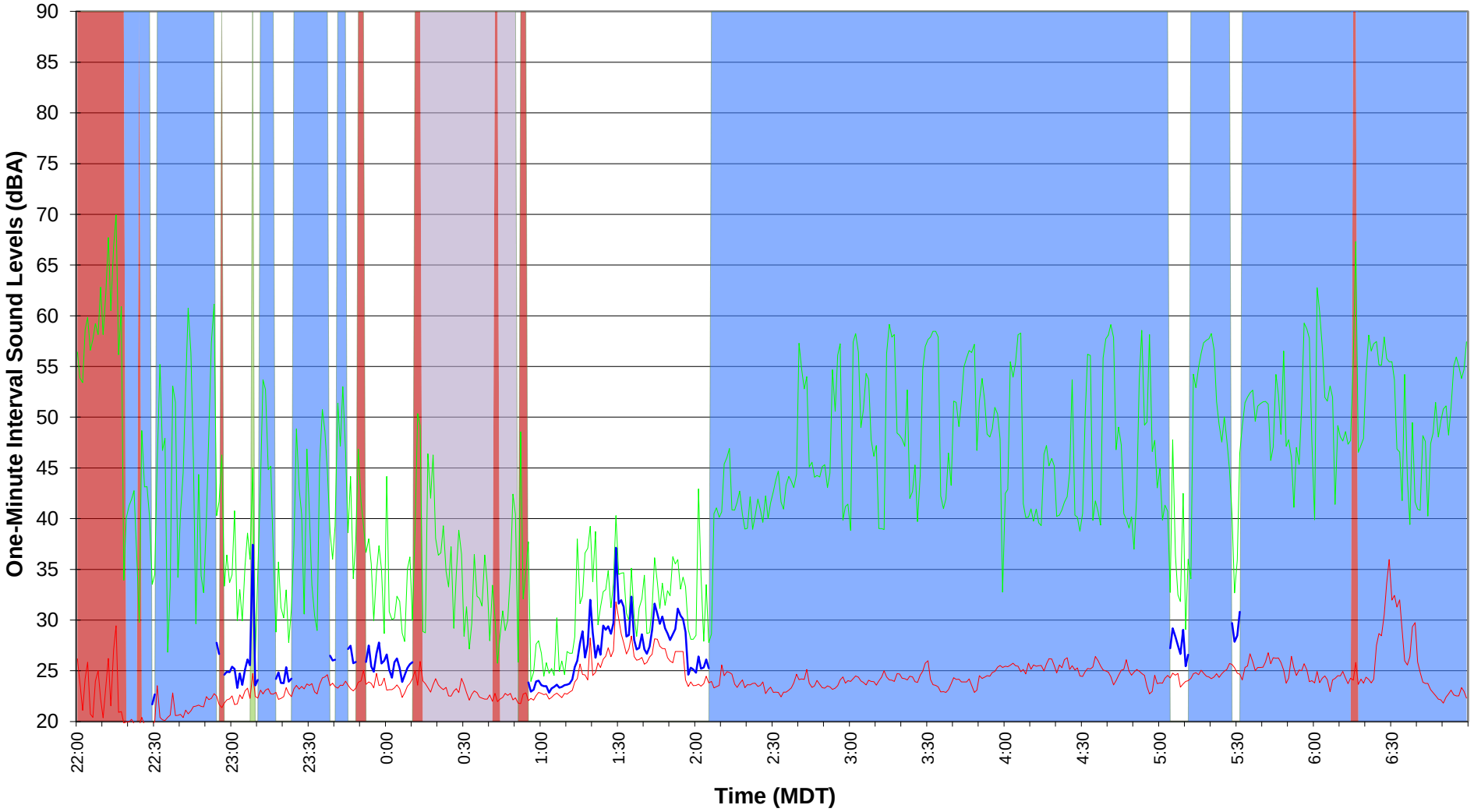


Figure E.8.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

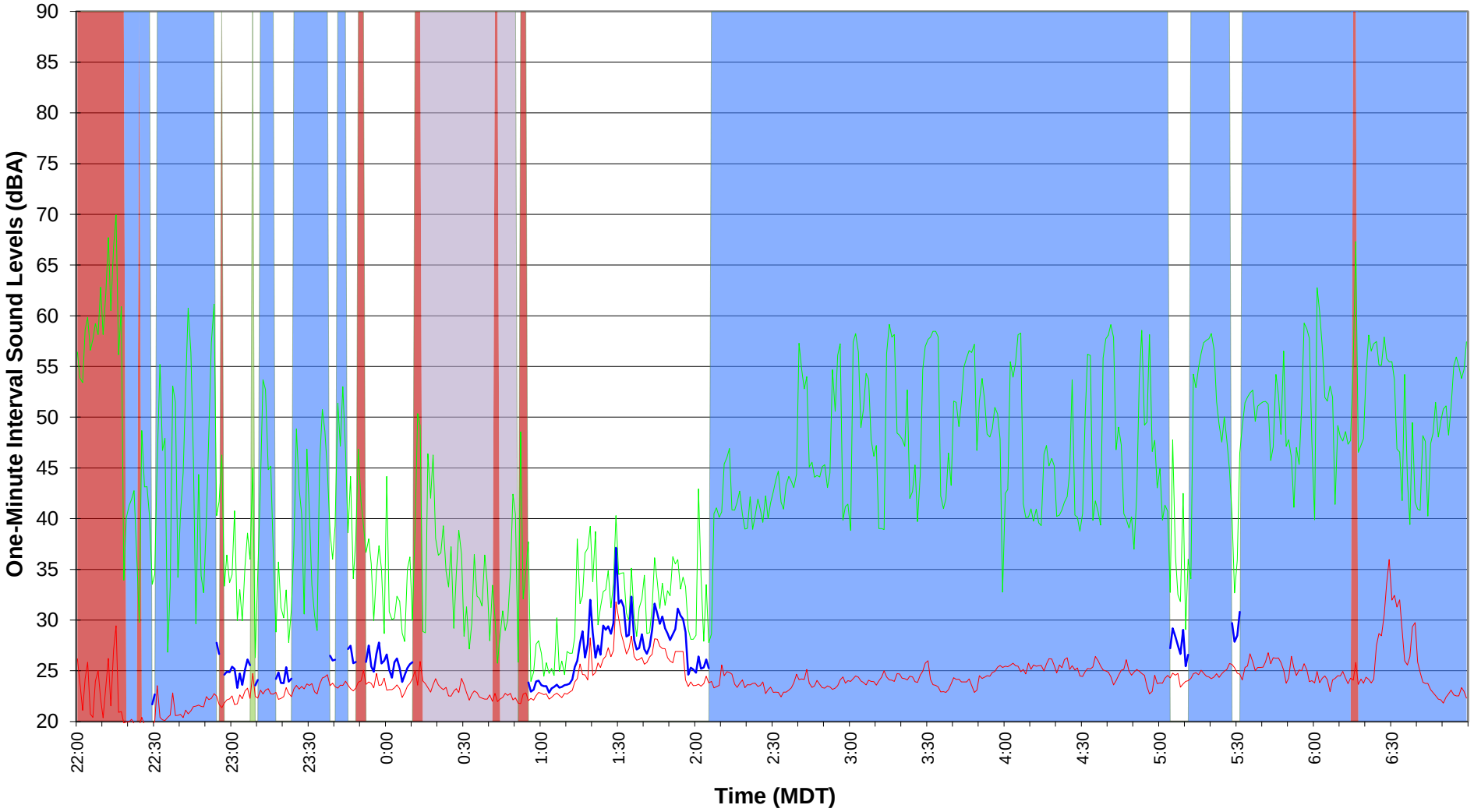


Figure E.9

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 07:00 - 14:29

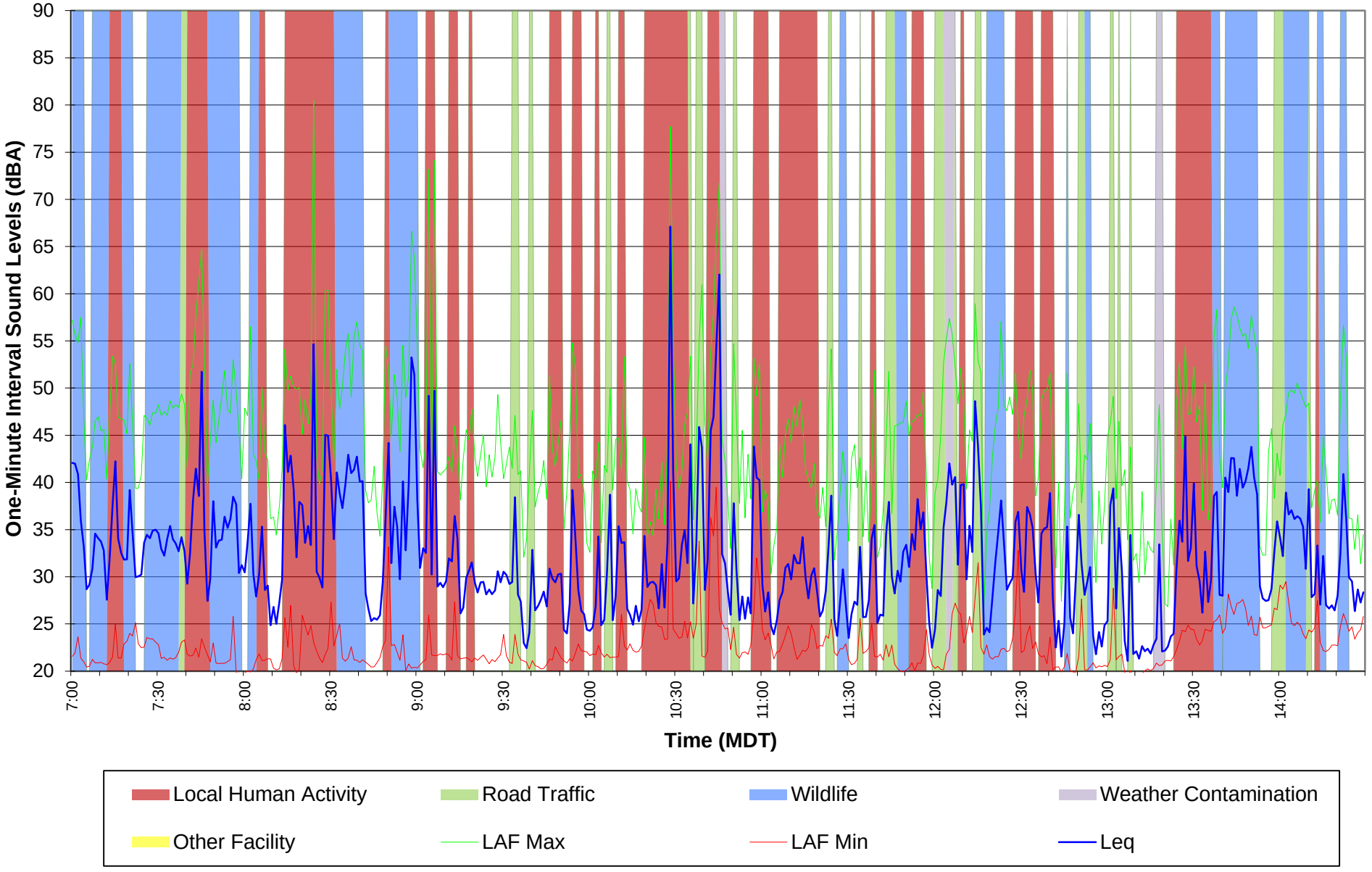


Figure E.9.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 07:00 - 14:29

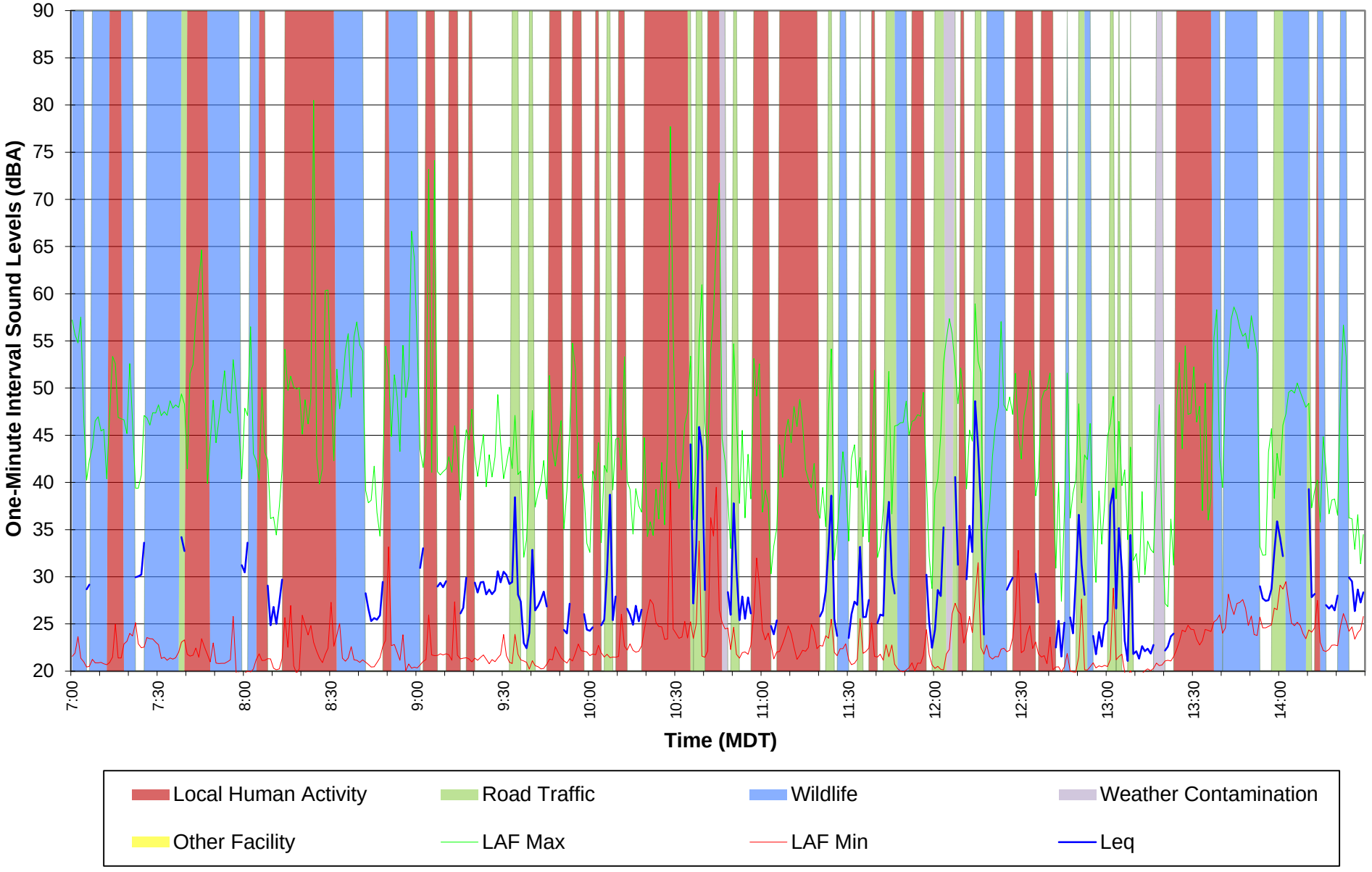


Figure E.9.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 07:00 - 14:29

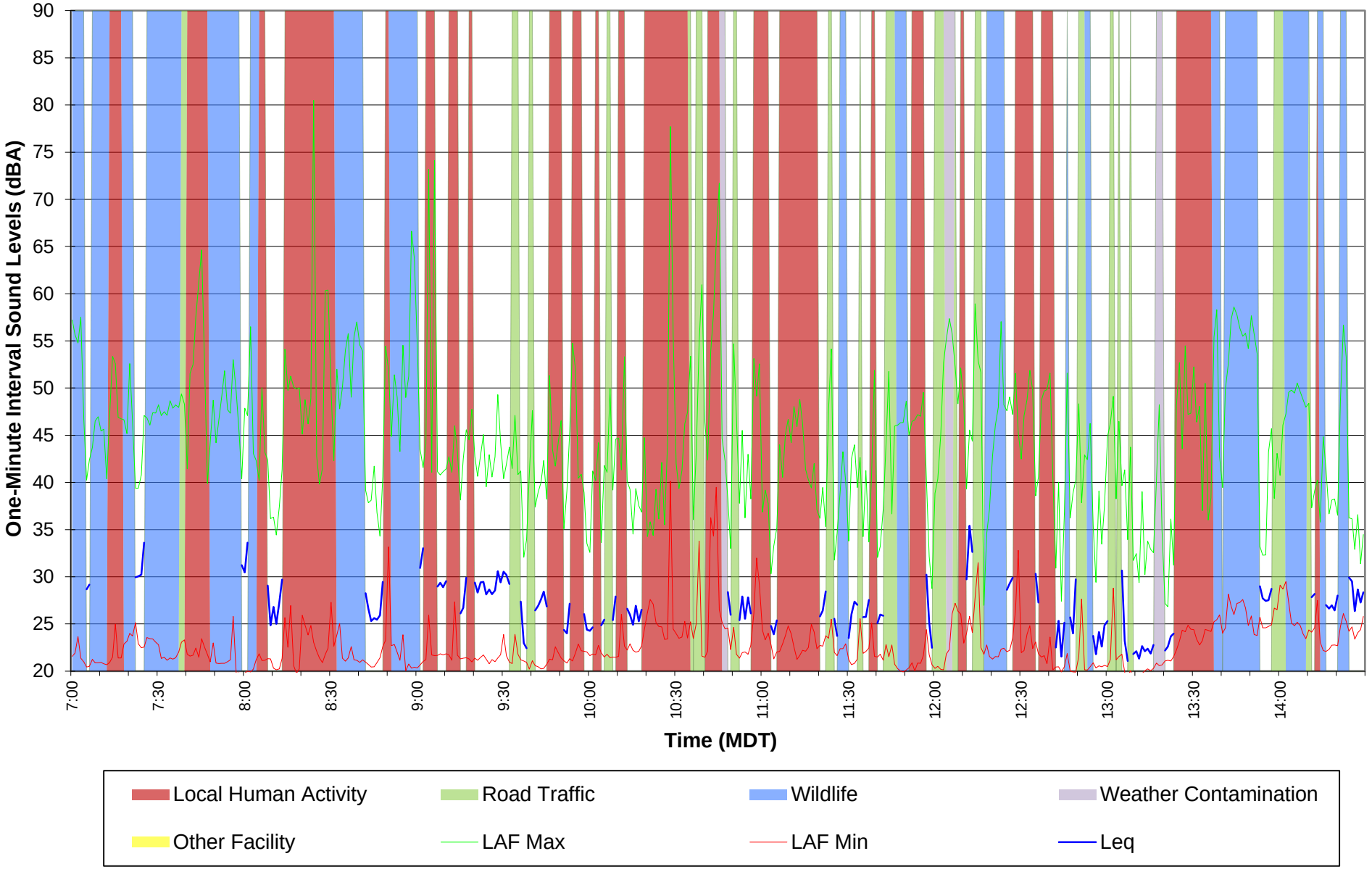


Figure E.10

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 14:30 - 21:59

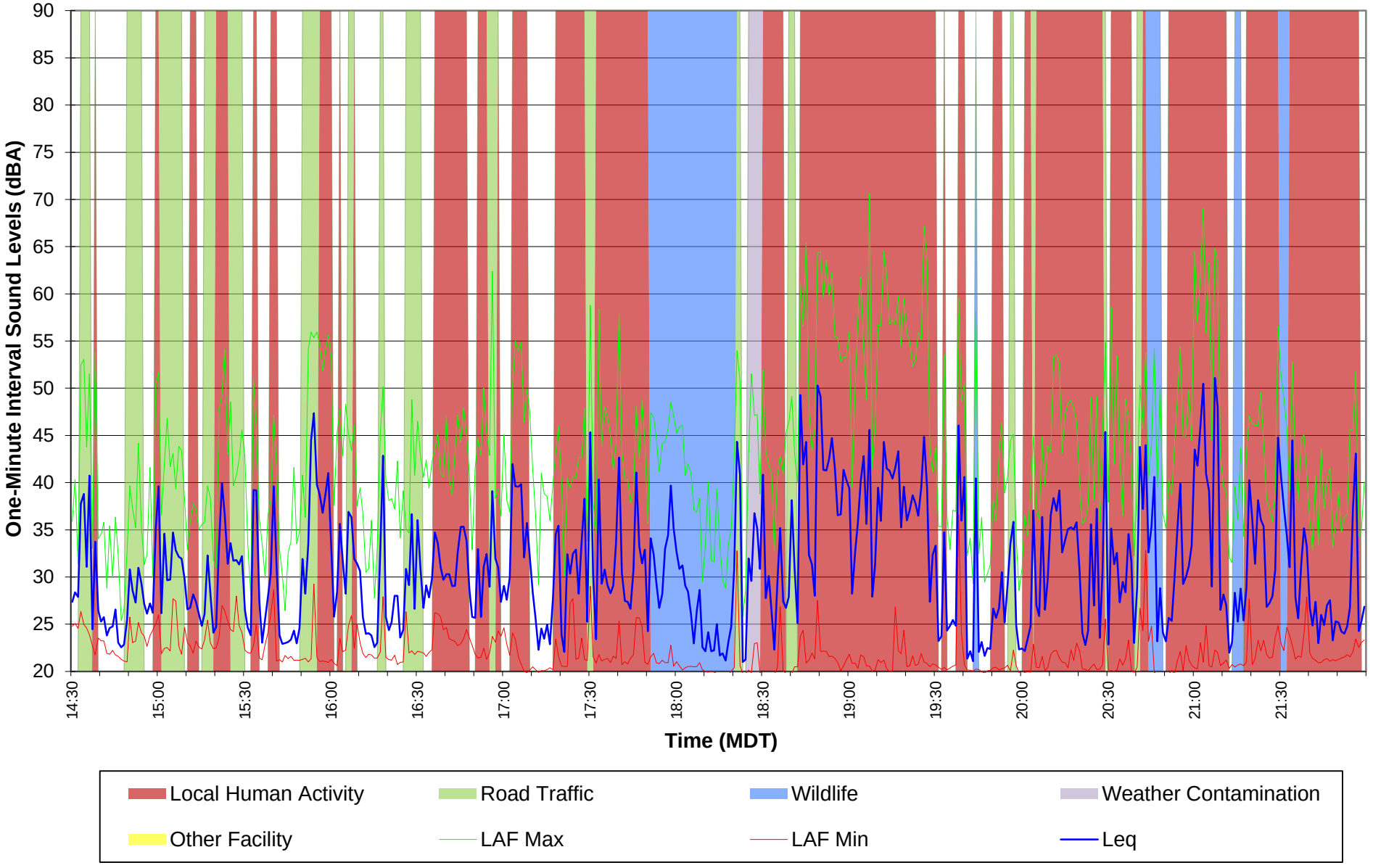


Figure E.10.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 14:30 - 21:59

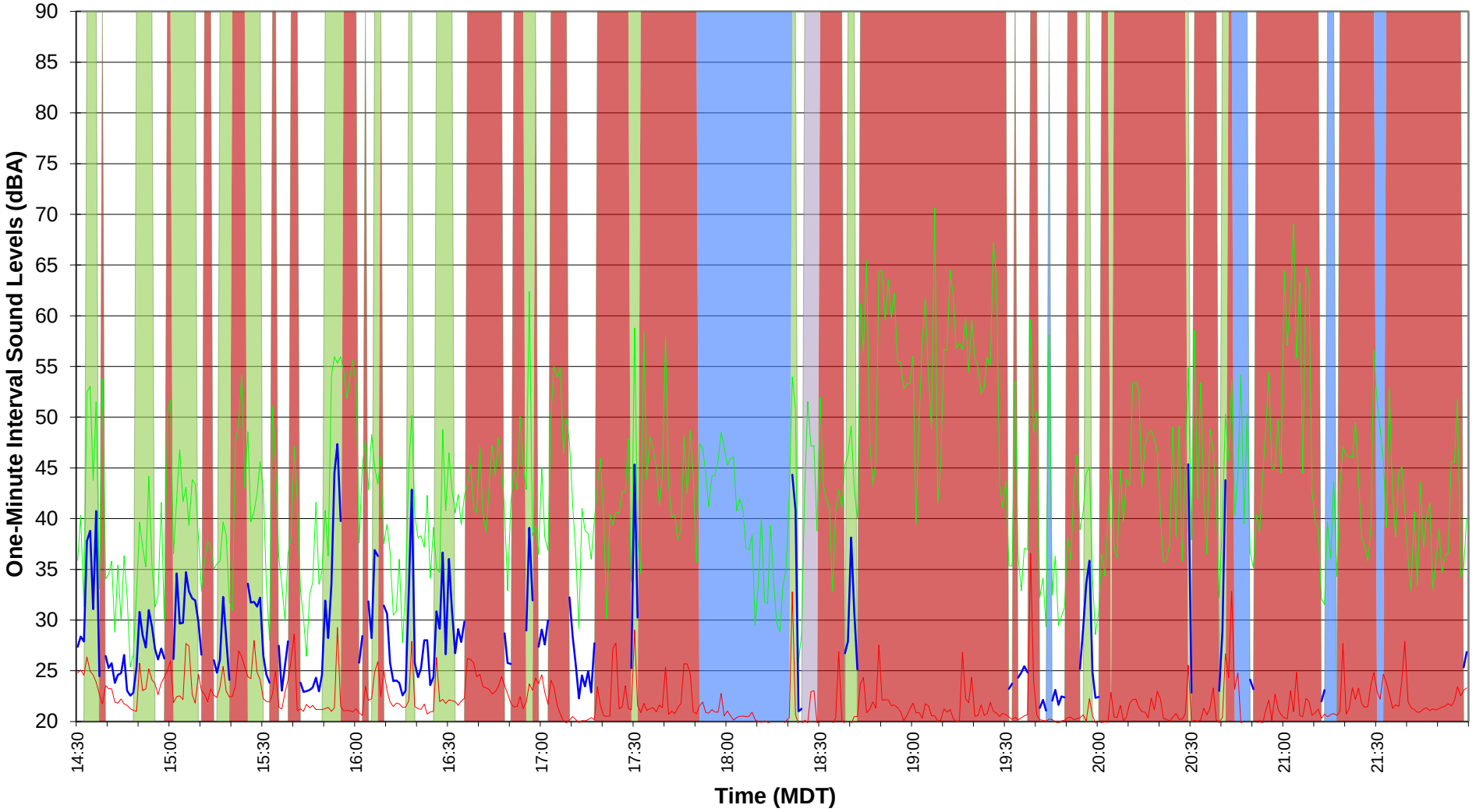


Figure E.10.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 28, 2012 14:30 - 21:59

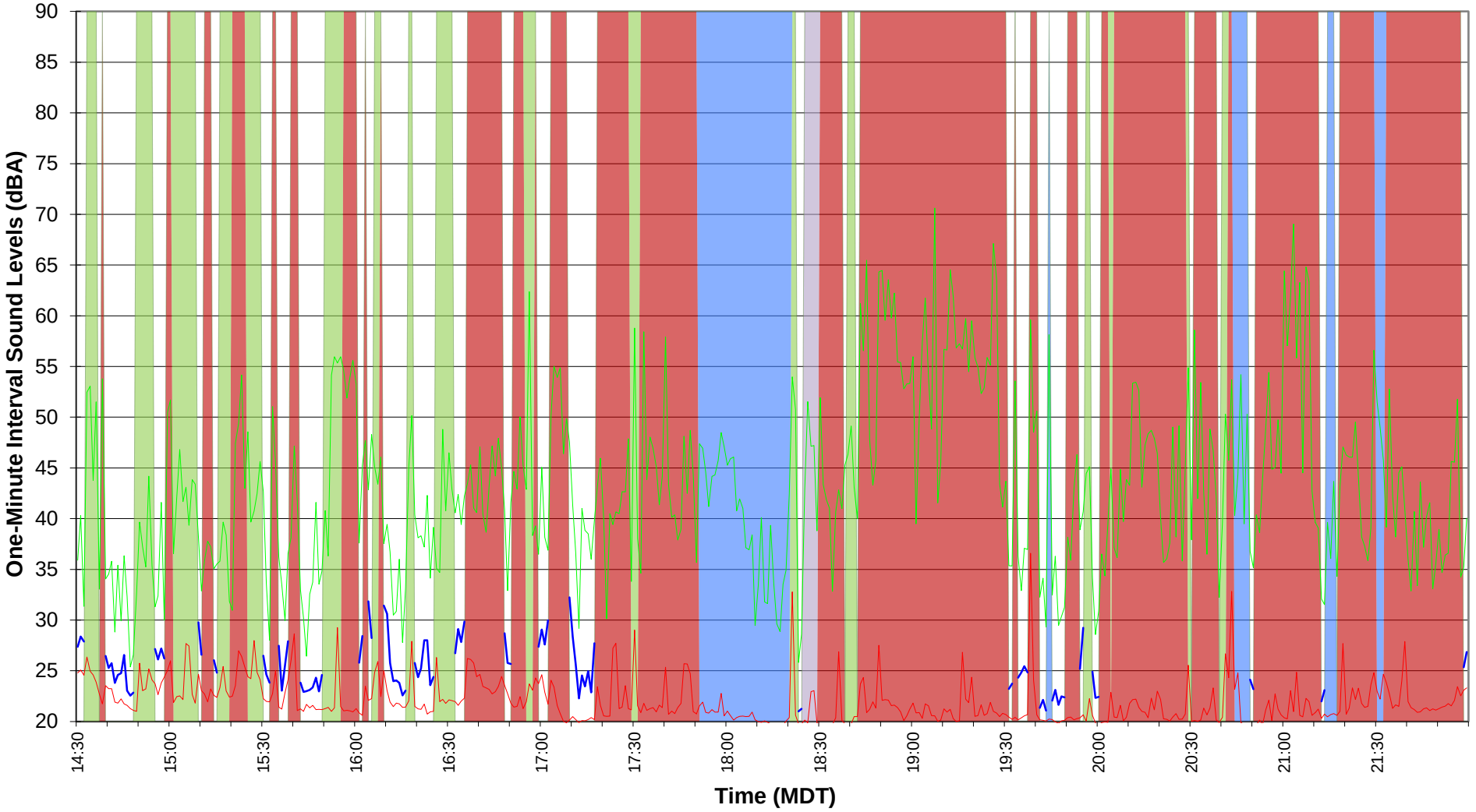


Figure E.11

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

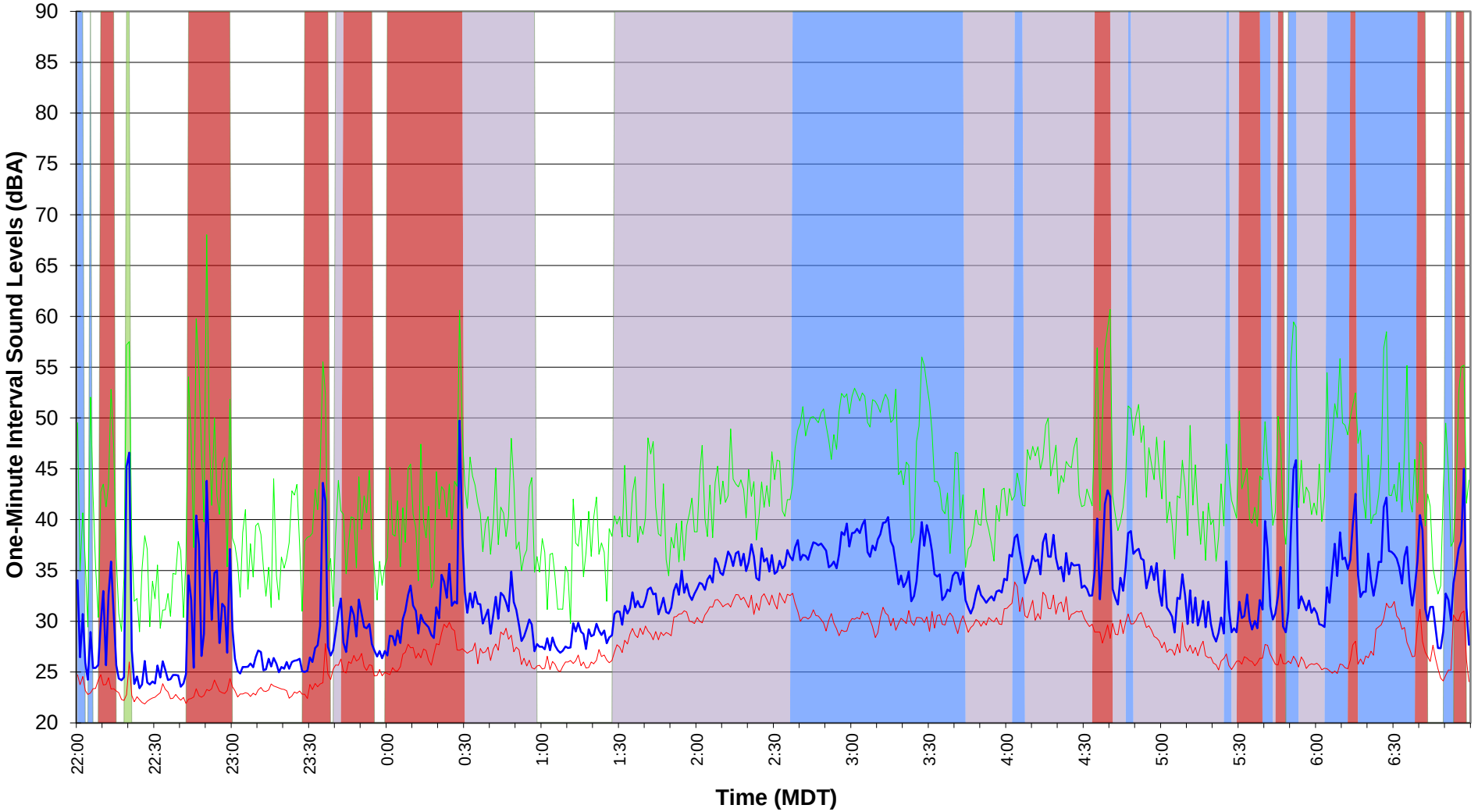


Figure E.11.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

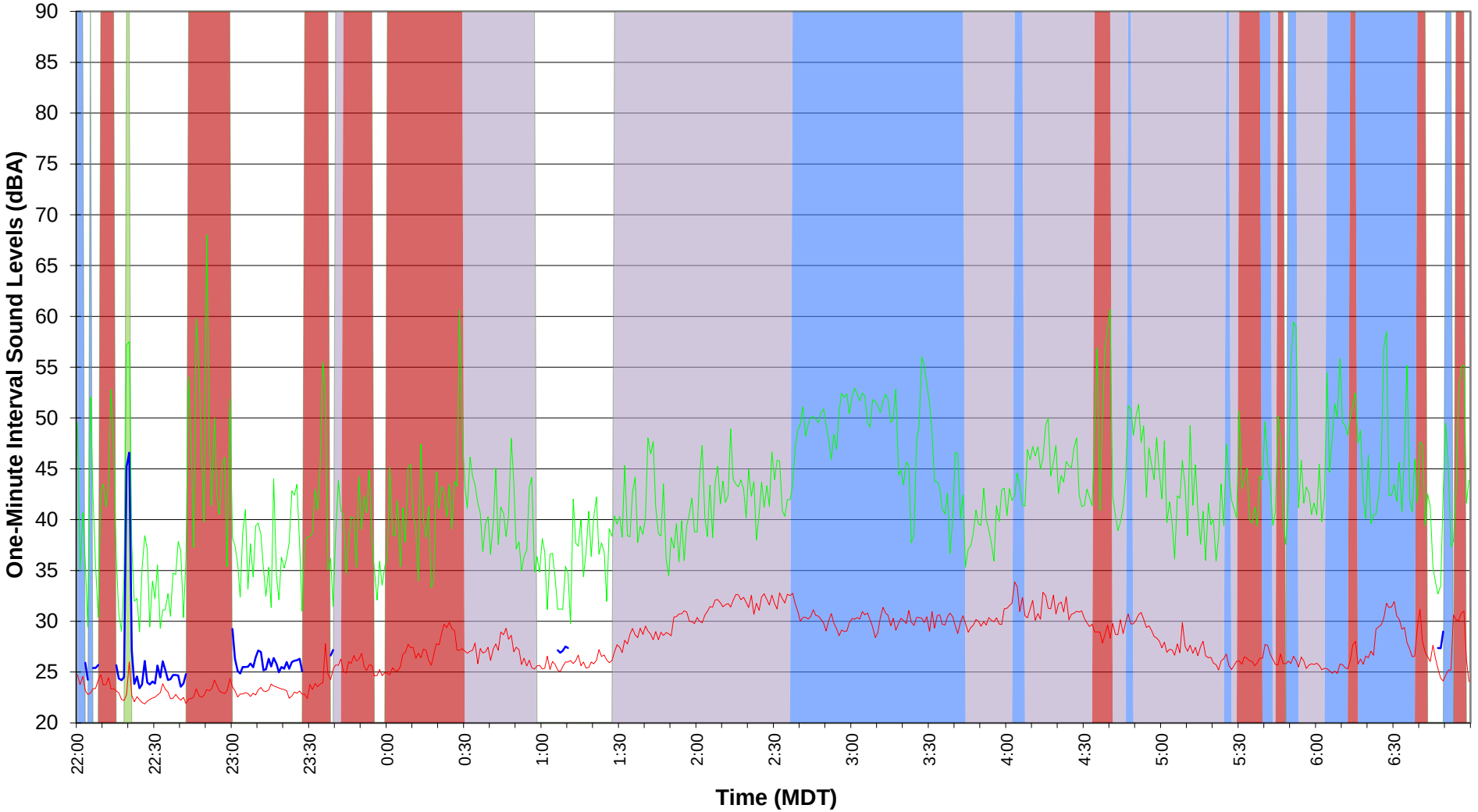


Figure E.11.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

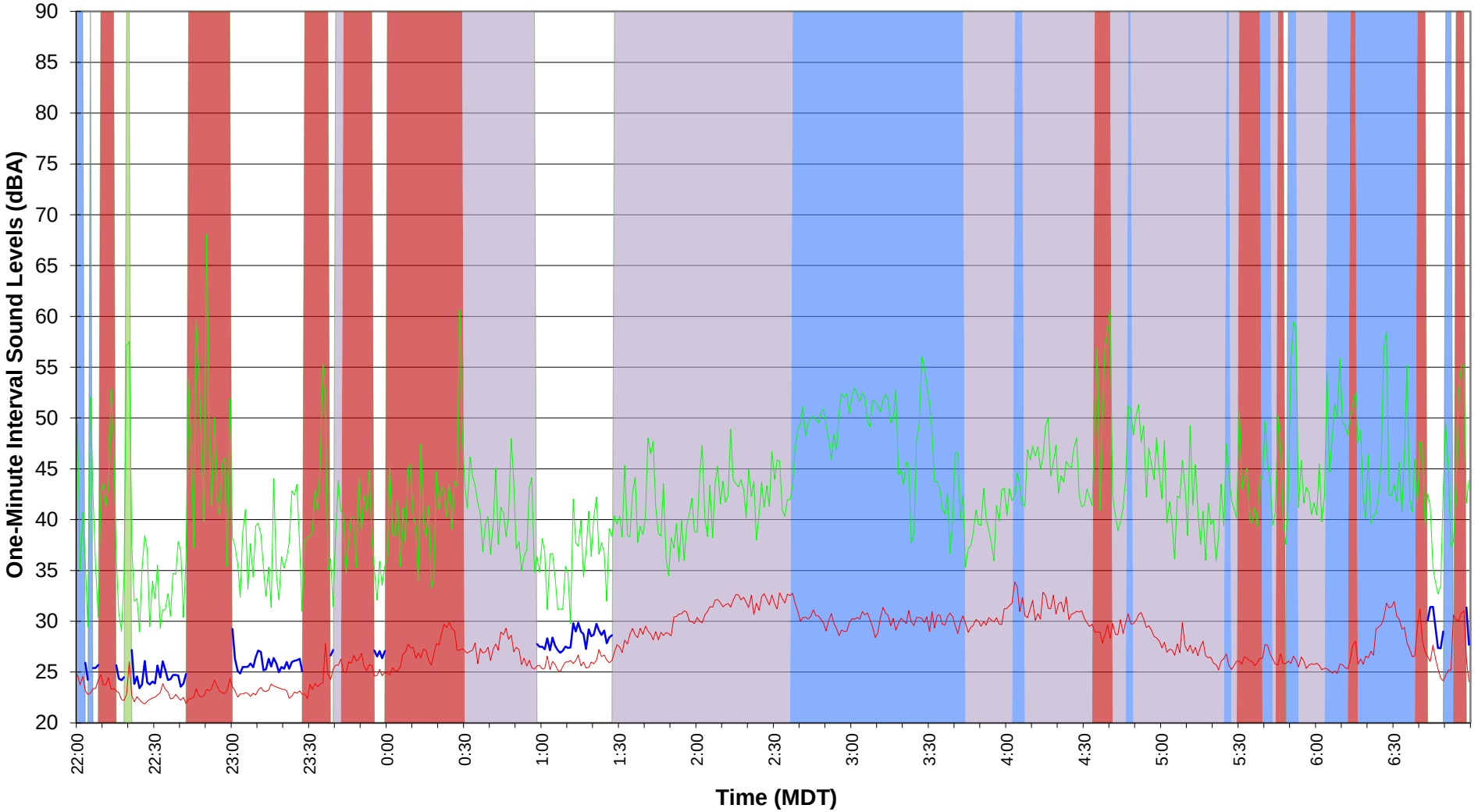


Figure E.12

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 29, 2012 07:00 - 14:29

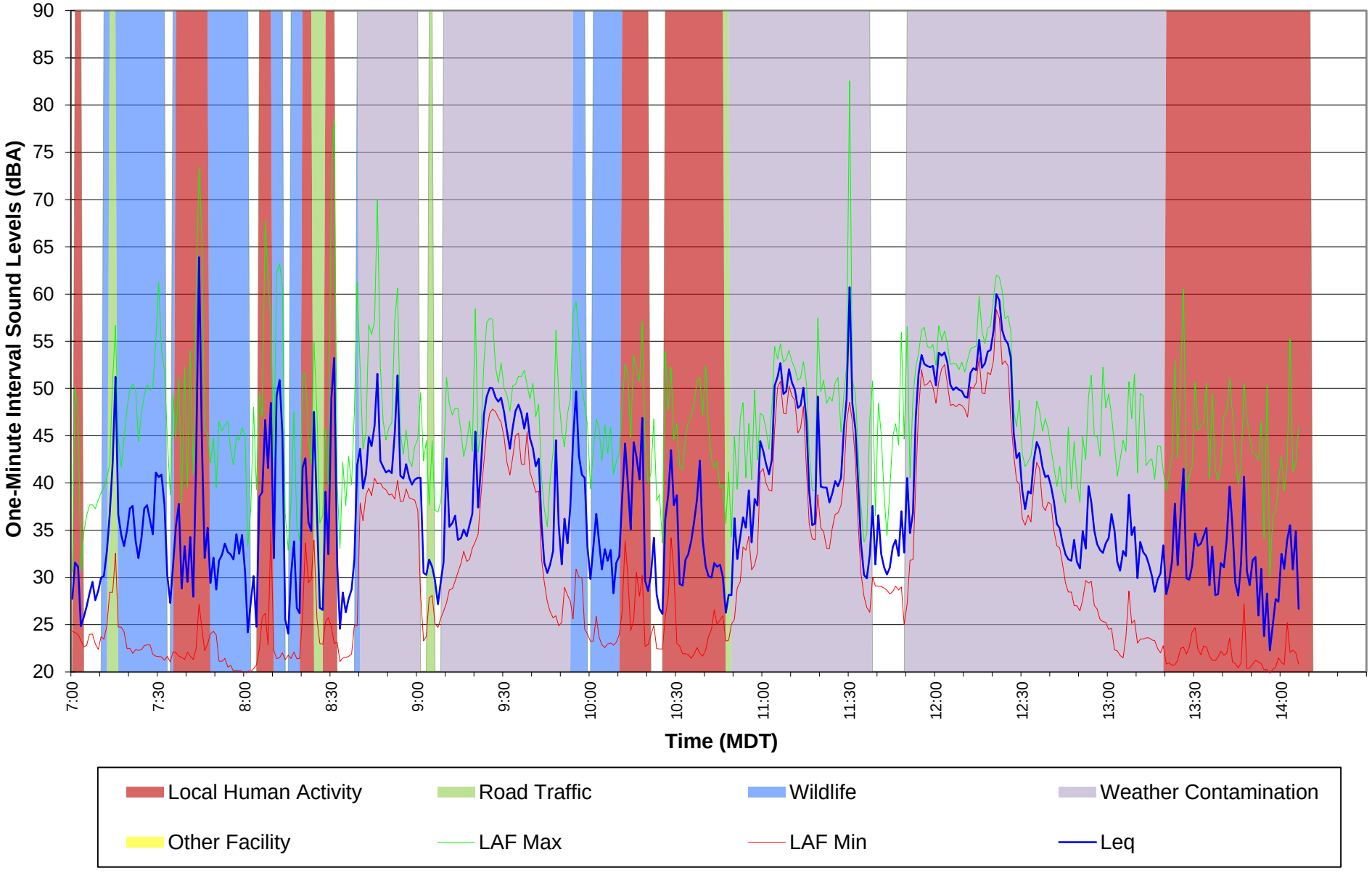


Figure E.12.Fac

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 29, 2012 07:00 - 14:29

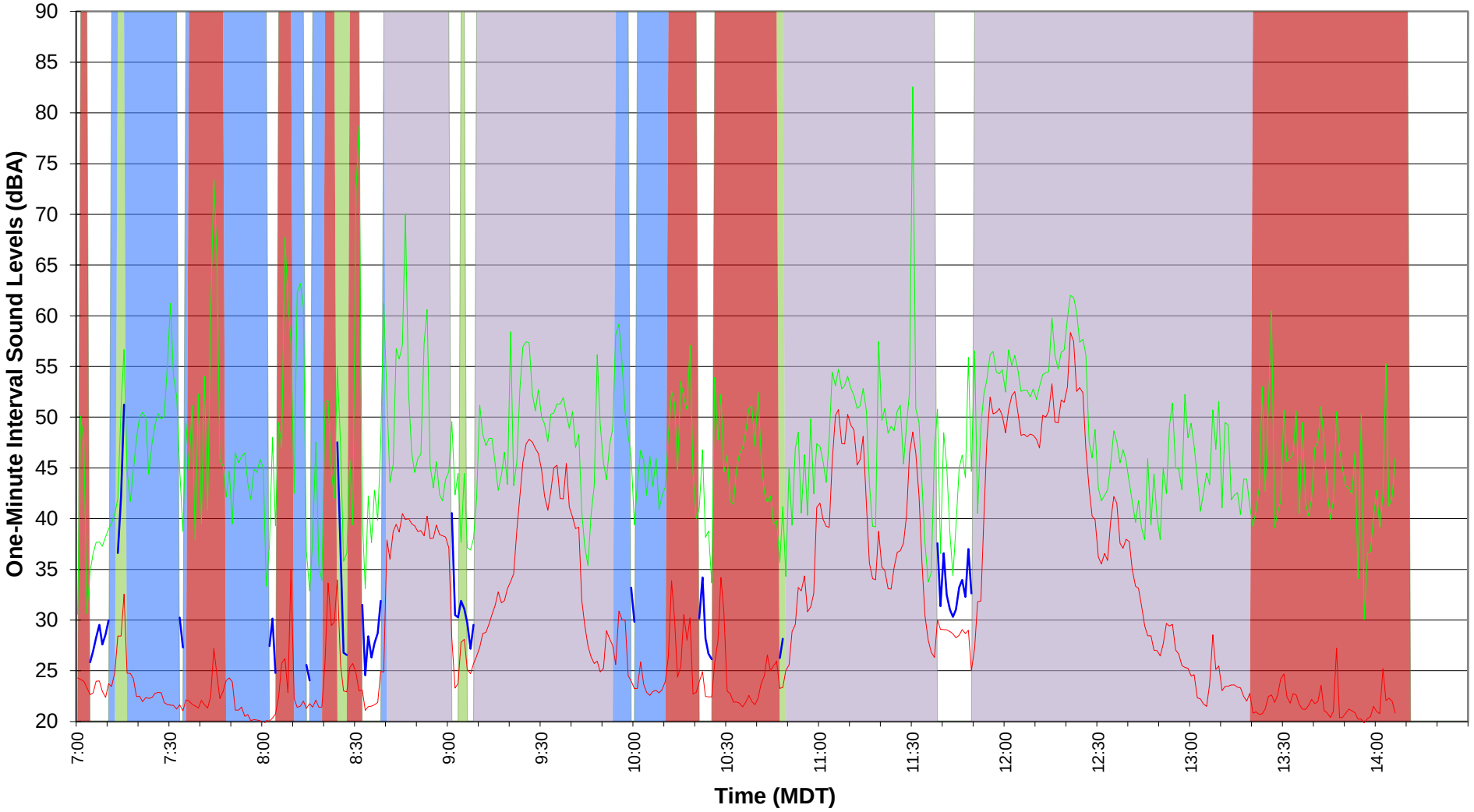
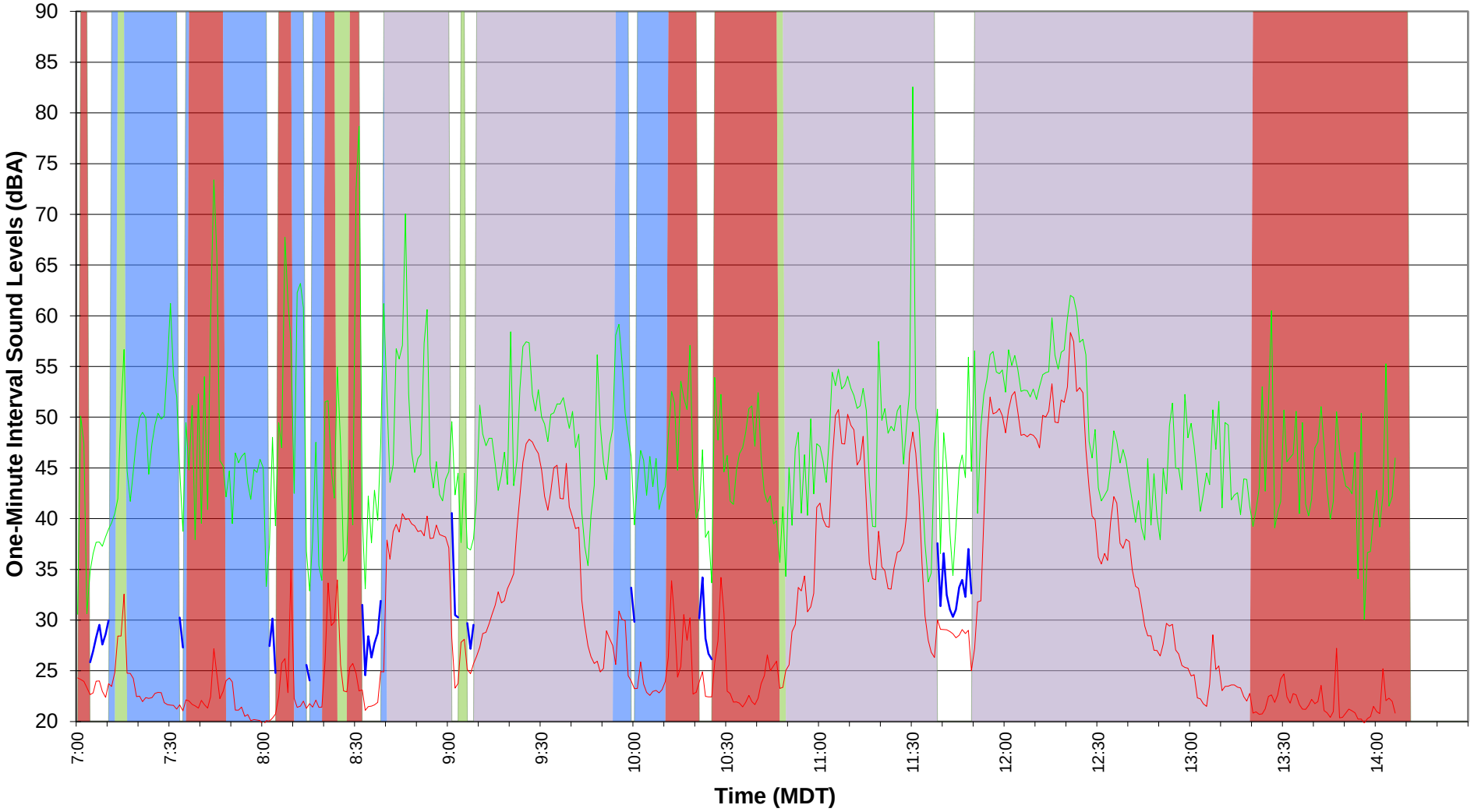


Figure E.12.Amb

YESAB Keno Hill Silver District Operations

R3 Noise Survey

Jun. 29, 2012 07:00 - 14:29



APPENDIX F

Measurement Results
Graphs of 1-Minute Sound Data
Residence 4

Patching Associates Acoustical Engineering Ltd.

Consultants in Acoustics, Noise Control and Vibrations

Table F.1
YESAB Keno Hill Silver District Operations
R4 Noise Survey
Daily Leq Values

Date	Time	Measured		Residual Incl. Facility		Measured Ambient	
		Leq	Hours	Leq	Hours	Leq	Hours
Jun. 25, 2012	07:00 - 21:59	41	4.9	39	1.7	28	0.5
Jun. 25, 2012 - Jun. 26, 2012	22:00 - 06:59	40	9.0	36	6.7	35	0.3
Jun. 26, 2012	07:00 - 21:59	44	15.0	39	6.7	32	6.3
Jun 26, 2012 - Jun 27, 2012	22:00 - 06:59	39	9.0	35	3.8	32	1.9
Jun. 27, 2012	**07:00 - 21:59**	**47**	**15.0**	**36**	**3.6**	**34**	**3.3**
Jun. 27, 2012 - Jun. 28, 2012	**22:00 - 06:59**	**41**	**9.0**	**32**	**3.8**	**30**	**3.3**
Jun. 28, 2012	07:00 - 21:59	44	15.0	44	7.5	30	6.8
Jun 28, 2012 - Jun 29, 2012	22:00 - 06:59	39	9.0	32	2.1	32	2.1
Jun. 29, 2012	07:00 - 21:59	48	6.9	42	1.3	31	1.0

Figure F.1

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 14:30 - 21:59

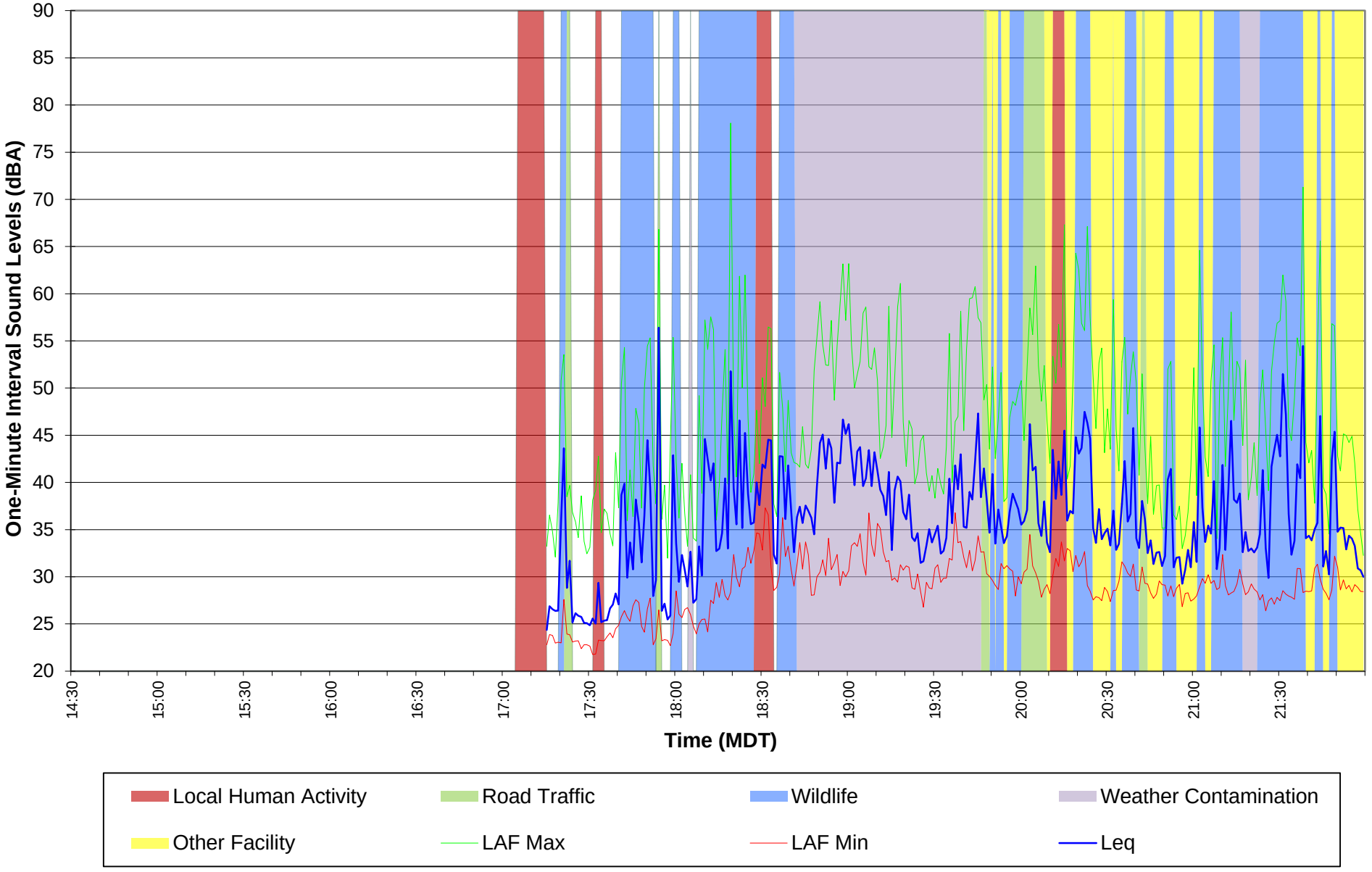


Figure F.1.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 14:30 - 21:59

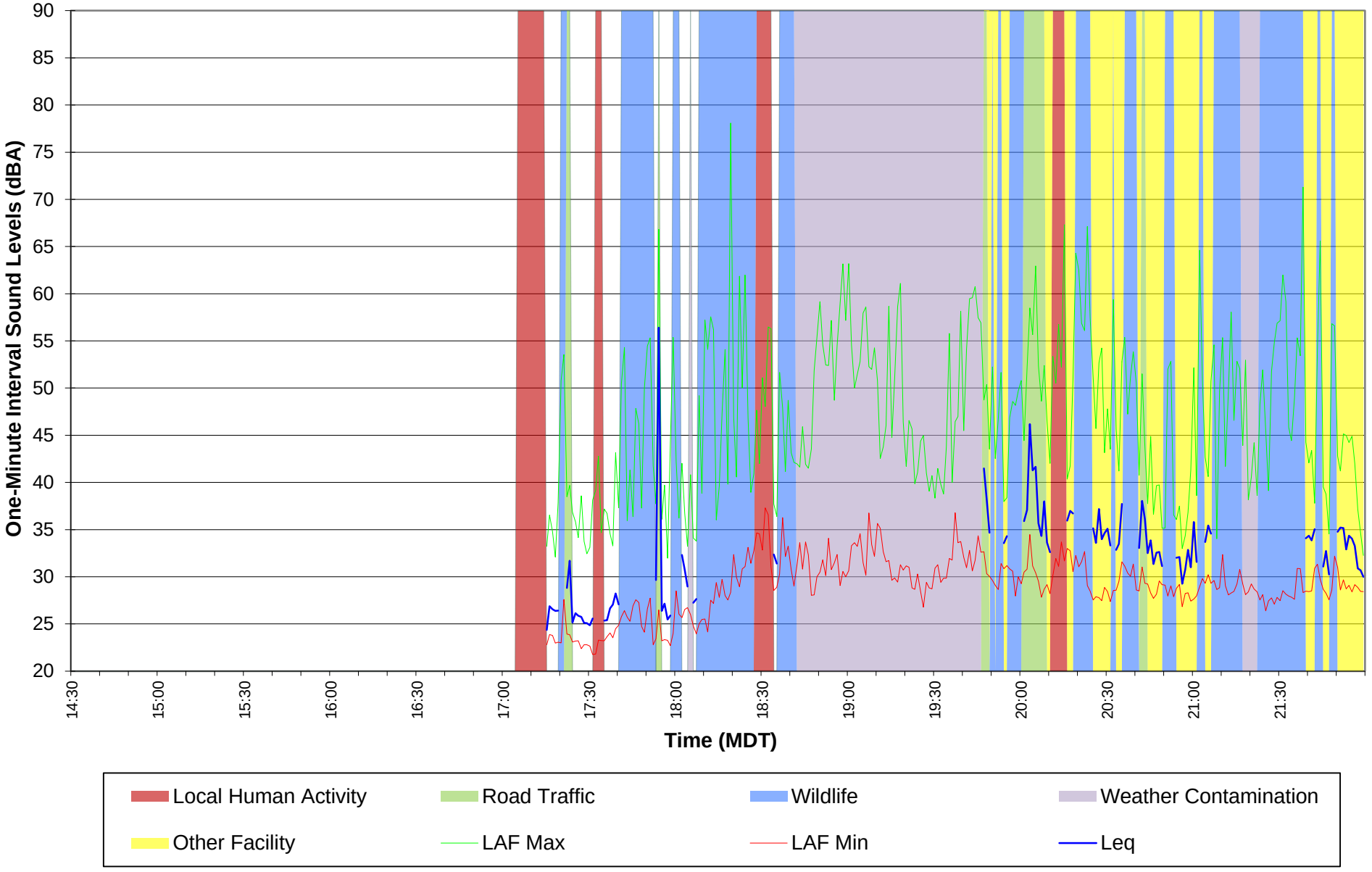


Figure F.1.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 14:30 - 21:59

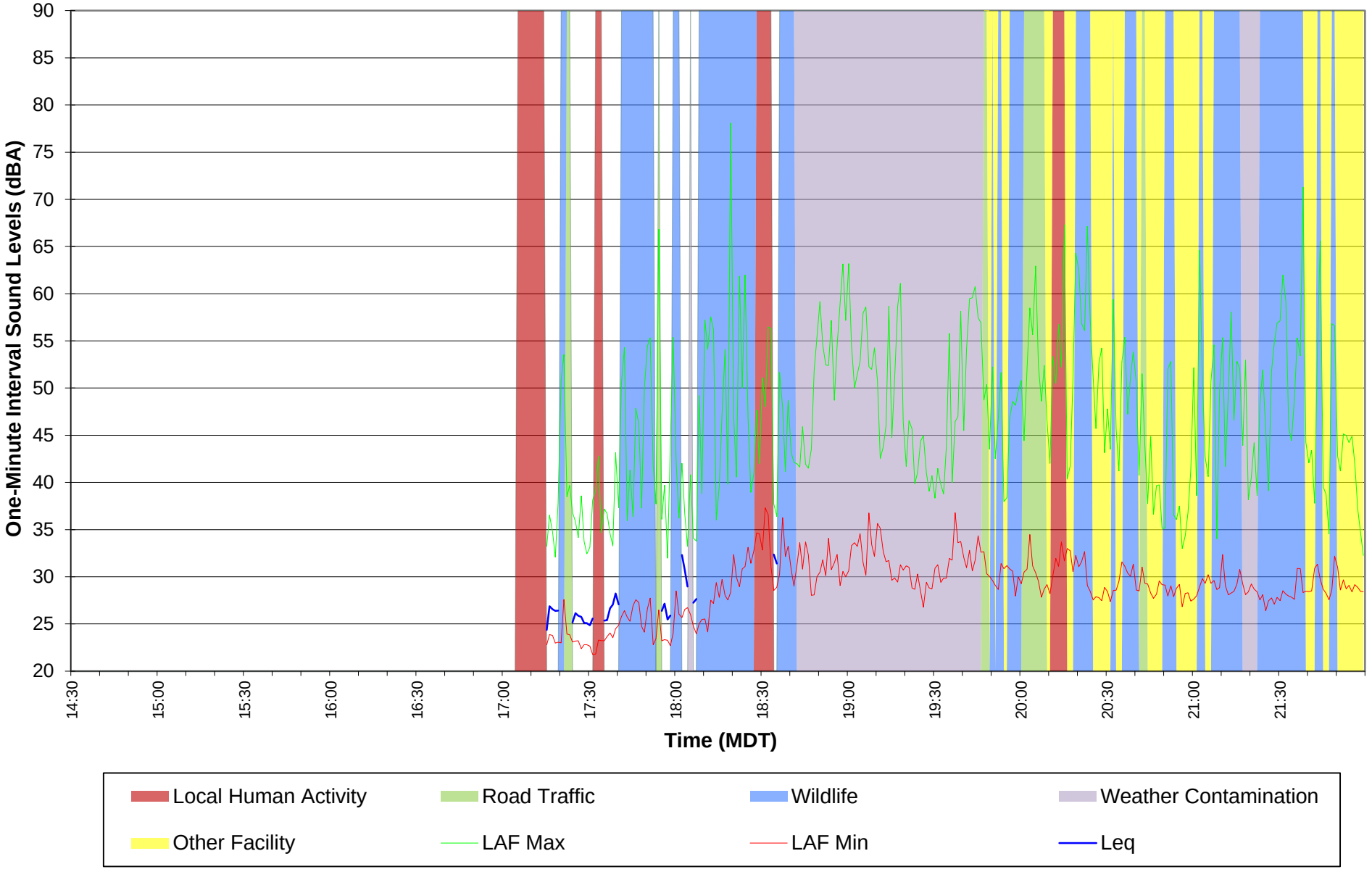


Figure F.2

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

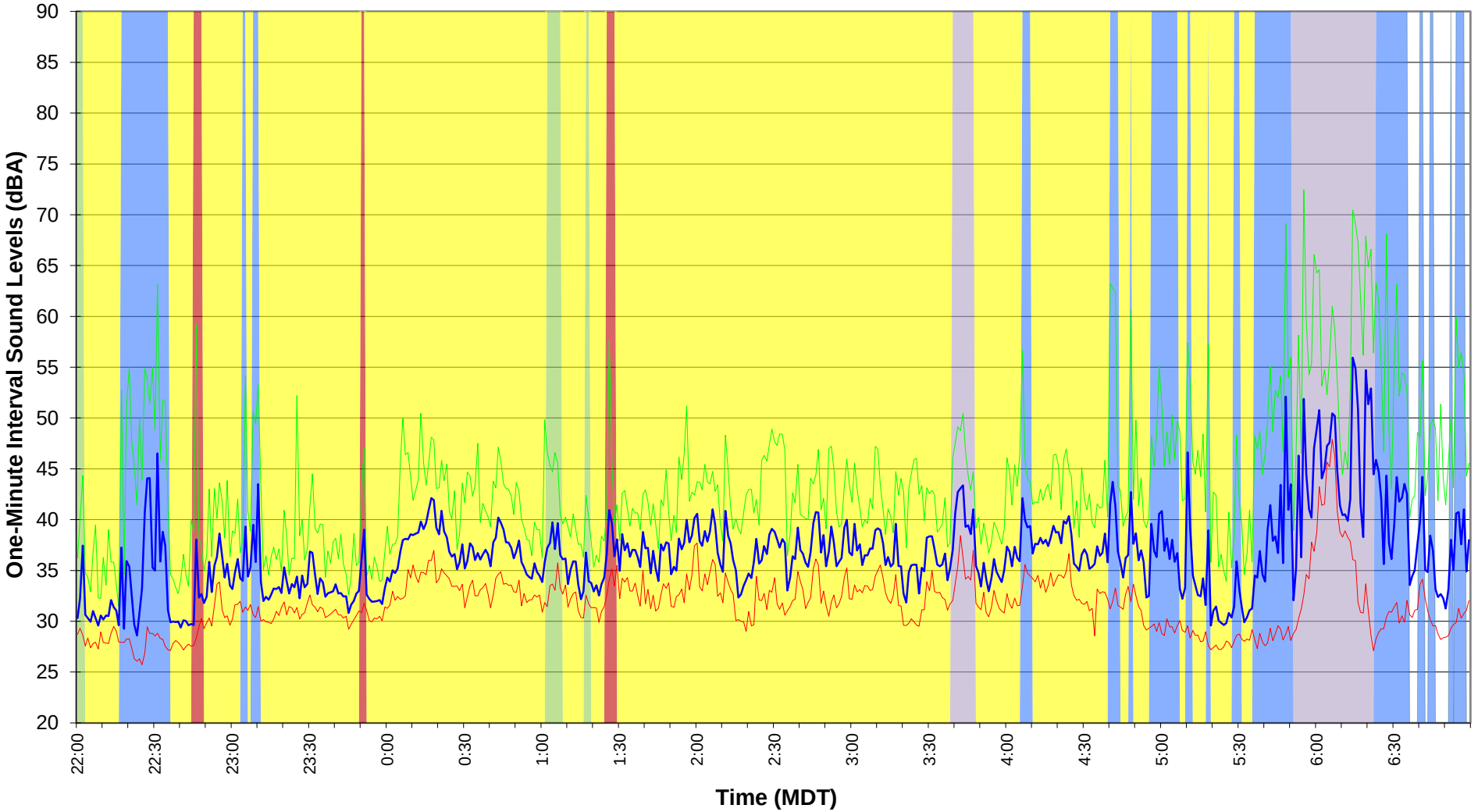


Figure F.2.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

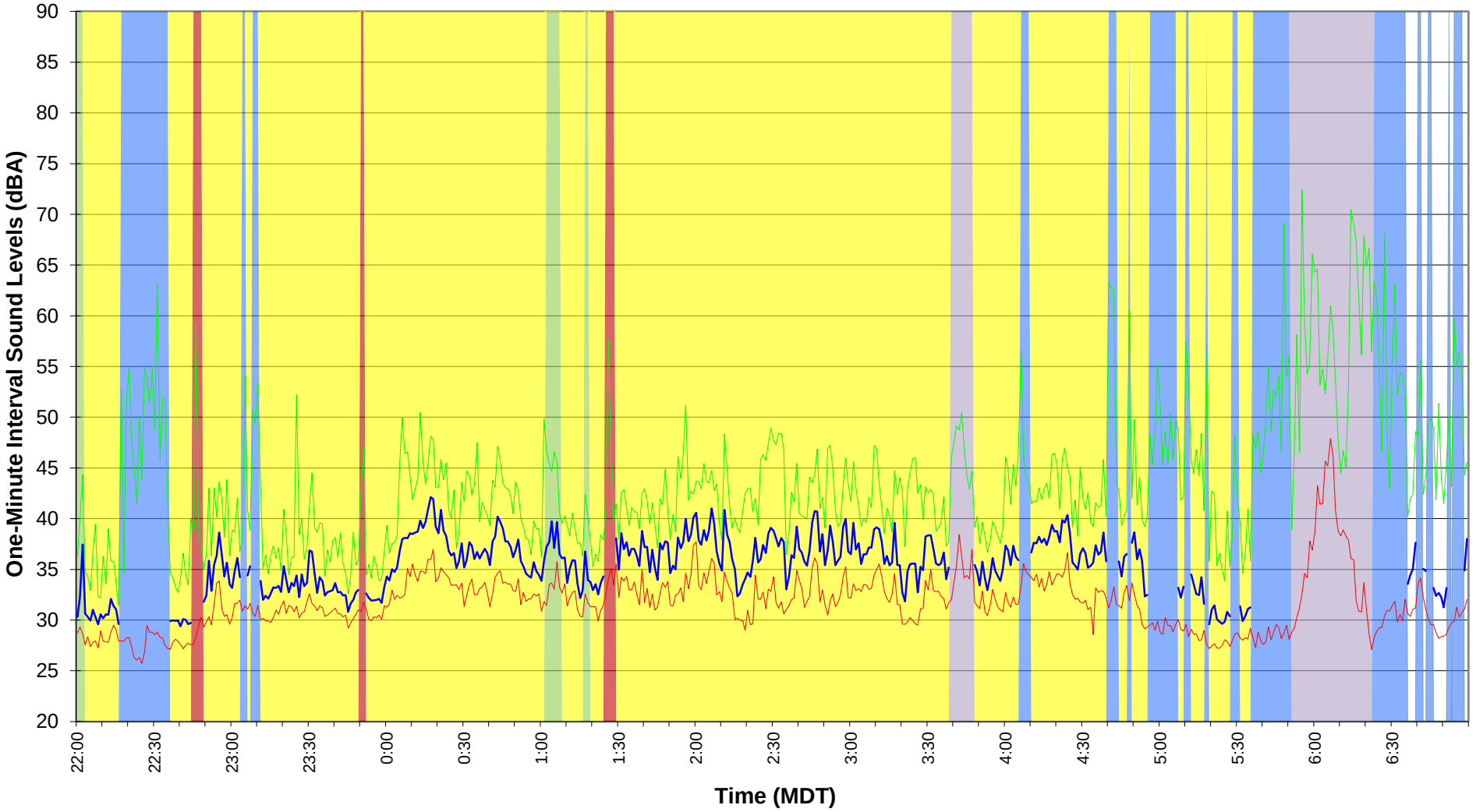


Figure F.2.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

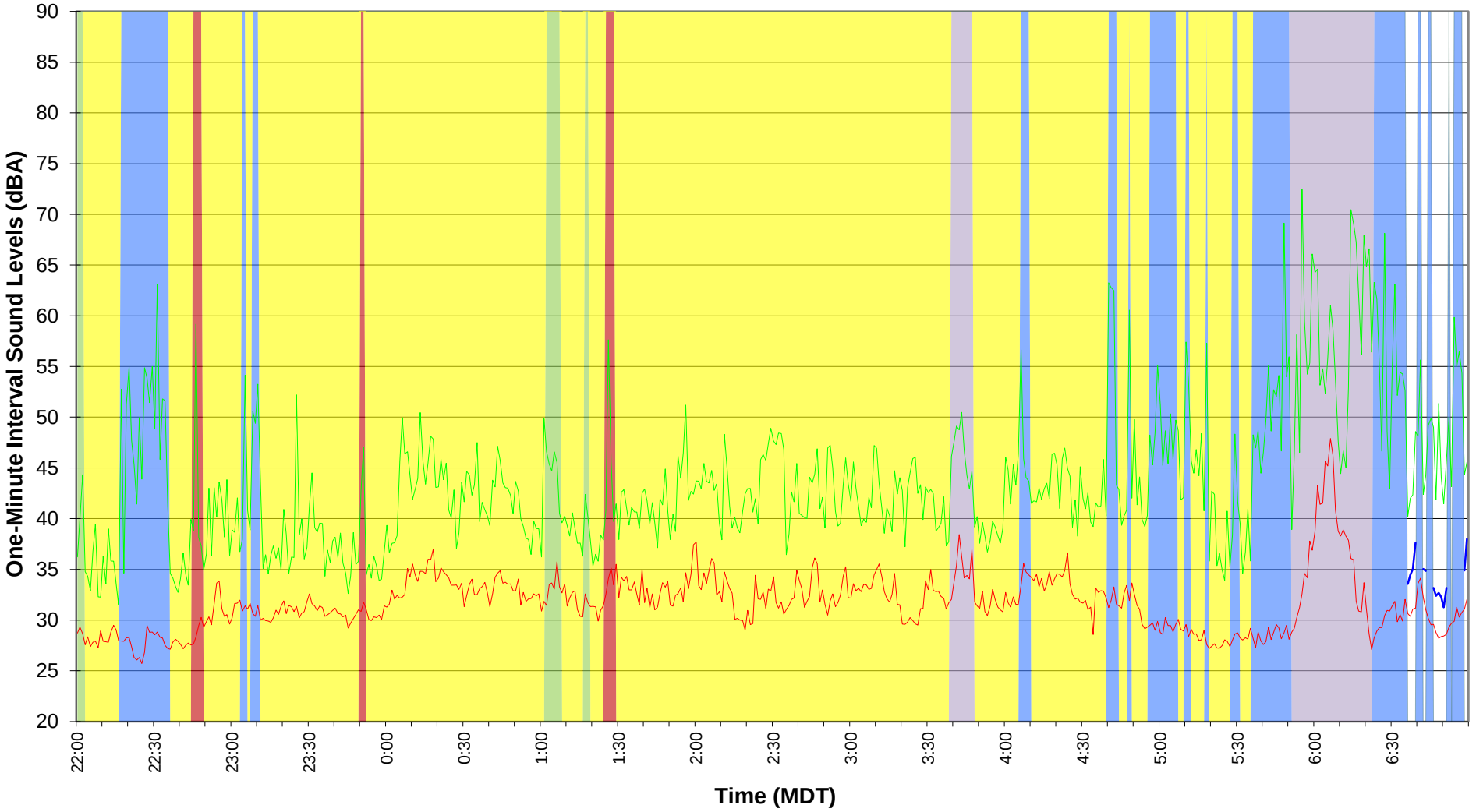


Figure F.3

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 07:00 - 14:29

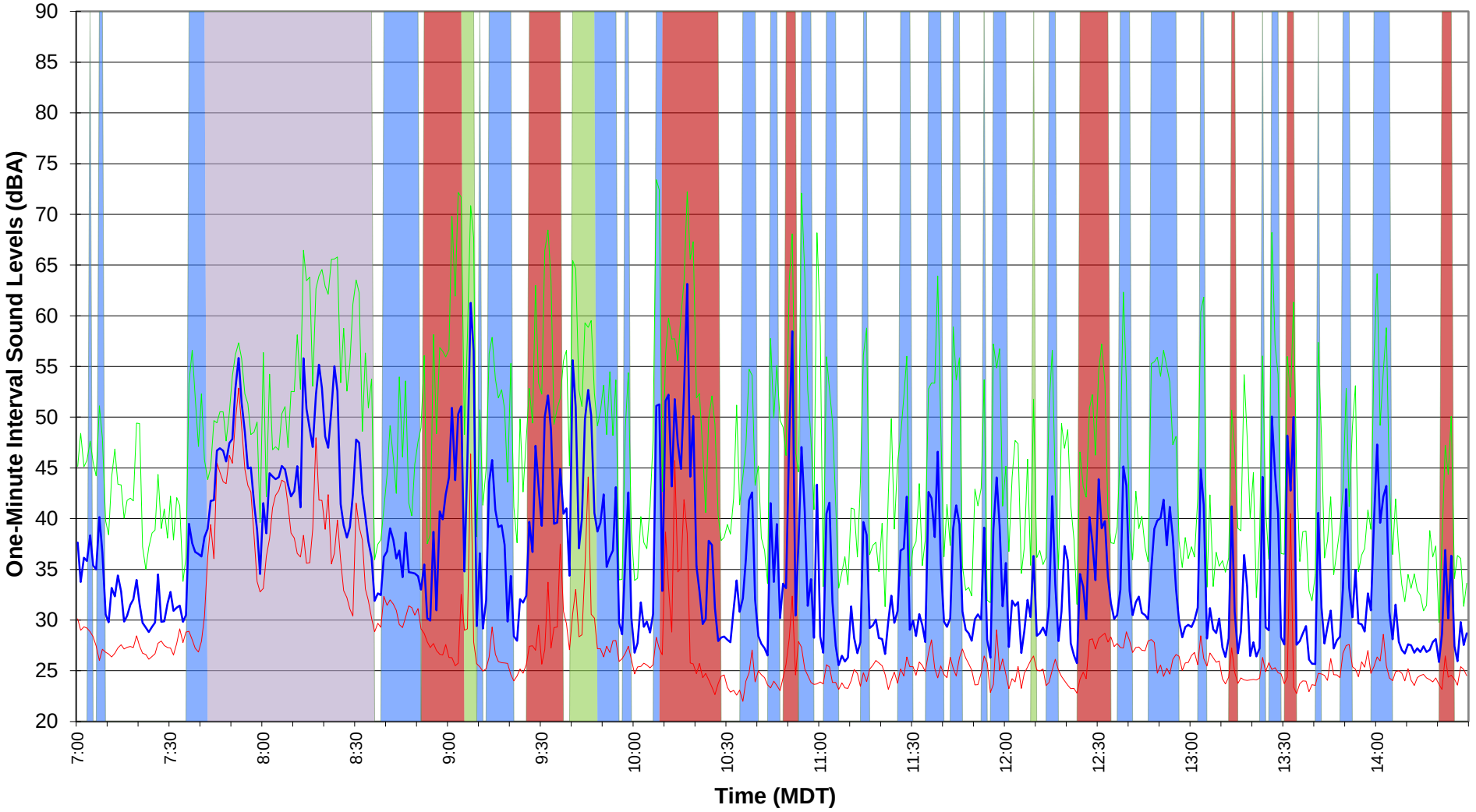


Figure F.3.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 07:00 - 14:29

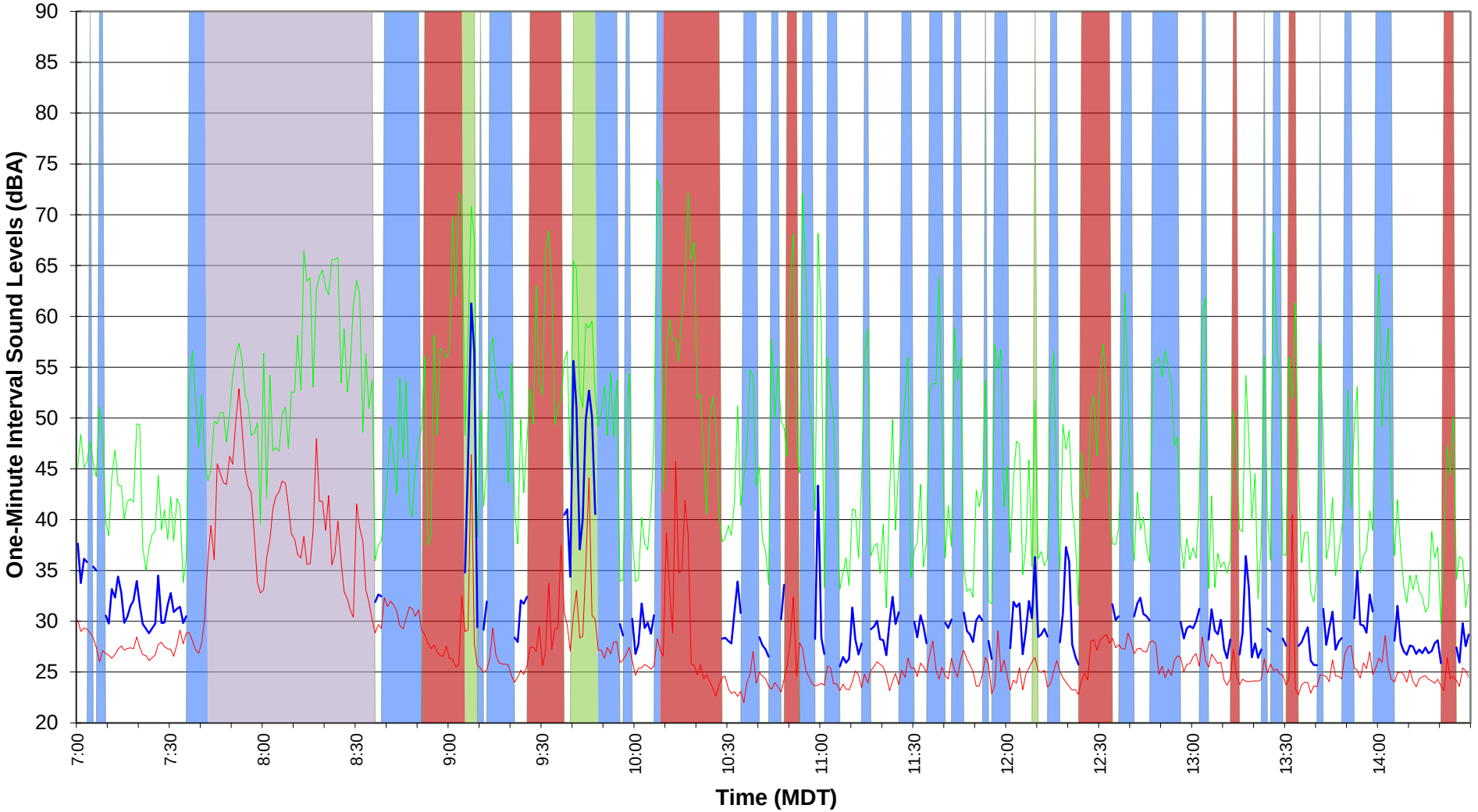


Figure F.3.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 07:00 - 14:29

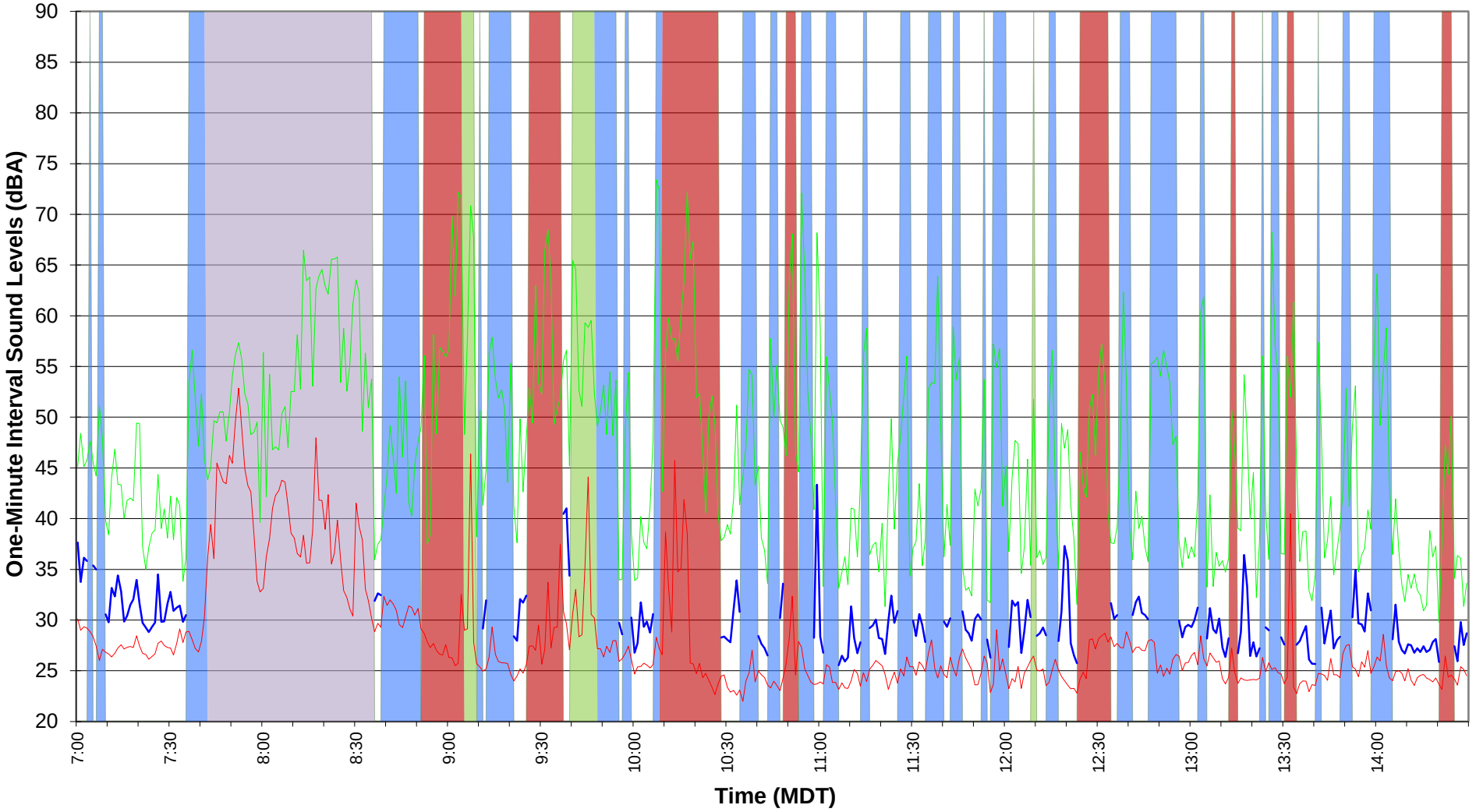


Figure F.4

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 14:30 - 21:59

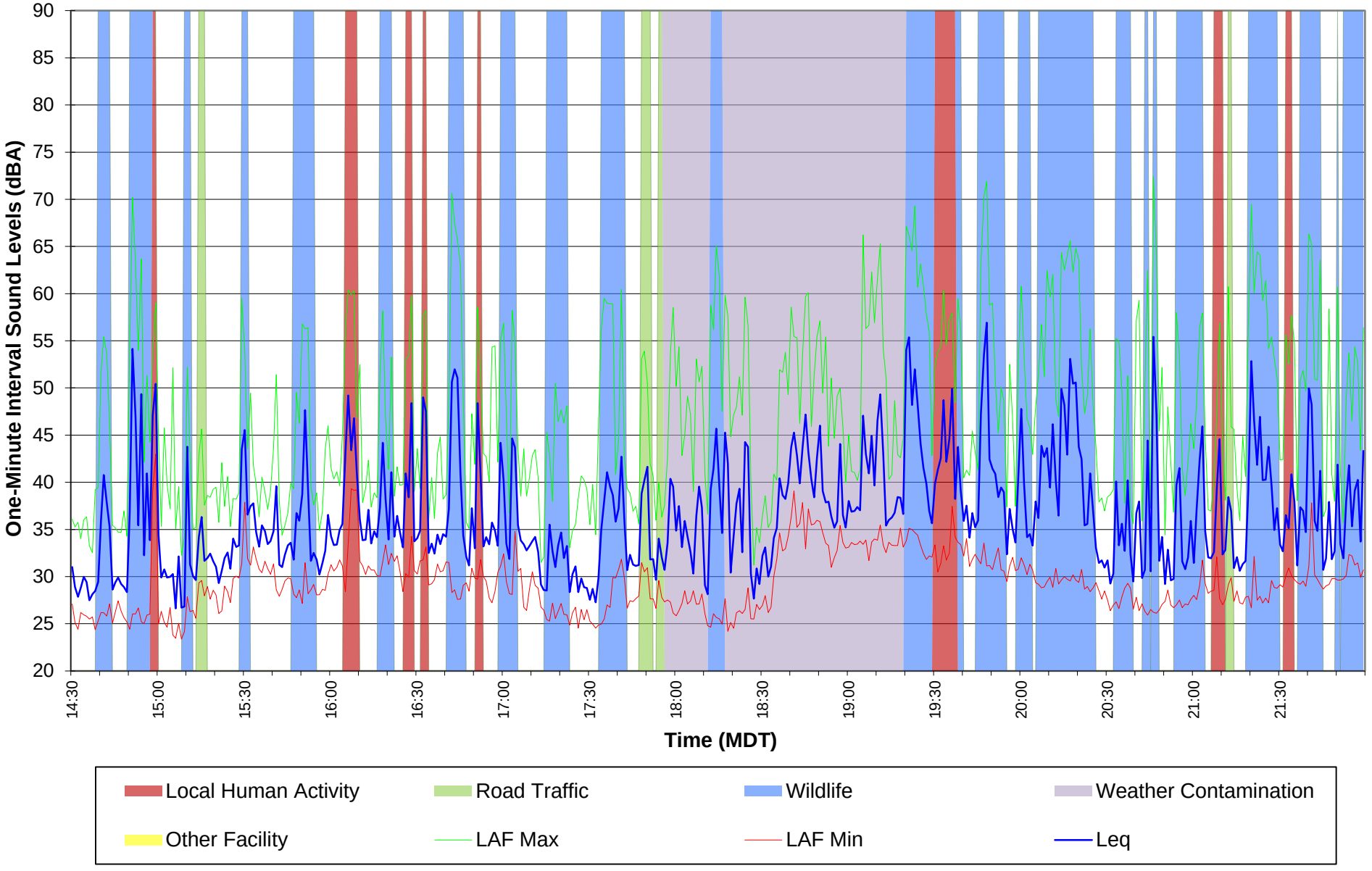


Figure F.4.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 14:30 - 21:59

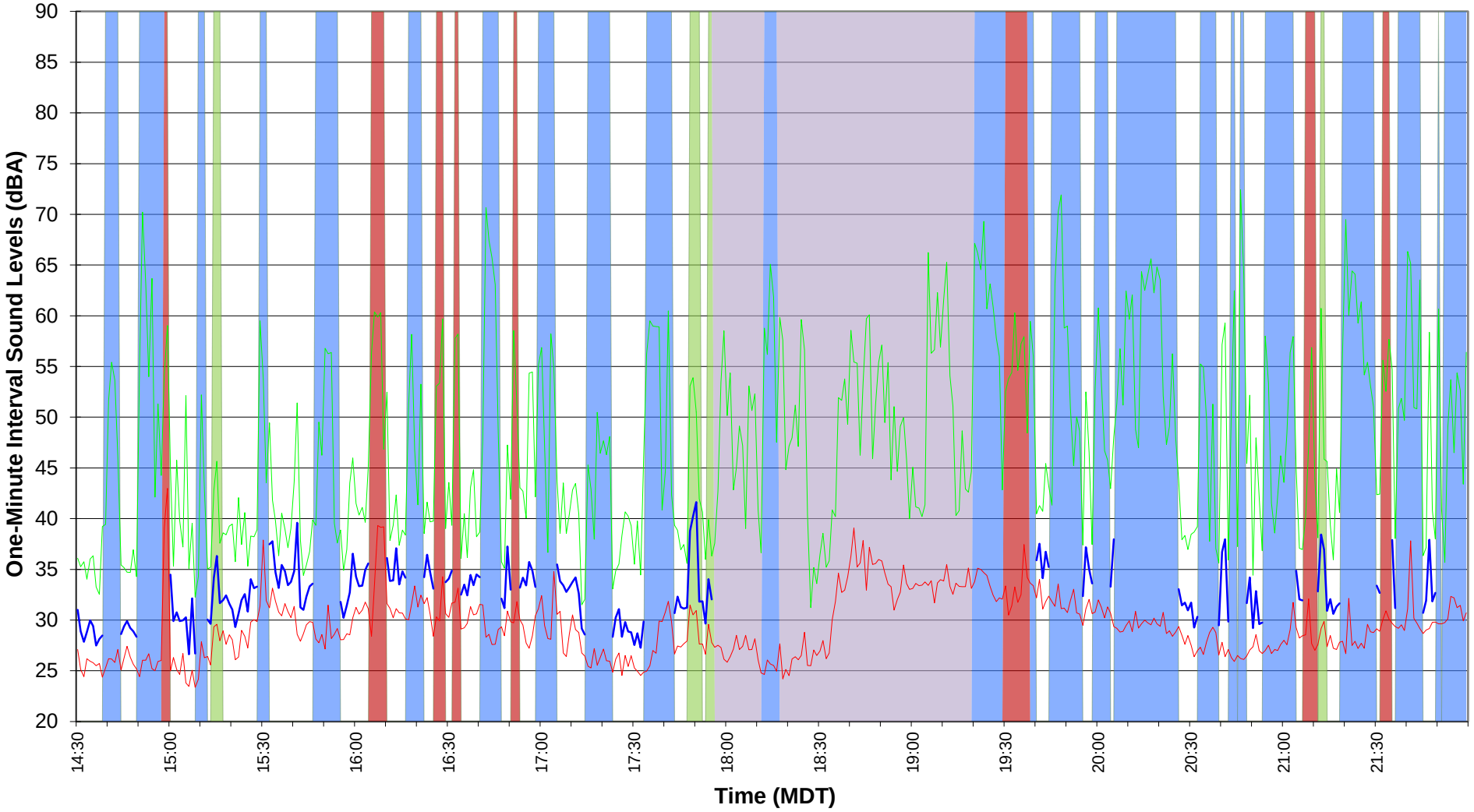


Figure F.4.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 26, 2012 14:30 - 21:59

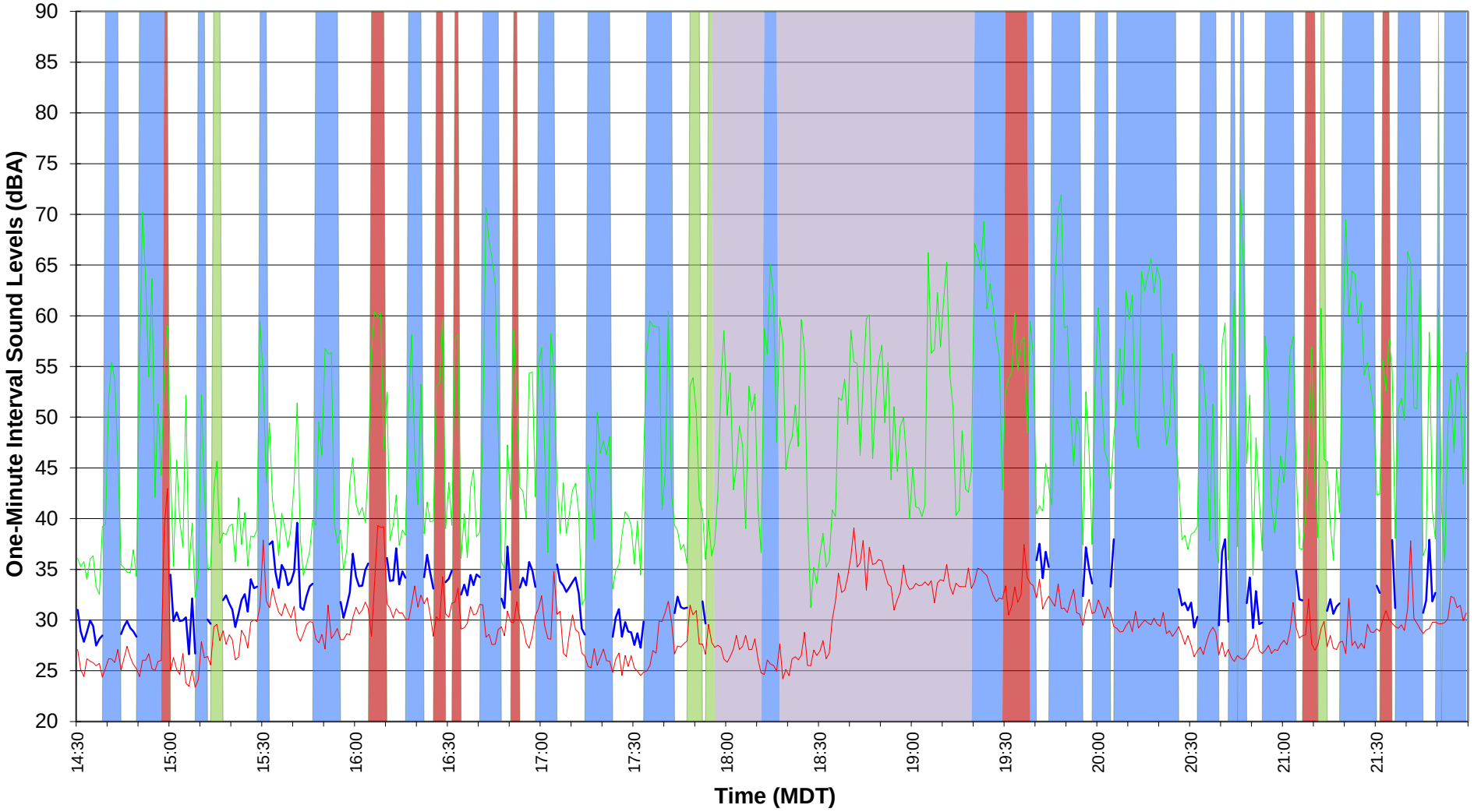


Figure F.5

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

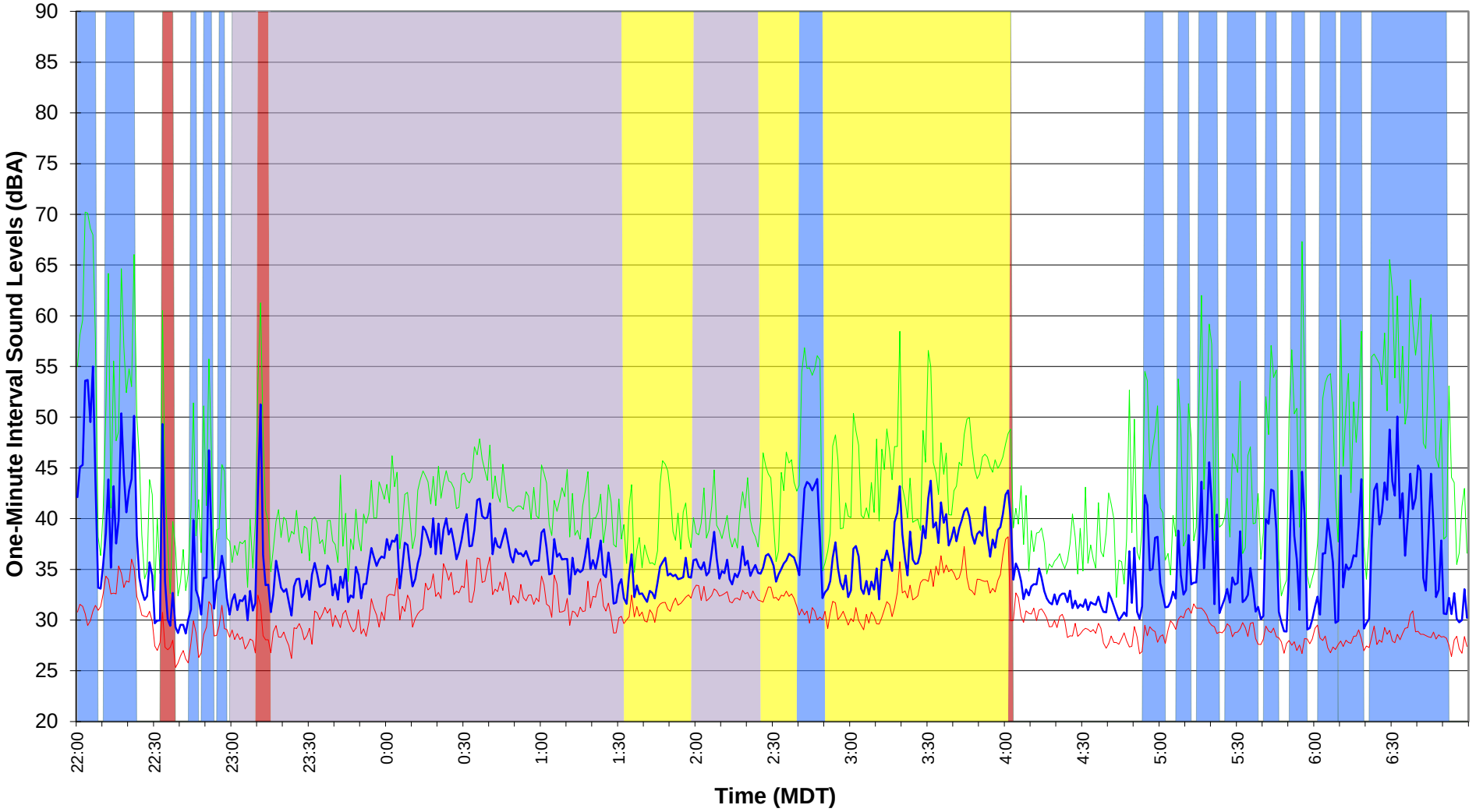


Figure F.5.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

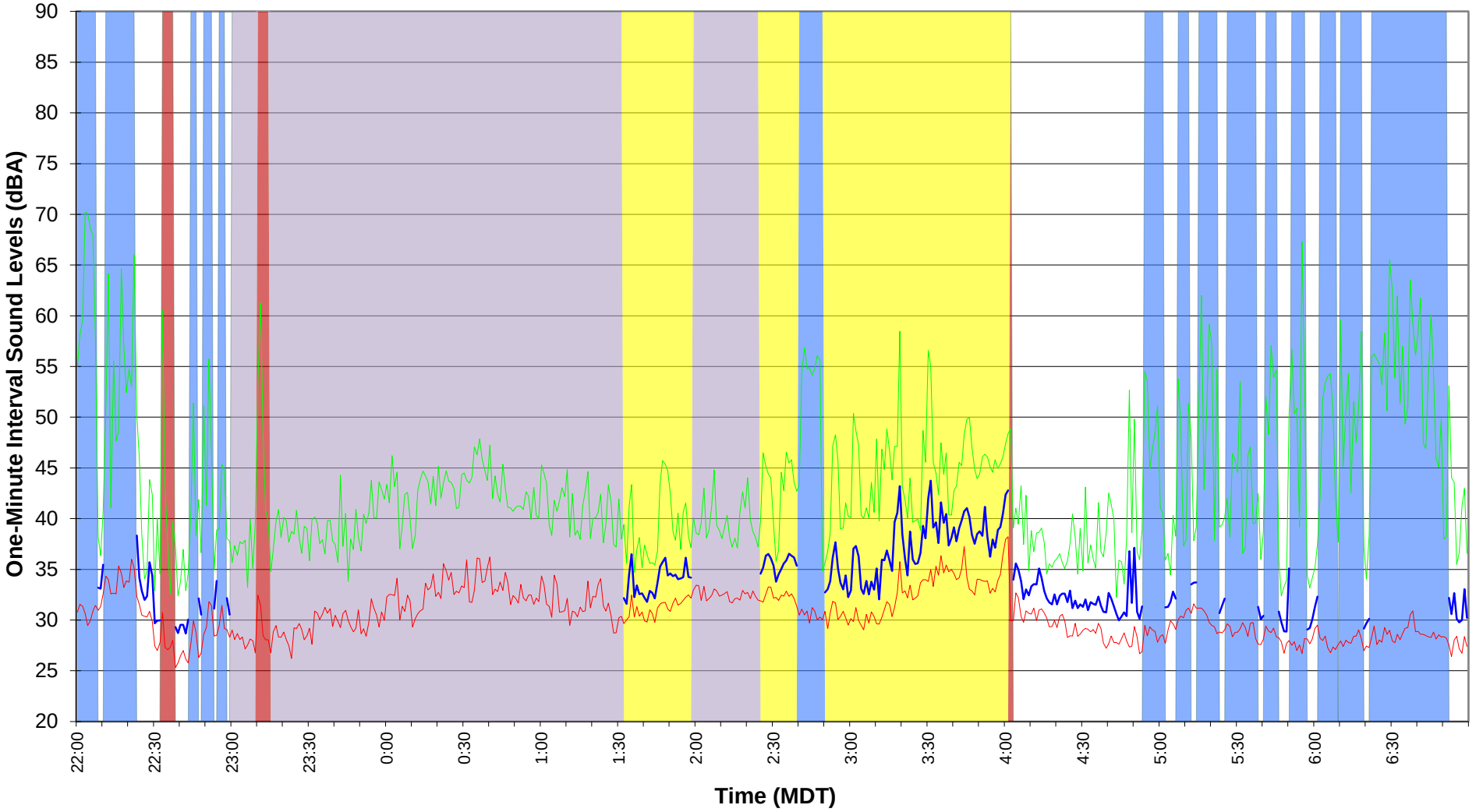


Figure F.5.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

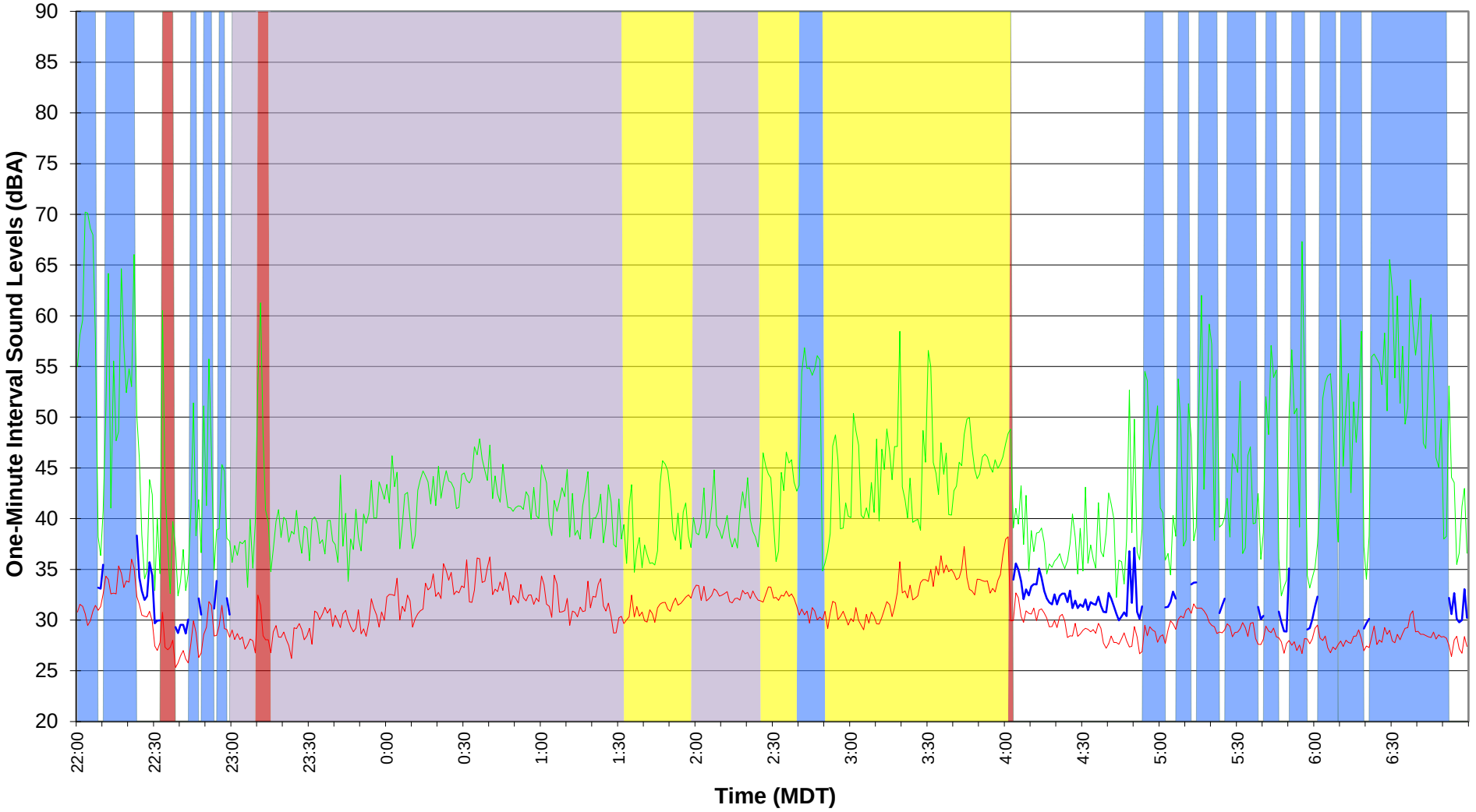


Figure F.6

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 07:00 - 14:29

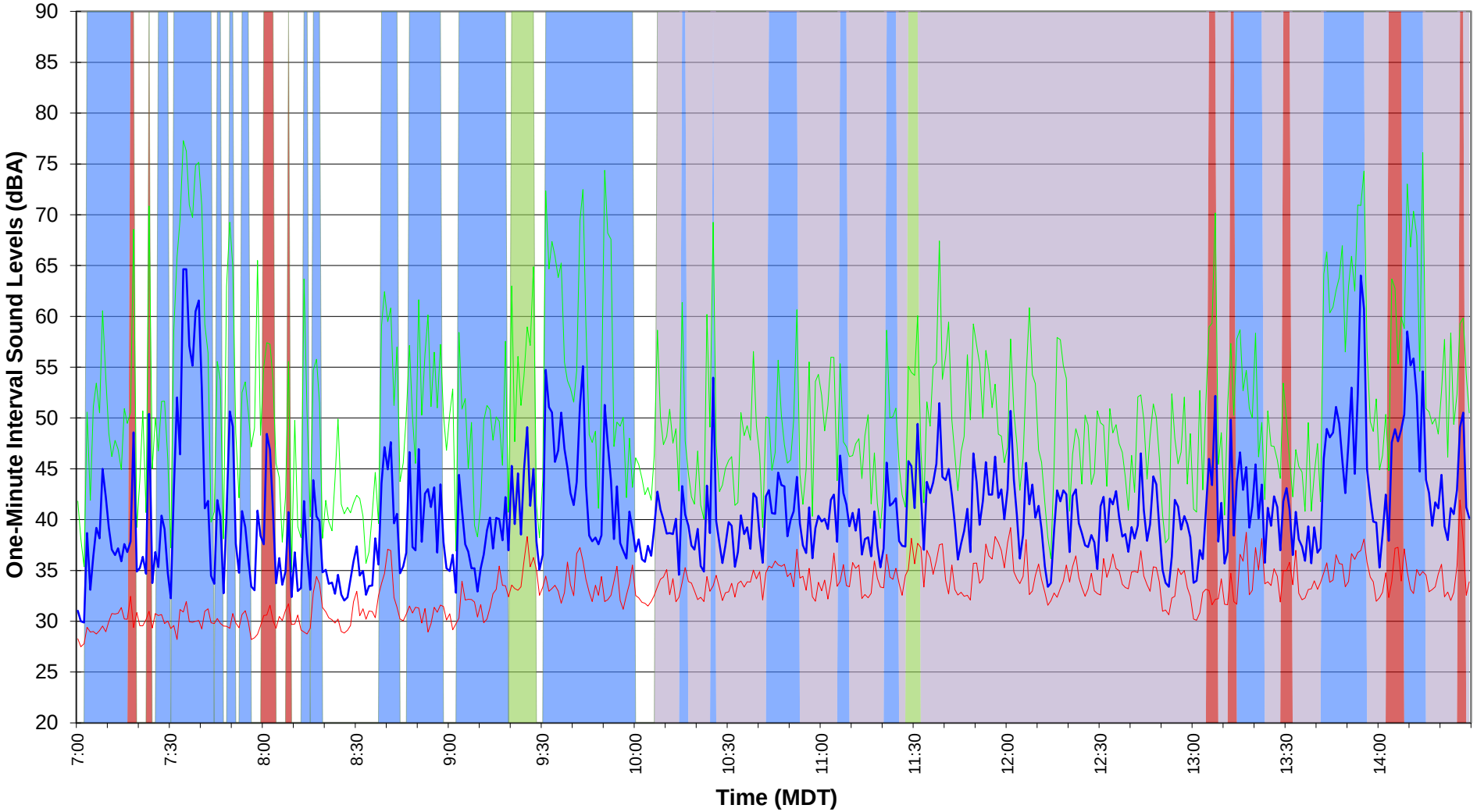


Figure F.6.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 07:00 - 14:29

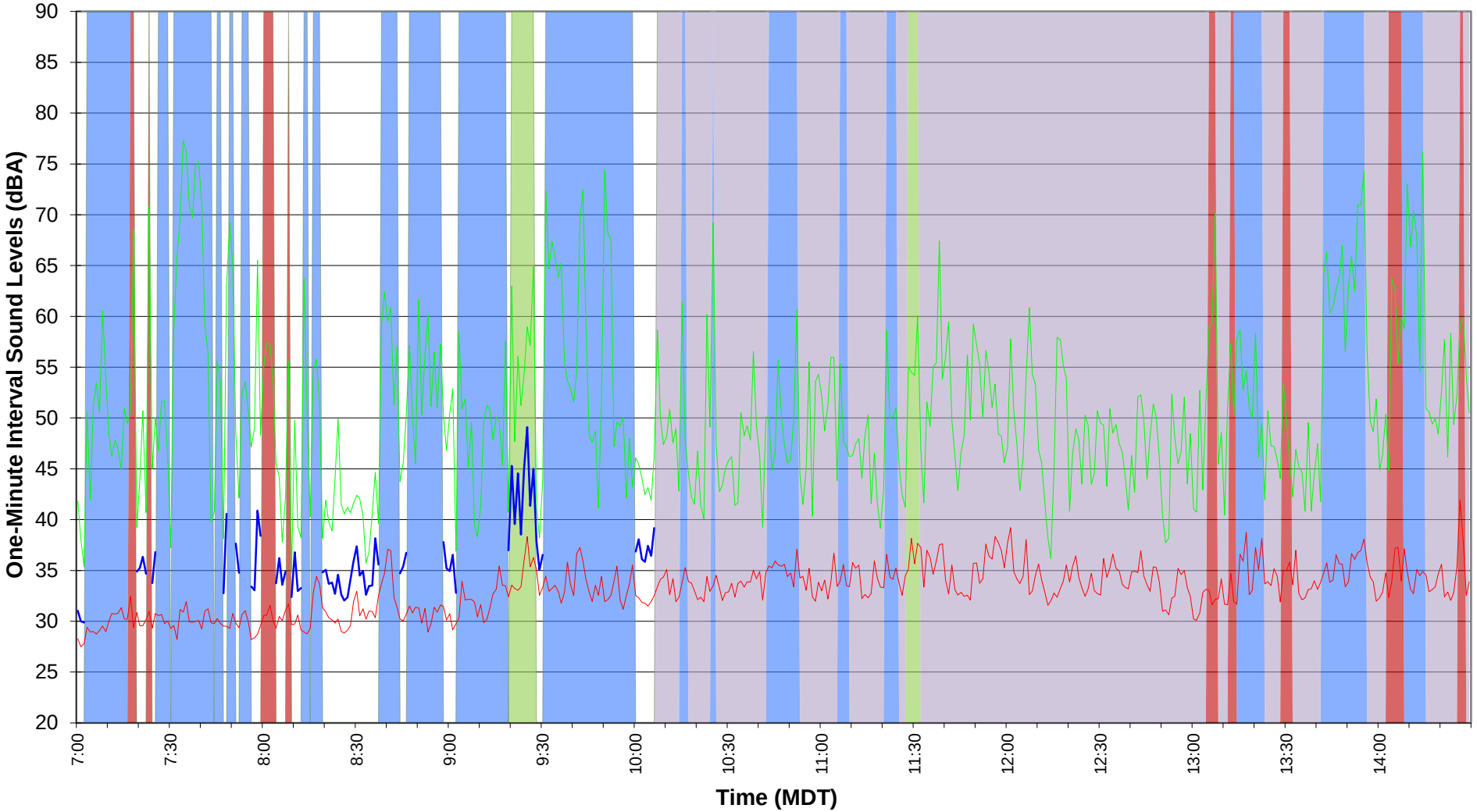


Figure F.6.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 07:00 - 14:29

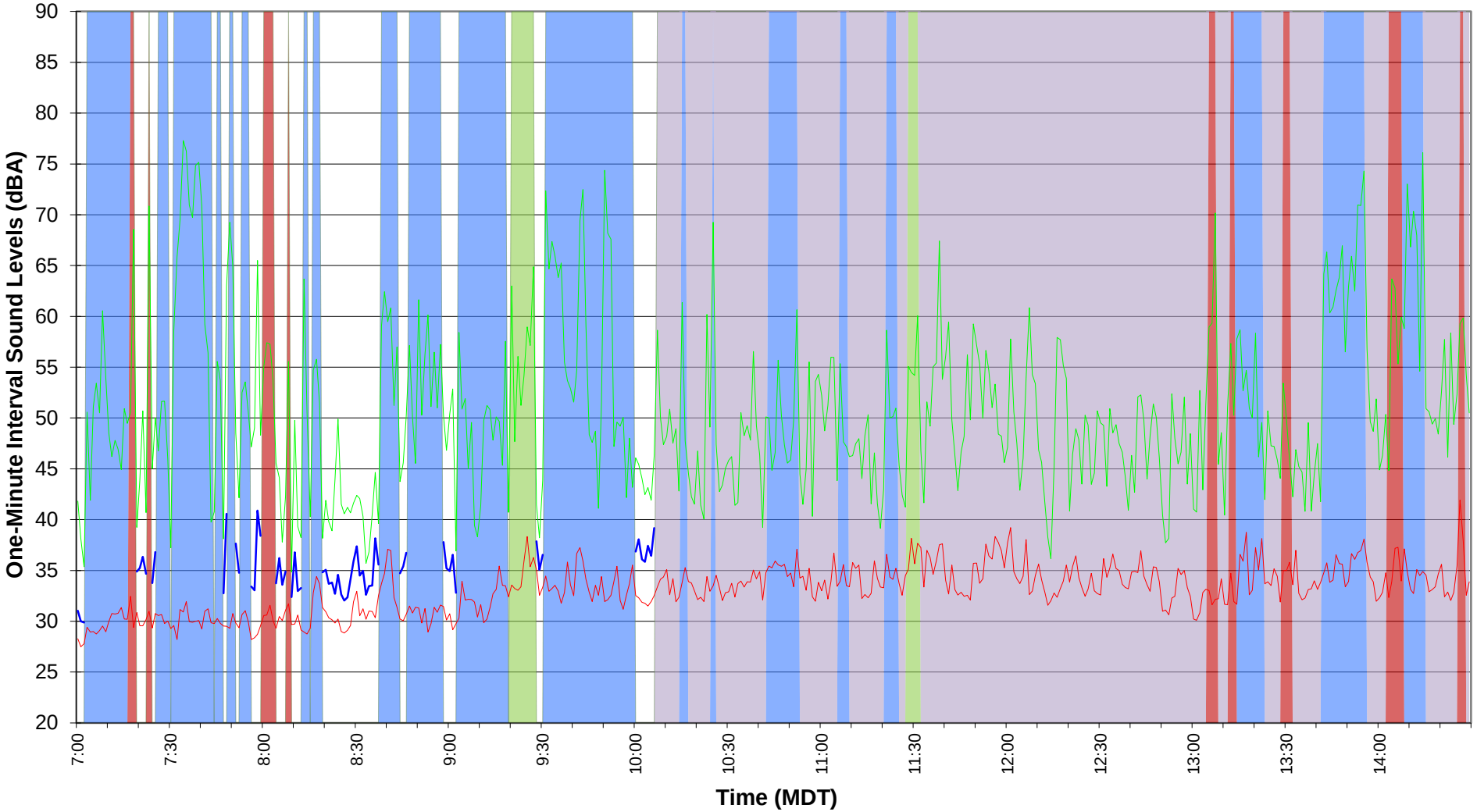


Figure F.7

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 14:30 - 21:59

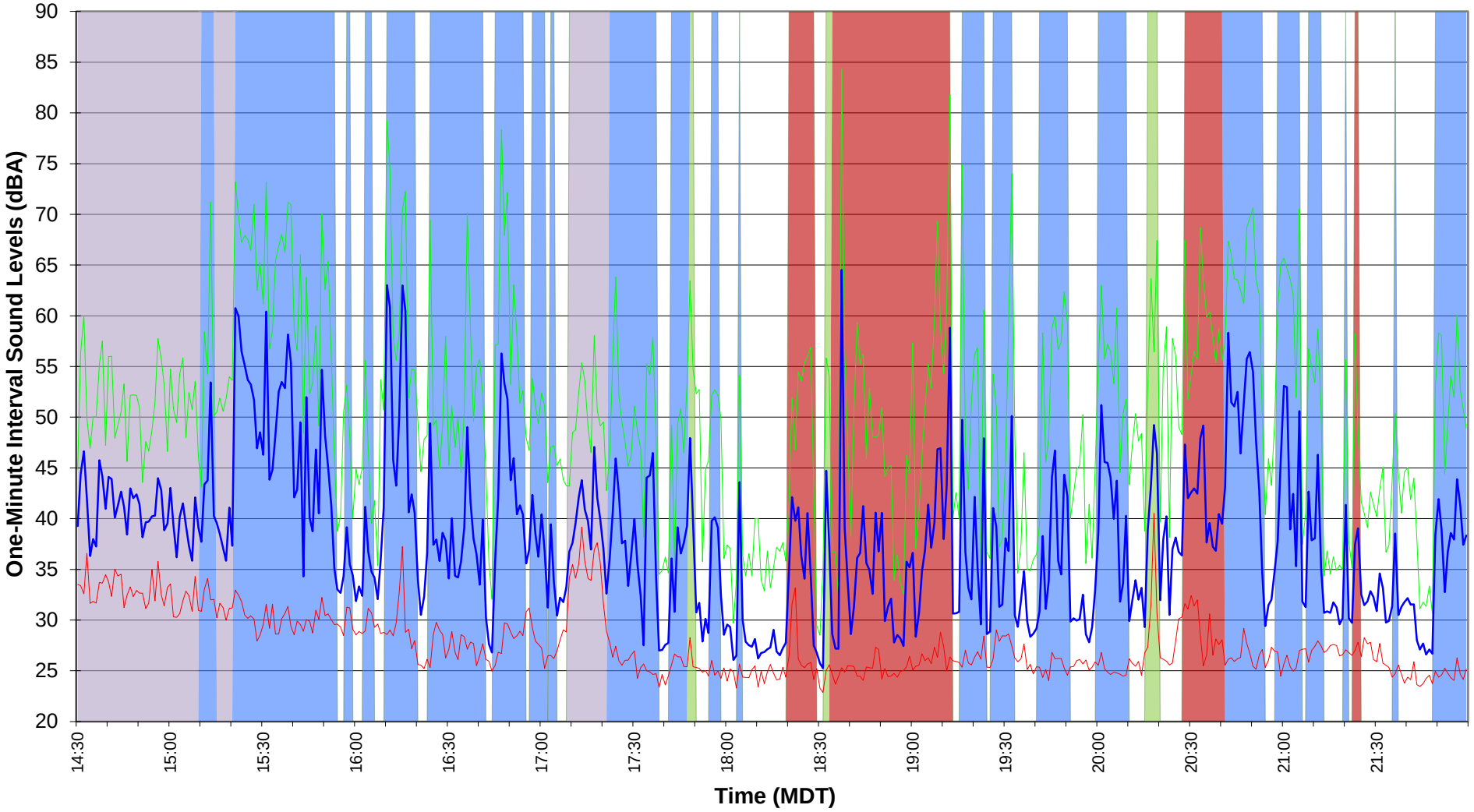


Figure F.7.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 14:30 - 21:59

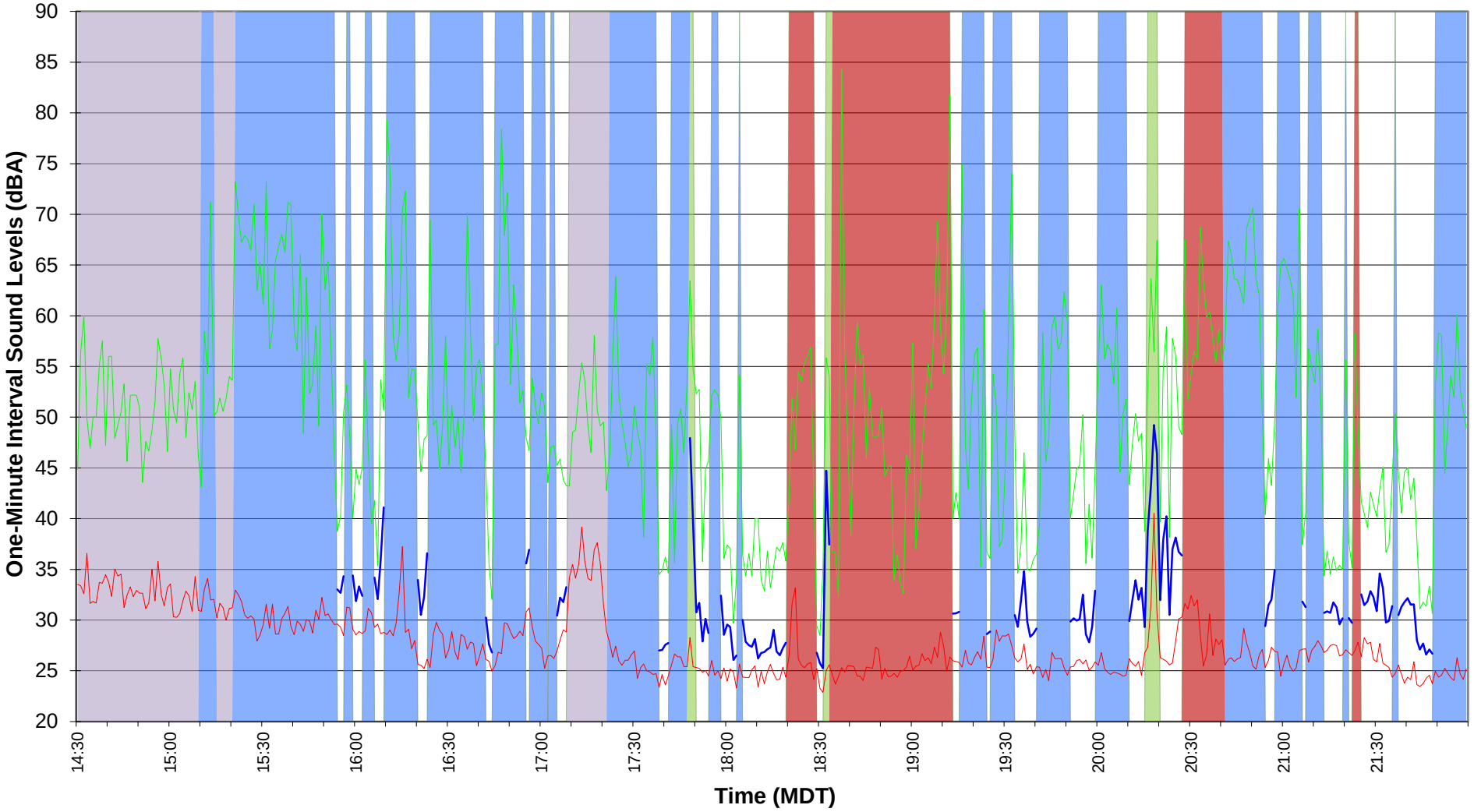


Figure F.7.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 14:30 - 21:59

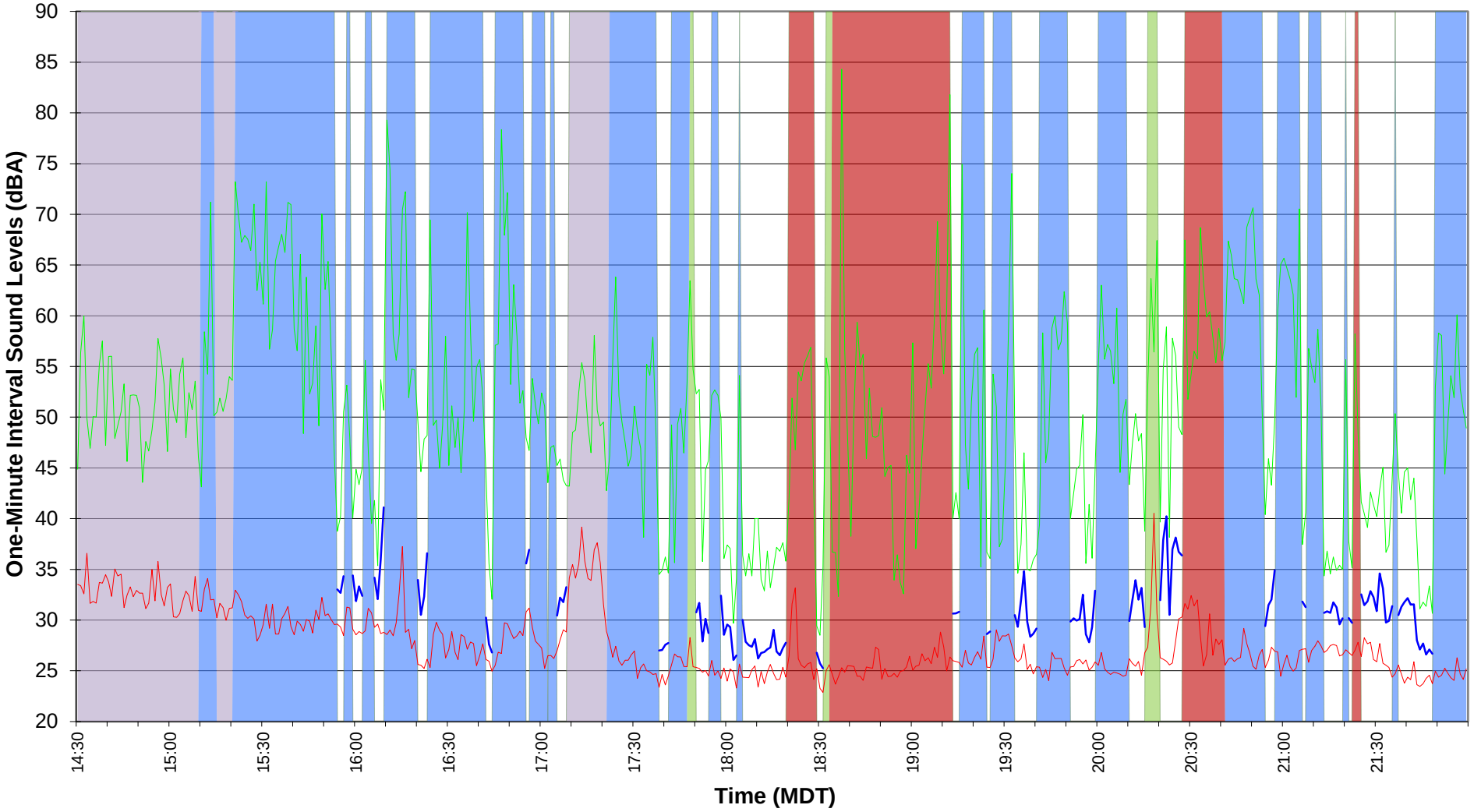


Figure F.8

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

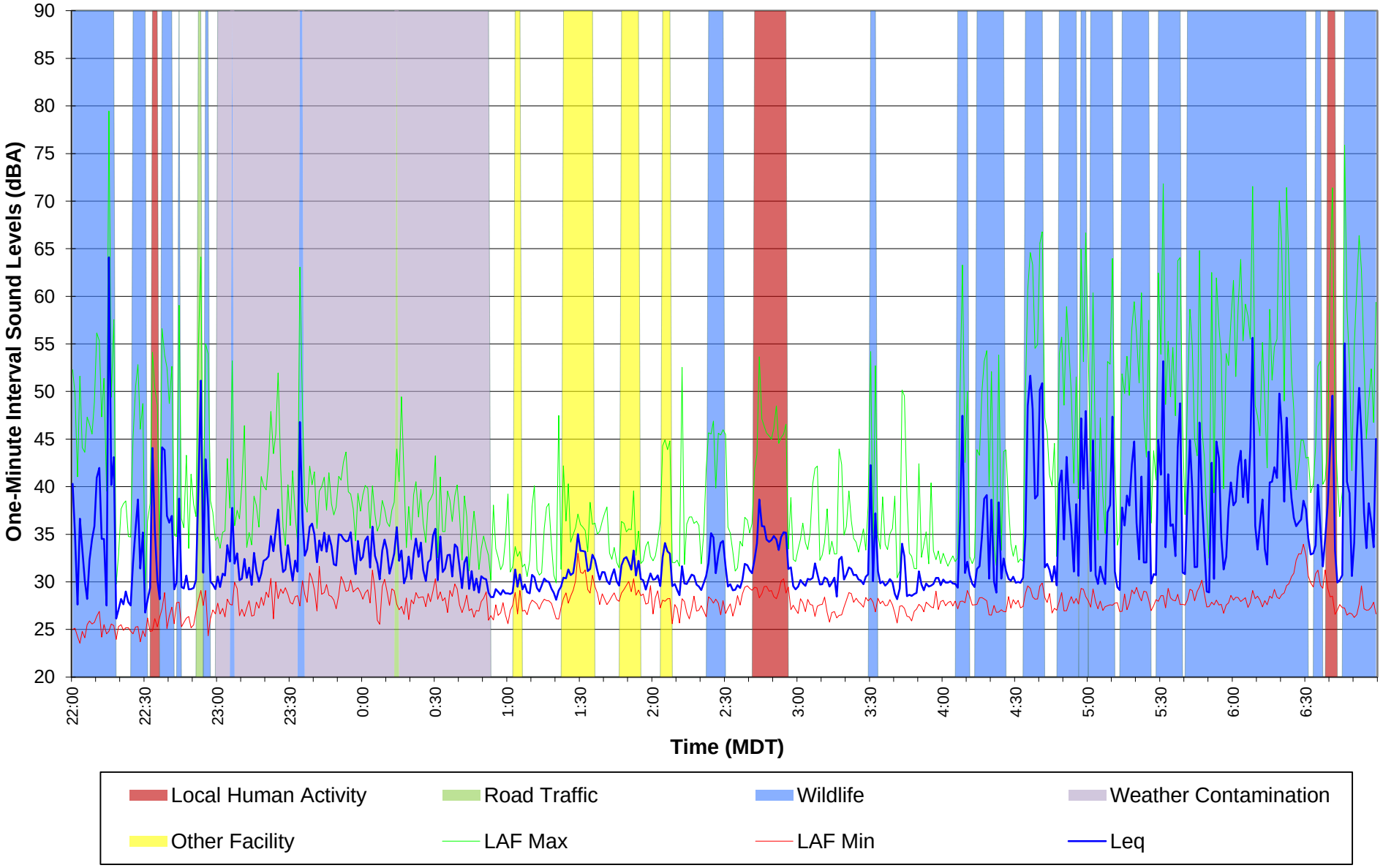


Figure F.8.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

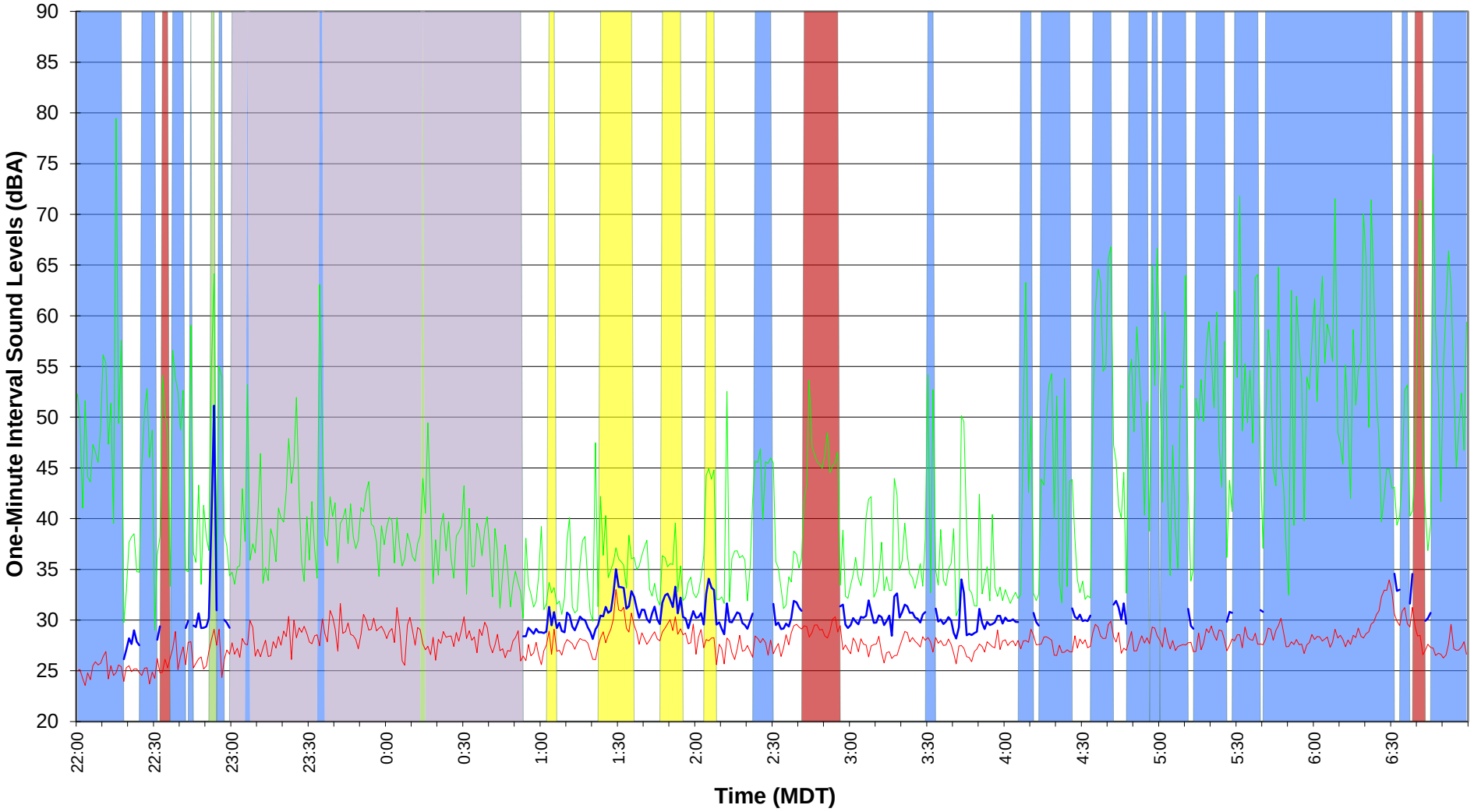


Figure F.8.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

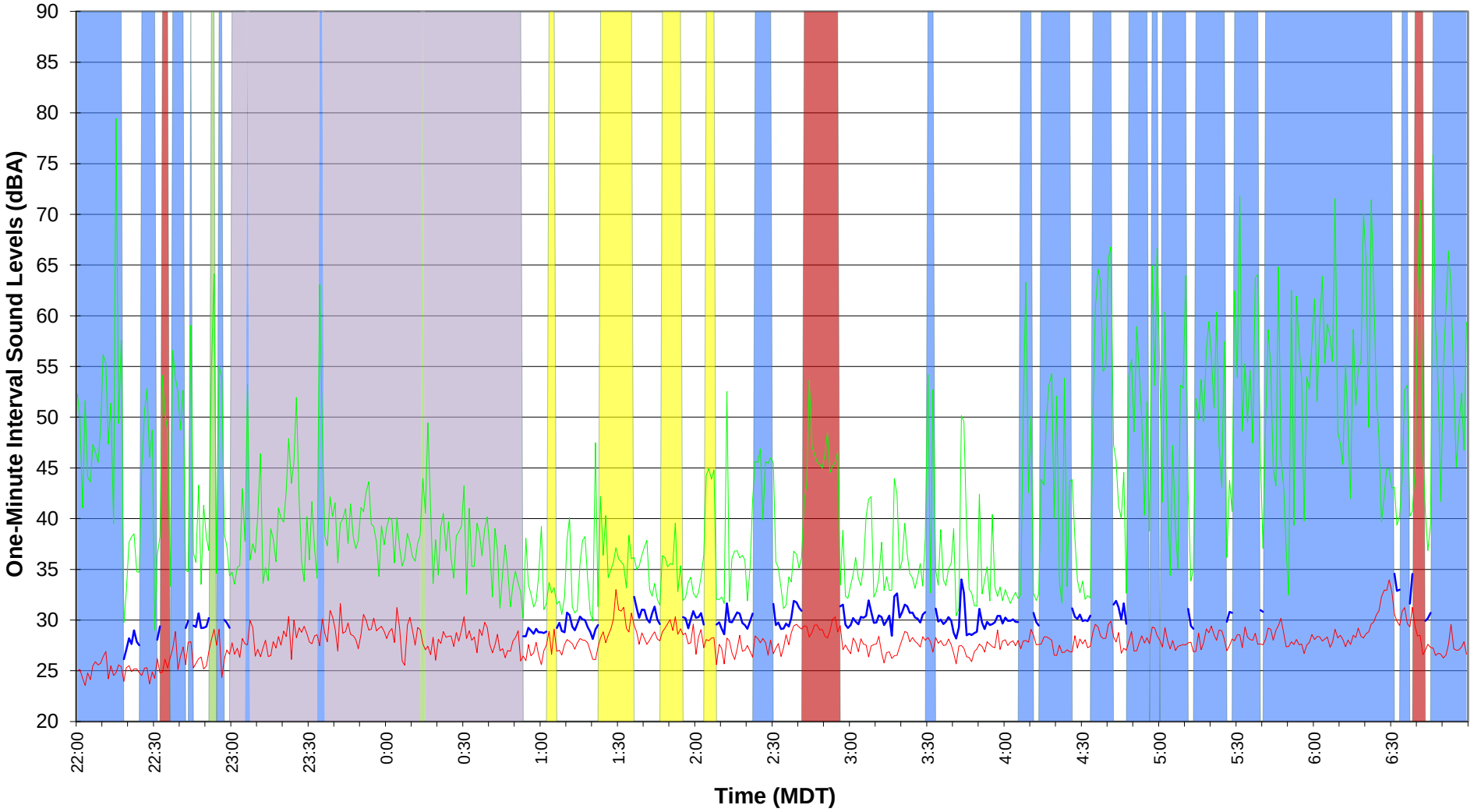


Figure F.9

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 07:00 - 14:29

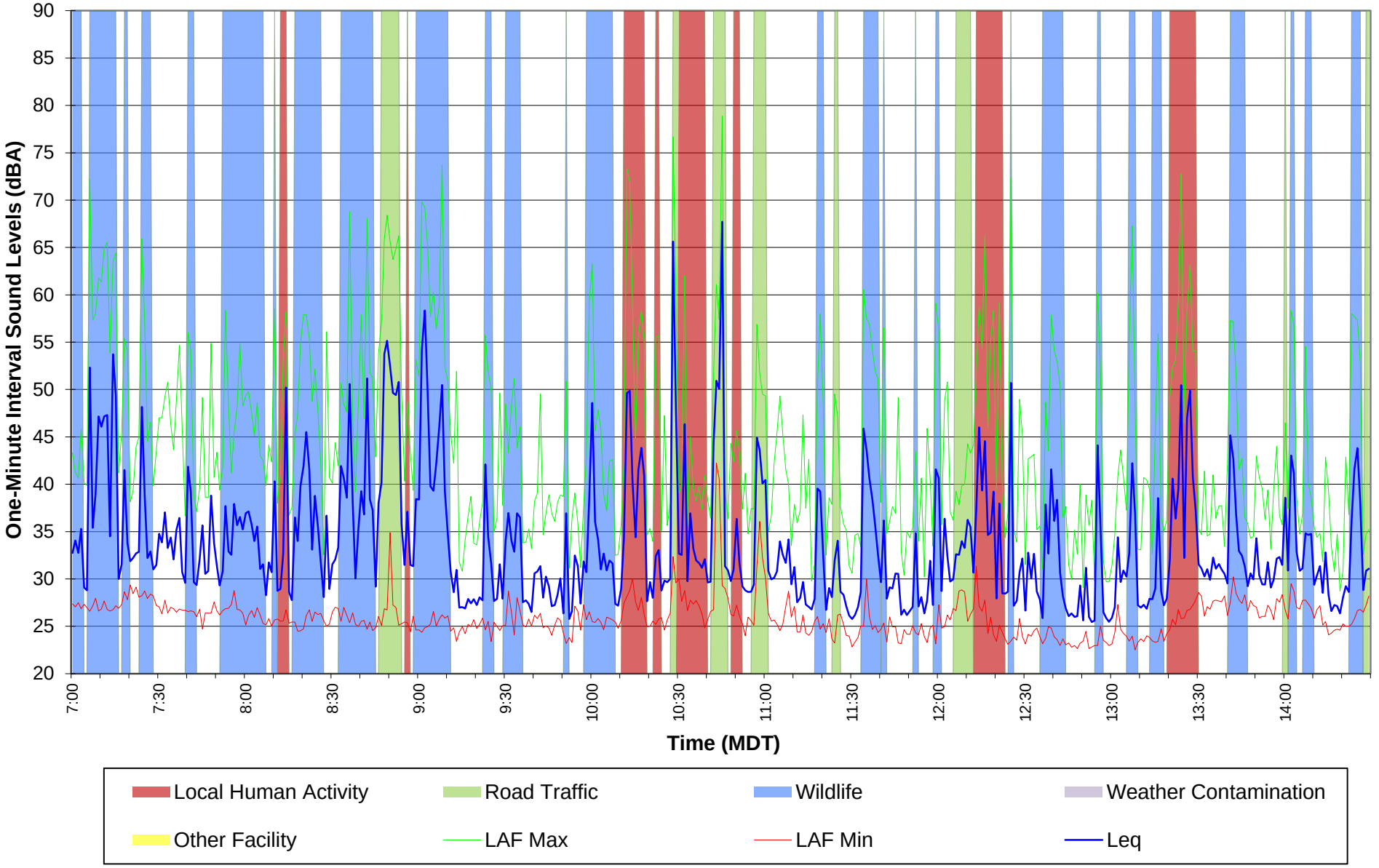


Figure F.9.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 07:00 - 14:29

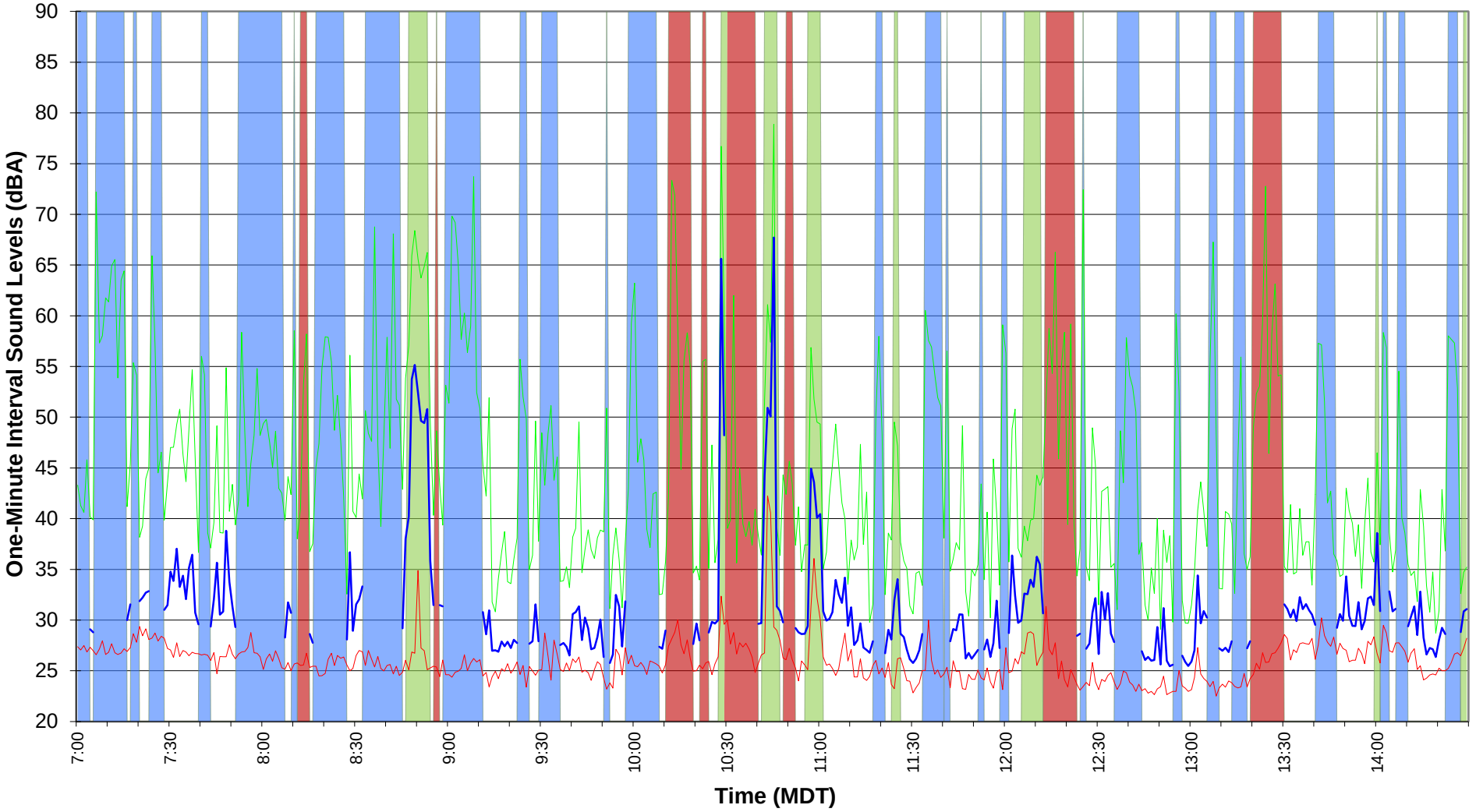


Figure F.9.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 07:00 - 14:29

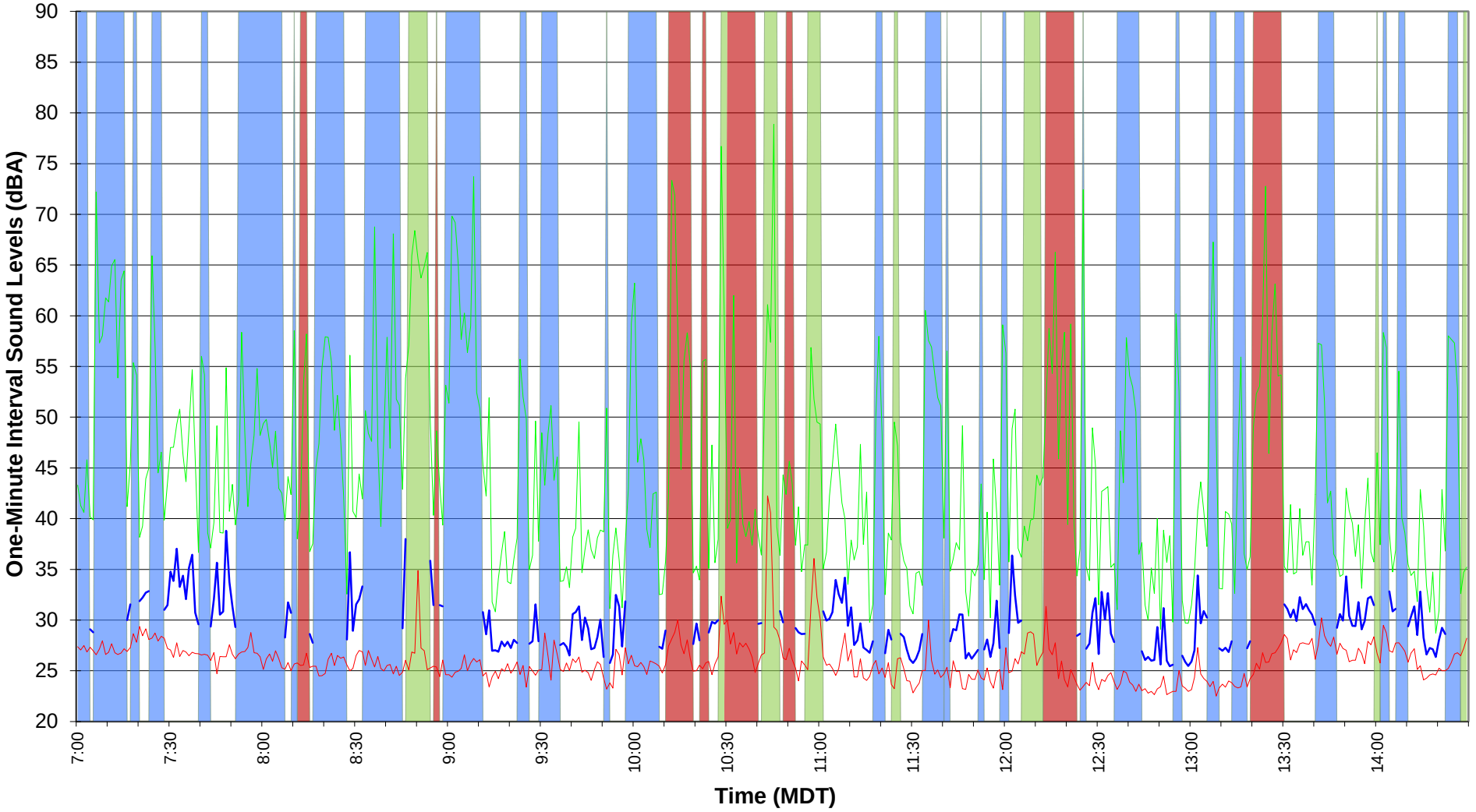


Figure F.10

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 14:30 - 21:59

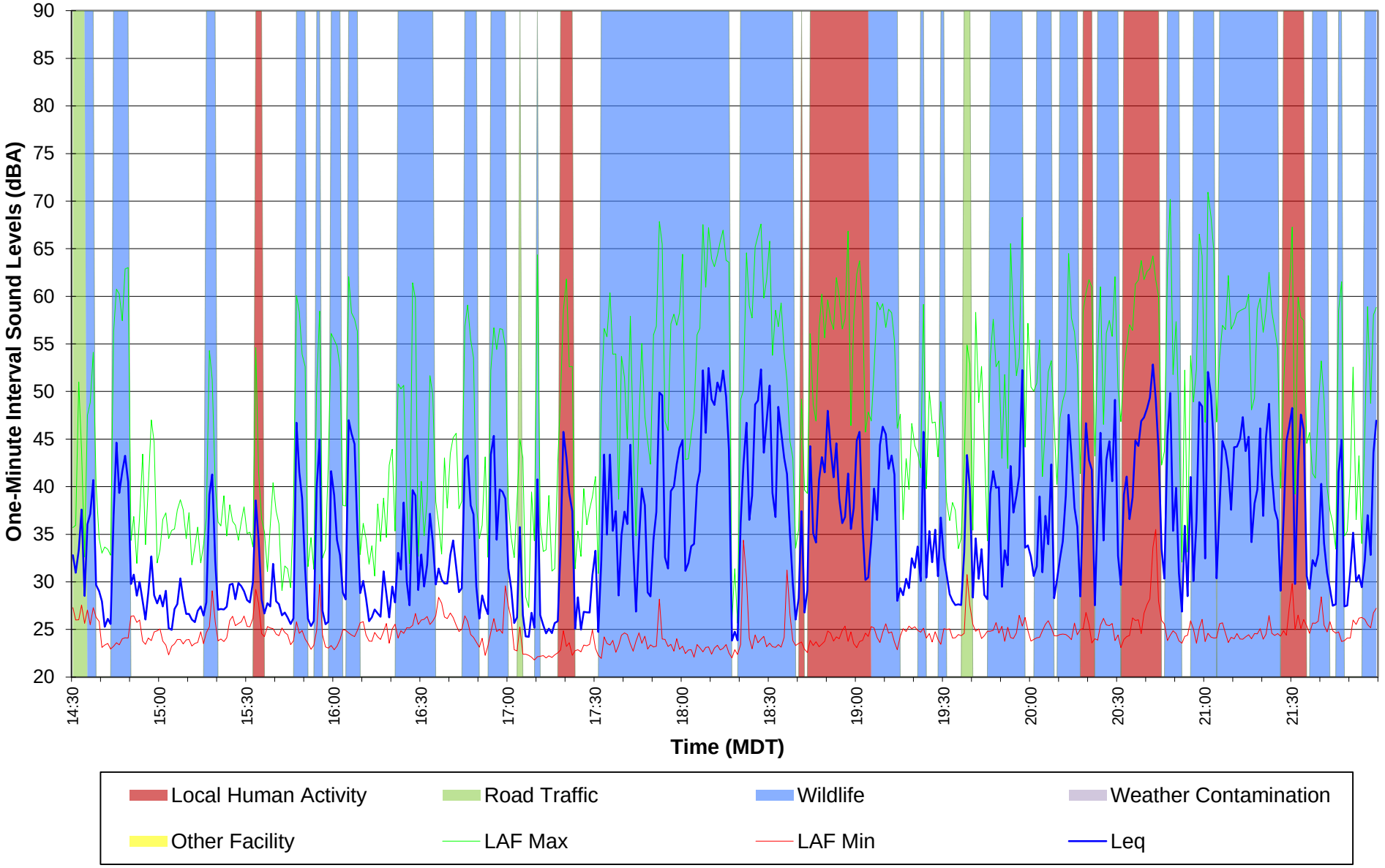


Figure F.10.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 14:30 - 21:59

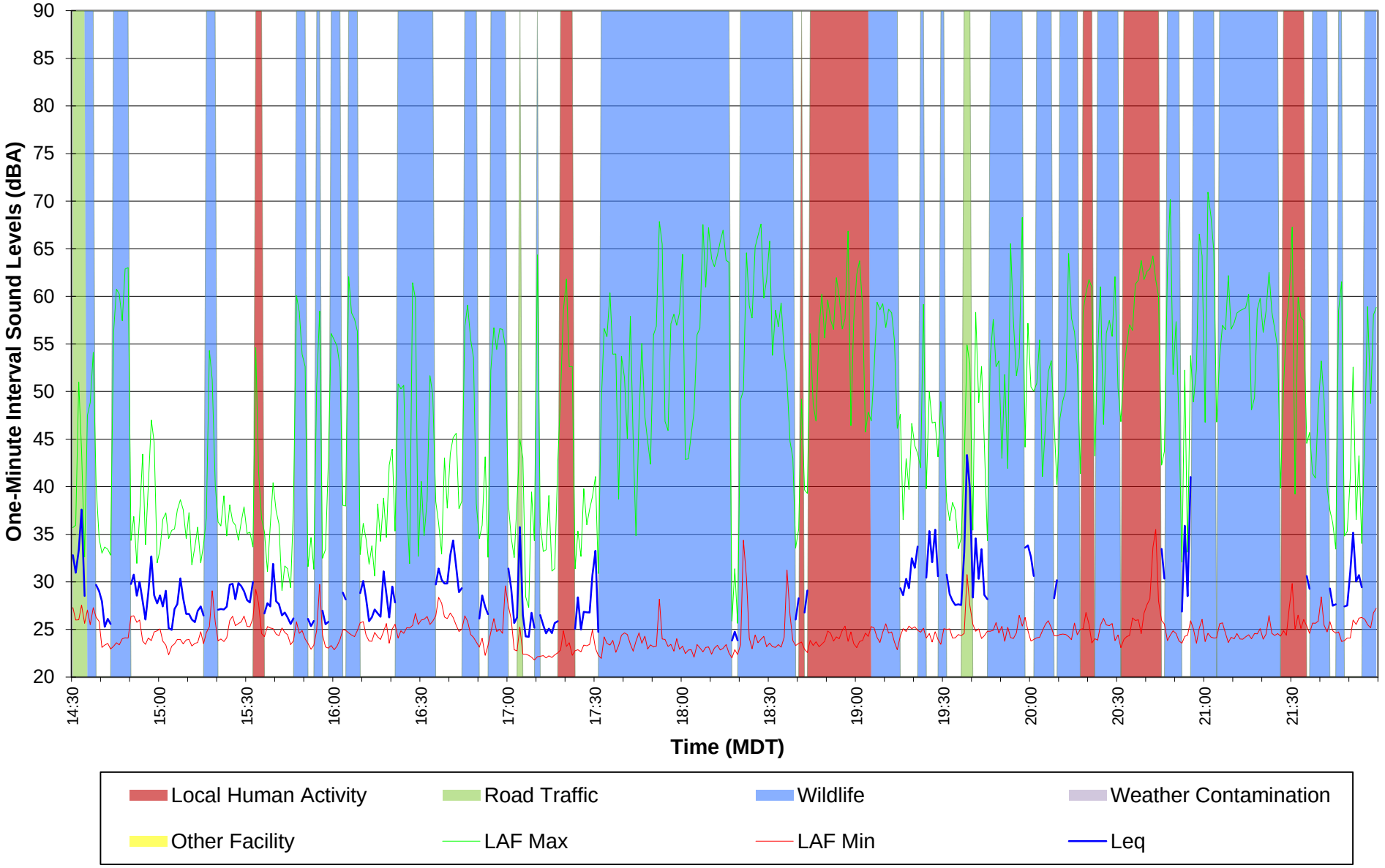


Figure F.10.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 28, 2012 14:30 - 21:59

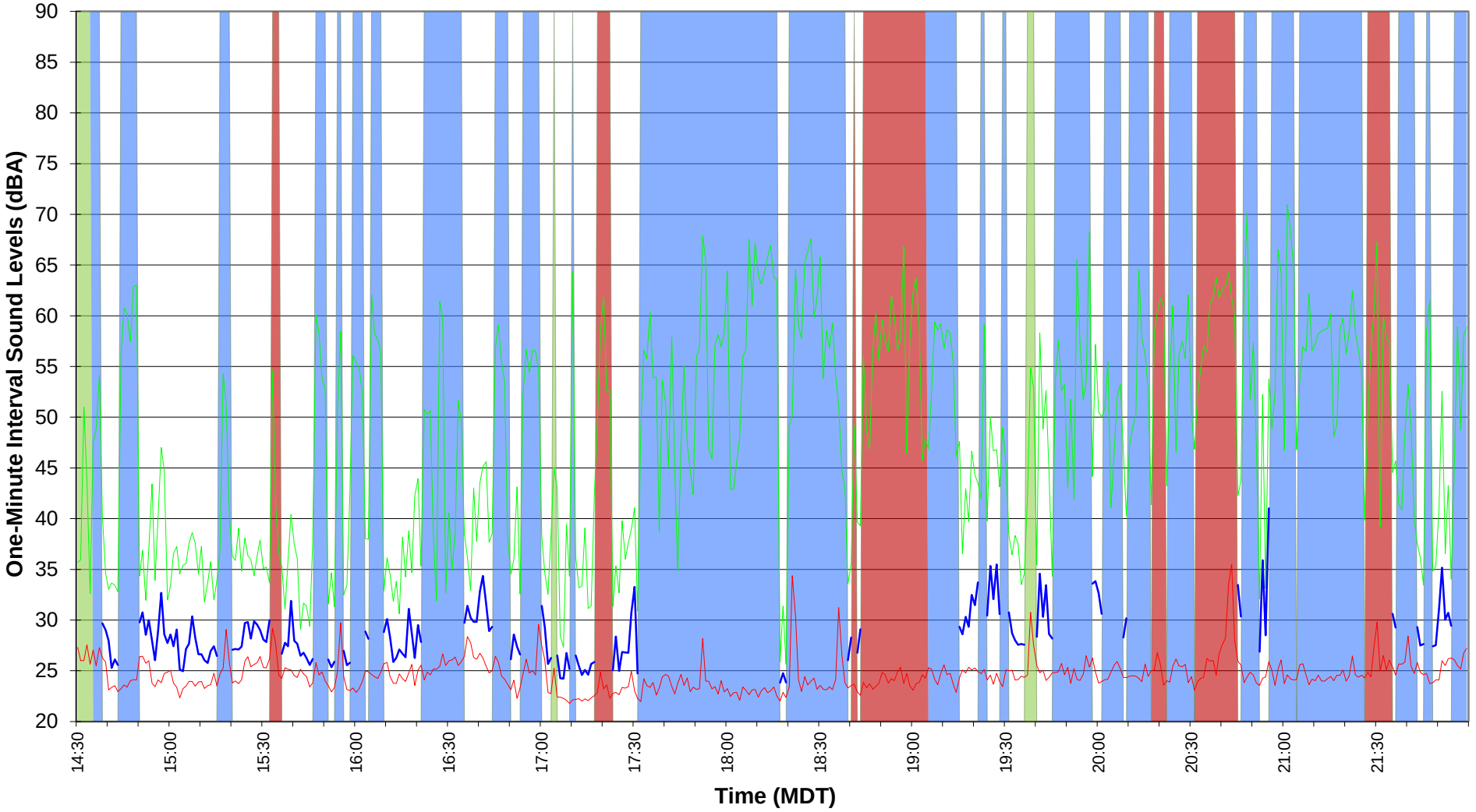


Figure F.11

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

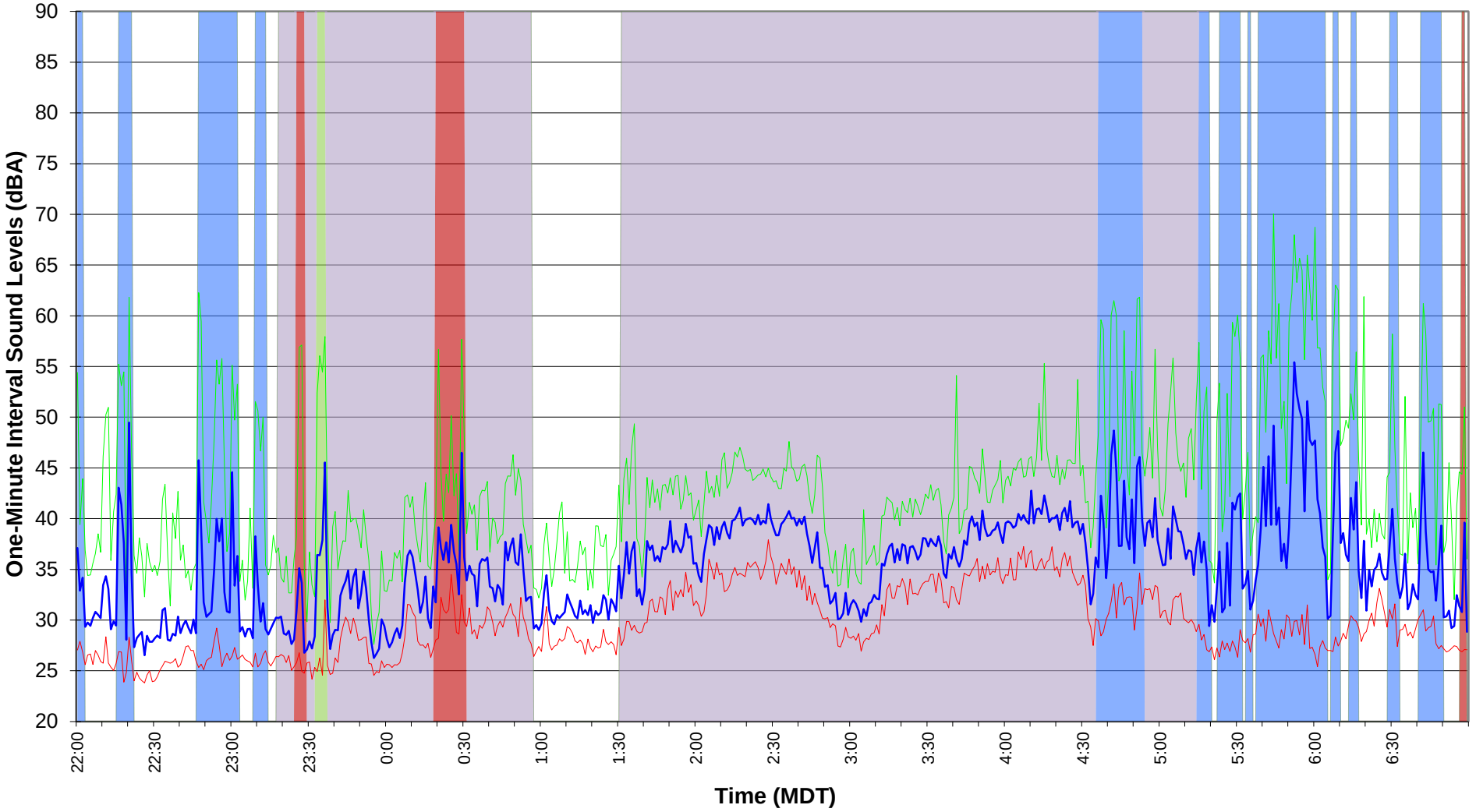


Figure F.11.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

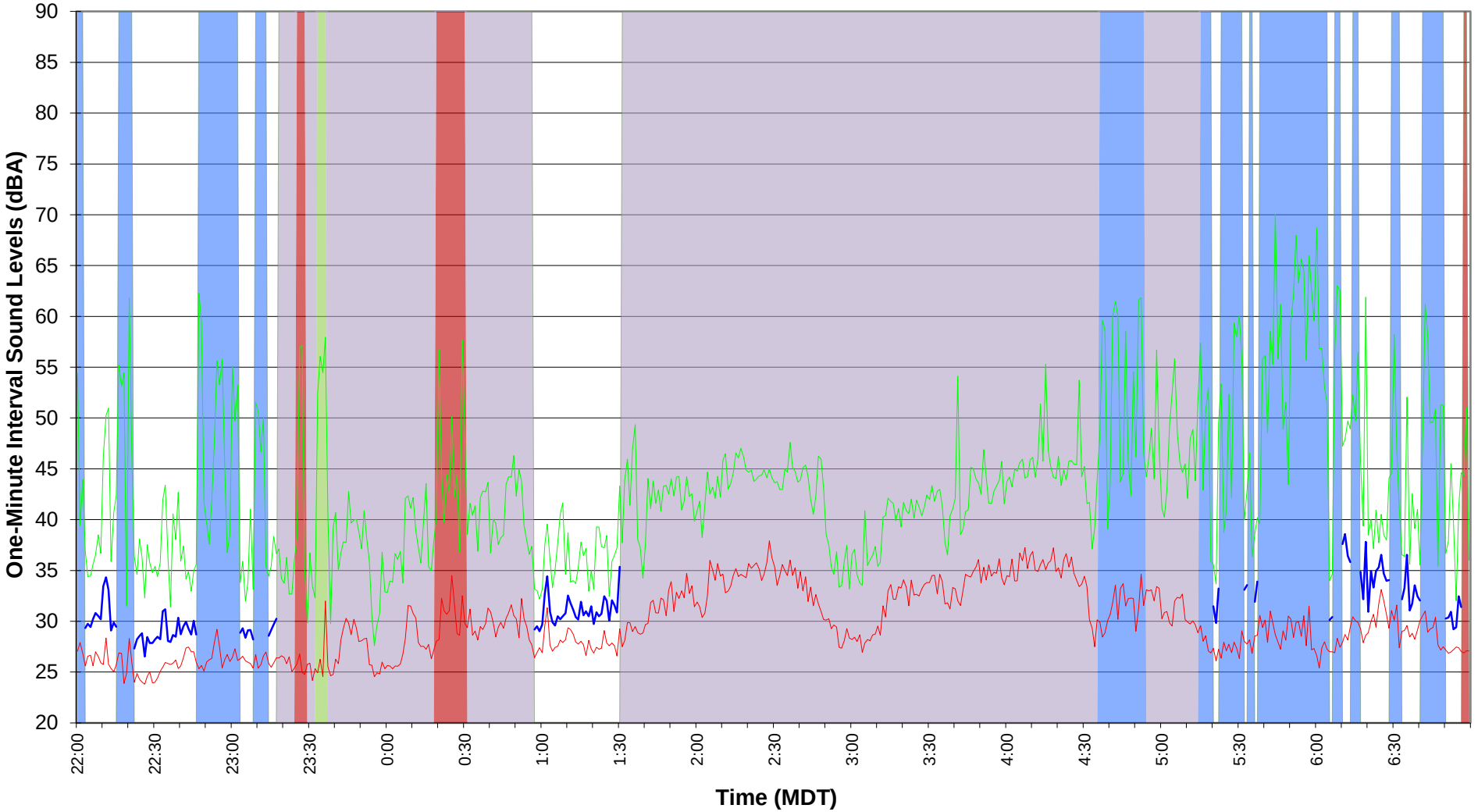


Figure F.11.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun 28, 2012 - Jun 29, 2012 22:00 - 06:59

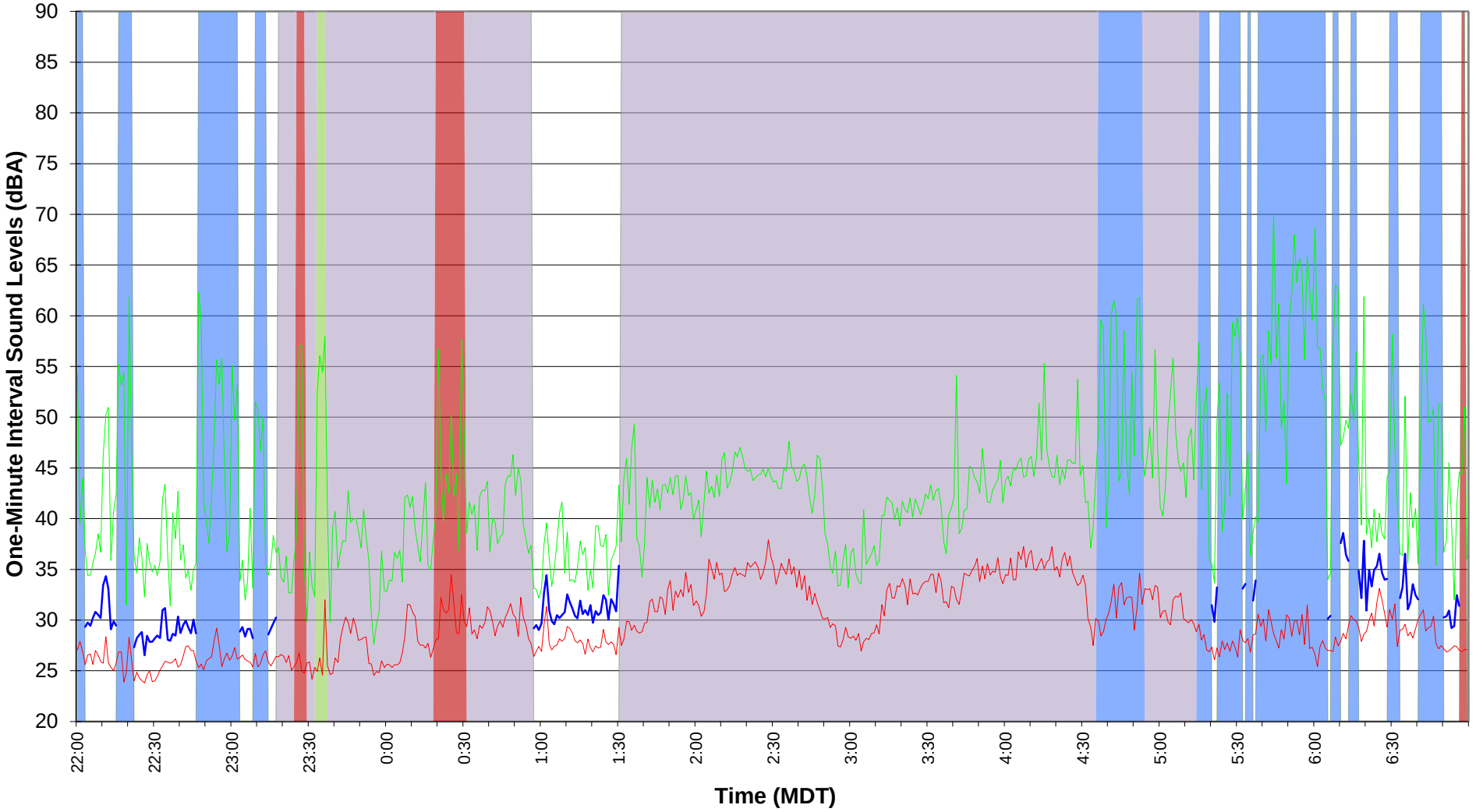


Figure F.12

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 29, 2012 07:00 - 14:29

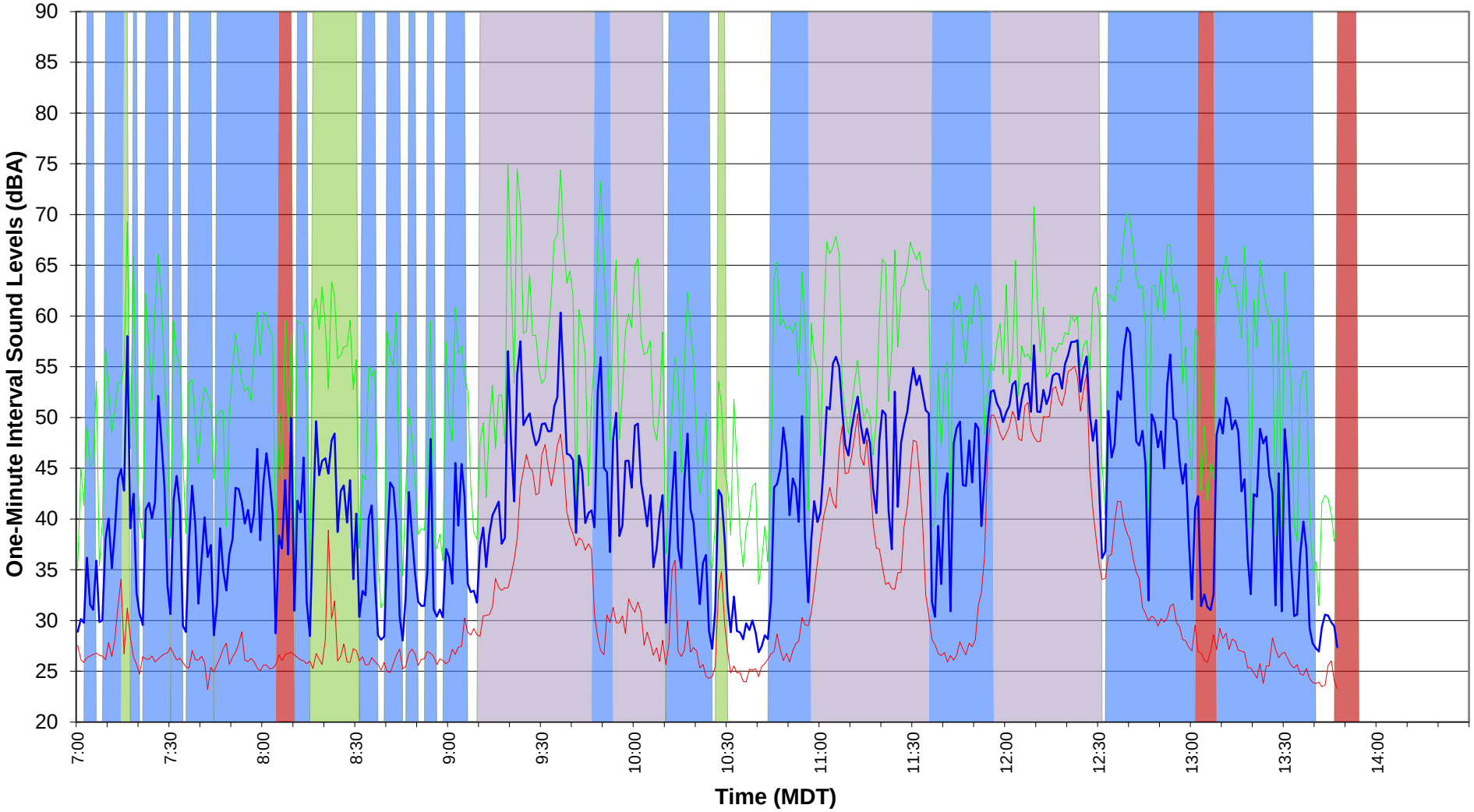


Figure F.12.Fac

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 29, 2012 07:00 - 14:29

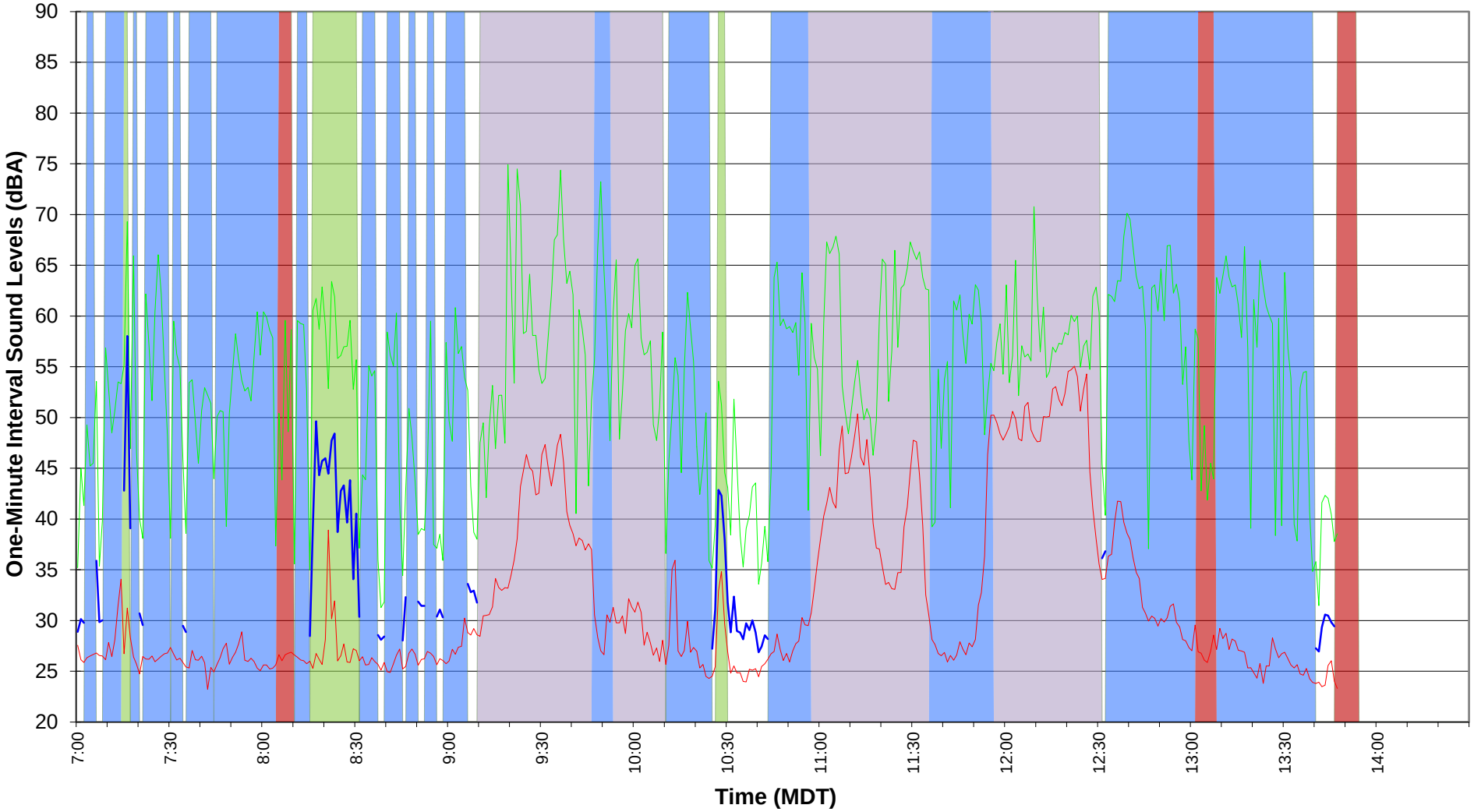
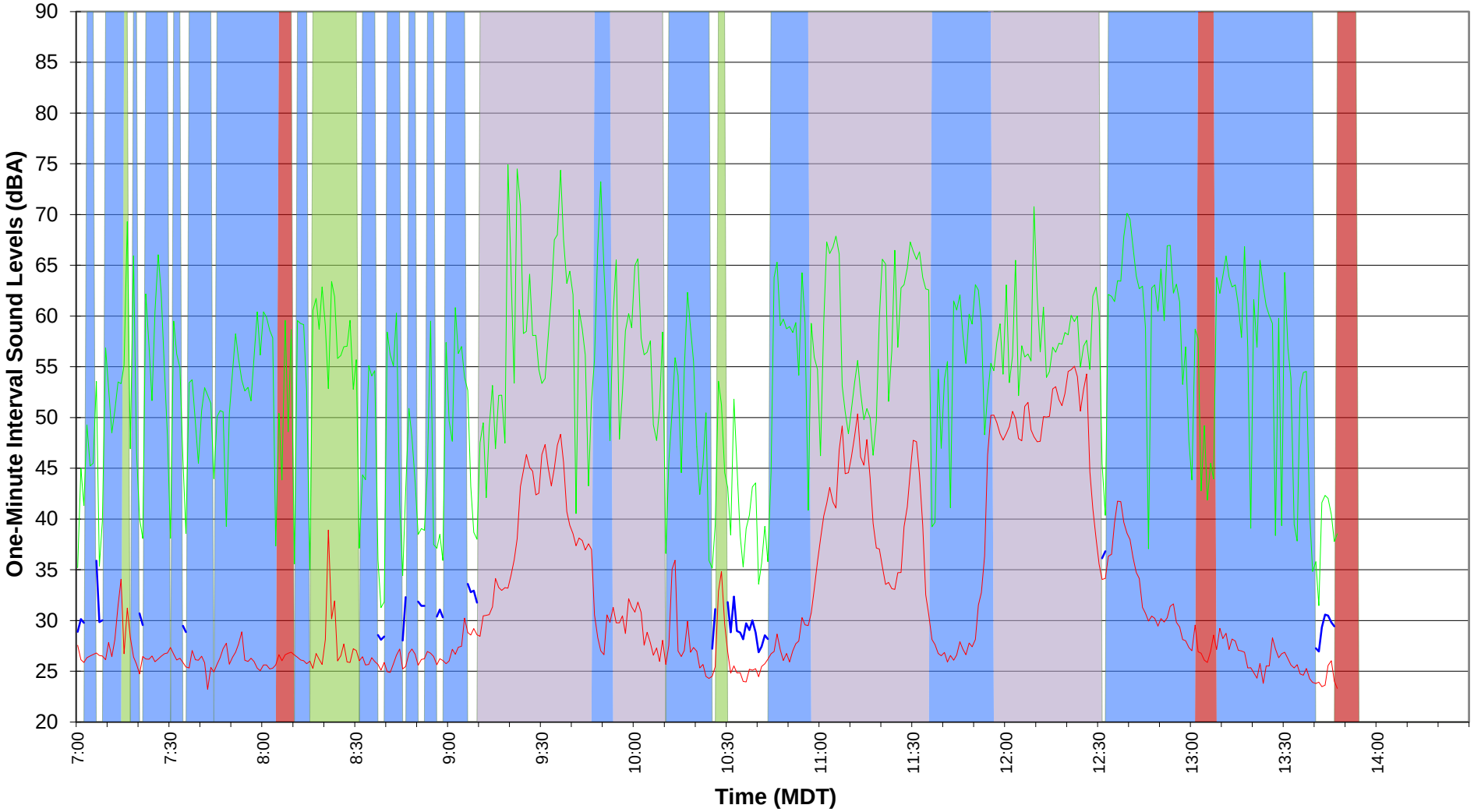


Figure F.12.Amb

YESAB Keno Hill Silver District Operations

R4 Noise Survey

Jun. 29, 2012 07:00 - 14:29



APPENDIX G

Measurement Results
Graphs of 1-Minute Sound Data
Residence 5

Patching Associates Acoustical Engineering Ltd.

Consultants in Acoustics, Noise Control and Vibrations

Table G.1
YESAB Keno Hill Silver District Operations
R5 Noise Survey
Daily Leq Values

Date	Time	Measured		Residual		Measured Ambient	
		Leq	Hours	Leq	Hours	Leq	Hours
Jun. 25, 2012	07:00 - 21:59	37	3.6	36	1.3	39	0.0
Jun. 25, 2012 - Jun. 26, 2012	22:00 - 06:59	40	9.0	39	8.3	-	-
Jun. 26, 2012	07:00 - 21:59	37	15.0	35	7.8	34	0.0
Jun 26, 2012 - Jun 27, 2012	22:00 - 06:59	36	9.0	36	8.2	-	-
Jun. 27, 2012	07:00 - 21:59	37	15.0	36	10.0	26	0.7
Jun. 27, 2012 - Jun. 28, 2012	22:00 - 06:59	38	9.0	38	8.9	-	-
Jun. 28, 2012	07:00 - 21:59	42	7.6	34	1.2	-	-

Figure G.1

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 14:30 - 21:59

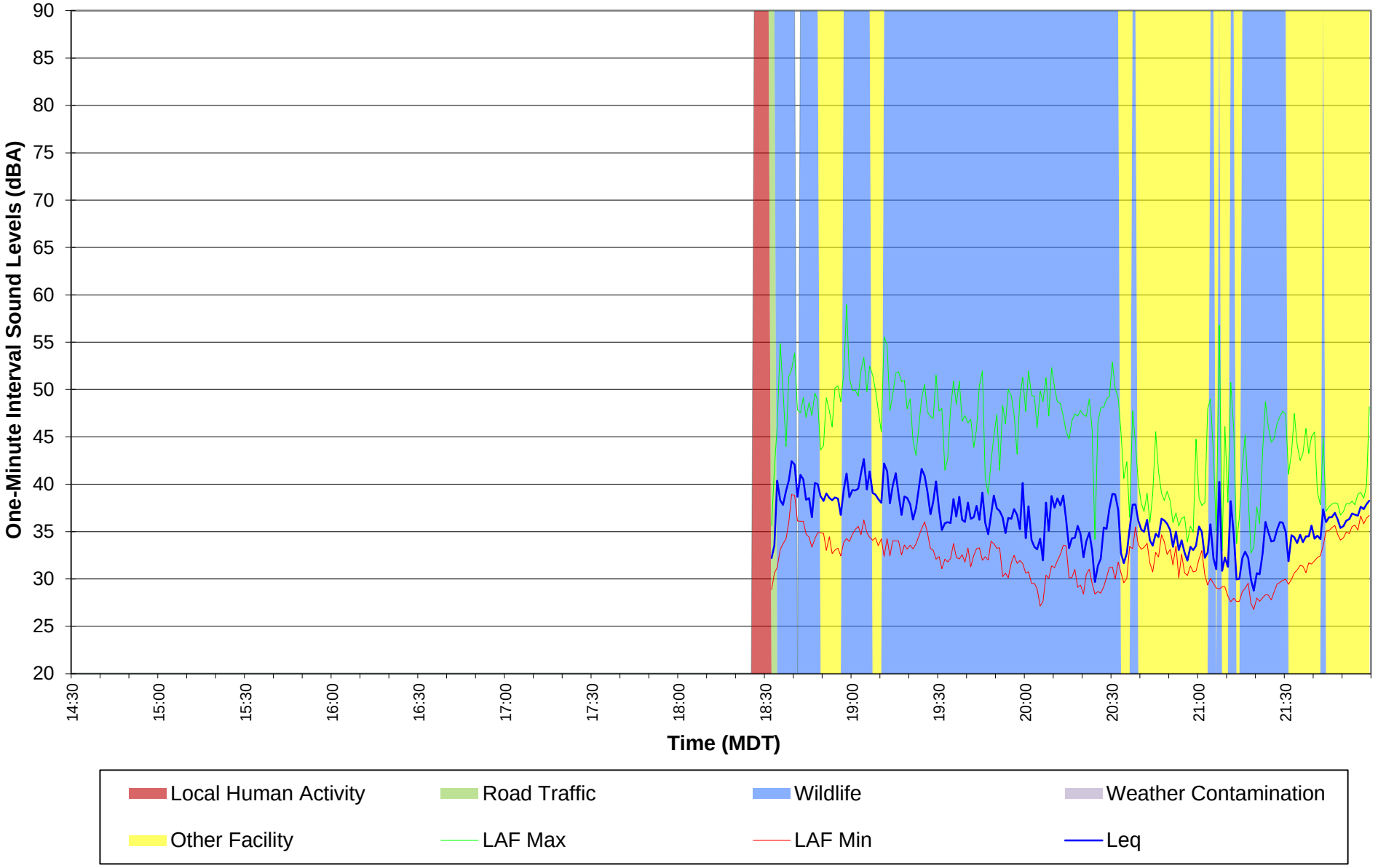


Figure G.1.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 14:30 - 21:59

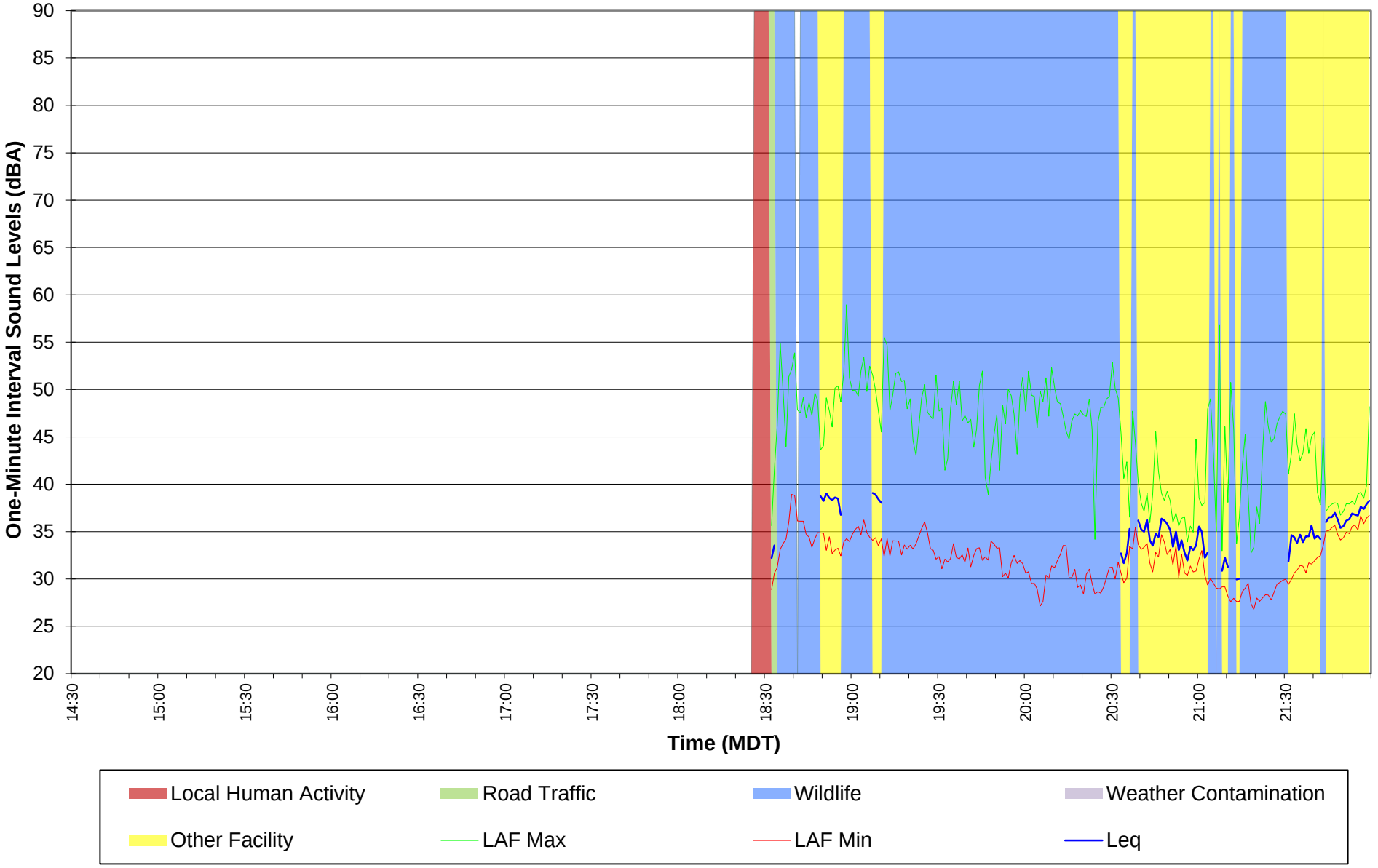


Figure G.1.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 14:30 - 21:59

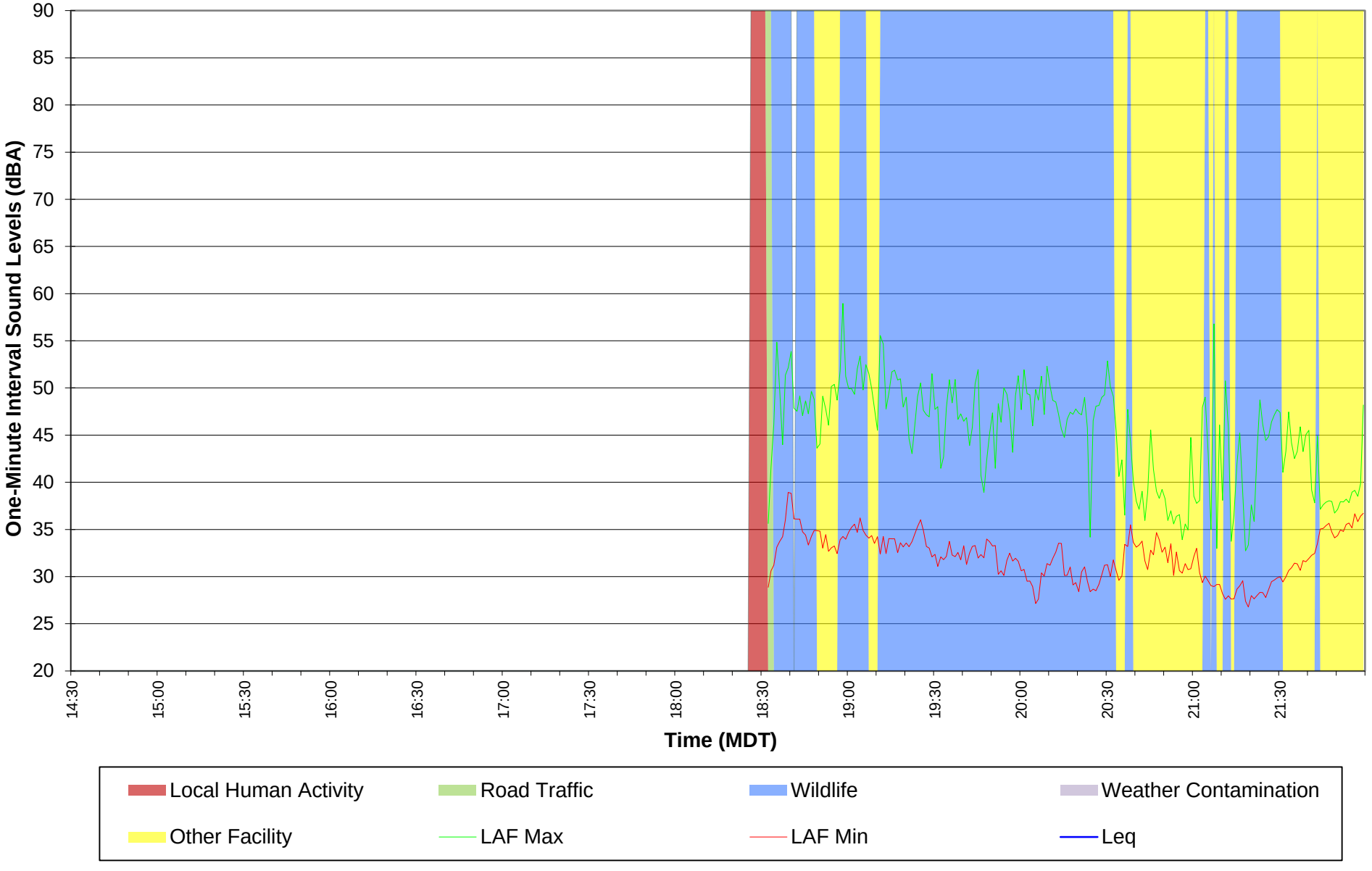


Figure G.2

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

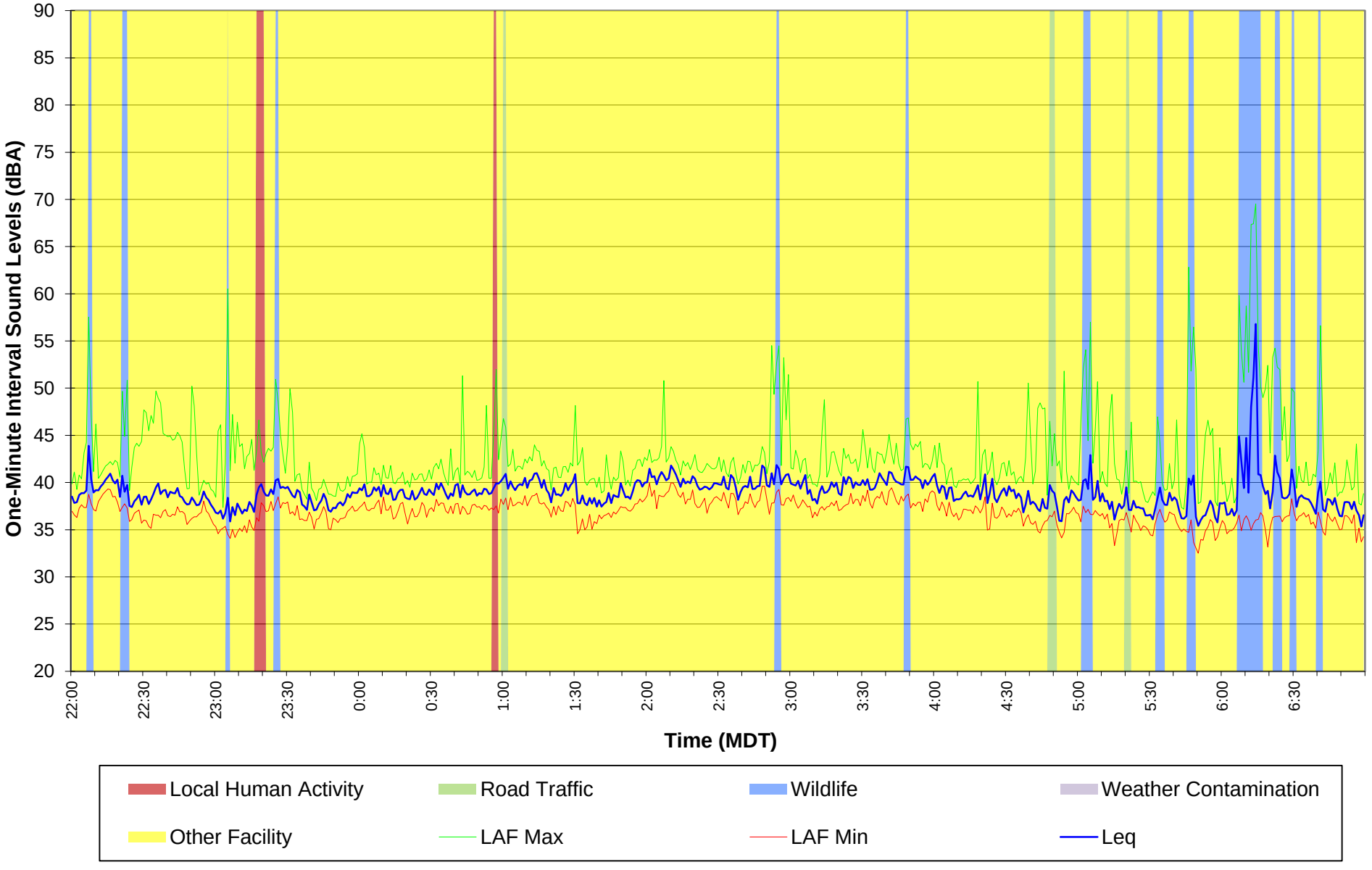


Figure G.2.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

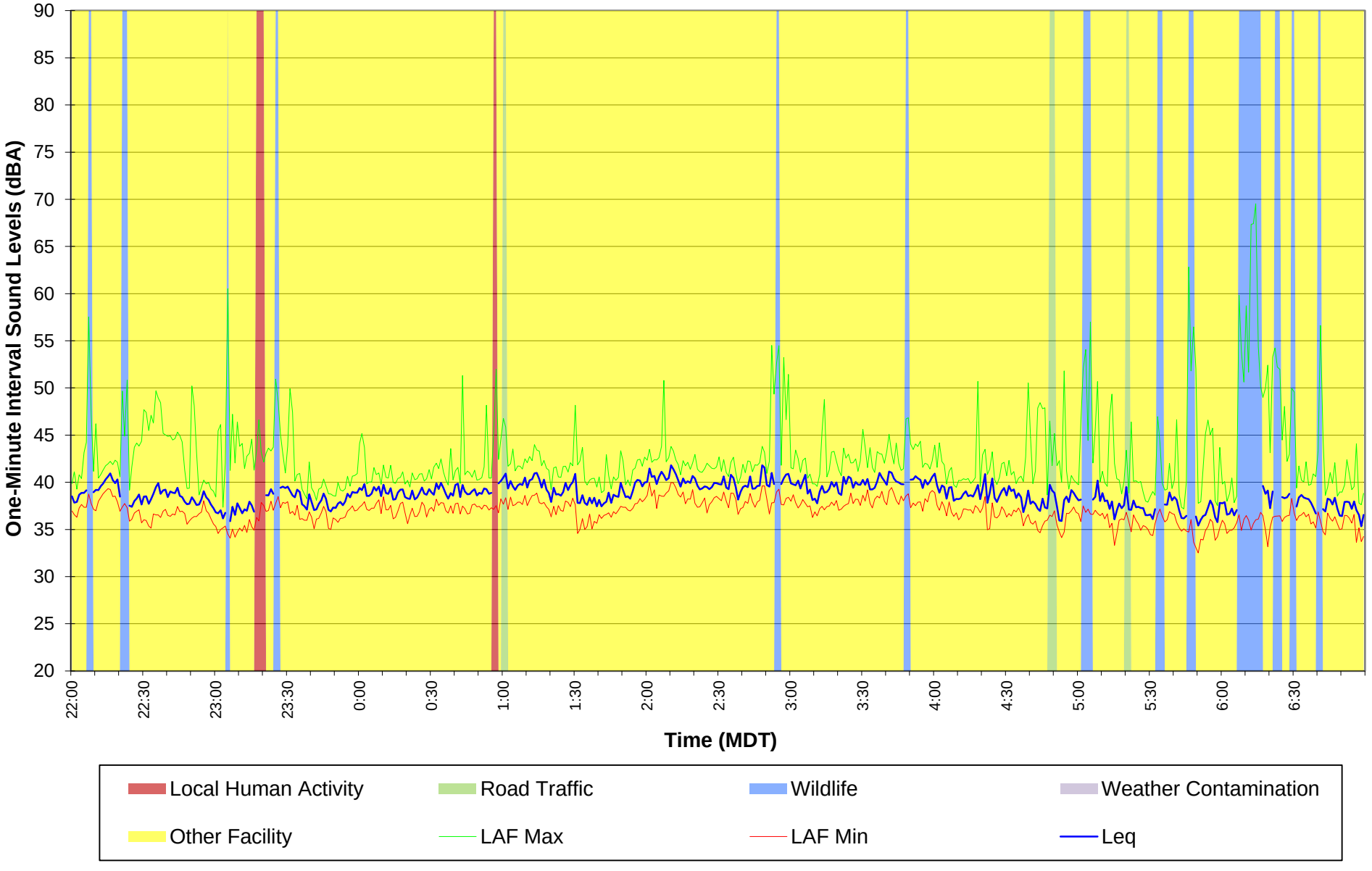


Figure G.2.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 25, 2012 - Jun. 26, 2012 22:00 - 06:59

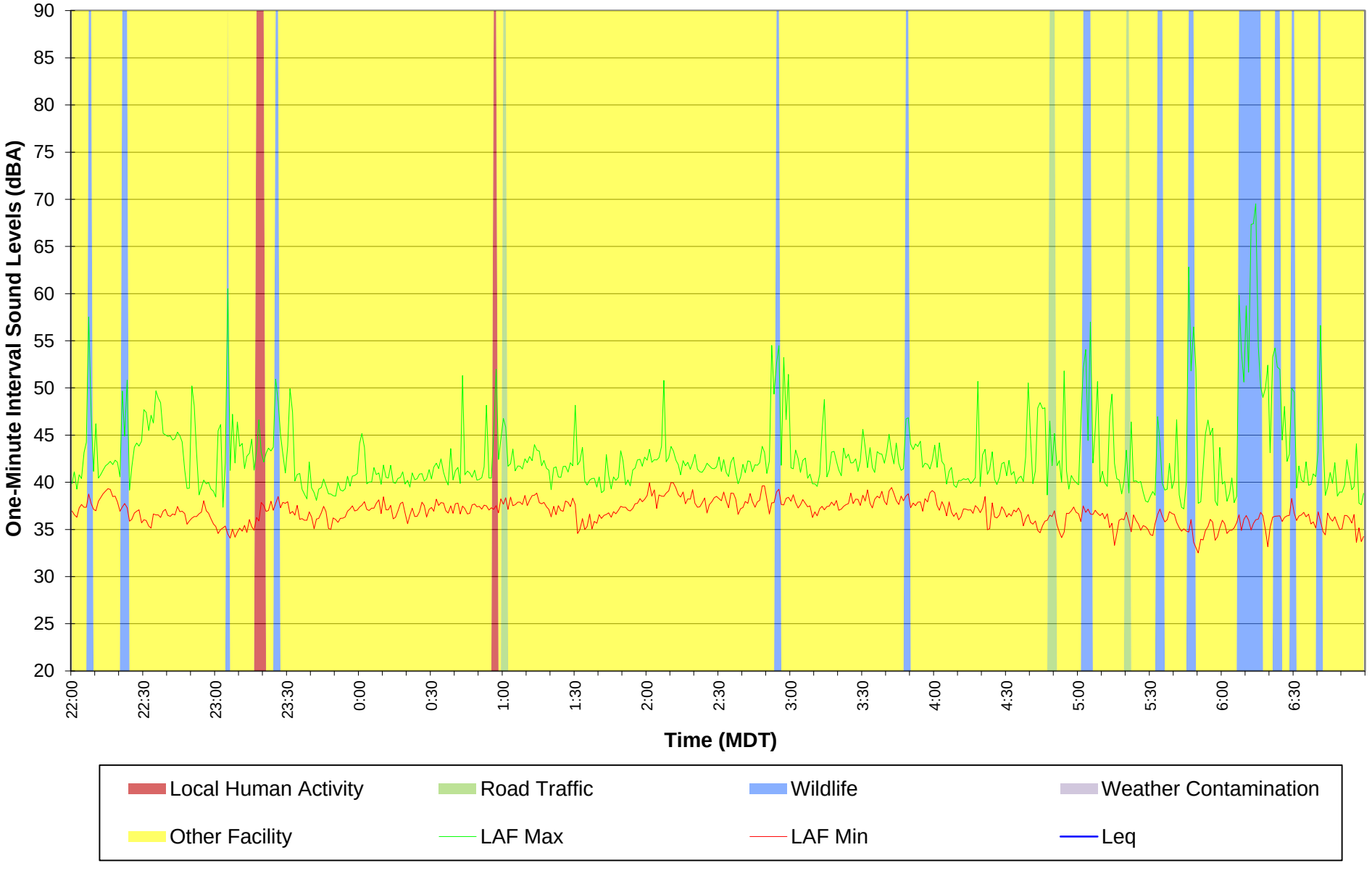


Figure G.3

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 07:00 - 14:29

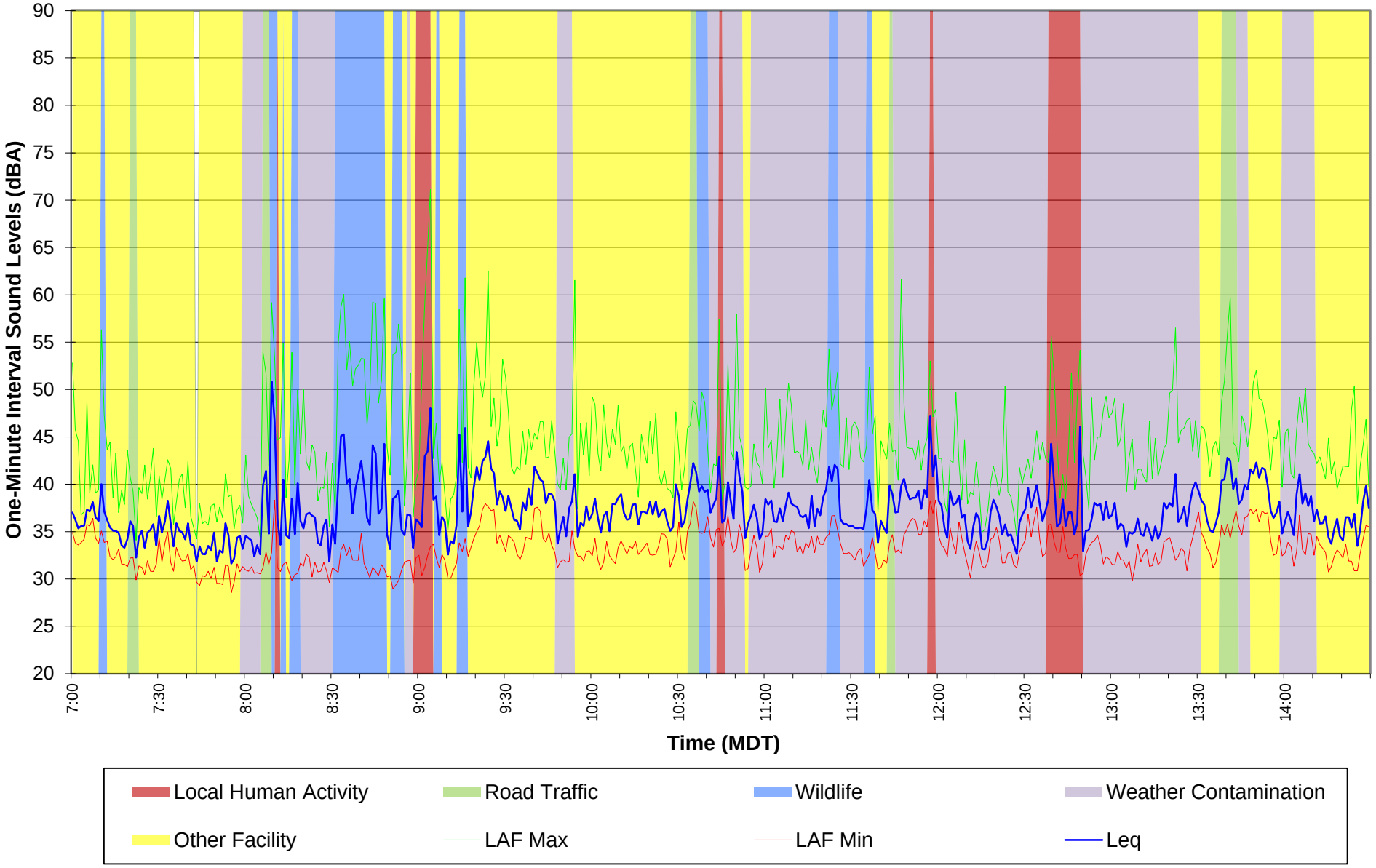


Figure G.3.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 07:00 - 14:29

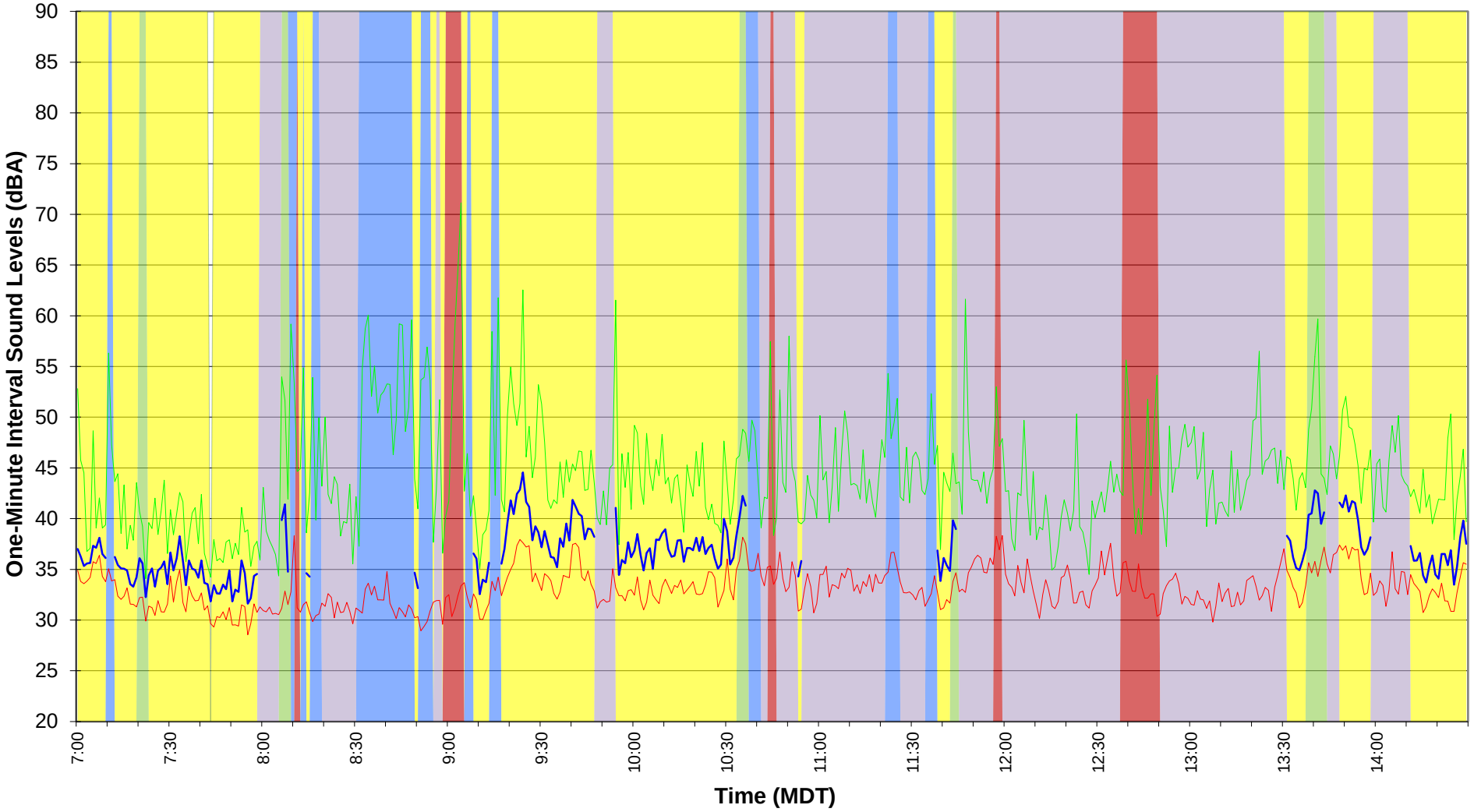


Figure G.3.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 07:00 - 14:29

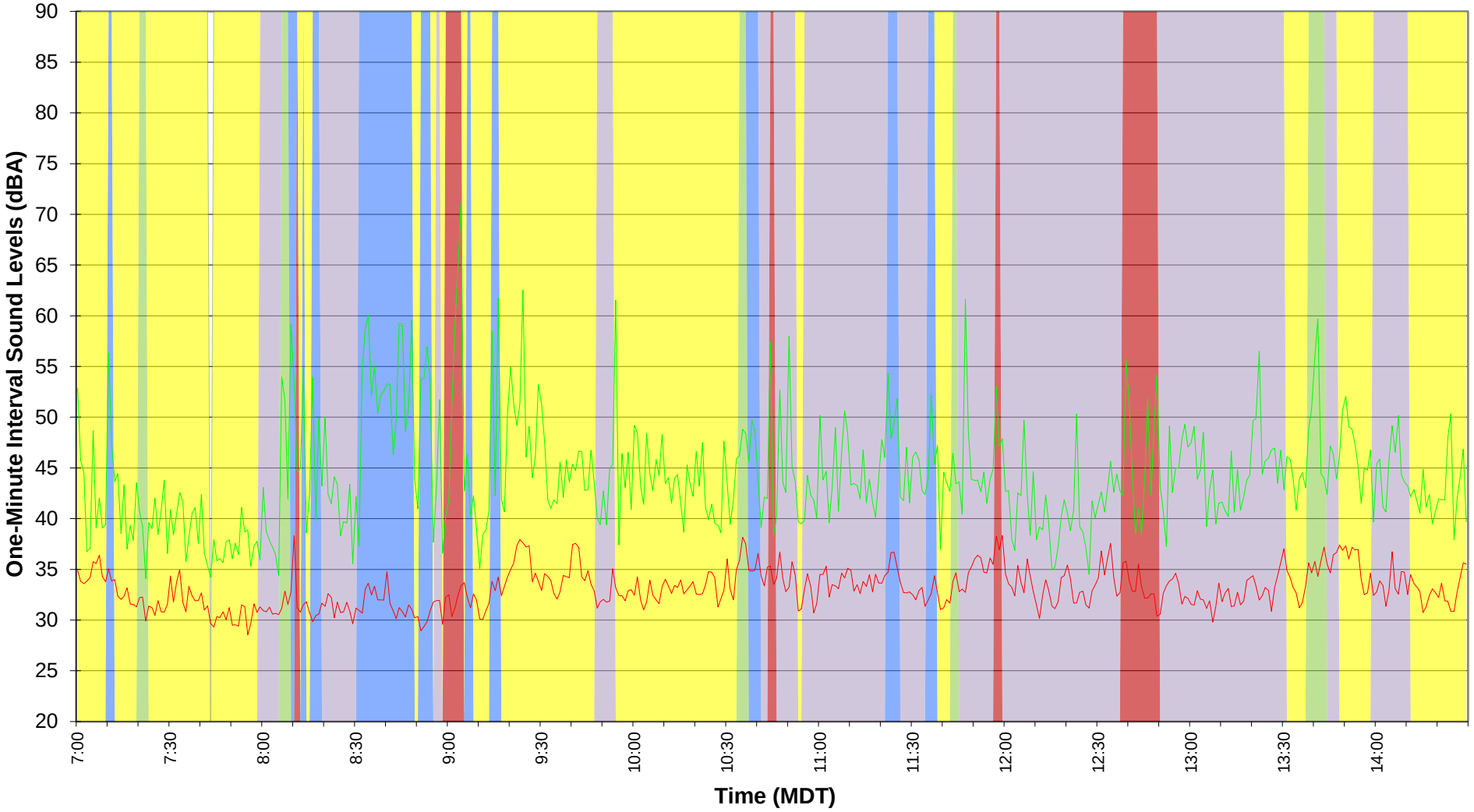


Figure G.4

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 14:30 - 21:59

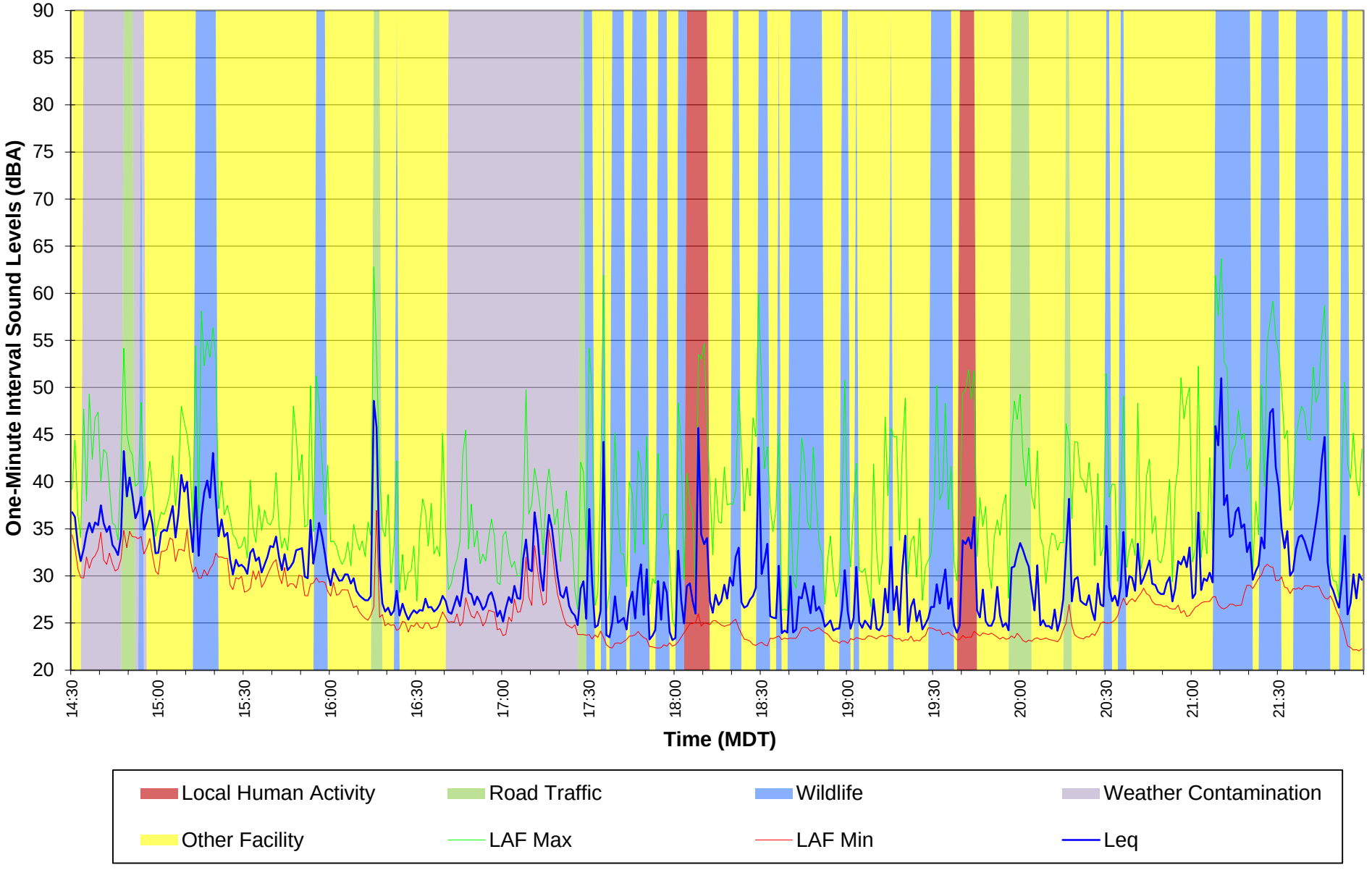


Figure G.4.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 14:30 - 21:59

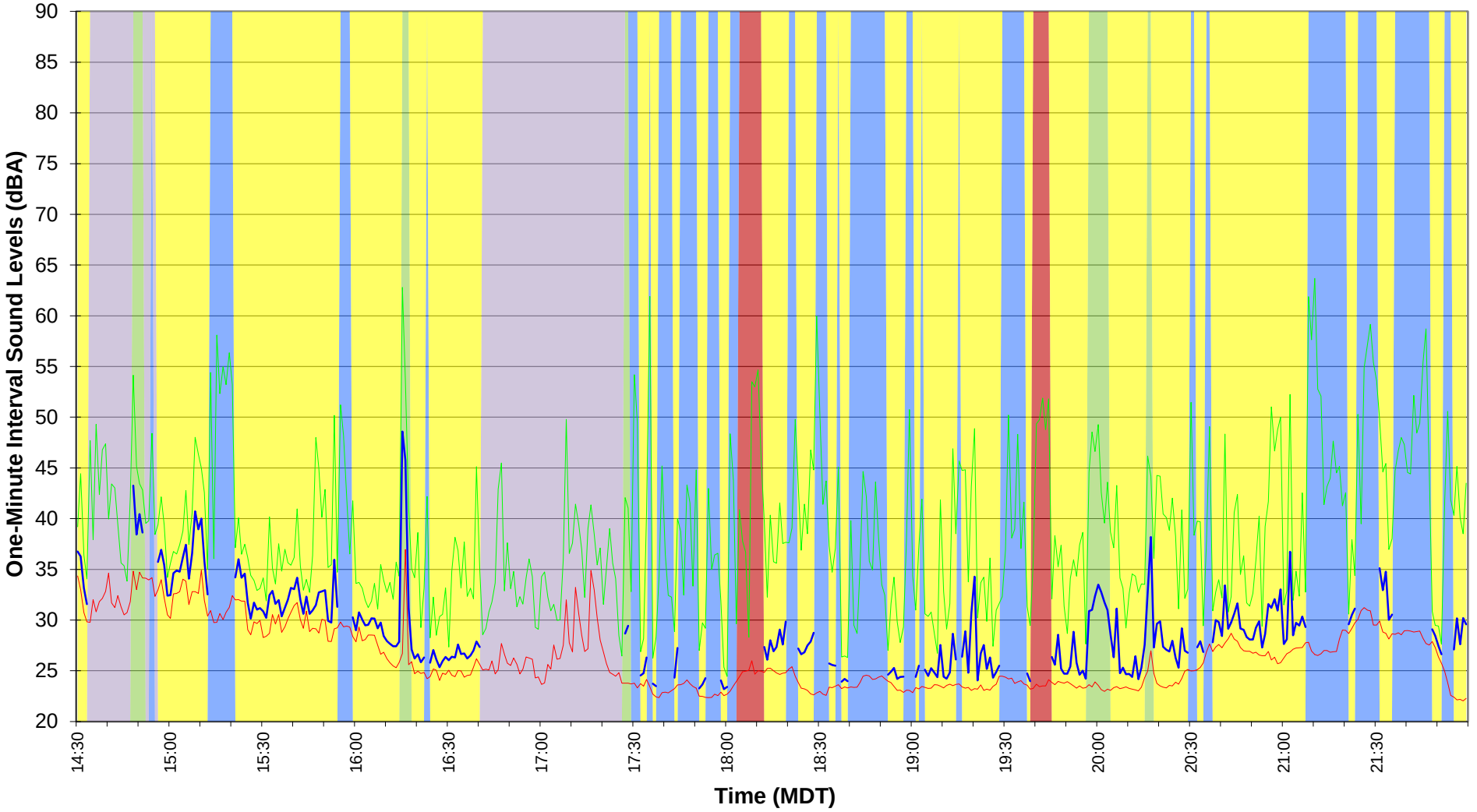


Figure G.4.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 26, 2012 14:30 - 21:59

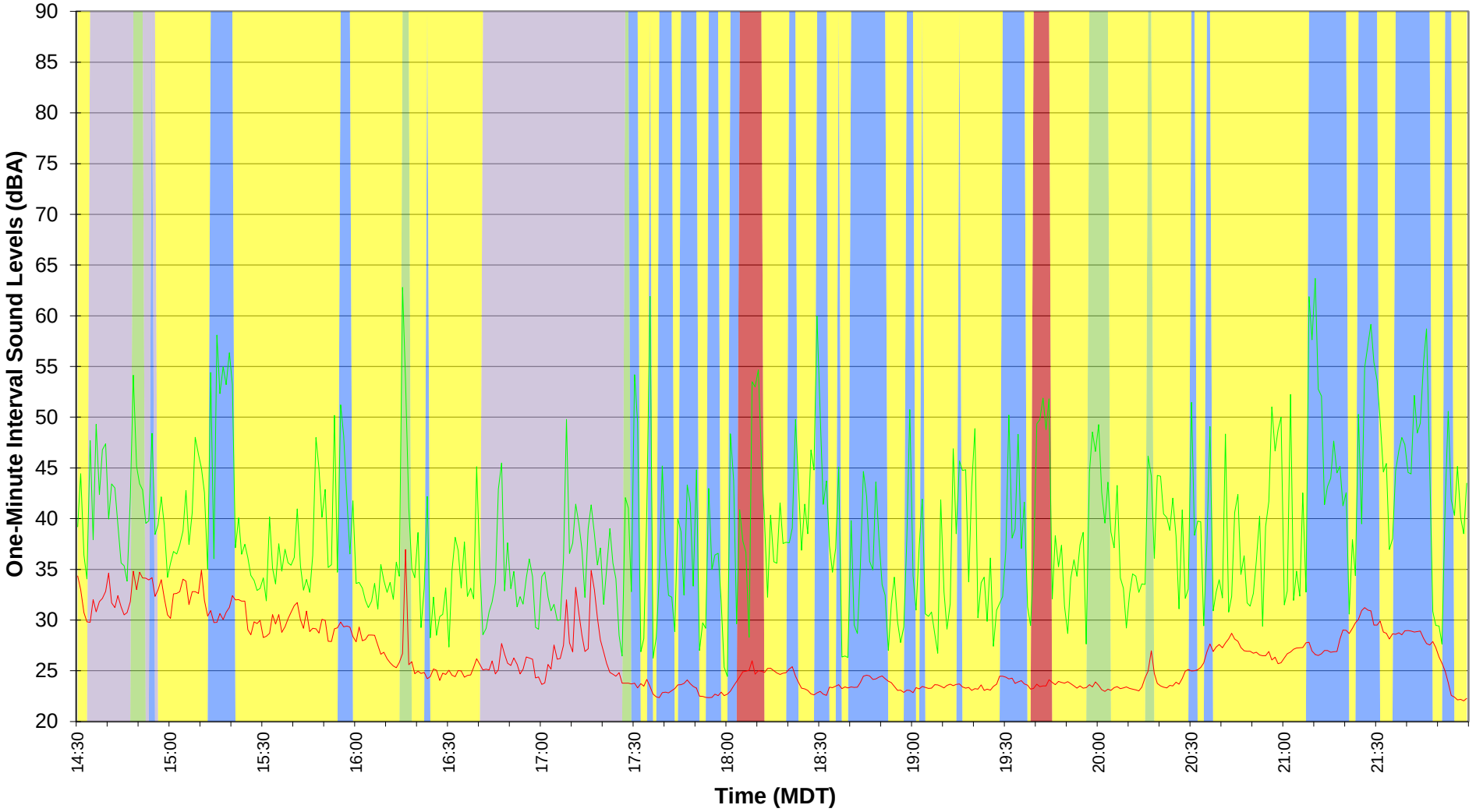


Figure G.5

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

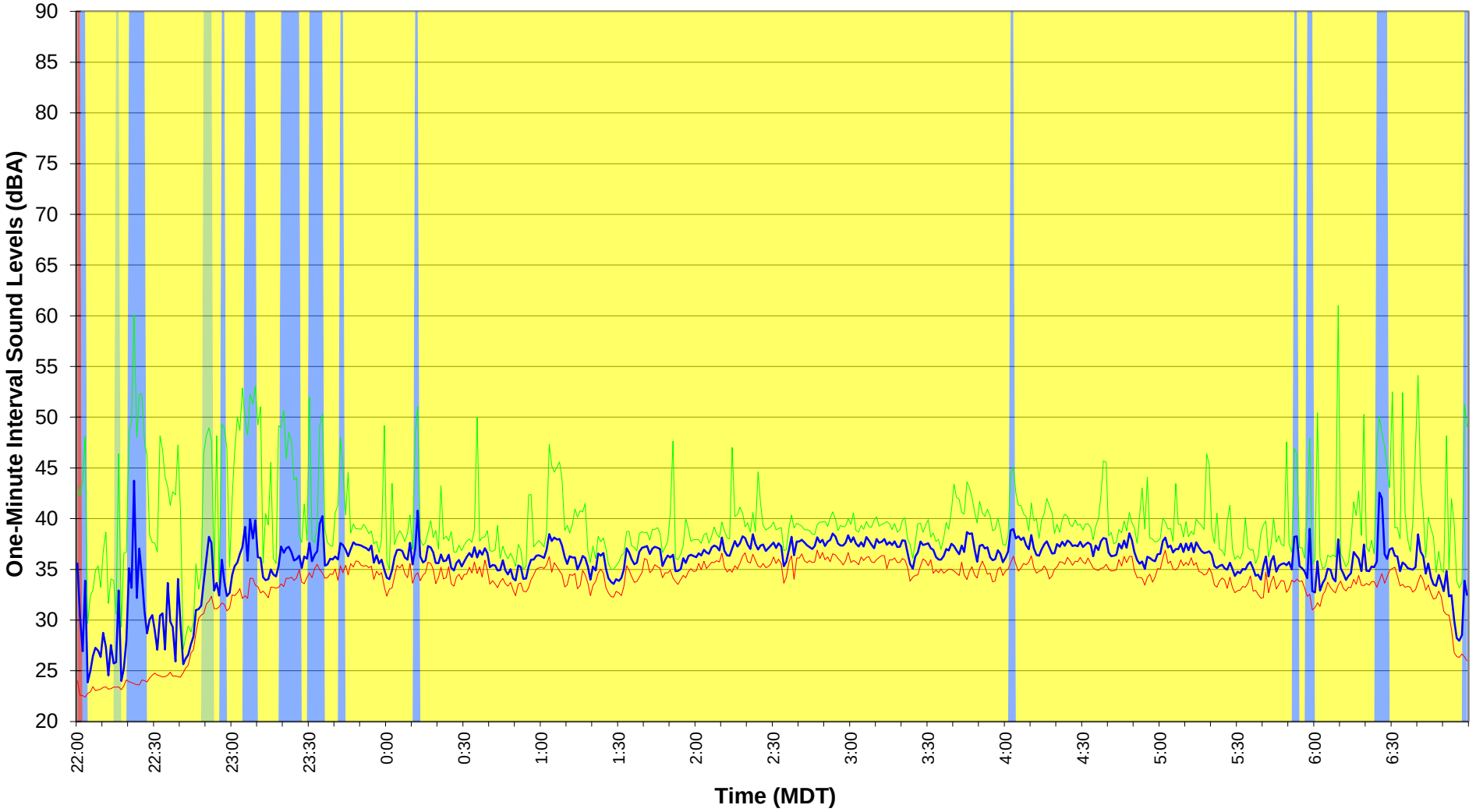


Figure G.5.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

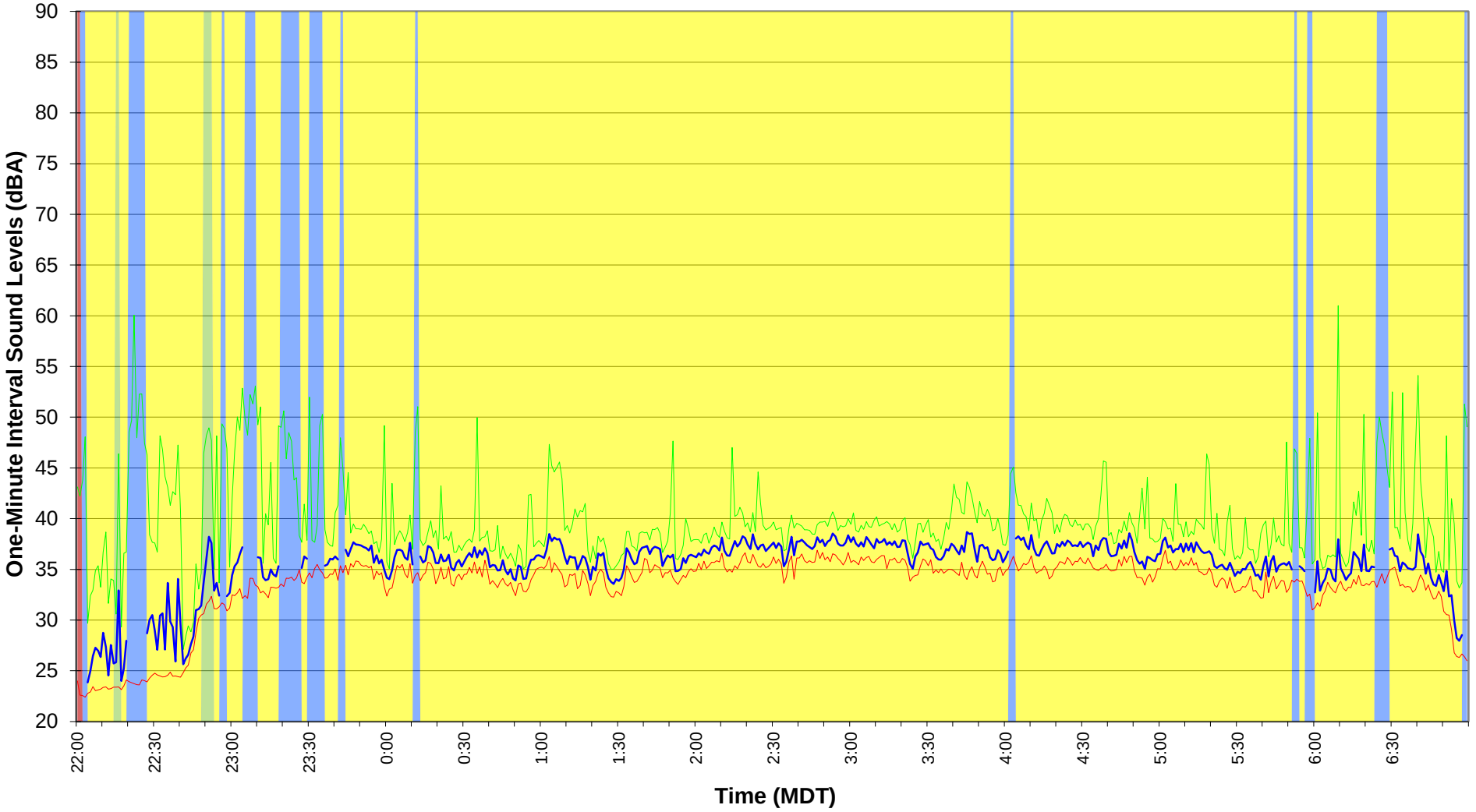


Figure G.5.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun 26, 2012 - Jun 27, 2012 22:00 - 06:59

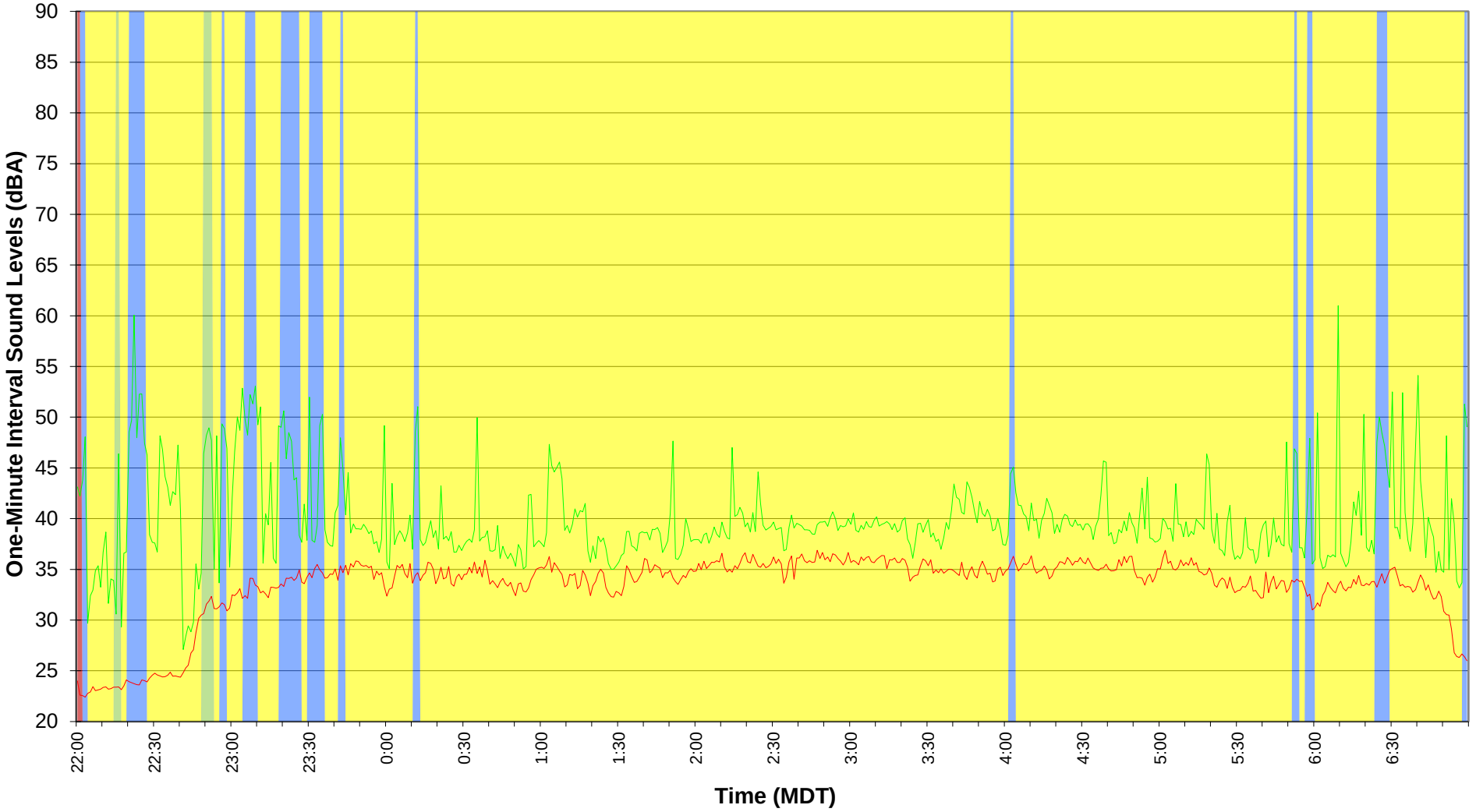


Figure G.6

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 07:00 - 14:29

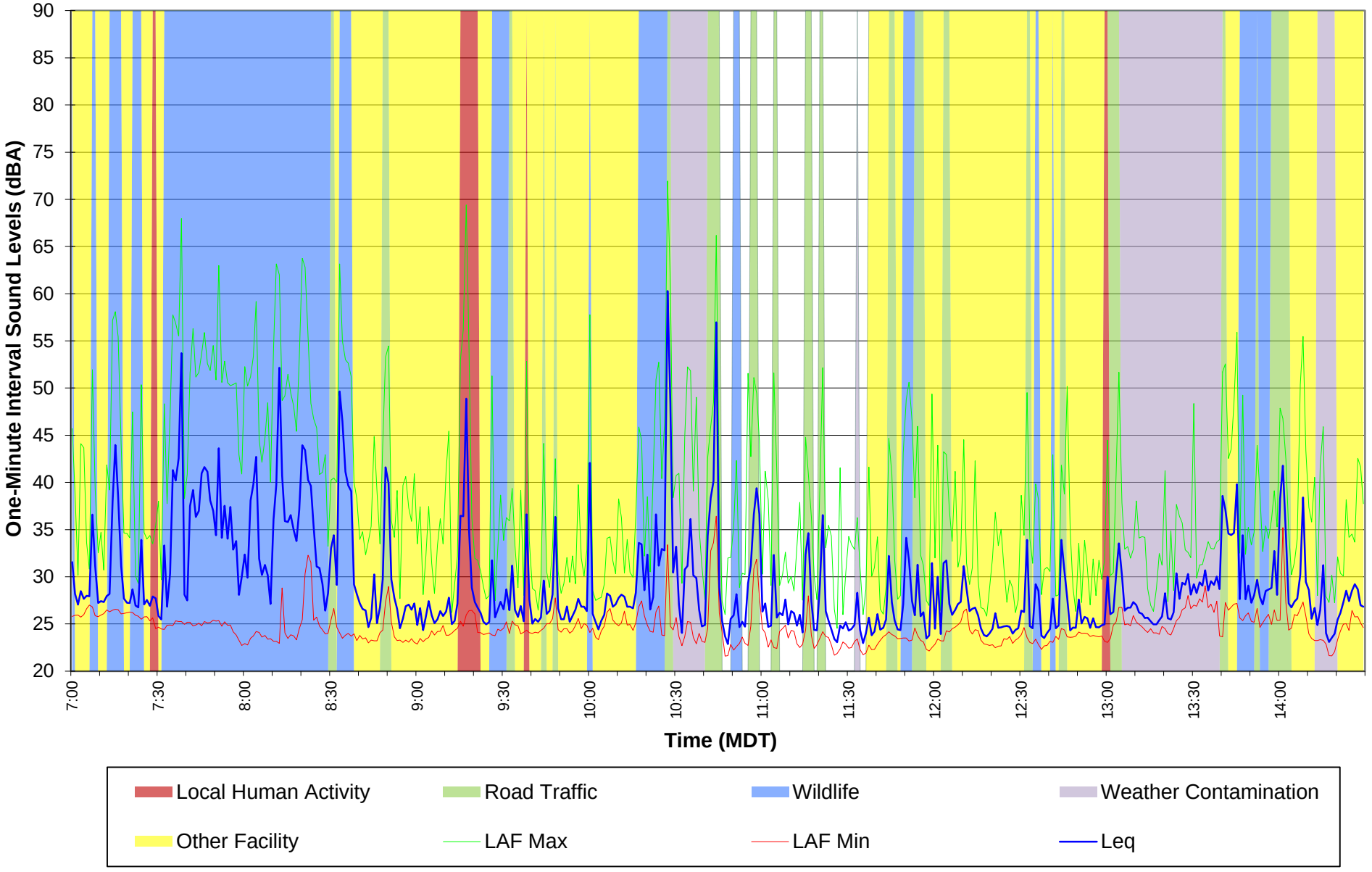


Figure G.6.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 07:00 - 14:29

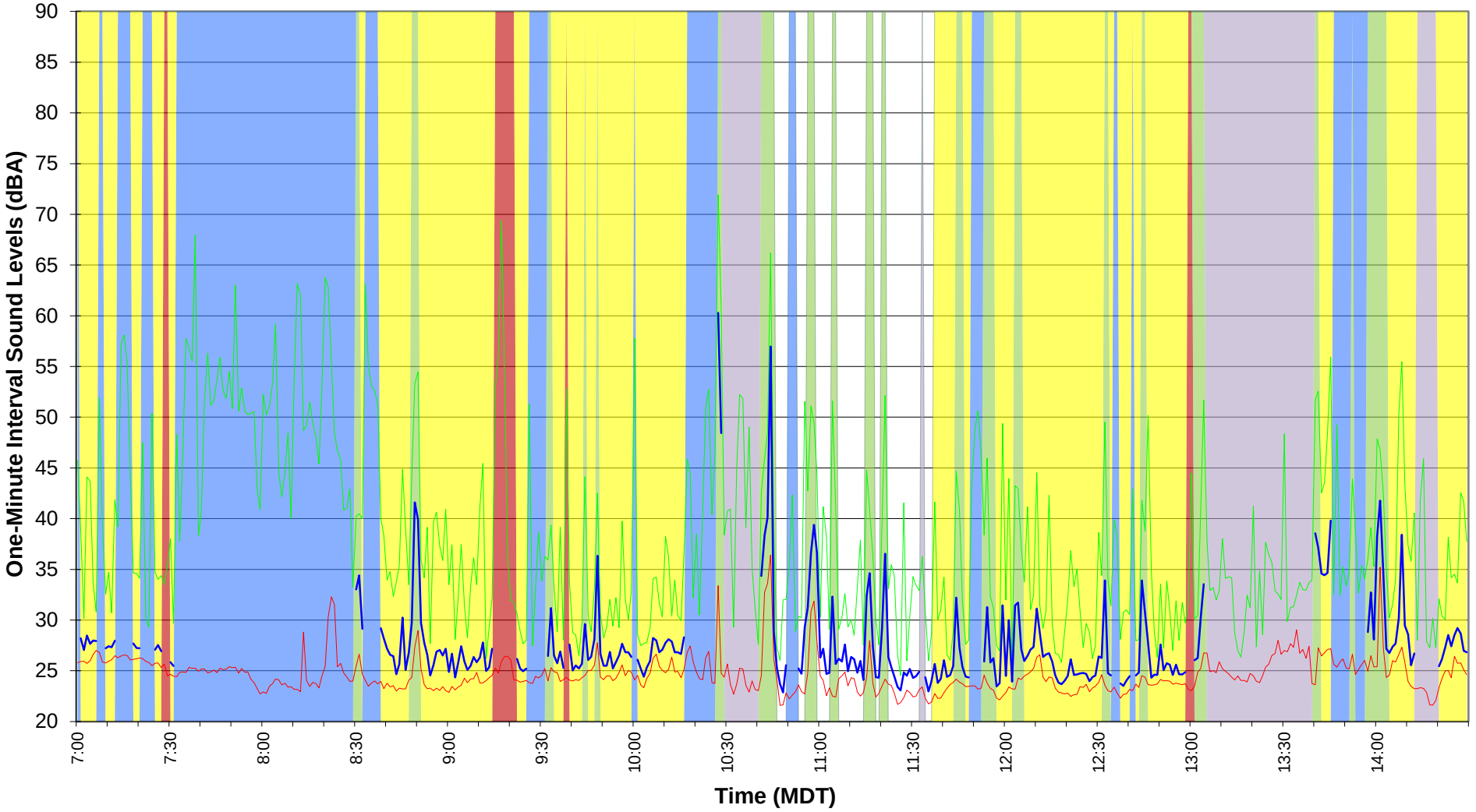


Figure G.6.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 07:00 - 14:29

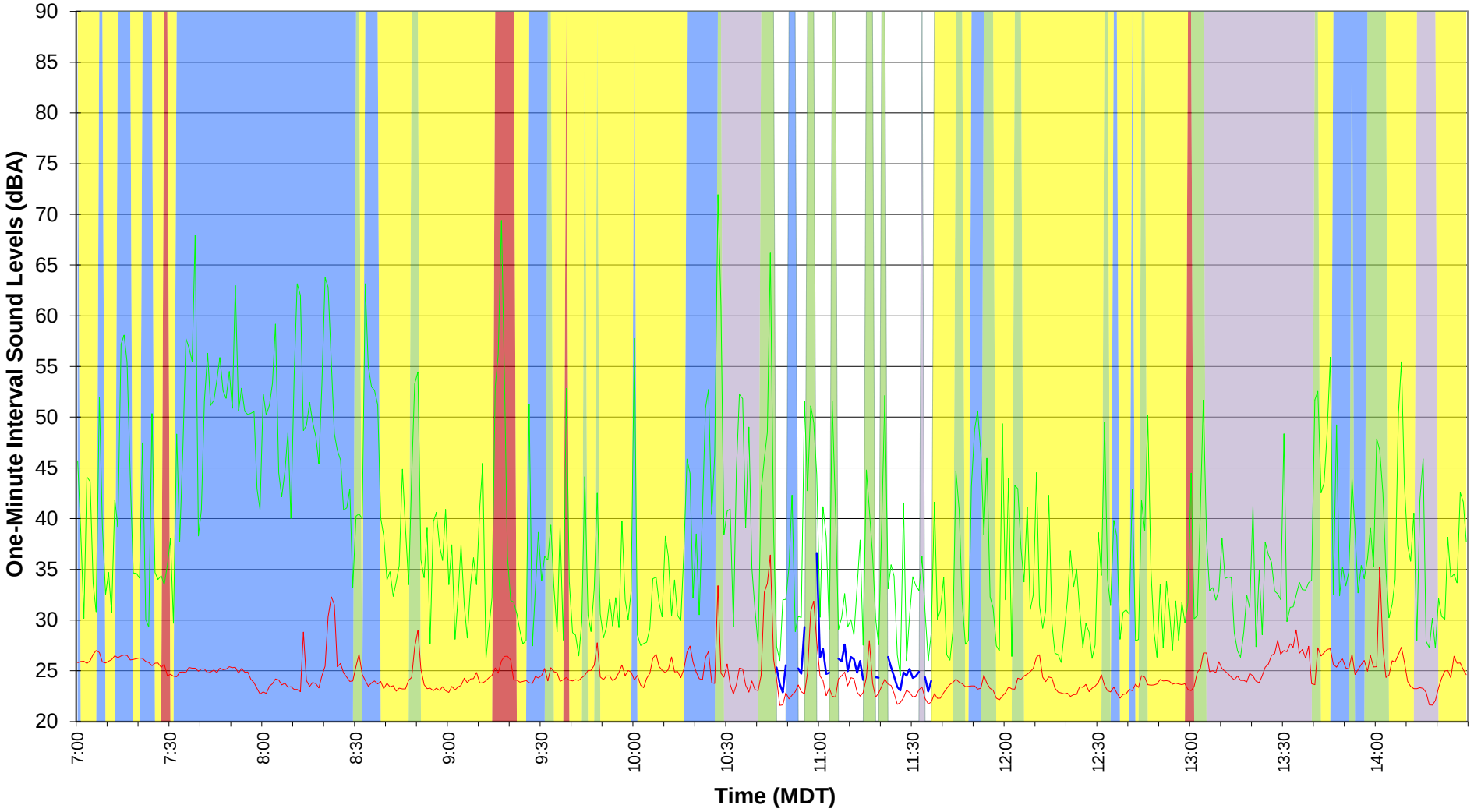


Figure G.7

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 14:30 - 21:59

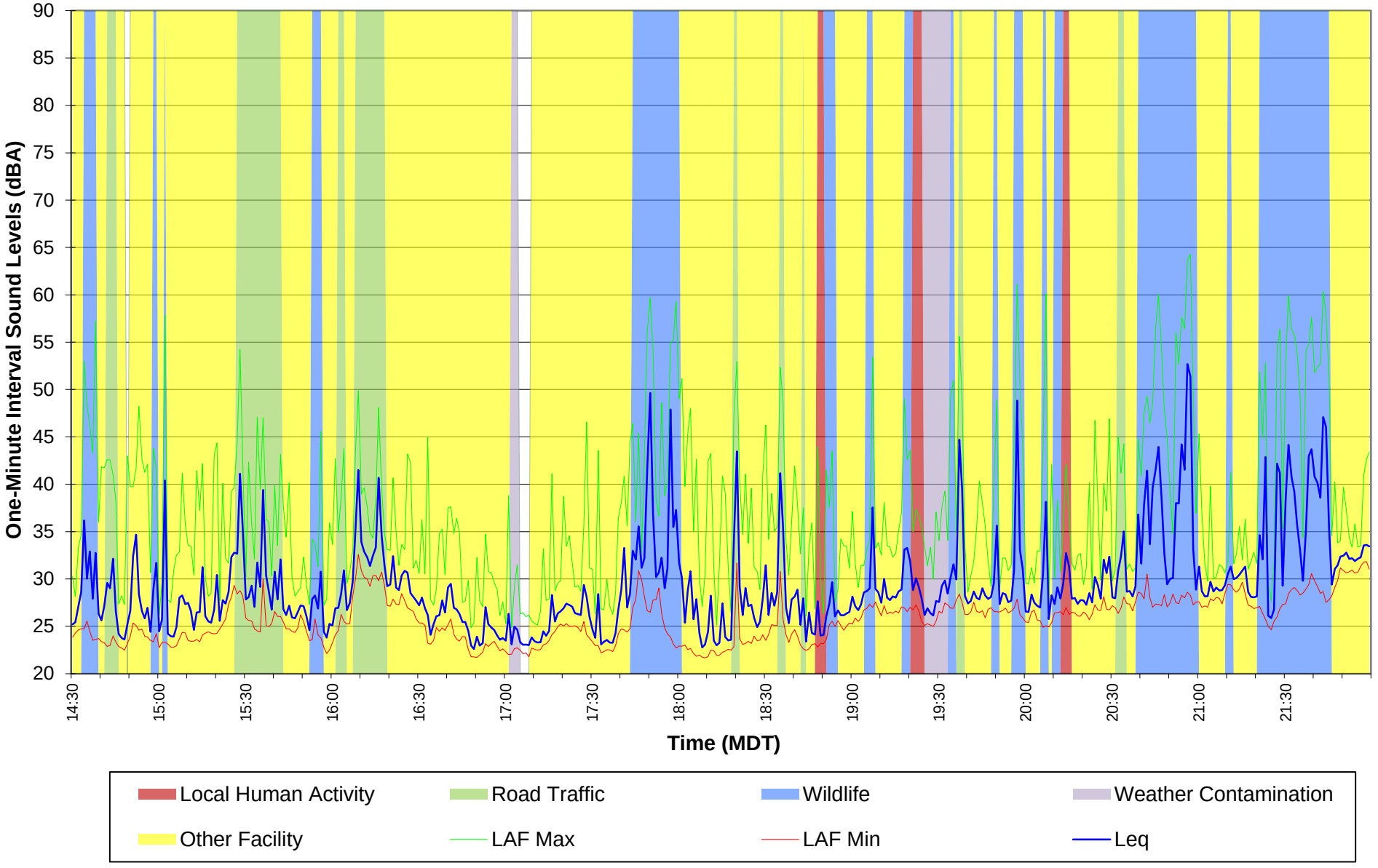


Figure G.7.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 14:30 - 21:59

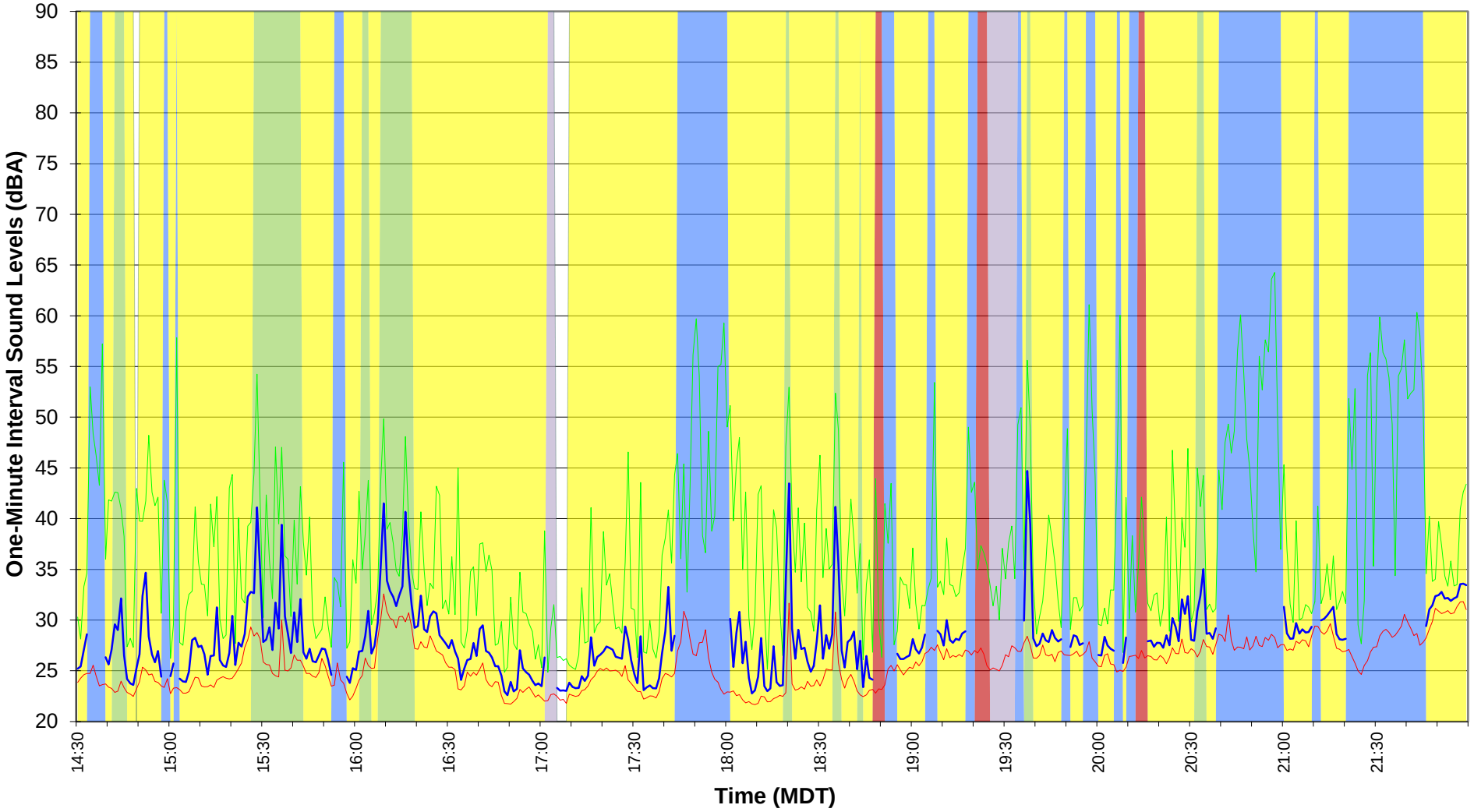


Figure G.7.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 14:30 - 21:59

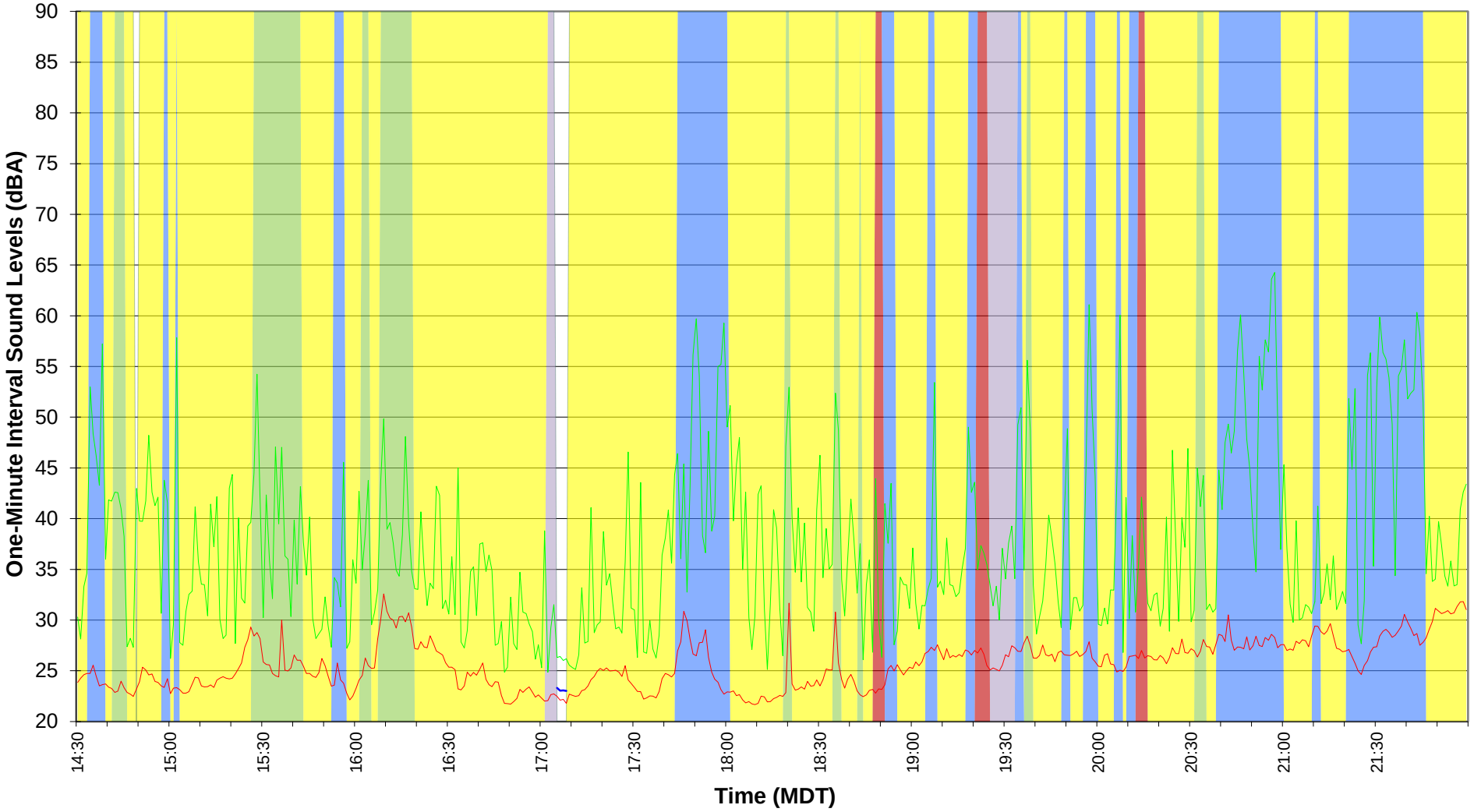


Figure G.8

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

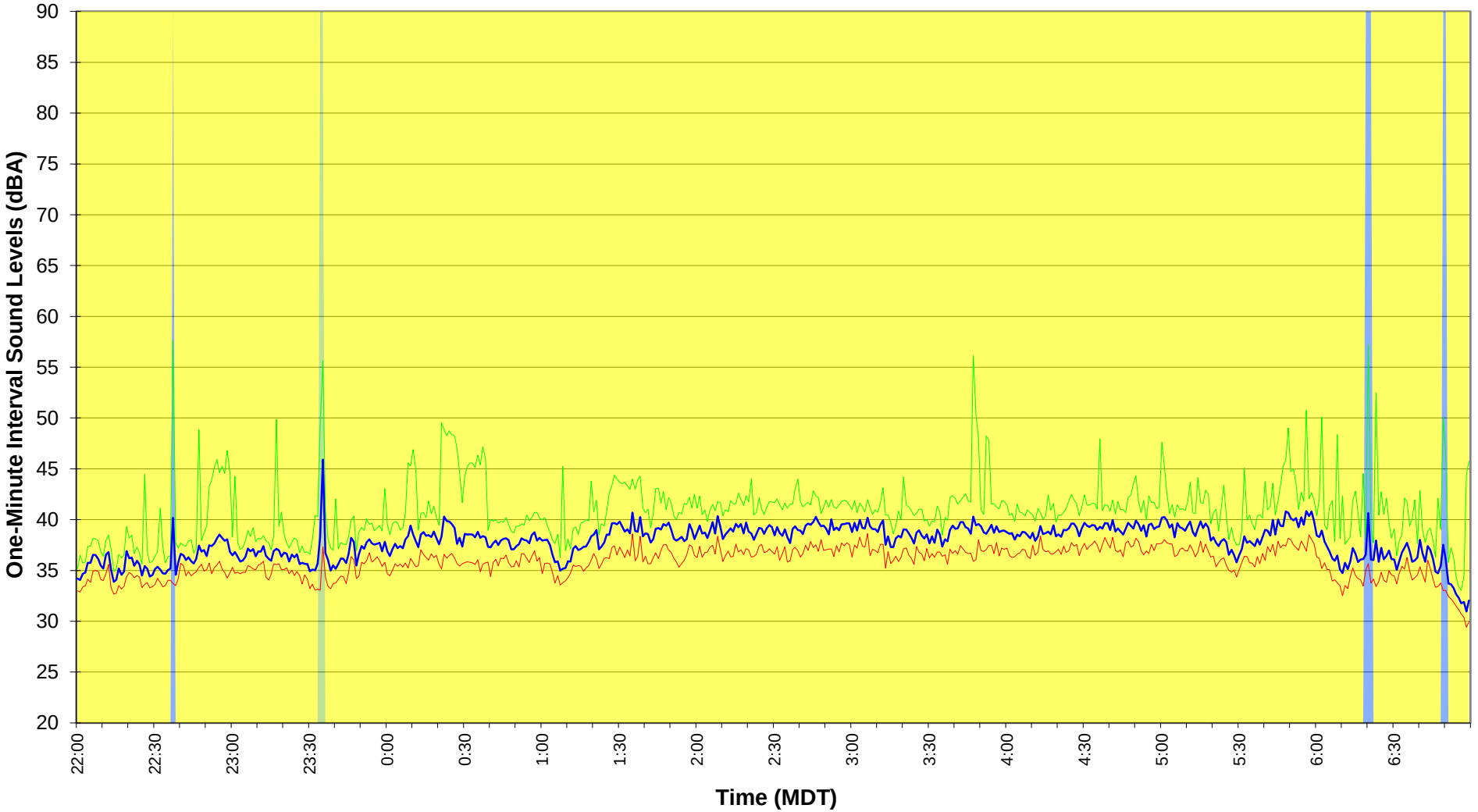


Figure G.8.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

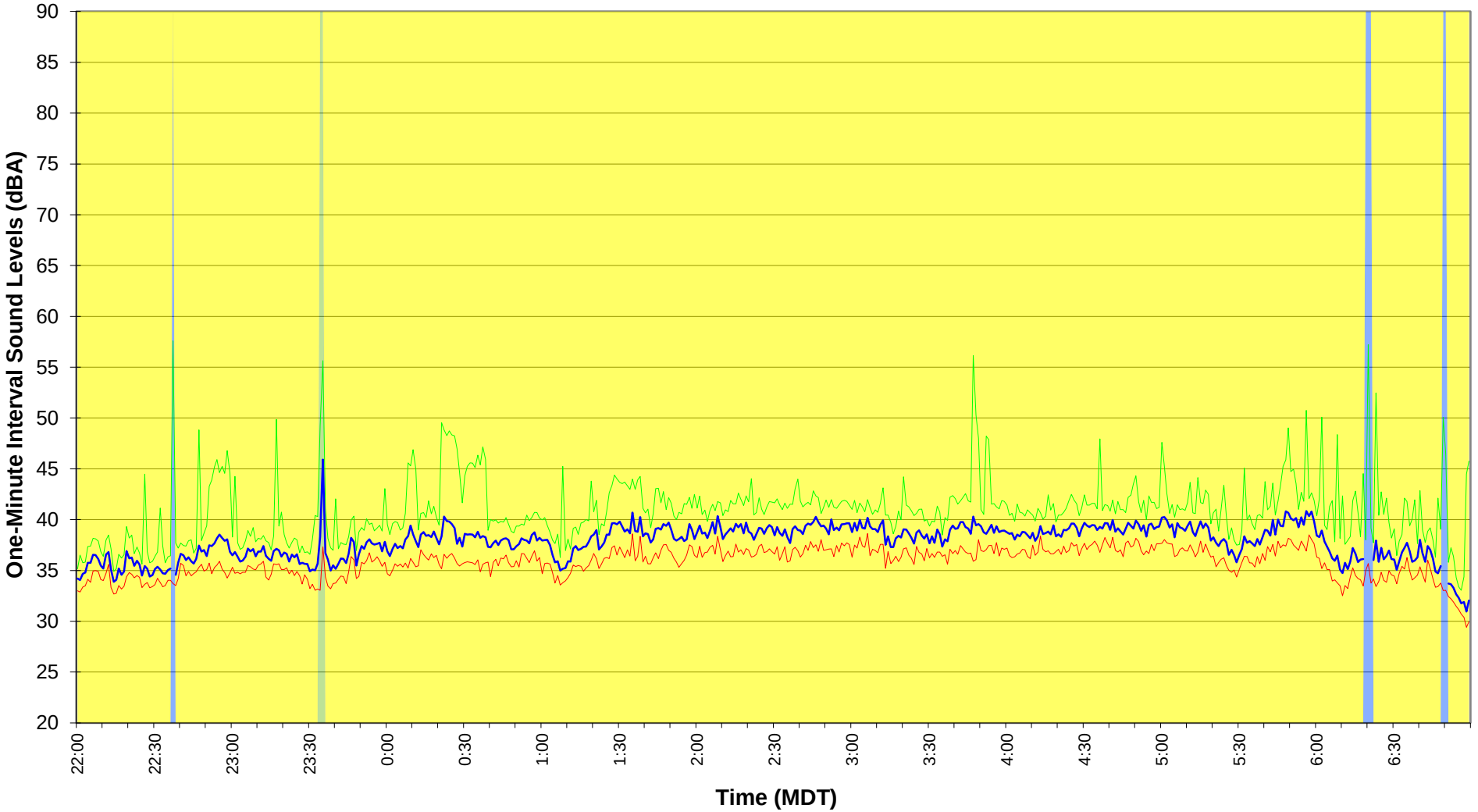


Figure G.8.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 27, 2012 - Jun. 28, 2012 22:00 - 06:59

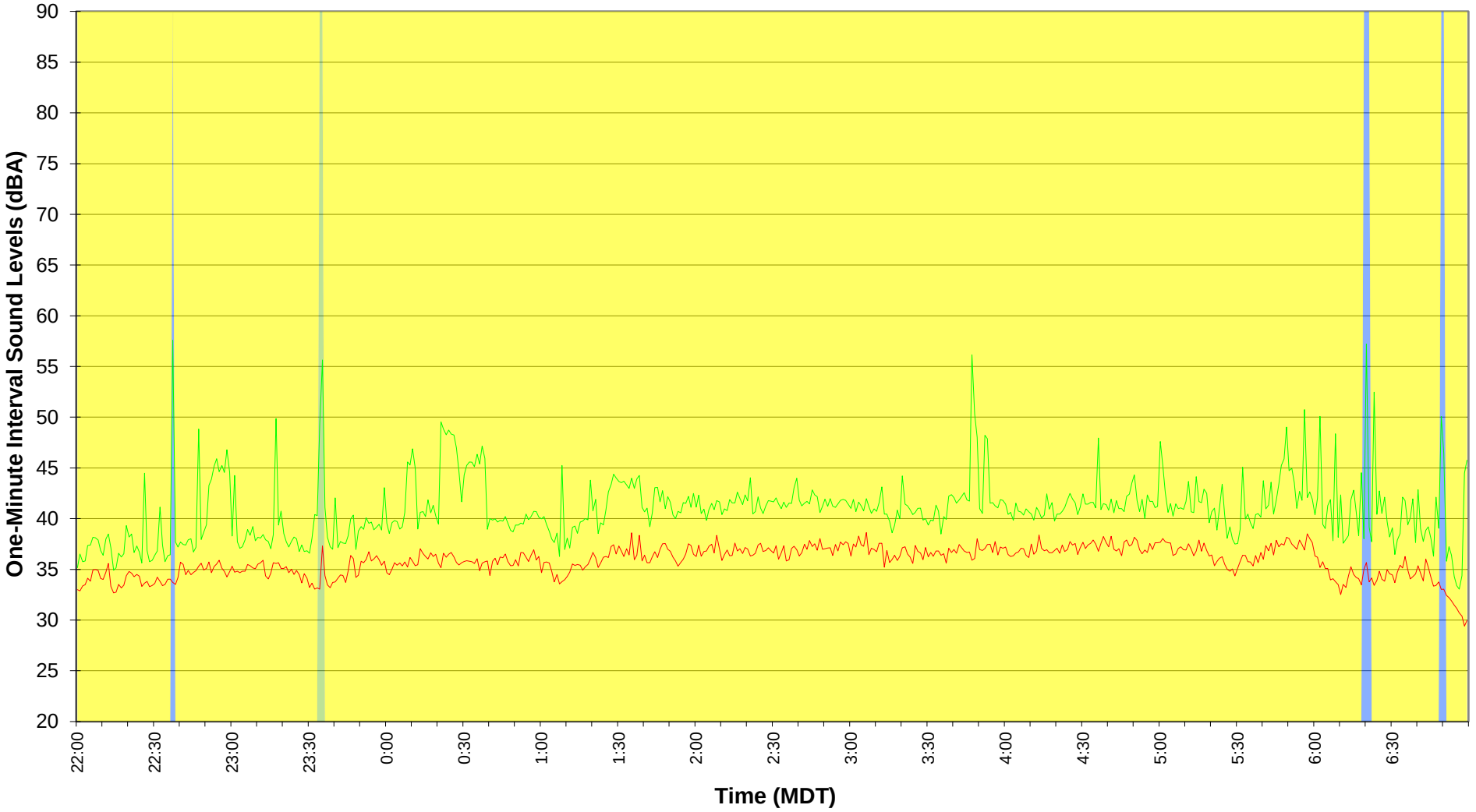


Figure G.9

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 28, 2012 07:00 - 14:29

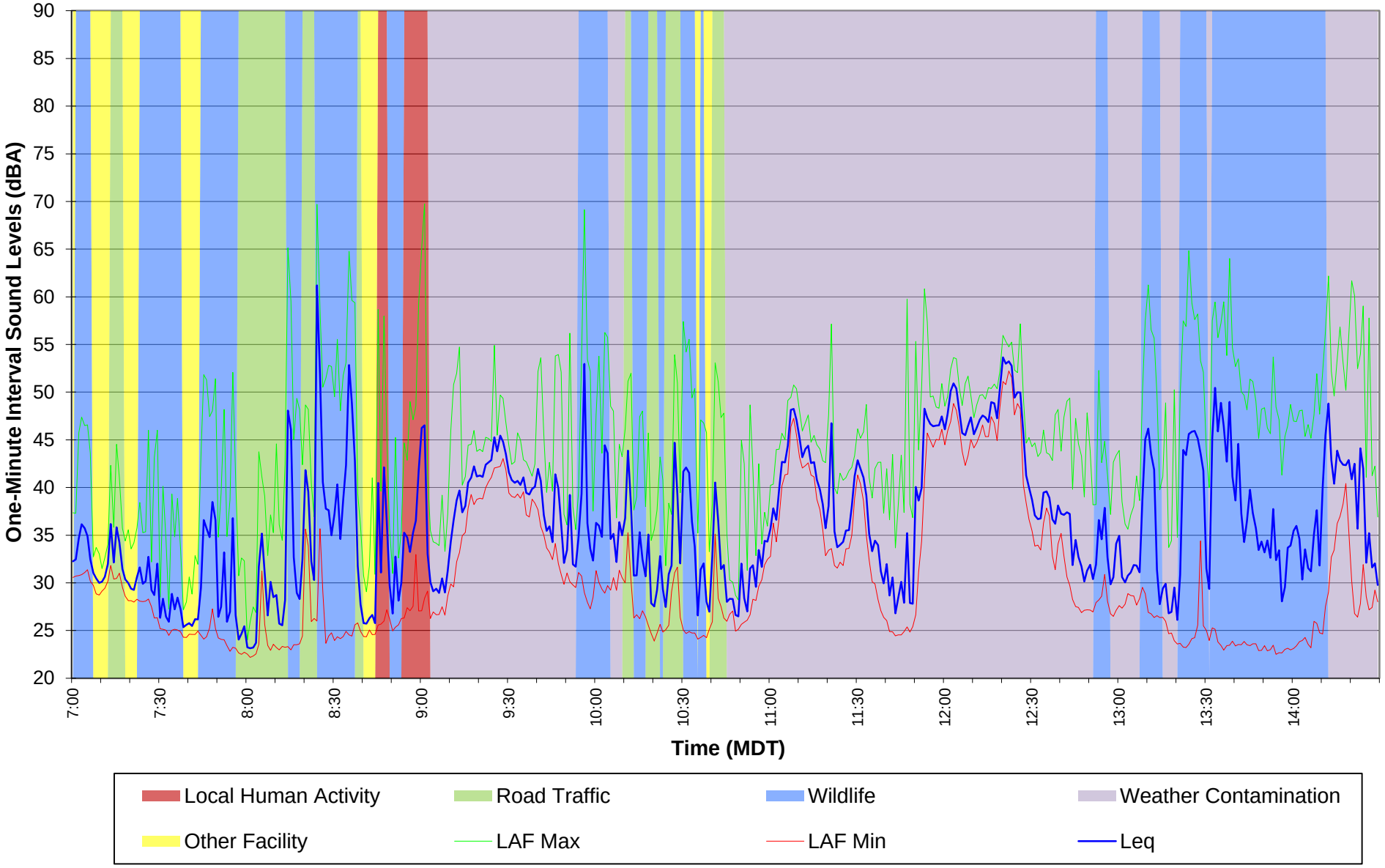


Figure G.9.Fac

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 28, 2012 07:00 - 14:29

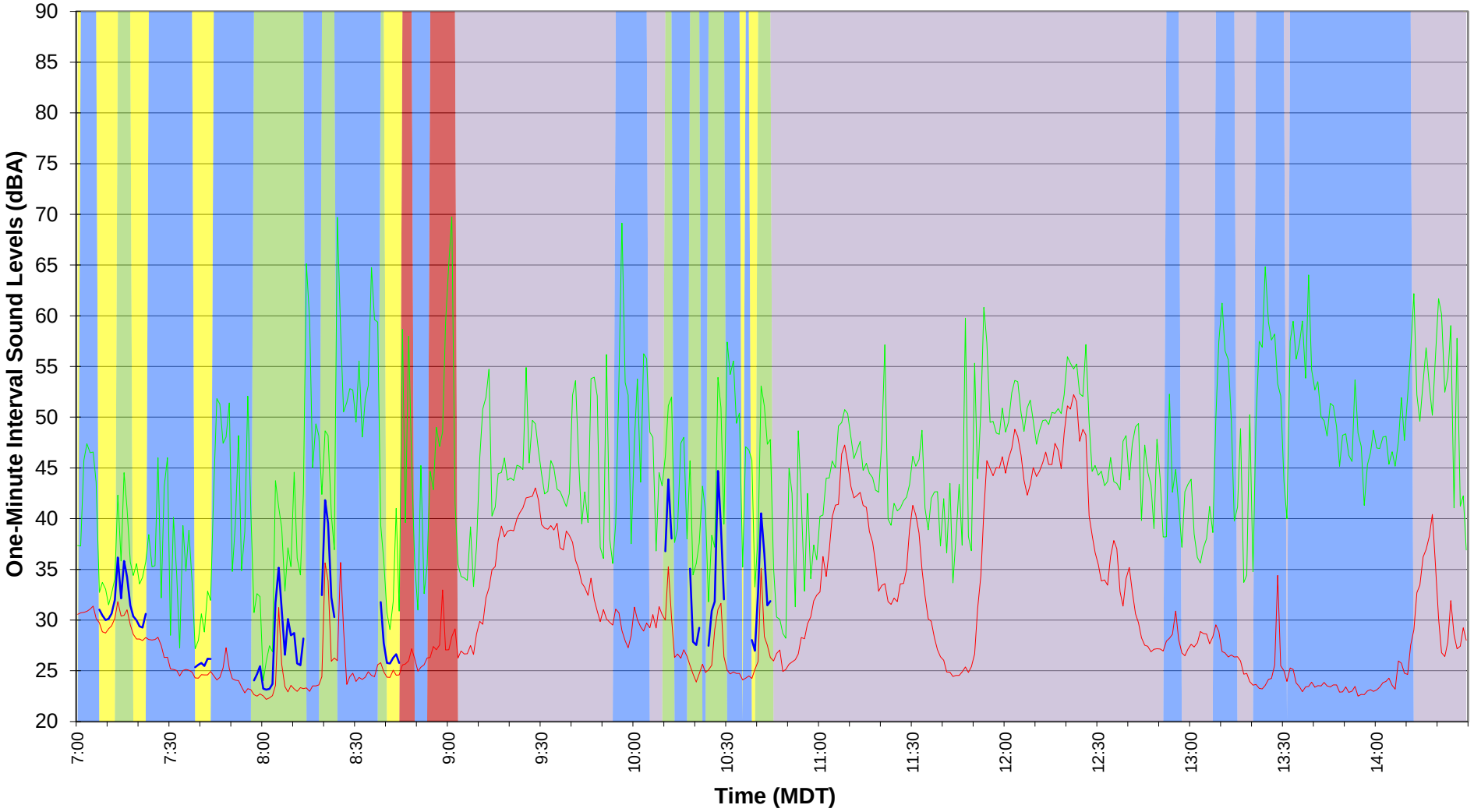
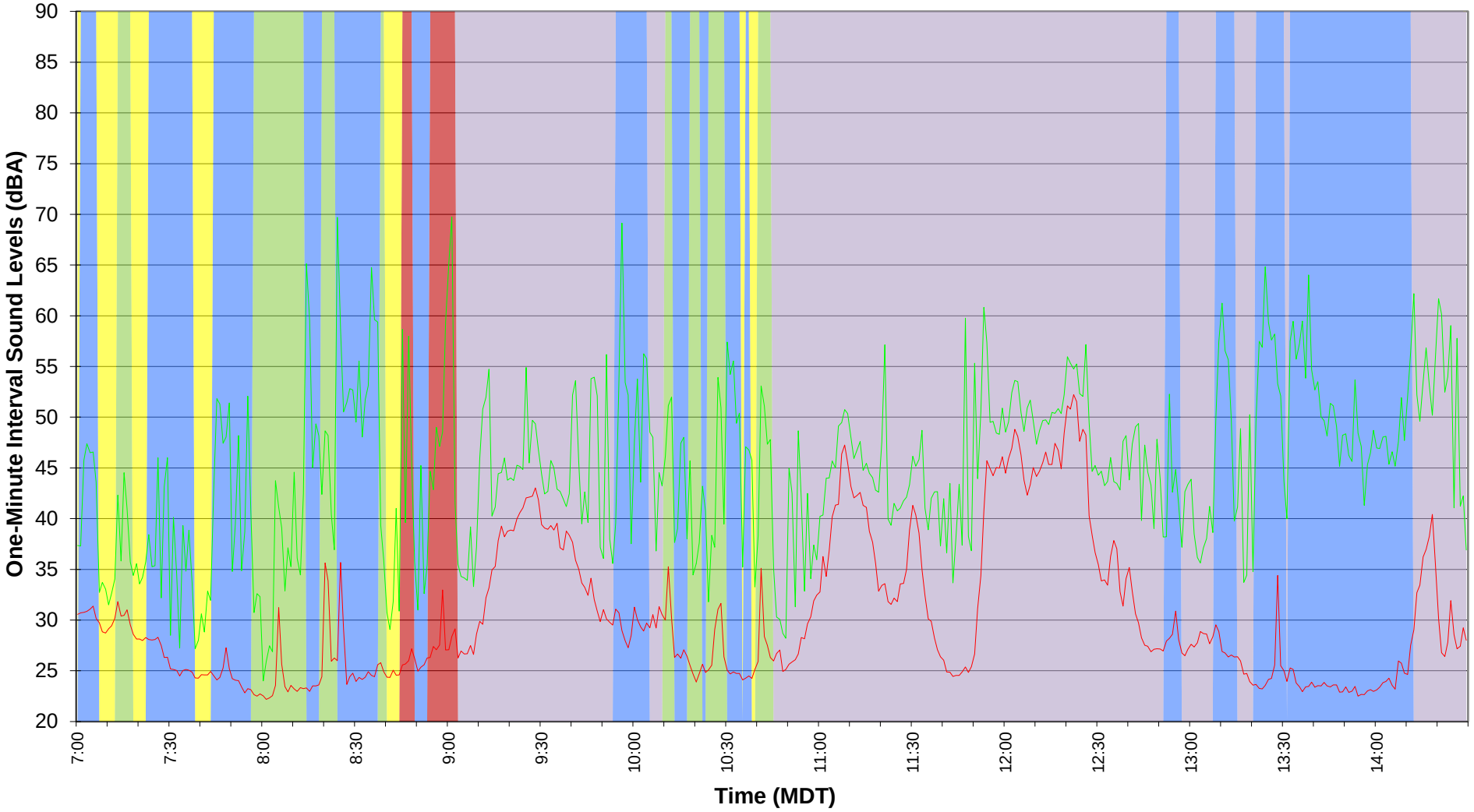


Figure G.9.Amb

YESAB Keno Hill Silver District Operations

R5 Noise Survey

Jun. 28, 2012 07:00 - 14:29



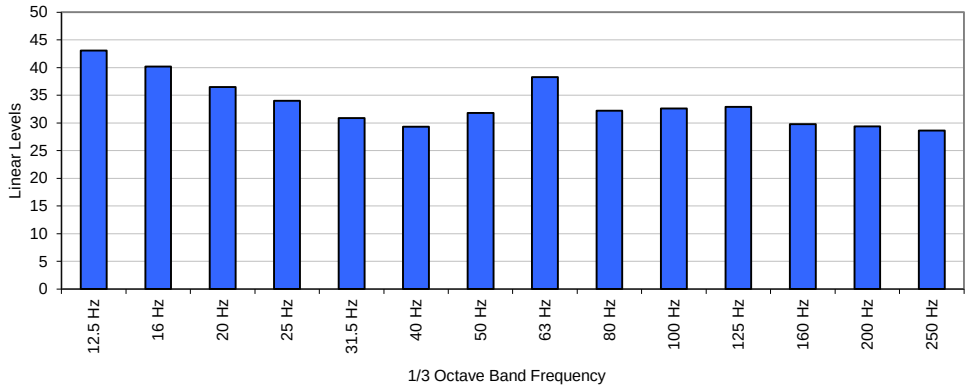
APPENDIX H

Low Frequency Analysis
Residences 1 to 5

Appendix I.1 - LFN Analysis Results

Day 1
Residence 1 (R01)
Data Start Time: 25/06/2012 06:54:00 PM
Duration: 2:49:00

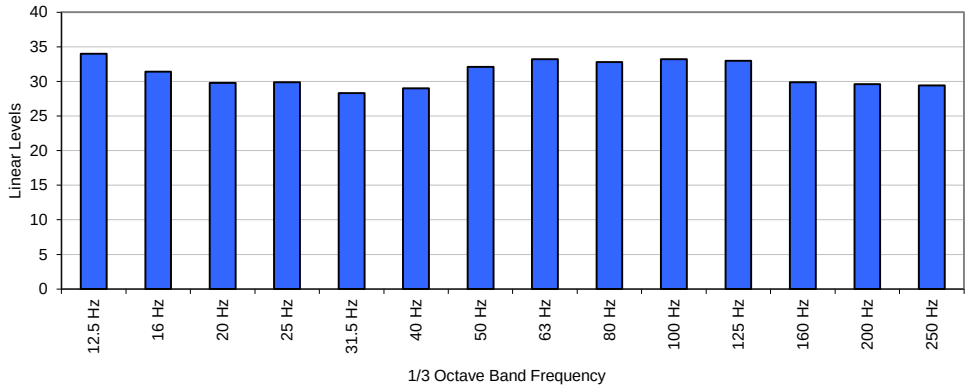
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
43.1	40.2	36.5	34	30.9	29.3	31.8	38.3	32.2	32.6	32.9	29.8	29.4	28.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-20.3	-16.5	-14	-10.7	-8.5	-5.3	1.6	12.1	9.7	13.5	16.8	16.4	18.5	20	40.4
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
31.9	31.7	30.3	29.6	27.9	27.3	30.5	37.5	31.7	32.3	32.7	29.7	29.4	28.6	45.6
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	5.2



Appendix I.1 - LFN Analysis Results

Night 1
Residence 1 (R01)
Data Start Time: 25/06/2012 10:00:00 PM
Duration: 7:50:00

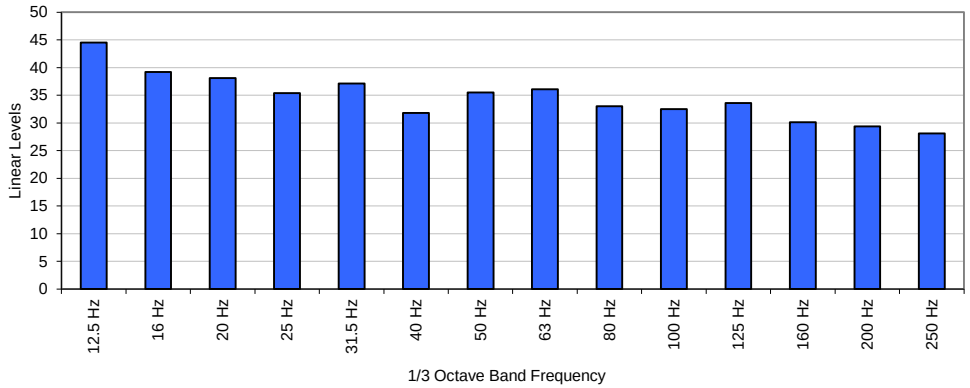
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
34	31.4	29.8	29.9	28.3	29	32.1	33.2	32.8	33.2	33	29.9	29.6	29.4	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-29.4	-25.3	-20.7	-14.8	-11.1	-5.6	1.9	7	10.3	14.1	16.9	16.5	18.7	20.8	40
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
22.8	22.9	23.6	25.5	25.3	27	30.8	32.4	32.3	32.9	32.8	29.8	29.6	29.4	44.2
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	4.2



Appendix I.1 - LFN Analysis Results

Day 2
Residence 1 (R01)
Data Start Time: 26/06/2012 07:00:00 AM
Duration: 11:38:00

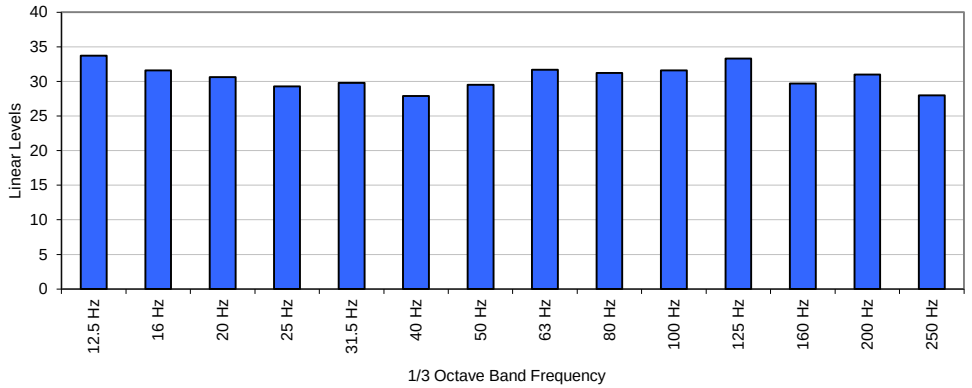
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
44.5	39.2	38.1	35.4	37.1	31.8	35.5	36.1	33	32.5	33.6	30.1	29.4	28.1	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-18.9	-17.5	-12.4	-9.3	-2.3	-2.8	5.3	9.9	10.5	13.4	17.5	16.7	18.5	19.5	39.4
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33.3	30.7	31.9	31	34.1	29.8	34.2	35.3	32.5	32.2	33.4	30	29.4	28.1	45.6
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.2



Appendix I.1 - LFN Analysis Results

Night 2
Residence 1 (R01)
Data Start Time: 26/06/2012 10:00:00 PM
Duration: 8:10:00

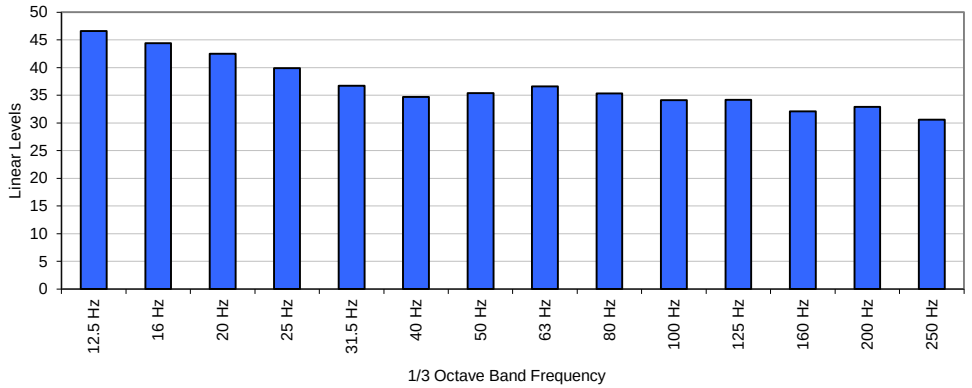
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33.7	31.6	30.6	29.3	29.8	27.9	29.5	31.7	31.2	31.6	33.3	29.7	31	28	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-29.7	-25.1	-19.9	-15.4	-9.6	-6.7	-0.7	5.5	8.7	12.5	17.2	16.3	20.1	19.4	38.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
22.5	23.1	24.4	24.9	26.8	25.9	28.2	30.9	30.7	31.3	33.1	29.6	31	28	43
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	4.4



Appendix I.1 - LFN Analysis Results

Day 3
Residence 1 (R01)
Data Start Time: 27/06/2012 07:00:00 AM
Duration: 13:09:00

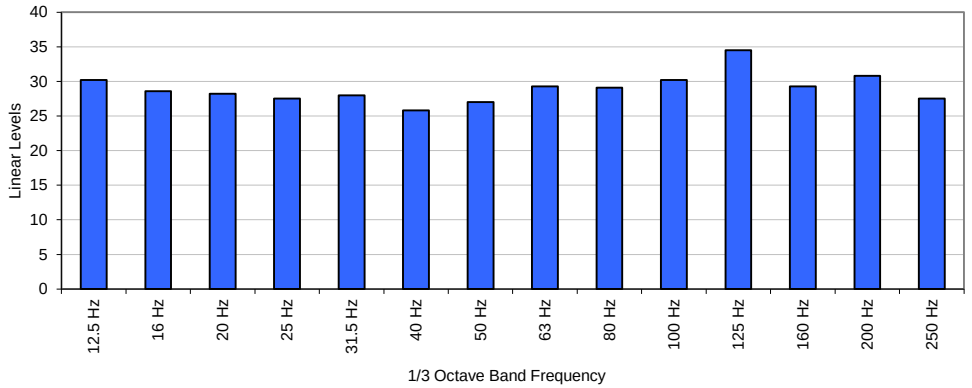
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
46.6	44.4	42.5	39.9	36.7	34.7	35.4	36.6	35.3	34.1	34.2	32.1	32.9	30.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-16.8	-12.3	-8	-4.8	-2.7	0.1	5.2	10.4	12.8	15	18.1	18.7	22	22	41.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.4	35.9	36.3	35.5	33.7	32.7	34.1	35.8	34.8	33.8	34	32	32.9	30.6	48
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.1



Appendix I.1 - LFN Analysis Results

Night 3
Residence 1 (R01)
Data Start Time: 27/06/2012 10:00:00 PM
Duration: 7:59:00

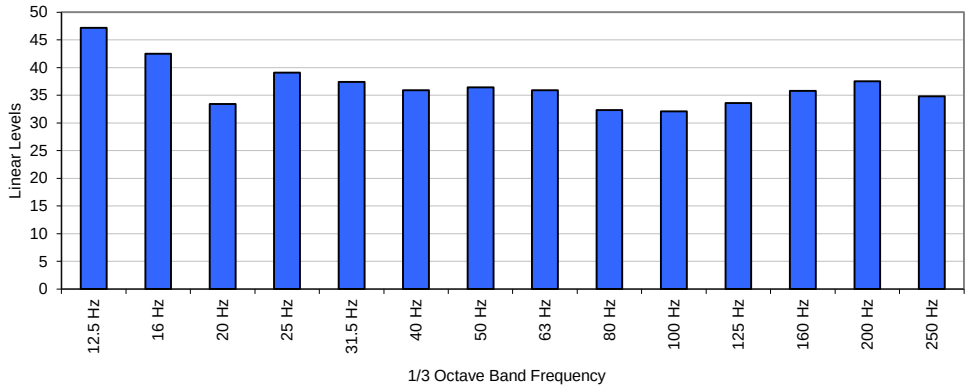
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
30.2	28.6	28.2	27.5	28	25.8	27	29.3	29.1	30.2	34.5	29.3	30.8	27.5	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-33.2	-28.1	-22.3	-17.2	-11.4	-8.8	-3.2	3.1	6.6	11.1	18.4	15.9	19.9	18.9	38.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
19	20.1	22	23.1	25	23.8	25.7	28.5	28.6	29.9	34.3	29.2	30.8	27.5	42.3
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	3.7



Appendix I.1 - LFN Analysis Results

Day 4
Residence 1 (R01)
Data Start Time: 28/06/2012 07:00:00 AM
Duration: 8:55:24

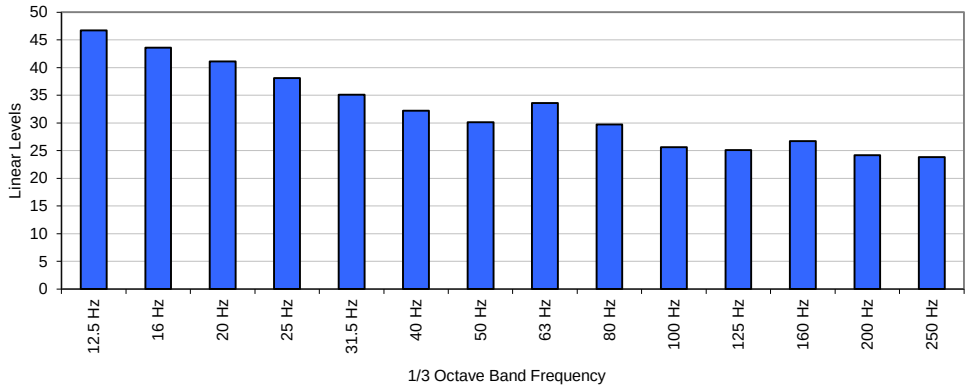
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
47.2	42.5	33.4	39.1	37.4	35.9	36.4	35.9	32.3	32.1	33.6	35.8	37.5	34.8	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-16.2	-14.2	-17.1	-5.6	-2	1.3	6.2	9.7	9.8	13	17.5	22.4	26.6	26.2	41
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
36	34	27.2	34.7	34.4	33.9	35.1	35.1	31.8	31.8	33.4	35.7	37.5	34.8	47.5
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.5



Appendix H.2 - LFN Analysis Results

Day 1
Residence 2 (R02)
Data Start Time: 25/06/2012 07:22:00 PM
Duration: 2:01:00

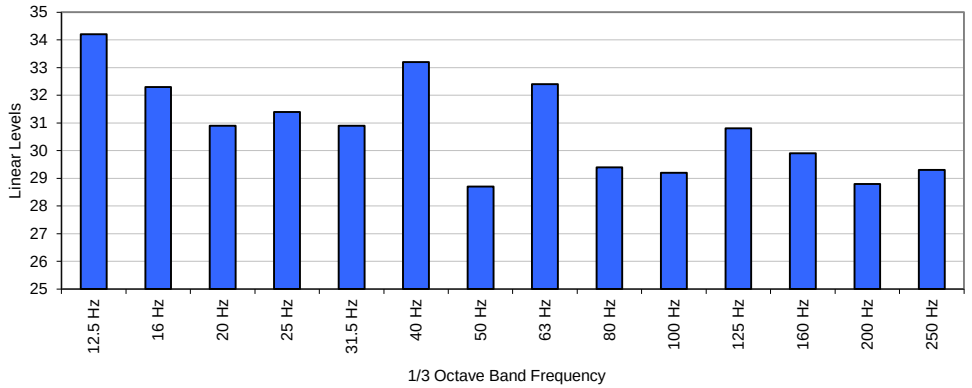
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
46.7	43.6	41.1	38.1	35.1	32.2	30.1	33.6	29.7	25.6	25.1	26.7	24.2	23.8	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-16.7	-13.1	-9.4	-6.6	-4.3	-2.4	-0.1	7.4	7.2	6.5	9	13.3	13.3	15.2	34.7
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.5	35.1	34.9	33.7	32.1	30.2	28.8	32.8	29.2	25.3	24.9	26.6	24.2	23.8	44.9
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	10.2



Appendix H.2 - LFN Analysis Results

Night 1
Residence 2 (R02)
Data Start Time: 25/06/2012 10:00:00 PM
Duration: 7:45:00

Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
34.2	32.3	30.9	31.4	30.9	33.2	28.7	32.4	29.4	29.2	30.8	29.9	28.8	29.3	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-29.2	-24.4	-19.6	-13.3	-8.5	-1.4	-1.5	6.2	6.9	10.1	14.7	16.5	17.9	20.7	36.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
23	23.8	24.7	27	27.9	31.2	27.4	31.6	28.9	28.9	30.6	29.8	28.8	29.3	42.3
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	5.4

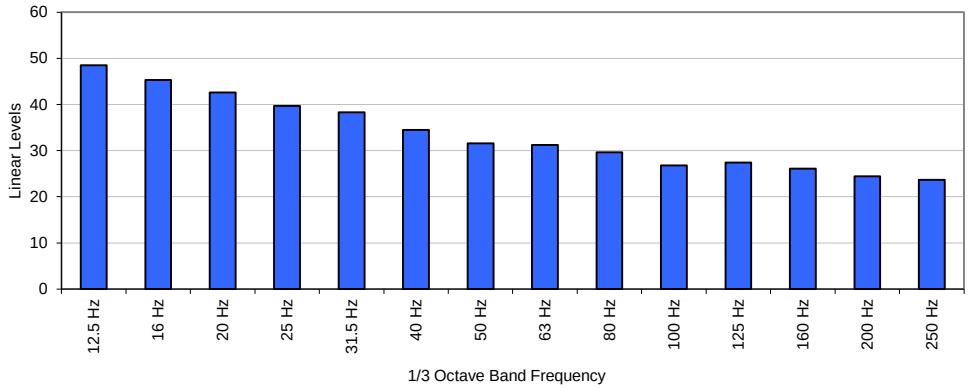


Results indicate that low frequency noise is not present

Appendix H.2 - LFN Analysis Results

Day 2
Residence 2 (R02)
Data Start Time: 26/06/2012 07:00:00 AM
Duration: 6:14:00

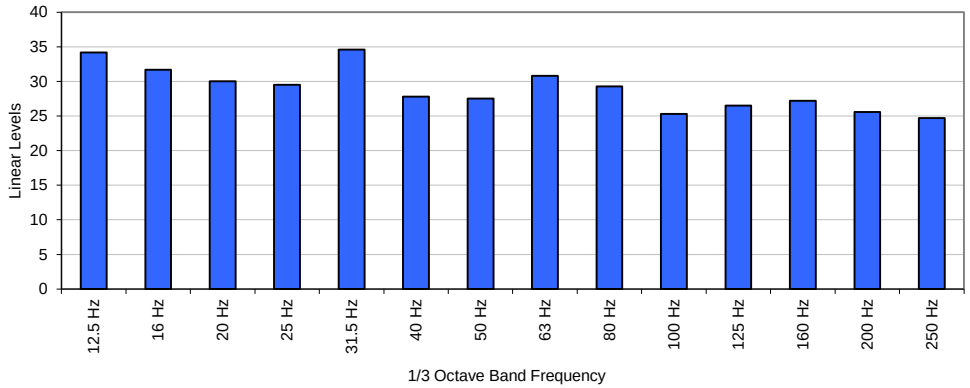
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
48.5	45.3	42.6	39.7	38.3	34.5	31.6	31.2	29.6	26.8	27.4	26.1	24.4	23.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-14.9	-11.4	-7.9	-5	-1.1	-0.1	1.4	5	7.1	7.7	11.3	12.7	13.5	15.1	34
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
37.3	36.8	36.4	35.3	35.3	32.5	30.3	30.4	29.1	26.5	27.2	26	24.4	23.7	46.1
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	12.1



Appendix H.2 - LFN Analysis Results

Night 2
Residence 2 (R02)
Data Start Time: 26/06/2012 10:00:00 PM
Duration: 7:05:00

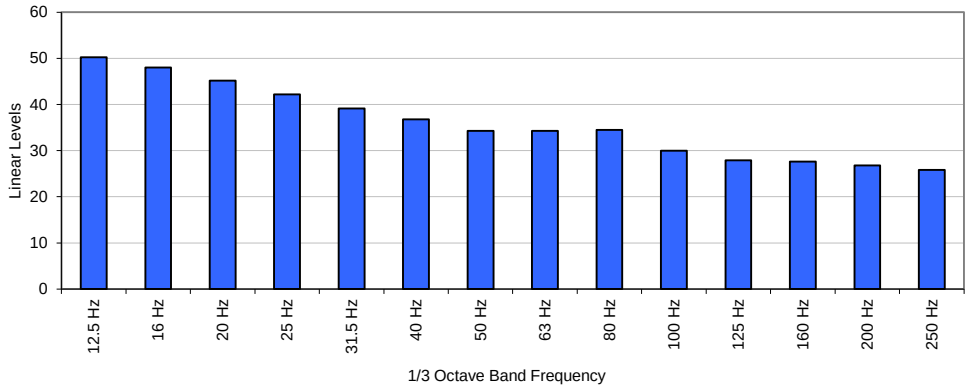
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
34.2	31.7	30	29.5	34.6	27.8	27.5	30.8	29.3	25.3	26.5	27.2	25.6	24.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-29.2	-25	-20.5	-15.2	-4.8	-6.8	-2.7	4.6	6.8	6.2	10.4	13.8	14.7	16.1	34.5
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
23	23.2	23.8	25.1	31.6	25.8	26.2	30	28.8	25	26.3	27.1	25.6	24.7	40.4
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	5.9



Appendix H.2 - LFN Analysis Results

Day 3
Residence 2 (R02)
Data Start Time: 27/06/2012 07:00:00 AM
Duration: 5:36:00

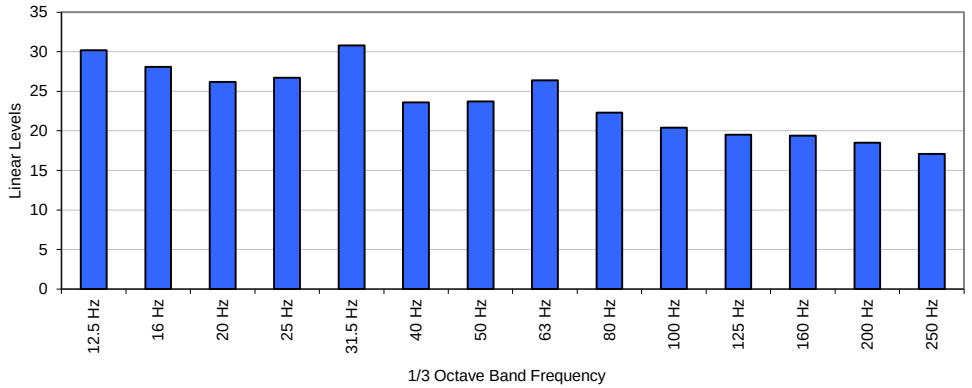
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
50.2	48	45.2	42.2	39.1	36.8	34.3	34.3	34.5	30	27.9	27.6	26.8	25.8	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-13.2	-8.7	-5.3	-2.5	-0.3	2.2	4.1	8.1	12	10.9	11.8	14.2	15.9	17.2	36.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
39	39.5	39	37.8	36.1	34.8	33	33.5	34	29.7	27.7	27.5	26.8	25.8	48.4
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	11.8



Appendix H.2 - LFN Analysis Results

Night 3
Residence 2 (R02)
Data Start Time: 27/06/2012 10:24:00 PM
Duration: 7:24:00

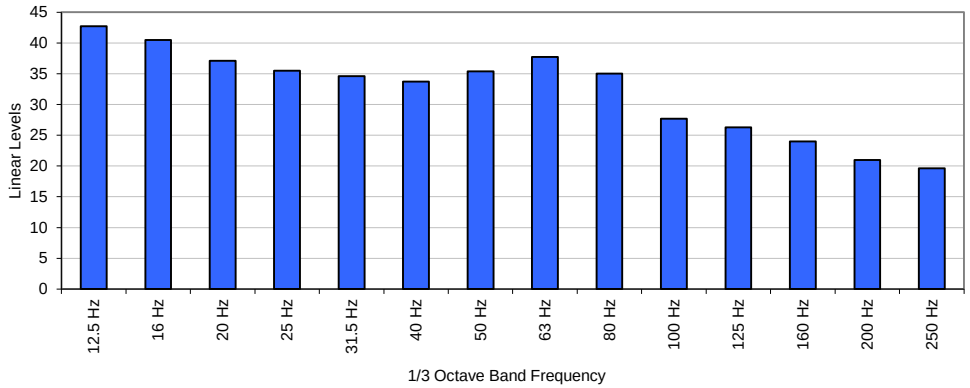
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
30.2	28.1	26.2	26.7	30.8	23.6	23.7	26.4	22.3	20.4	19.5	19.4	18.5	17.1	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-33.2	-28.6	-24.3	-18	-8.6	-11	-6.5	0.2	-0.2	1.3	3.4	6	7.6	8.5	28.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
19	19.6	20	22.3	27.8	21.6	22.4	25.6	21.8	20.1	19.3	19.3	18.5	17.1	35
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.1



Appendix H.2 - LFN Analysis Results

Day 4
Residence 2 (R02)
Data Start Time: 28/06/2012 07:00:00 AM
Duration: 4:02:00

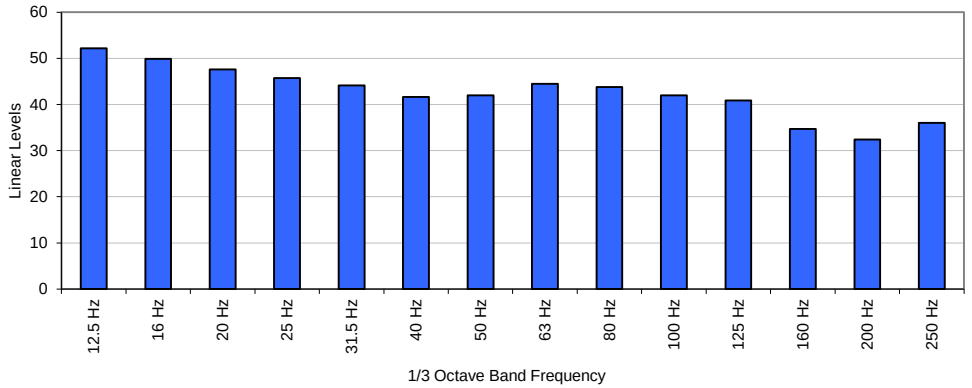
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
42.7	40.5	37.1	35.5	34.6	33.7	35.4	37.7	35	27.7	26.3	24	21	19.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-20.7	-16.2	-13.4	-9.2	-4.8	-0.9	5.2	11.5	12.5	8.6	10.2	10.6	10.1	11	28.5
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
31.5	32	30.9	31.1	31.6	31.7	34.1	36.9	34.5	27.4	26.1	23.9	21	19.6	43.8
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	15.3



Appendix H.3 - LFN Analysis Results

Day 1
Residence 3 (R03)
Data Start Time: 25/06/2012 04:03:00 PM
Duration: 2:13:00

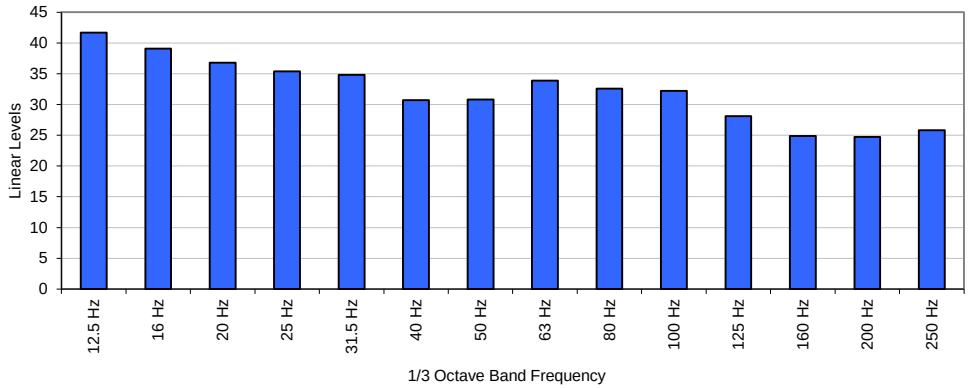
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
52.2	49.9	47.6	45.7	44.1	41.6	42	44.5	43.8	42	40.9	34.7	32.4	36	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-11.2	-6.8	-2.9	1	4.7	7	11.8	18.3	21.3	22.9	24.8	21.3	21.5	27.4	40
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
41	41.4	41.4	41.3	41.1	39.6	40.7	43.7	43.3	41.7	40.7	34.6	32.4	36	53.1
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	13.1



Appendix H.3 - LFN Analysis Results

Night 1
Residence 3 (R03)
Data Start Time: 25/06/2012 10:00:00 PM
Duration: 7:35:00

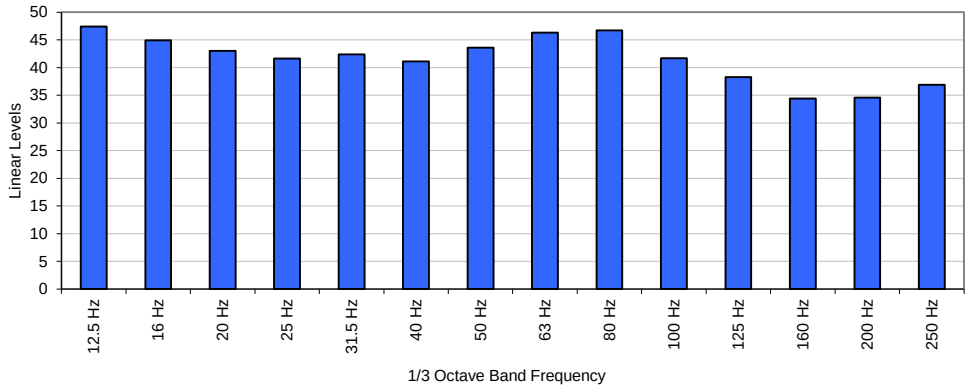
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
41.7	39.1	36.8	35.4	34.8	30.7	30.8	33.9	32.6	32.2	28.1	24.9	24.7	25.8	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-21.7	-17.6	-13.7	-9.3	-4.6	-3.9	0.6	7.7	10.1	13.1	12	11.5	13.8	17.2	35.7
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
30.5	30.6	30.6	31	31.8	28.7	29.5	33.1	32.1	31.9	27.9	24.8	24.7	25.8	43.5
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	7.8



Appendix H.3 - LFN Analysis Results

Day 2
Residence 3 (R03)
Data Start Time: 26/06/2012 07:13:00 AM
Duration: 8:49:00

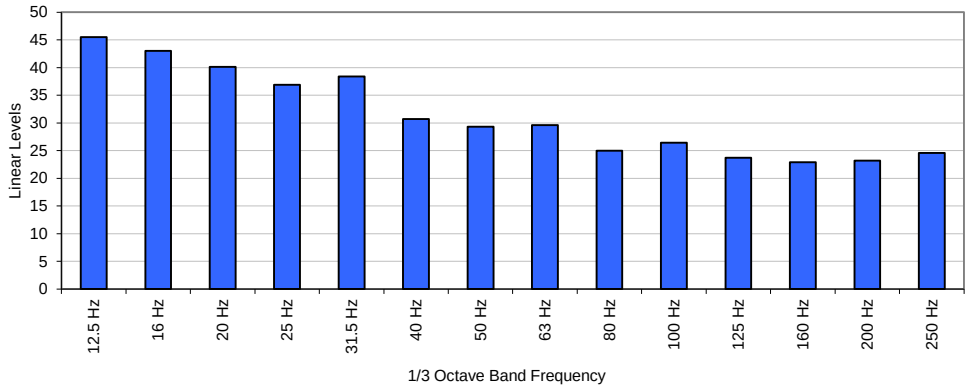
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
47.4	44.9	43	41.6	42.4	41.1	43.6	46.3	46.7	41.7	38.3	34.4	34.6	36.9	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-16	-11.8	-7.5	-3.1	3	6.5	13.4	20.1	24.2	22.6	22.2	21	23.7	28.3	41.3
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
36.2	36.4	36.8	37.2	39.4	39.1	42.3	45.5	46.2	41.4	38.1	34.3	34.6	36.9	52.7
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	11.4



Appendix H.3 - LFN Analysis Results

Night 2
Residence 3 (R03)
Data Start Time: 26/06/2012 10:03:00 PM
Duration: 4:23:00

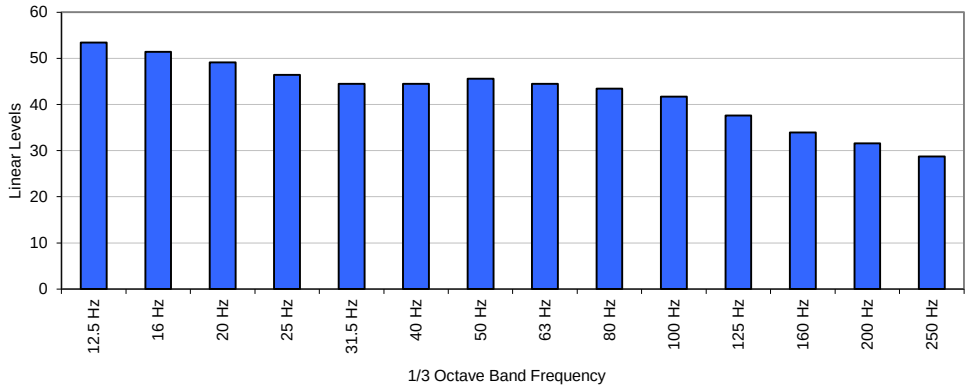
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
45.5	43	40.1	36.9	38.4	30.7	29.3	29.6	25	26.4	23.7	22.9	23.2	24.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-17.9	-13.7	-10.4	-7.8	-1	-3.9	-0.9	3.4	2.5	7.3	7.6	9.5	12.3	16	34.2
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
34.3	34.5	33.9	32.5	35.4	28.7	28	28.8	24.5	26.1	23.5	22.8	23.2	24.6	44.2
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	10



Appendix H.3 - LFN Analysis Results

Day 3
Residence 3 (R03)
Data Start Time: 27/06/2012 07:00:00 AM
Duration: 5:15:00

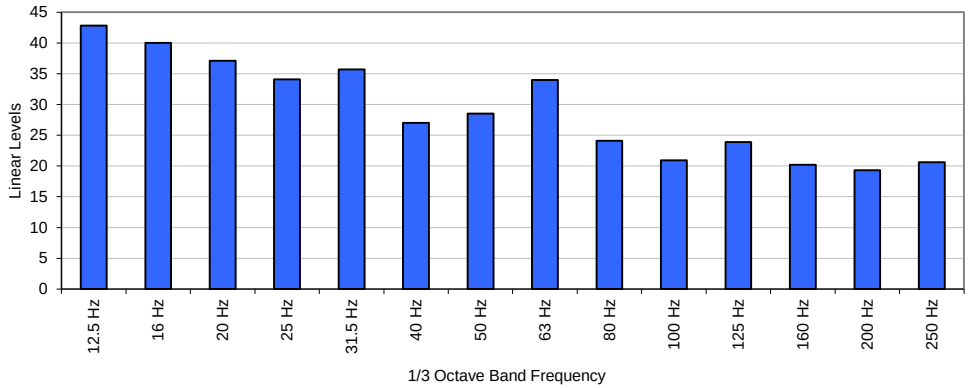
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
53.4	51.4	49.1	46.4	44.5	44.5	45.6	44.5	43.4	41.7	37.6	33.9	31.6	28.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-10	-5.3	-1.4	1.7	5.1	9.9	15.4	18.3	20.9	22.6	21.5	20.5	20.7	20.1	36.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
42.2	42.9	42.9	42	41.5	42.5	44.3	43.7	42.9	41.4	37.4	33.8	31.6	28.7	53.7
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	16.8



Appendix H.3 - LFN Analysis Results

Night 3
Residence 3 (R03)
Data Start Time: 27/06/2012 10:29:00 PM
Duration: 2:03:00

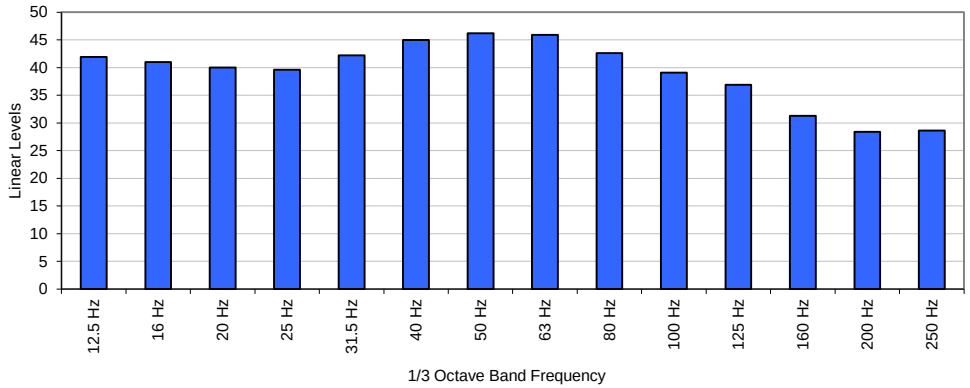
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
42.8	40	37.1	34.1	35.7	27	28.5	34	24.1	20.9	23.9	20.2	19.3	20.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-20.6	-16.7	-13.4	-10.6	-3.7	-7.6	-1.7	7.8	1.6	1.8	7.8	6.8	8.4	12	27.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
31.6	31.5	30.9	29.7	32.7	25	27.2	33.2	23.6	20.6	23.7	20.1	19.3	20.6	41.7
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	14.1



Appendix H.3 - LFN Analysis Results

Day 4
Residence 3 (R03)
Data Start Time: 28/06/2012 07:05:00 AM
Duration: 6:12:00

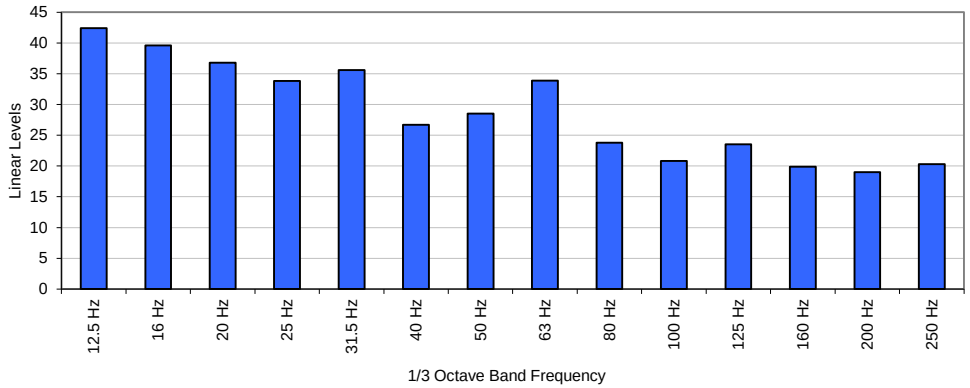
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
41.9	41	40	39.6	42.2	45	46.2	45.9	42.6	39.1	36.9	31.3	28.4	28.6	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-21.5	-15.7	-10.5	-5.1	2.8	10.4	16	19.7	20.1	20	20.8	17.9	17.5	20	33.8
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
30.7	32.5	33.8	35.2	39.2	43	44.9	45.1	42.1	38.8	36.7	31.2	28.4	28.6	51.3
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	17.5



Appendix H.3 - LFN Analysis Results

Night 4
Residence 3 (R03)
Data Start Time: 27/06/2012 10:29:00 PM
Duration: 2:15:00

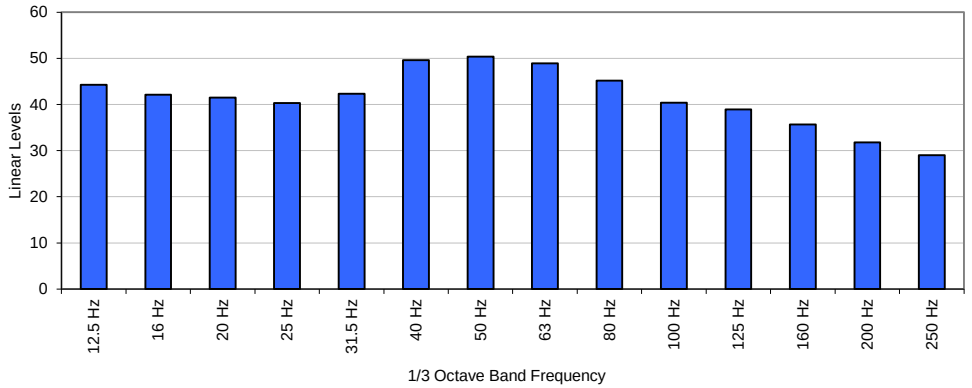
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
42.4	39.6	36.8	33.8	35.6	26.7	28.5	33.9	23.8	20.8	23.5	19.9	19	20.3	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-21	-17.1	-13.7	-10.9	-3.8	-7.9	-1.7	7.7	1.3	1.7	7.4	6.5	8.1	11.7	27.7
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
31.2	31.1	30.6	29.4	32.6	24.7	27.2	33.1	23.3	20.5	23.3	19.8	19	20.3	41.4
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	13.7



Appendix H.3 - LFN Analysis Results

Day 5
Residence 3 (R03)
Data Start Time: 29/06/2012 07:00:00 AM
Duration: 1:14:00

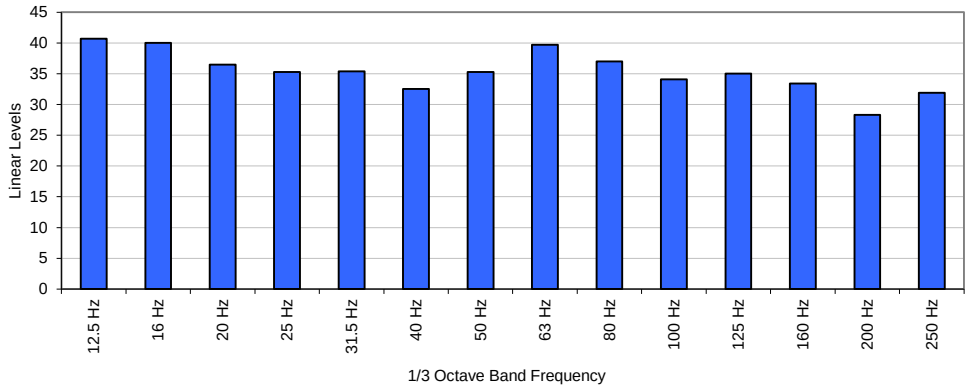
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
44.3	42.1	41.5	40.3	42.3	49.6	50.4	48.9	45.2	40.4	38.9	35.7	31.8	29	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-19.1	-14.6	-9	-4.4	2.9	15	20.2	22.7	22.7	21.3	22.8	22.3	20.9	20.4	37.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33.1	33.6	35.3	35.9	39.3	47.6	49.1	48.1	44.7	40.1	38.7	35.6	31.8	29	54.5
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	16.6



Appendix H.4 - LFN Analysis Results

Day 1
Residence 4 (R04)
Data Start Time: 25/06/2012 05:15:00 PM
Duration: 1:39:00

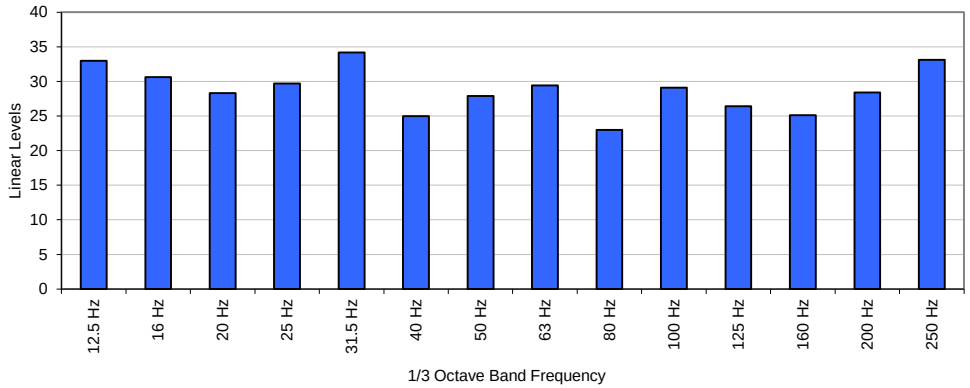
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
40.7	40	36.5	35.3	35.4	32.5	35.3	39.7	37	34.1	35	33.4	28.3	31.9	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-22.7	-16.7	-14	-9.4	-4	-2.1	5.1	13.5	14.5	15	18.9	20	17.4	23.3	38.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
29.5	31.5	30.3	30.9	32.4	30.5	34	38.9	36.5	33.8	34.8	33.3	28.3	31.9	46.5
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	7.9



Appendix H.4 - LFN Analysis Results

Night 1
Residence 4 (R04)
Data Start Time: 25/06/2012 10:00:00 PM
Duration: 6:41:00

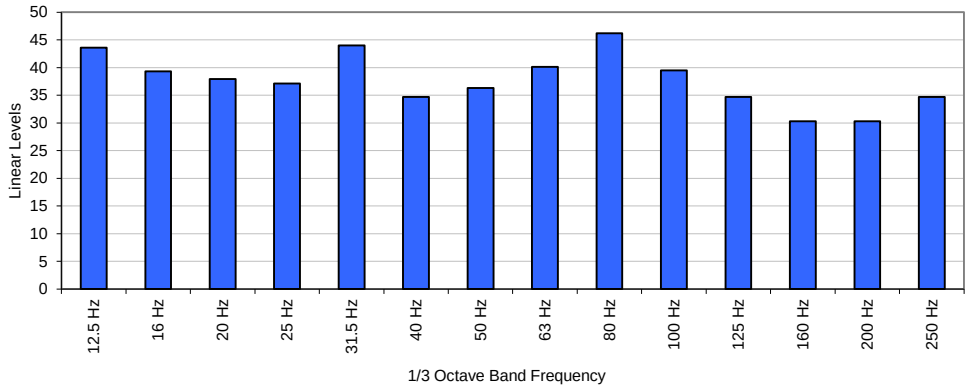
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33	30.6	28.3	29.7	34.2	25	27.9	29.4	23	29.1	26.4	25.1	28.4	33.1	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-30.4	-26.1	-22.2	-15	-5.2	-9.6	-2.3	3.2	0.5	10	10.3	11.7	17.5	24.5	36.2
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
21.8	22.1	22.1	25.3	31.2	23	26.6	28.6	22.5	28.8	26.2	25	28.4	33.1	41.9
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	5.7



Appendix H.4 - LFN Analysis Results

Day 2
Residence 4 (R04)
Data Start Time: 26/06/2012 07:00:00 AM
Duration: 6:42:00

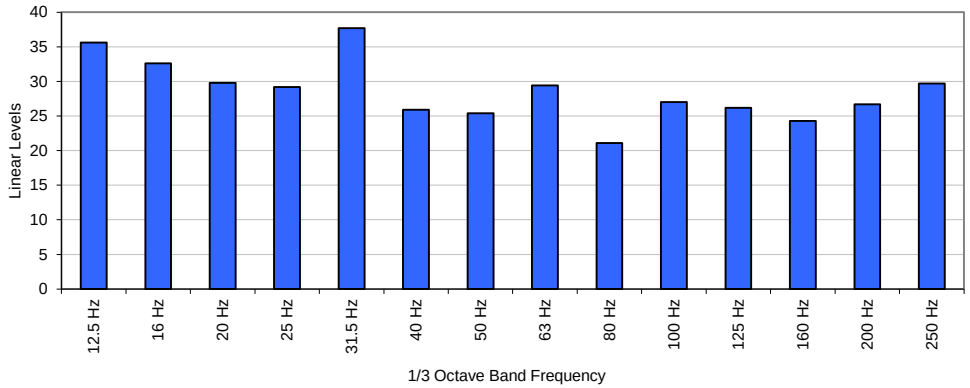
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
43.6	39.3	37.9	37.1	44	34.7	36.3	40.1	46.2	39.5	34.7	30.3	30.3	34.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-19.8	-17.4	-12.6	-7.6	4.6	0.1	6.1	13.9	23.7	20.4	18.6	16.9	19.4	26.1	39.3
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
32.4	30.8	31.7	32.7	41	32.7	35	39.3	45.7	39.2	34.5	30.2	30.3	34.7	50
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	10.7



Appendix H.4 - LFN Analysis Results

Night 2
Residence 4 (R04)
Data Start Time: 26/06/2012 10:08:00 PM
Duration: 3:45:00

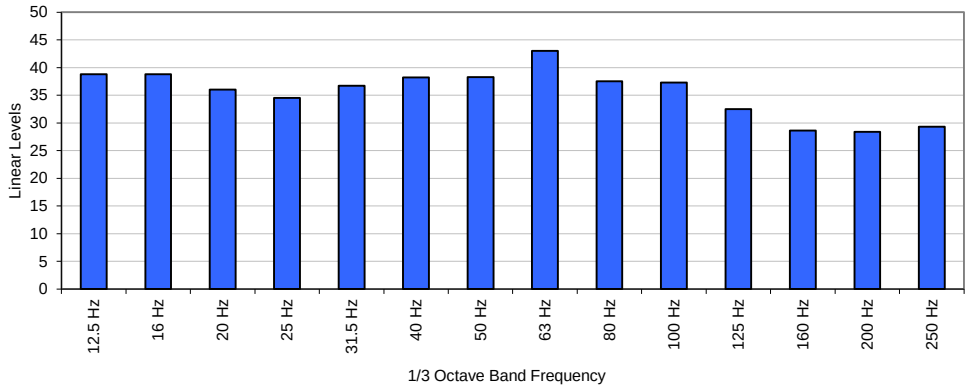
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.6	32.6	29.8	29.2	37.7	25.9	25.4	29.4	21.1	27	26.2	24.3	26.7	29.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-27.8	-24.1	-20.7	-15.5	-1.7	-8.7	-4.8	3.2	-1.4	7.9	10.1	10.9	15.8	21.1	35.5
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
24.4	24.1	23.6	24.8	34.7	23.9	24.1	28.6	20.6	26.7	26	24.2	26.7	29.7	41.6
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.1



Appendix H.4 - LFN Analysis Results

Day 3
Residence 4 (R04)
Data Start Time: 27/06/2012 07:00:00 AM
Duration: 3:34:00

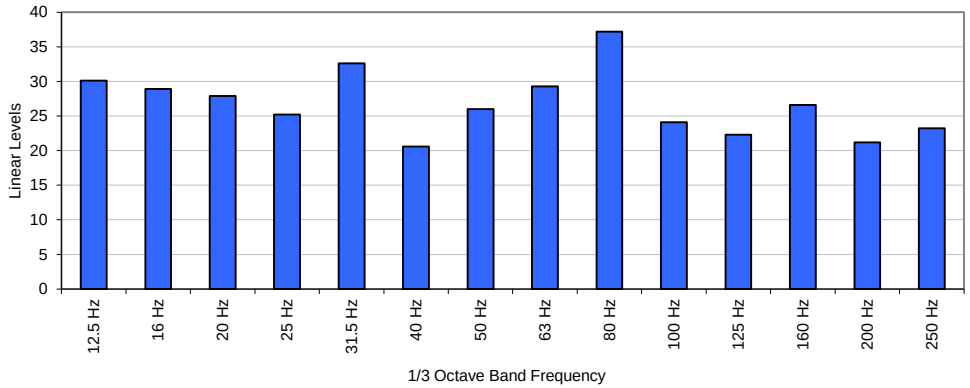
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
38.8	38.8	36	34.5	36.7	38.2	38.3	43	37.5	37.3	32.5	28.6	28.4	29.3	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-24.6	-17.9	-14.5	-10.2	-2.7	3.6	8.1	16.8	15	18.2	16.4	15.2	17.5	20.7	36.5
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
27.6	30.3	29.8	30.1	33.7	36.2	37	42.2	37	37	32.3	28.5	28.4	29.3	47.1
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	10.6



Appendix H.4 - LFN Analysis Results

Night 3
Residence 4 (R04)
Data Start Time: 27/06/2012 10:18:00 PM
Duration: 3:49:00

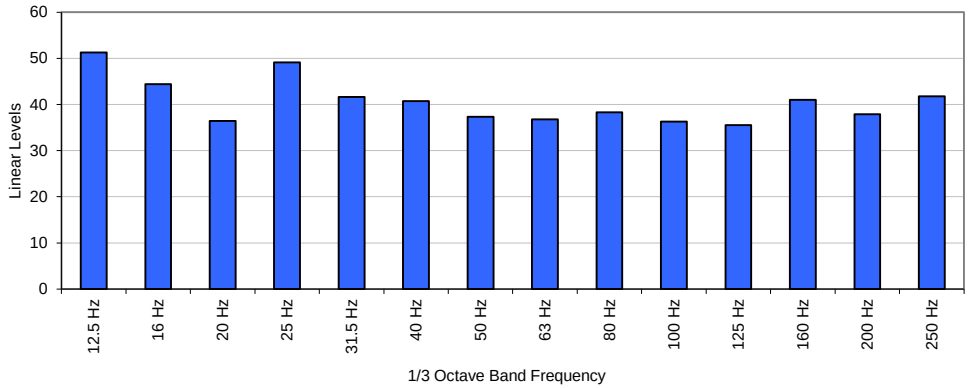
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
30.1	28.9	27.9	25.2	32.6	20.6	26	29.3	37.2	24.1	22.3	26.6	21.2	23.2	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-33.3	-27.8	-22.6	-19.5	-6.8	-14	-4.2	3.1	14.7	5	6.2	13.2	10.3	14.6	32.4
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
18.9	20.4	21.7	20.8	29.6	18.6	24.7	28.5	36.7	23.8	22.1	26.5	21.2	23.2	40.6
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	8.2



Appendix H.4 - LFN Analysis Results

Day 4
Residence 4 (R04)
Data Start Time: 28/06/2012 07:04:00 AM
Duration: 7:29:00

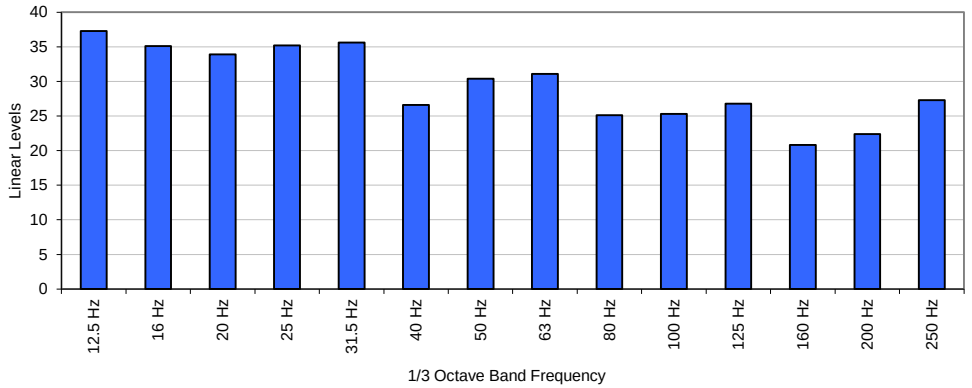
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
51.3	44.4	36.4	49.1	41.6	40.7	37.3	36.8	38.3	36.3	35.5	41	37.9	41.8	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-12.1	-12.3	-14.1	4.4	2.2	6.1	7.1	10.6	15.8	17.2	19.4	27.6	27	33.2	44.1
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
40.1	35.9	30.2	44.7	38.6	38.7	36	36	37.8	36	35.3	40.9	37.9	41.8	51.8
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	7.7



Appendix H.4 - LFN Analysis Results

Night 4
Residence 4 (R04)
Data Start Time: 28/06/2012 10:03:00 PM
Duration: 2:02:00

Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
37.3	35.1	33.9	35.2	35.6	26.6	30.4	31.1	25.1	25.3	26.8	20.8	22.4	27.3	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-26.1	-21.6	-16.6	-9.5	-3.8	-8	0.2	4.9	2.6	6.2	10.7	7.4	11.5	18.7	31.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
26.1	26.6	27.7	30.8	32.6	24.6	29.1	30.3	24.6	25	26.6	20.7	22.4	27.3	40.7
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	8.8

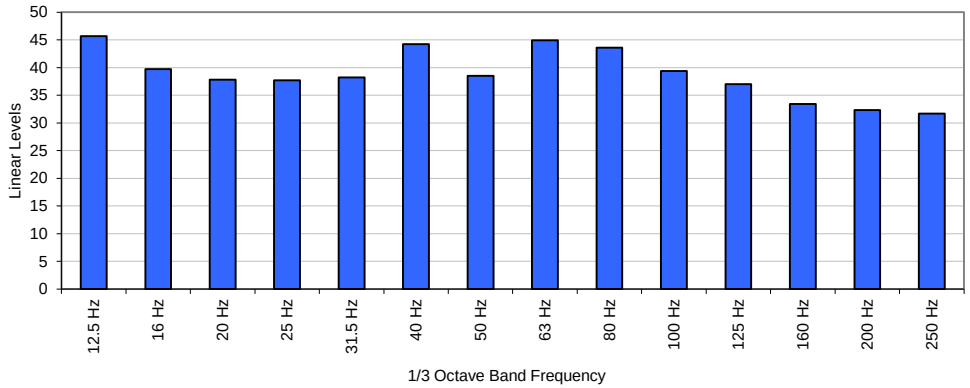


Appendix H.4 - LFN Analysis Results

Day 5
Residence 4 (R04)
Data Start Time: 29/06/2012 07:00:00 AM
Duration: 1:17:00

Linear 1/3 Octave Bands Leq (dBZ)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
45.7	39.7	37.8	37.7	38.2	44.2	38.5	44.9	43.6	39.4	37	33.4	32.3	31.7
A-weighted 1/3 Octave Bands Leq (dBA)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
-17.7	-17	-12.7	-7	-1.2	9.6	8.3	18.7	21.1	20.3	20.9	20	21.4	23.1
C-weighted 1/3 Octave Bands Leq (dBC)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
34.5	31.2	31.6	33.3	35.2	42.2	37.2	44.1	43.1	39.1	36.8	33.3	32.3	31.7
Tonal Component Detected													
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

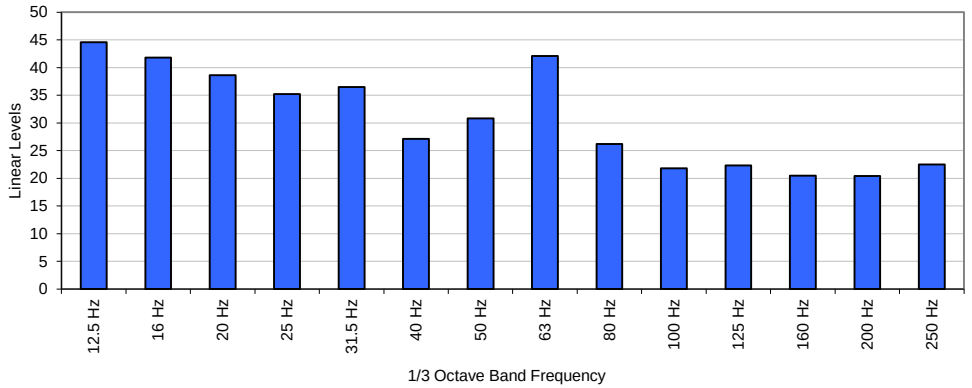
LAeq (dBA)
42
LCeq(dBC)
50.7
dBC-dBA
8.7



Appendix H.5 - LFN Analysis Results

Day 1
Residence 5 (R05)
Data Start Time: 26/06/2012 06:32:00 PM
Duration: 1:16:00

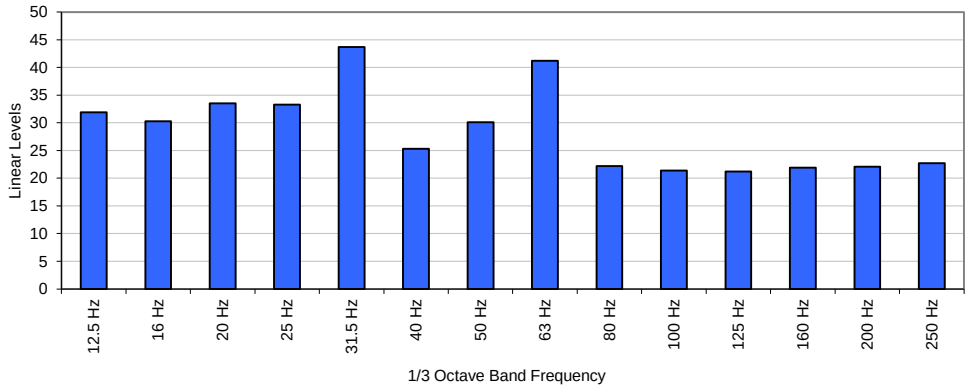
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
44.6	41.8	38.6	35.2	36.5	27.1	30.8	42.1	26.2	21.8	22.3	20.5	20.4	22.5	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-18.8	-14.9	-11.9	-9.5	-2.9	-7.5	0.6	15.9	3.7	2.7	6.2	7.1	9.5	13.9	35.6
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33.4	33.3	32.4	30.8	33.5	25.1	29.5	41.3	25.7	21.5	22.1	20.4	20.4	22.5	45.5
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	9.9



Appendix H.5 - LFN Analysis Results

Night 1
Residence 5 (R05)
Data Start Time: 26/06/2012 10:00:00 PM
Duration: 8:14:00

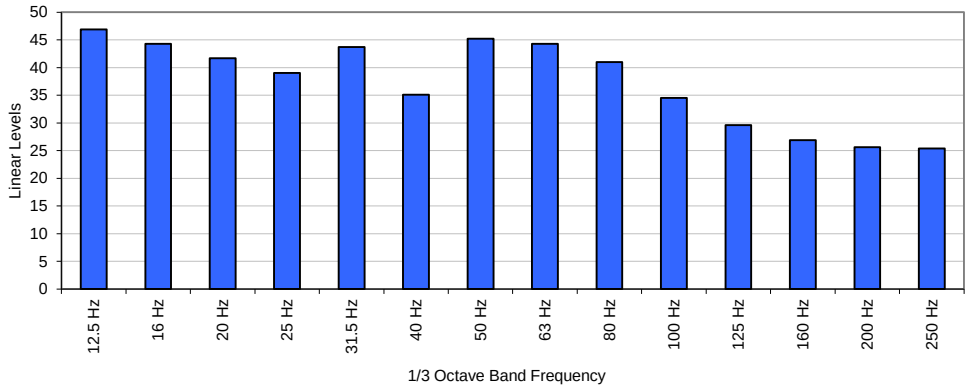
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
31.9	30.3	33.5	33.3	43.7	25.3	30.1	41.2	22.2	21.4	21.2	21.9	22.1	22.7	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-31.5	-26.4	-17	-11.4	4.3	-9.3	-0.1	15	-0.3	2.3	5.1	8.5	11.2	14.1	38.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
20.7	21.8	27.3	28.9	40.7	23.3	28.8	40.4	21.7	21.1	21	21.8	22.1	22.7	45.3
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	6.4



Appendix H.5 - LFN Analysis Results

Day 2
Residence 5 (R05)
Data Start Time: 27/06/2012 07:00:00 AM
Duration: 7:43:00

Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
46.9	44.3	41.7	39	43.7	35.1	45.2	44.3	41	34.5	29.6	26.9	25.6	25.4	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-16.5	-12.4	-8.8	-5.7	4.3	0.5	15	18.1	18.5	15.4	13.5	13.5	14.7	16.8	35.4
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.7	35.8	35.5	34.6	40.7	33.1	43.9	43.5	40.5	34.2	29.4	26.8	25.6	25.4	50.1
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	14.7



Appendix H.5 - LFN Analysis Results

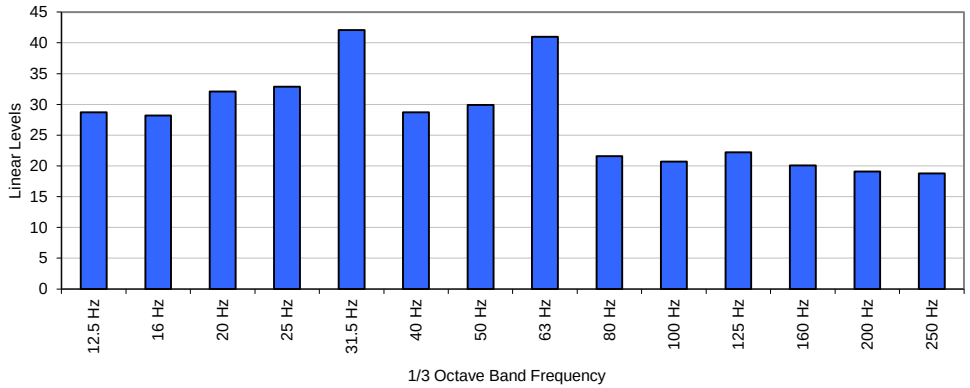
Night 2
Residence 5 (R05)
Data Start Time: 27/06/2012 10:00:00 PM
Duration: 8:11:00

Linear 1/3 Octave Bands Leq (dBZ)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
28.7	28.2	32.1	32.9	42.1	28.7	29.9	41	21.6	20.7	22.2	20.1	19.1	18.8
A-weighted 1/3 Octave Bands Leq (dBA)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
-34.7	-28.5	-18.4	-11.8	2.7	-5.9	-0.3	14.8	-0.9	1.6	6.1	6.7	8.2	10.2
C-weighted 1/3 Octave Bands Leq (dBC)													
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz
17.5	19.7	25.9	28.5	39.1	26.7	28.6	40.2	21.1	20.4	22	20	19.1	18.8
Tonal Component Detected													
N/A	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

LAeq (dBA)
36.1

LCeq(dBC)
44

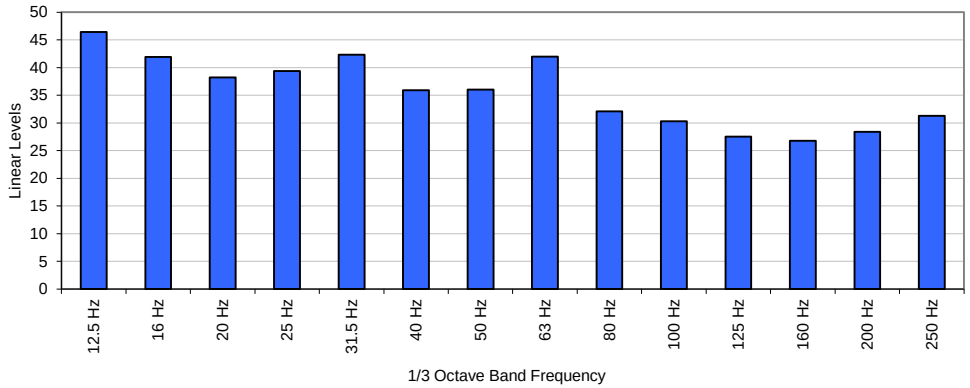
dBC-dBA
7.9



Appendix H.5 - LFN Analysis Results

Day 3
Residence 5 (R05)
Data Start Time: 28/06/2012 07:02:00 AM
Duration: 9:57:00

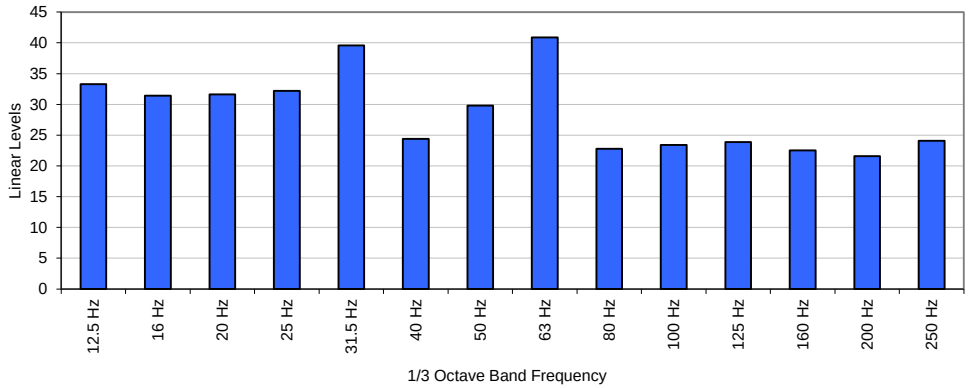
Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
46.4	41.9	38.2	39.4	42.3	35.9	36	42	32.1	30.3	27.5	26.8	28.4	31.3	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-17	-14.8	-12.3	-5.3	2.9	1.3	5.8	15.8	9.6	11.2	11.4	13.4	17.5	22.7	35.8
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.2	33.4	32	35	39.3	33.9	34.7	41.2	31.6	30	27.3	26.7	28.4	31.3	47.2
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	11.4



Appendix H.5 - LFN Analysis Results

Night 3
Residence 5 (R05)
Data Start Time: 28/06/2012 10:00:00 PM
Duration: 8:53:00

Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
33.3	31.4	31.6	32.2	39.6	24.4	29.8	40.9	22.8	23.4	23.9	22.5	21.6	24.1	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-30.1	-25.3	-18.9	-12.5	0.2	-10.2	-0.4	14.7	0.3	4.3	7.8	9.1	10.7	15.5	38.2
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
22.1	22.9	25.4	27.8	36.6	22.4	28.5	40.1	22.3	23.1	23.7	22.4	21.6	24.1	44.1
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	5.9



Appendix H.5 - LFN Analysis Results

Day 4
Residence 5 (R05)
Data Start Time: 29/06/2012 07:00:00 AM
Duration: 1:14:00

Linear 1/3 Octave Bands Leq (dBZ)														
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
46.4	39.8	37.9	36.9	40.7	34.7	34.5	42.8	35.2	31.9	25.6	26.1	25.4	25.9	
A-weighted 1/3 Octave Bands Leq (dBA)														**LAeq (dBA)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
-17	-16.9	-12.6	-7.8	1.3	0.1	4.3	16.6	12.7	12.8	9.5	12.7	14.5	17.3	33.9
C-weighted 1/3 Octave Bands Leq (dBC)														**LCeq(dBC)**
12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	
35.2	31.3	31.7	32.5	37.7	32.7	33.2	42	34.7	31.6	25.4	26	25.4	25.9	46.3
Tonal Component Detected														**dBC-dBA**
N/A	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	12.4