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NOISE IMPACT ASSESSMENT

AREA Q QUARRY PROJECT

Vulcan Materials Company – Western Division
San Bernardino County, California

April 2, 2020

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Noise Impact Assessment
Area Q Quarry Project
Vulcan Materials Company – Western Division
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Vulcan Materials Company
Area Q Quarry Project

April 2, 2020

1.0 INTRODUCTION

Sespe Consulting, Inc. ("Sespe") has prepared the following Noise Impact Assessment (NIA) on behalf of Vulcan Materials Company – Western Division ("Vulcan"), to determine noise impacts associated with the development and operation of the proposed Area Q Quarry Project ("Project"). Upon completion of mining at the Cajon Creek Quarry (referred to as Area L), Vulcan is proposing to relocate the mining operation to an adjacent site, referred to as the Area Q Quarry. In preparation for transferring the mining operation to the adjacent site, Vulcan submitted an application to the County of San Bernardino ("County") for a Conditional Use Permit (CUP) permit to conduct aggregate material extraction and ancillary activities, and post-mining reclamation on 187.6-acre portion of the Area Q property, which is 196.0-acres in size. Extraction of sand and gravel (i.e., aggregate) at the Project site will occur over a 182.1-acre area. The Project site is in unincorporated San Bernardino County (see Figure 1 and Figure 4, Attachment A).

This NIA quantifies the results of background noise monitoring and assesses potential noise impacts associated with the development and operation of the proposed Project on nearby sensitive receptors. Project impacts are presented and compared to applicable regional and local noise thresholds, and mitigation measures are recommended for receptors where noise impacts were found to be above applicable regulatory thresholds.

2.0 PROJECT DESCRIPTION

2.1 Location

The Project site is located in unincorporated San Bernardino County, east of Cajon Creek and north of the community of unincorporated community of Muscoy. The Project site is bounded by residential neighborhoods to the south, a Southern Pacific Railroad (SPRR) rail line to the west, Cajon Boulevard to the east, and Vulcan's existing Cajon Creek Quarry aggregates mine, specifically Area L, to the north. The Project site is located approximately 2.5 miles away from Vulcan's existing San Bernardino facility, which is located directly north of State Route 210 (SR-210) and Highland Avenue. Nearby communities include Muscoy located immediately south, the City of San Bernardino (adjacent to the east/north), and the City of Rialto (1.25 miles west). Please see Figure 1 and Figure 4 (Attachment A) which display the Project site and surrounding setting.

2.2 Objectives and Benefits

Vulcan currently mines aggregates at its existing Cajon Creek Quarry Area L site located immediately north of Area Q Quarry. The Cajon Creek Quarry also consists of Areas M and N. As shown on Figure 3 (Attachment A), Area L is located in the City of San Bernardino's ("City") jurisdiction. The aggregate extracted from Area L is transported to Vulcan's San Bernardino facility for processing, which is also located in the City.

The Project will provide a high-quality source of local aggregate materials to serve the regional market. Mining in the Area Q Quarry will not involve any significant changes to the existing operations as currently ongoing at the Cajon Creek Quarry. Once mining is completed at Area L, Vulcan is proposing to relocate the mining operation into the adjacent Area Q Quarry. Mined materials will be transported via an extension of the existing conveyance infrastructure in place at Area L. Material will then be processed and shipped from Vulcan's existing and/or permitted locations. No material processing will occur on the Project site. Additionally, no on-road haul trucks would leave the Project site onto public roads, and would therefore not result in any new transportation noise impacts.

Upon completion of mining within the Cajon Creek Quarry (i.e., Area L), Vulcan is proposing to relocate the mining operation to the adjacent Area Q Project site. Area Q mining operations will be typical of surface aggregate mining operations, and would involve the use of mobile equipment to excavate and load material onto an extension of the existing conveyance infrastructure in place at Area L. The materials would then be transported to other Vulcan permitted facilities for processing. It is expected that approximately 40,000,000 tons of aggregate will be extracted over approximately 30-years, depending on market demand and/or at what point mining in Area L ceases. Mining in Area Q will provide a high-quality source of local aggregate materials to serve the regional market and provide aggregate resources for processing at other Vulcan permitted facilities.

In preparation for transferring the mining operation to the adjacent site, Vulcan is submitting an application for a Conditional Use Permit (CUP), Reclamation Plan, and General Plan Land Use Zoning Designation change to conduct aggregate material extraction and ancillary activities, as well as post-mining reclamation, on a 187.6-acre site ("Project site") within the Area Q property. Specifically, Vulcan is requesting that the County of San Bernardino approve a CUP authorizing the following uses and activities for no more than a 12-hour period between the hours of 6:00 a.m. and 10:00 p.m., Monday through Saturday (except holidays). Operations span 8 hours on a typical operating day:

- Mineral resource extraction activities in one (1) phase. Material extraction would occur over a 182.1-acre area, and reach a maximum depth of 120-feet below natural ground surfaces. The design incorporates a standard final reclaimed slope configuration of 2:1 (horizontal to vertical);
- Construction of an approximately 10-foot tall earthen landscaped berm along the southern perimeter of the Project site (along the Devil Creek Diversion Channel) using subsoil and topsoil removed from the Project site;
- Construction and operation of an elevated conveyor system arm with a catch tray across the Project site, connecting with Vulcan's existing conveyor system located on the Cajon Creek extraction site;
- Construction and maintenance of onsite roads;
- Operation of haul trucks, loaders, scrapers, conveyors, and related equipment, as necessary, to move material from the Project site to the conveyor system that will transport materials to Vulcan's existing conveyor system located on the Cajon Creek Quarry site; and
- Conduct all activities as described above and herein on approximately 187.6-acres of the 196.0-acre Area Q property, as shown on Figure 2 (see Attachment A).

As noted above, no on-road haul trucks would leave the Project site onto public roadways. All mined materials will be transported via conveyor from the Project site to Vulcan's existing conveyor system located on the Cajon Creek Quarry site.

Second, Vulcan requests approval of a Reclamation Plan, submitted under separate cover, that calls for reclamation and revegetation of the Project site for subsequent uses as open space.

Lastly, Vulcan requests approval of a General Plan Land Use Zoning Designation change from MS/RS-1 (Single Residential) to IC (Community Industrial).

2.3 Area Q Operations/Phases

As described above, the Project would be initiated once the mining operations at the Cajon Creek Quarry Area L are complete. Mining in Area Q would be conducted in one (1) mining phase, with reclamation occurring concurrently, as feasible, as mining activities progress through the Project site. Prior to initiating mining, the Project site would be cleared and existing debris and structures would be removed in accordance with local, state and federal regulations. Figure 2 (Attachment A) displays Vulcan's Area Q design and proposed single mining phase. The following is a brief description of the Project operations analyzed within this NIA.

Initial Site Preparation & Berm Construction: Following Project approval and prior to mining, the Project site will be cleared and initial ground preparation would commence. Two (2) dozers and/or scrapers would be used to remove subsoil and topsoil from the mine areas. Per specifications provided by Vulcan, it is assumed no other mining equipment would operate and no aggregate excavation operations would occur during this initial Project phase. Topsoil and subsoil removed from the site will then be used to construct a 10-foot high earthen berm constructed along the entire length of site's southern boundary, adjacent to the Devil Creek Diversion Channel. Topsoil and subsoil stored within the berm would eventually be used as revegetation cover during post-mining reclamation. See Figure 2 (Attachment A), which shows the location of the proposed 10-foot perimeter topsoil storage berm. Based upon discussion with the Vulcan and information gathered from the previous projects, this process is expected to take approximately three

(3) months. Following site preparation and construction of the topsoil storage berm, extraction of the aggregate would commence at grade within the northeast corner of the Project site mining area. Please see Figure 2, Figure 4 and Figure 5 (Attachment A) which display specific design features and information related to initial site clearing, ground preparation, and perimeter berm construction.

Mining Operations/Excavation of Aggregate: Once the site is prepared and the perimeter topsoil/subsoil berm constructed (approximately 3 months), mining of the Area Q Quarry will commence in one (1) mining phase, initiating in the northeast corner of the site and reaching a final depth of 120-feet below ground surface (bgs). It is anticipated that it will take approximately 30 years total to extract the available aggregate at the site. Please see Figure 2 (Attachment A), which shows the layout of the mine site.

The design of the Area Q Quarry is consistent with the current mine plan at Area L. The number of employees (approximately 4 employees) and the hours of operation (typically 8 hours per day) would remain the same as they currently are at Cajon Creek Quarry. Once the Project commences, existing employees working onsite would be moved from Area L to work at Area Q. Once mining operations are complete, the site would be reclaimed back to open space, in a manner consistent with the approved end use for the Cajon Creek Quarry.

Mining at the Area Q Quarry would be conducted with the same equipment and in the same manner as what is currently being done at the existing Cajon Creek Quarry (i.e., Area L) to the north of Area Q (see Figure 4, Attachment A). Specifically, equipment used during excavation includes two (2) dozers, a scraper, a front-end loader, and a grader. When mining is completed at Area L, the existing equipment (e.g., dozers, front-end loaders, graders, etc.) will be relocated to the Area Q Quarry site. Mined materials will be transported via a conveyor system to the existing conveyance infrastructure in place at Area L. Please see Figure 2 (Attachment A), which shows the proposed location and design of the conveyor connecting to Area L to the north. An elevated conveyor system arm with a catch tray will be installed across the Project site, connecting with the existing conveyor system that originates in Cajon Creek Quarry/Area L and terminates at the overhead truck loading hoppers west of the Project site. From there, material will then be processed at the San Bernardino facility or one of Vulcan's other permitted locations in the same manner as is currently being done with the aggregate from Area L. As discussed previously, no on-road haul trucks will leave the Area Q site by public roads.

3.0 EXISTING SETTING

The Area Q Quarry Project site is located north of the community of Muscoy within the County of San Bernardino, southwest of Cajon Boulevard. The Project site covers a 187.6-acre portion of the Area Q property, which is 196.0 acres in size. The Project site is adjacent to the Vulcan's existing Cajon Creek extraction site. Extraction of aggregate at the Project site will occur over a 182.1-acre area. Please see Figure 1 (Attachment A) which shows the Project site and surrounding environment.

Although the entire Area Q property is located within the County of San Bernardino, the City of San Bernardino is adjacent to portions the Project site to the west, north and east (see Figure 3, Attachment A). Interstate 215 (I-215) is located approximately 0.4 miles to the northeast, and California State Route 210 (SR-210) is located approximately 1.8 miles to the south (see Figure 1 and Figure 4, Attachment A). The SPRR track runs adjacent to the western border on an approximately 5 to 6-foot high earthen berm adjacent to the Muscoy Groin 3#, a certified levee that directs surface flow in the Cajon Creek drainage away from the SPRR tracks and Area Q site.

This section discusses the existing regulatory and environmental settings applicable to the Project.

3.1 Regulatory Setting & Noise Fundamentals

This section discusses the Project's regulatory setting. Specifically, the San Bernardino County *General Plan – Noise Element* (San Bernardino County, 2014) and *County Code – Noise & Vibration Ordinances* (San Bernardino County, 2009), as well as the City of San Bernardino's *General Plan* and *City Noise & Vibration Ordinances* (City of San Bernardino, 2005). Noise and vibration standards from the Federal Highway Administration's (FHWA) *Roadway Construction Noise Model* (Federal Highway Administration, 2006), the Federal Interagency Commission on Noise (FICON), and applicable guidance from the California Department of Transportation's (Caltrans) are also discussed in this section.

3.1.1 Definitions

The following terms are employed in this NIA:

- **Decibel (dB):** A unit division, on a logarithmic scale, whose base is the tenth root of ten, used to represent ratios of quantities proportional to power. In simple terms, if the power is multiplied by a factor of ten, then ten is added to the representation of the power on the decibel scale. If 0 dB represents 1 unit of power, 30 dB represents one thousand units, 60 dB represents one million units, etc.
- **A-Weighted Sound Level (dBA):** Sound pressure level measured using the A-weighting network, a filter which discriminates against low and very high frequencies in a manner similar to the human hearing mechanism at moderate sound levels. The A-weighted sound level is generally used when discussing environmental noise impacts.
- **L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$:** The A-weighted noise level that is equaled or exceeded by the designated percentage of time within the sample. In other words, L_{50} is the noise level that is exceeded 50% of the time (i.e., 30 minutes in an hour), L_{25} is the noise level exceeded 25% of the time (i.e., 15 minutes in an hour), $L_{8.3}$ is exceeded 8.3% of the time (i.e., 5 minutes in an hour), etc.
- **Maximum Noise Level (L_{max}).** The instantaneous maximum noise level measured during the sample.

- **Equivalent Continuous Noise Level (L_{eq}).** The average noise level over a designated time period. This is often referred to as "equivalent sound level", hence the "eq" subscript. The "equivalence" is to a sound of constant level that has the same total acoustic energy content.
- **Ambient (i.e., Background) Noise Level:** The current noise level in the vicinity of the proposed Project that results from the combination of all sources, near and far. Please note, ambient noise measurements presented in this NIA include existing noise generated at the Cajon Creek Quarry (see Section 3.2).
- **Day-Night Average Level (L_{dn} – dBA):** The long-term time average sound level, weighted as follows:
  - Frequency response is filtered using the A-weighting network;
  - Daytime noise (7:00 a.m. – 10:00 p.m.) is not weighted; and
  - Nighttime noise (10:00 p.m. – 7:00 a.m.) is weighted by +10 dB.
- **Community Noise Equivalent Level (CNEL – dBA):** The long-term time average sound level, weighted as follows (note that the daytime/evening/nighttime time periods for CNEL are different than the daytime/evening/nighttime timeframes in the San Bernardino County thresholds of significance):
  - Frequency response is filtered using the A-weighting network.
  - Daytime noise (7:00 a.m. to 7:00 p.m.) is not weighted.
  - Evening noise (7:00 p.m. and 10:00 p.m.) is weighted by +5 dB.
  - Nighttime noise (10:00 p.m. and 7:00 a.m.) is weighted by +10 dB.

3.1.2 Characteristics of Noise

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second) they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 decibels (dB). Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness as presented in Table 1.

The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the sound level pressures between 1,000 and 5,000 Hz, which represent the most sensitive frequencies perceived by a healthy human ear and coincidentally the natural frequency range of human speech. This weighting network is referred to as the A-scale. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this NIA are A-weighted. Table 1 provides sound pressure levels of typical noise sources in units of dBA and micropascals (µPa) of pressure.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour or less). The L_{eq} is also the foundation of both the Day-Night Average Level (L_{dn}) and the Community Noise Equivalent Level (CNEL) noise descriptors described below, each of which has a strong correlation with community response to noise. The maximum sound level (L_{max}) represents the highest instantaneous noise level recorded over a given time period (usually one hour or less), and can also be utilized to assess community noise impacts.

Table 1 Typical A-Weighted Sound Levels of Common Noise Sources

Loudness Ratio	Micropascals (μPa)	dBA	Description
128	63,245,553	130	Threshold of Pain
64	20,000,000	120	Jet aircraft Take-Off at 100 feet
32	6,324,555	110	Riveting Machine at Operator's Position
16	2,000,000	100	Shotgun at 200 feet
8	632,456	90	Bulldozer at 50 feet
4	200,000	80	Diesel Locomotive at 300 feet
2	63,246	70	Commercial Jet Aircraft Interior During Flight
1	20,000	60	Normal Conversation Speech at 5-10 feet
0.5	6,325	50	Open Office Background Level
0.25	2,000	40	Background Level Within a Residence
0.125	632	30	Soft Whisper at 2 feet
0.0625	200	20	Interior of Recording Studio

Sources: (US EPA, 1971) and (Federal Interagency Committee on Noise, 1992).

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to smooth out short-term variations in the noise environment. L_{dn} based noise standards are commonly used to assess noise impacts associated with variable noise sources, such as traffic, railroad and aircraft noise.

Community Noise Equivalent Level (CNEL) is also based upon the average noise level over a 24-hour day, with a +5 decibel weighing applied to noise occurring during evening (7:00 p.m. to 10:00 p.m.) hours and a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. These additions are made to account for the noise sensitive time periods during the evening and night hours, when people are generally at home and more sensitive to sound.

The maximum sound level (L_{max}) presents the highest instantaneous noise level recorded over a given time period (usually one hour or less). This value is useful as it can reveal short-term, intermittent noise sources (e.g. railroads, aircraft noise) within a noise environment, which would be lost with L_{dn} and CNEL noise descriptors.

3.1.3 Characteristics of Groundborne Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, while vibration is usually associated with transmission through a structure. As with noise, vibration consists of an amplitude and frequency. A person's response to vibration depends on their individual sensitivity as well as the amplitude and frequency of the source. Additionally, damage to structures can occur when exposed to groundborne vibration.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (inches/second). Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of peak particle velocity. Although aggregate mining and processing vibration levels are not expected to be significant for this Project due to the relatively large distances between Project equipment (sources) and acoustically sensitive receivers, and the fact that no blasting would occur with this Project, an assessment of mining-related vibration levels is nonetheless addressed.

According to Caltran's *Transportation and Construction Vibration Guidance Manual* (Caltrans, 2013), operation of construction equipment and construction techniques generate ground vibration. Traffic traveling on roadways can also be a source of such vibration. At high enough amplitudes, ground vibration has the potential to damage structures and/or cause cosmetic damage (e.g., crack plaster). Ground vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. Traffic, including heavy trucks traveling on a highway, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.

As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate by a few ten-thousandths to a few thousandths of an inch. Differences in subsurface geologic conditions and distance from the source of vibration would result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes would decrease with increasing distance. The maximum rate or velocity of particle movement is the commonly accepted descriptor of the vibration "strength." This is referred to as the peak particle velocity (PPV) and is typically measured in inches per second.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 2 displays the human response to transient vibration sources (i.e., mining equipment) in terms of particle velocity (PPV) vibration levels.

Table 2 General Human Responses to Transient Vibration Levels

Human Response to Vibration	Peak Vibration Threshold (in./sec. PPV)
Severe	2.0
Strongly perceptible	0.9
Distinctly perceptible	0.24
Barely perceptible	0.035

Source: *Transportation and Construction Vibration Guidance Manual* (Caltrans, 2013).

3.1.4 Federal Standards

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972 (42 U.S.C. §4901 et seq.), which serves three purposes:

- Establish noise emission standards for interstate commerce.
- Assist state and local abatement efforts.
- Promote noise education and research.

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies, including the Federal Aviation Administration (FAA), Federal Transit Administration (FTA), and Federal Highway Administration (FHWA).

The FAA regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA (formerly the Urban Mass Transit Administration). Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the Federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the counties and cities are restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

3.1.5 State Standards

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 24, Chapter 1) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that prevent interior Day-Night (L_{dn}) or CNEL noise levels from exceeding 45 dBA. When

such structures are located within a 60-dBA Day-Night (L_{dn}) or CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA limit.

Government Code §65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Although the Project site is located within the County of San Bernardino, because many of the adjacent receptors are located within the City of San Bernardino, both the County and City noise standards are utilized to determine the significance of noise impacts within this NIA. Please see Figure 3 (Attachment A) which displays the County and City jurisdictions in relation to the Project site.

The *County of San Bernardino – 2007 General Plan* (amended 2014) has adopted a noise element (Section VII) that outlines various guidelines and requirements related to noise. The *City of San Bernardino – General Plan* (November 1, 2005), noise element (Chapter 14) also contains applicable guidelines and thresholds related to noise. In addition to the County and City General Plan's, San Bernardino County's adopted Development Standards (i.e., County Code, Chapter 83.01.080 – General Performance Standards, Noise) and the City of San Bernardino's Noise Ordinance (§19.20.030.15 of the Development Code) both regulate construction and operational noise and vibration from stationary and mobile sources.

3.1.6 County General Noise Policies & Guidelines

The *County of San Bernardino – 2007 General Plan* (amended 2014), Noise Element (Section VII) has a number of policies related to noise (San Bernardino County, 2014). General Plan noise policies that apply to the Project are listed below.

N 1.1 Designate areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Chapter 83.01 of the Development Code.

N 1.3 When industrial, commercial, or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use will not exceed the performance standards of Table N-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards listed in Chapter 83.01 of the Development Code at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Programs

1. Require an acoustical analysis prior to approval of proposed development of new residential or other noise-sensitive land uses in a noise-impacted area or a new noise generating use in an area that could affect existing noise-sensitive land uses. The appropriate time for requiring an acoustical analysis is during the environmental review process so that noise mitigation may be an integral part of the project design. The acoustical analysis shall:
    a. Be the responsibility of the applicant.
    b. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.

c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
d. Include estimated noise levels in terms of the descriptors shown in Figures II-8 and II-9 of the Noise Background Report for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
e. Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
f. Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided.

2. Develop and employ procedures to ensure that requirements imposed pursuant to the finding of an acoustical analysis are implemented as part of the project review and building permit processes.

N 1.6 Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

Programs

1. Develop and implement a noise ordinance that will:
   a. Be consistent with this element of the General Plan.
   b. Include the development standards provided in this element in the Development Code.

N 2.1 The County will require appropriate and feasible on-site noise attenuating measures that may include noise walls, enclosure of noise-generating equipment, site planning to locate noise sources away from sensitive receptors, and other comparable features.

The *County of San Bernardino – 2007 General Plan – Final Program EIR* also contains the following noise standard as it relates to "the development of new industrial and commercial uses" which "may create stationary noise sources the generate noise levels which are incompatible with adjacent residential or other sensitive land uses. Specifically, the *Final Program EIR* contains the following noise standard, which closely corresponds with the County Noise Ordinances presented in Section 3.1.7:

Mitigation N-3 When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 (i.e., Table 3 shown below) within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Table 3 Hourly Noise Level Performance Standards – Locally Regulated Sources

Land Use Category	7:00 a.m. – 10:00 p.m.		10:00 p.m. – 7:00 a.m.	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Residential or other noise-sensitive receivers	55 dB(A)	75 dB(A)	45 dB(A)	65 dB(A)

Source: County of San Bernardino – 2007 General Plan – Final Program EIR, Chapter IV, Table IV-K-2.

* Noise sources that are stationary and not pre-empted from local noise control. Pre-empted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

These limits are set forth in §87-0905(b)(2) of the County Development Code. Additional limits are specified in the code for other land use categories, including professional services, commercial, and other industrial uses.

3.1.7 San Bernardino County Code – Noise Ordinances

The San Bernardino County Code, Chapter 83.01.080 (General Performance Standards, Noise) regulates both construction and Project noise from stationary and mobile sources. Ambient noise level, type of noise source, distance to the noise source, time of day, duration of the noise, and zoning of the areas in questions are among the variables considered when analyzing the adverse effects of noise.

Table 4 presents the noise standards for stationary sources within the San Bernardino County Noise Ordinance.

Table 4 San Bernardino County Noise Standards for Stationary Noise Sources

Affected Land Use (Receiving Noise)	Daytime – L_{eq} (7:00 a.m. – 10:00 p.m.)	Nighttime – L_{eq} (10:00 p.m. – 7:00 a.m.)
Residential	55 dB(A)	45 dB (A)
Professional Services	55 dB(A)	55 dB (A)
Other Commercial	60 dB(A)	60 dB (A)
Industrial	70 dB(A)	70 dB (A)

Source: County of San Bernardino County Code Chapter 83.01.080

L_{eq} = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period (typically 1, 8 or 24 hours).

dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.

Table 5 shows the maximum time of exposure for increasing noise levels when measured on another property. Please note, per the County Code, if the measured ambient level exceeds any of the first four noise limit presented in Table 5 below, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit (i.e., L_{max}) category in Table 5, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

Table 5 San Bernardino County Noise Standards – Noise Limit Category

Exterior Noise Standard	Noise Metric	Noise Levels not to be Exceeded in Residential Zone (7:00 a.m. – 10:00 p.m.)	Noise Levels not to be Exceeded in Residential Zone (10:00 p.m. – 7:00 a.m.)
30 min/hour	L_{50}	55 dB(A)	45 dB(A)
15 min/hour	L_{25}	60 dB(A)	50 dB(A)
5 min/hour	$L_{8.3}$	65 dB(A)	55 dB(A)
1 min/hour	$L_{1.7}$	70 dB(A)	60 dB(A)
Any period of time	L_{max}	75 dB(A)	65 dB(A)

Source: County of San Bernardino County Code Chapter 83.01.080

Table 6 shows the noise standards for adjacent mobile noise sources (i.e., mining equipment). When noise from mobile sources affects adjacent properties adversely, the noise shall be mitigated for any development to a level that shall not exceed the standards presented in Table 6.

Table 6 Noise Standards for Adjacent Mobile Noise Sources (Table 83-3)

Table 83-3 – Noise Standards for Adjacent Mobile Noise Sources			
Land Use		L_{dn} (or CNEL) dB(A)	
Categories	**Use**	**Interior (1)**	**Exterior (2)**
Residential	Single and multi-family, duplex, mobile homes	45	60(3)
Commercial	Hotel, motel, transient housing	45	60(3)
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:
(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
(2) The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

Source: County of San Bernardino County Code Chapter 83.01.080

3.1.8 San Bernardino County Code – Vibration Ordinances

The San Bernardino County Code, Chapter 83.01.090 (General Performance Standards, Vibration) regulates both construction and Project vibration from stationary and mobile sources. Specifically, the

following County Ordinances will be used to determine the significance of vibration impacts resulting from the Project:

(a) *Vibration Standard*. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths inches per second (0.2 in/sec) measured at or beyond the lot line.

3.1.9 City of San Bernardino General Noise Policies & Guidelines

The *City of San Bernardino – General Plan* (November 1, 2005), noise element (Chapter 14) has a number of policies related to noise (City of San Bernardino, 2005). General Plan policies that apply to the Project are listed below.

Goal 14.1.4 Prohibit the development of new or expansion of existing industrial, commercial, or other uses that generate noise impacts on housing, schools, health care facilities or other sensitive uses above a L_{dn} of 65 dB(A). (LU-1)

Goal 14.2.3 Require that development that increases the ambient noise level adjacent to noise-sensitive land uses provide appropriate mitigation measures. (LU-1)

Goal 14.2.14 Require that commercial and industrial uses implement transportation demand management programs consistent with the Air Quality Management Plan that provide incentives for carpooling, van pools, and the use of public transit to reduce traffic and associated noise levels in the City. (LU-1)

Goal 14.3.1 Require that construction activities adjacent to residential units be limited as necessary to prevent adverse noise impacts. (LU-1)

Goal 14.3.2 Require that construction activities employ feasible and practical techniques that minimize the noise impacts on adjacent uses. (LU-1)

Goal 14.3.3 Adopt and enforce a standard for exterior noise levels for all commercial uses that prevents adverse levels of discernible noise on adjoining residential properties. (A-1)

3.1.10 City of San Bernardino Noise & Vibration Ordinances

For noise impacts, the City of San Bernardino Noise Ordinance (§19.20.030.15 of the Development Code) specifies the maximum acceptable levels of noise for residential uses in the City. An excerpt from the *City of San Bernardino – General Plan* notes that the City Noise Ordinance standards for exterior noise levels at residential locations should not exceed an exterior CNEL of 65 dB(A) while interior levels shall not exceed a CNEL of 45 dB(A) in any habitable room. However, the current City Noise Ordinance indicates only that in residential areas, no exterior noise level shall exceed 65 dB(A) and no interior noise level shall exceed 45 dB(A) without indicating the noise parameter to utilize (e.g., L_{eq}, L_{dn}, CNEL, etc.). For the purposes of this analysis, both the L_{eq} and the CNEL thresholds of 65 dB(A) for exterior and 45 dB(A) for interior will be utilized to determine the significance of noise impacts. Additionally, these closely correspond to the County standards presented in Sections 3.1.6 and 3.1.7.

For vibration impacts, the City of San Bernardino Vibration Ordinance (§19.20.030.28 of the Development Code) specifies that “no vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property.”

3.1.11 Project-Related Noise Level Increases

The Federal Interagency Commission on Noise (FICON) has developed a graduated scale for use in the assessment of Project-related noise level increases. Table 7 was developed by FICON as a means of developing threshold criteria for Project-related noise level increases. The rationale for the graduated scale is that test subject's reactions to increases in noise levels varied depending on the starting level of the noise. Specifically, with lower ambient noise environments, such as those below 60 dBA L_{dn}, a larger increase in noise levels was required to achieve a negative reaction than was necessary in more elevated noise environments.

Table 7 Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level (No Project), dBA L_{dn}	Increase Required for Finding of Significance, dBA
< 60 dBA	+5 dBA or more
60 – 65 dBA	+3 dBA or more
> 65 dBA	+1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON), 1992.

Based on the FICON research, where pre-Project ambient noise levels are less than 60 dBA L_{dn}, a +5 dBA or greater increase in noise levels would be considered a significant impact. Where pre-Project ambient conditions are between 60 and 65 dBA L_{dn}, a +3 dBA increase in noise levels due to a Project is required for a finding of significant impact. Finally, in areas already exposed to higher noise levels, specifically pre-Project noise levels in excess of 65 dBA L_{dn}, a +1.5 dB increase is considered by FICON as the threshold criteria for determining significance. The FICON change criterion will be utilized within this NIA to determine the significance of Project noise impacts (see Sections 6.1.1).

Although not utilized within this NIA for significance determination, the subjective reactions to change in noise levels shown in Table 8 are commonly used to identify expected public reaction to changes in environmental noise levels. Table 8 was developed on the basis of test subjects' reaction to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source (i.e., mining equipment). Table 8 was taken from the *Fundamentals of Noise and Vibration Analysis for Engineers* (Norton & Karczub, 2003). As described within the reference materials, these changes in environmental noise level are most applicable to noise levels in the range of 50 dB to 70 dB, which is the usual range of voice and interior noise levels. The change in noise level thresholds in Table 8 are not used to determine significance of Project impacts, but rather is presented for informational purposes only.

Table 8 Subjective Reaction to Changes in Noise Levels of Similar Sources

Change in Level (dBA)	Factor Change In Acoustical Energy	Subjective Reaction
+1	1.3	Imperceptible (Except for Tones)
+3	2.0	Just Barely Perceptible
+6	4.0	Clearly Noticeable
+10	10.0	About Twice (or half) as Loud

Source: *Fundamentals of Noise and Vibration Analysis for Engineers, 2nd Edition* (Norton & Karczub, 2003).

3.1.12 Vibration Criteria

Although not utilized within this NIA for significance determination, the California Department of Transportation (Caltrans) has developed a set of criteria to assess the potential impacts caused by vibration-generating activities. Table 9 outlines threshold criteria for Project-related vibration impacts on nearby human populations, based on test subjects' responses to transient vibrations in terms of peak particle velocity (PPV) in units of inches per second (in/sec). These criteria provide additional context as part of the groundborne vibration impact analysis in Section 6.1.2.

Table 9 Human Responses to Transient Vibration

PPV (inches/second)	Human Response
2.0	Severe
0.9	Strongly perceptible
0.24	Distinctly perceptible
0.035	Barely perceptible

Source: *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans, 2013).

3.1.13 CEQA Guidelines

The CEQA Guidelines provide threshold criteria that can be used to determine whether a project would result in a significant impact to the environment. These criteria are found in the Environmental Checklist in Appendix G of the CEQA Guidelines. Section 13 of the Environmental Checklist outlines criteria for noise analysis, and these specific criteria form the basis of the significance thresholds utilized to determine noise impacts. These thresholds are used in this study to determine potential impacts associated with the Project and are discussed in Section 4.0.

3.2 Environmental Setting

This section describes the noise environment and existing noise sources in and around the Project site, the receptors of concern near the Project site, as well as the ambient noise levels in these areas. For this Project, the existing setting and ambient noise levels include current operations at Vulcan's Cajon Creek Quarry site located adjacent to the Project site to the north, specifically Area L (see Figure 4, Attachment A).

3.2.1 Regional Setting

The Project site is located in a semi-urban area of unincorporated San Bernardino County, California, immediate west of the City of San Bernardino. It is surrounded by residential neighborhoods to the south and east, industrial facilities to the east and north, and open-space/floodways (i.e., Cajon Creek) to the west. Vulcan's existing Cajon Creek Quarry site is adjacent to the north of Area Q. Existing sources of noise in the region are diverse, and include railroad noise, industrial and mining noise, traffic noise from nearby roadways (e.g., Cajon Boulevard, Interstate 215, Interstate 15, State Route 210, etc.), occasional aircraft over-flights, and urban activities from nearby communities. Nearby urban centers include the community of Muscoy (immediately southeast), the City of San Bernardino (immediately east), and the City of Rialto (1.25 miles to the southwest). The closest airport/airstrip is the Ontario International Airport located approximately 13 miles away to the southwest, and has no appreciable influence on noise levels near the Project site. See Figure 4 and Figure 5 (Attachment A) which show the locations of nearby Project site receptors.

3.2.2 Local Vibration Environment

The existing ambient vibration environment in the immediate Project vicinity is extremely low, as would be expected in typical environments with no appreciable sources of local vibration. During field visits, Sespe staff could not detect any appreciable groundborne vibrations resulting from existing Vulcan mining operations and excavation pits (i.e., Cajon Creek Quarry Area's N, M, and L). Background vibration levels around the Project perimeter are less than the threshold of perception.

3.2.3 Local Noise Environment

The existing ambient noise environment is consistent with that of typical semi-urban/industrial areas. Existing noise sources near the Project site receptors include equipment noise from Vulcan's existing operations (i.e., Cajon Creek Quarry), industrial noise from nearby facilities to the east, traffic noise from nearby roadways, urban activities from the nearby communities (Muscoy, San Bernardino, Rialto, etc.), and natural sounds (wind, plants rustling, birds/insects, etc.). Existing intermittent yet significant noise sources included train noise from nearby railways and occasional aircraft over-flights. These existing mine operations and surrounding noise sources constitute the existing physical conditions.

To quantify the existing ambient (i.e., baseline) noise environment experienced by neighboring receptors closest to the Project site, a total of seventeen (17) short-duration (15-minute) measurements and one (1) long-duration (24-hour) reference noise measurement were collected at twelve (12) locations surrounding the Project site on November 30th and December 1st, 2017 (Figure 4, Attachment A). The noise measurements were recorded using two (2) Quest DL SoundPro, Type 2 noise meters (Serial #'s BGI04008, BIJ090010). Noise meters were programmed in "slow" mode, in "A" weighted form, and logging every minute for the long-duration measurement and 10 seconds for the short-duration measurements. The microphones were equipped with a windscreen during measurements, and noise meters were calibrated using two (2) Quest QC-10 calibrators (Serial #'s QIB070141, QIJ090052) prior to, and following each, measurement taken. The noise meters and calibrators were calibrated by Engineering Dynamics, Inc., who provided Certificates of Compliance and Calibration for each piece of equipment (Attachment F).

Noise sensitive receptors are defined as "dwellings, schools, hospitals, nursing homes, churches, and libraries." within the CEQA Guidelines. Per the County and City of San Bernardino noise standards, noise impacts to nearby commercial and industrial receptors are also assessed within this NIA. The locations of the baseline noise measurement locations and the corresponding Project site receptors are shown on Figure 4 and Figure 5 (Attachment A). The long-duration (i.e., 24-hour) measurement does not represent a receptor, but rather is utilized as a reference measurement to quantify the daytime, evening, and nighttime noise levels at the other receptor locations where only short-duration measurements were collected. The details of these calculations are presented in Attachment B.

The monitoring locations and associated receptors considered in this NIA are described Table 10. The closest relevant receptor in each direction from the Project site were included. Furthermore, measurements at these closest receptors conservatively account for potentially-affected receptors at locations farther from the Project noise sources. When appropriate, receptors are grouped together and the noise impact at the worst-case portion of the group is determined. See Figure 4 and Figure 5 in Attachment A for the locations of the Project site receptors respectively.

Table 10 Summary of Monitoring Locations

Receptor	Duration	Date(s) Measured	Time Start	Time Stop	Description
N/A (reference)	24-hours	11/30/17 12/1/17	11:48 a.m.	11:48 a.m.	24-hour reference measurement taken along the southern boundary of Area L.
R1	15-mins	11/30/17	3:21 p.m.	3:36 p.m.	Glen Helen Rehabilitation Center (commercial) northwest of the Project site along Institution Road.
R2	15-mins	11/30/17	3:58 p.m.	4:13 p.m.	DCS Logistics warehouse (industrial) northeast of the Project site along Cajon Boulevard.
R3	15-mins	11/30/17	4:17 p.m.	4:32 p.m.	Pacific Coast Steel (industrial) northeast of the Project site along Cajon Boulevard.
R4	15-mins	11/30/17 12/1/17 12/1/17	5:36 p.m. 6:02 a.m. 7:42 a.m.	5:51 p.m. 6:17 a.m. 7:57 a.m.	Residential receptors east/south of the Project site along Jadestone Street.
R5	15-mins	11/30/17 12/1/17	5:56 p.m. 6:21 a.m.	6:11 p.m. 6:36 a.m.	Residential receptors east/south of the Project site along North Christy Avenue.
R6	15-mins	11/30/17 12/1/17	6:14 p.m. 6:39 a.m.	6:28 p.m. 6:53 a.m.	Residential receptors east/south of the Project site along Bronson Street.
R7	15-mins	11/30/17 12/1/17	6:32 p.m. 6:57 a.m.	6:46 p.m. 7:11 a.m.	Residential receptors south of the Project site along Bronson Street.
R8	15-mins	12/1/17	7:15 a.m.	7:30 a.m.	Residential receptors south of the Project site at the end of Coronado Place.
R9	15-mins	11/30/17 12/1/17	7:09 p.m. 8:10 a.m.	7:24 p.m. 8:24 a.m.	Residential receptors south of the Project site along W. 3rd Avenue.
R10	15-mins	11/30/17 12/1/17	7:36 p.m. 8:28 a.m.	7:51 p.m. 8:42 a.m.	Residential receptors south of the Project site along Gray Street.
R11	15-mins	12/1/17	8:45 a.m.	9:00 a.m.	Residential receptors south of the Project site along Gray Street.
R12	15-mins	11/30/17 12/1/17	7:54 p.m. 9:28 a.m.	8:09 p.m. 9:43 a.m.	Residential receptors south of the Project site at the end of Reservoir Street.

Figure 5 (Attachment A) shows the locations described above.

Table 11 presents the results of the long-duration (24-hour) measurement collected at the reference location adjacent to Area L. Table 12 presents the existing ambient noise levels at the receptor in the Project site vicinity, which are based on ambient noise measurements taken November 30th and December 1st, 2017. Noise from the existing Vulcan operations are included in the ambient noise levels as the site was operating while the measurements were taken. Noise measurement logs and additional information regarding the background noise level determination are included in Attachment B. Project site monitoring locations are illustrated on Figure 4 and Figure 5 (Attachment A).

To estimate nighttime noise levels for certain receptors (i.e., R8, R9, R10, R11, R12), L_{eq} and L_{max} measurements collected at the long-duration (24-hour) reference location were compared to L_{eq} and L_{max} measurements at each short-duration (15-minute) receptor locations during the same time of day to determine the dBA difference between the two points. For example, Receptor R6 measurements (15-minute) collected between 6:14 p.m. and 6:28 p.m. when compared to the L_{eq} and L_{max} values collected at the 24-hour reference point during the same time period show a noise level difference of +1.3 L_{eq} dBA and +1.1 L_{max} dBA respectively. This difference between the noise levels can be used as a correction factor, which is utilized to estimate the nighttime L_{eq} and L_{max} values at short-duration receptor locations. This same concept is also utilized to estimate Day-Night (L_{dn}) and CNEL noise levels at each receptor. Additional detail regarding these calculations are included in Attachment B.

Using this concept, Table 12 and shows the measured daytime and estimated nighttime ambient noise levels (L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, L_{max}) at each receptor. Land in the immediate Project vicinity is primarily residential to the south, and industrial to the east. The Glen Helen Rehabilitation Center (R1) is considered a residential receptor. The nearest noise sensitive receptor to the Project in each direction is included in this assessment. As described previously, measurements at these closest receptors conservatively account for potentially-affected receptors at locations farther from the Project noise sources. Please see Attachment B which provides more detail regarding ambient noise level measurements and determination.

Table 11 Long-Duration (24-Hour) Reference Location Noise Measurements (dBA)

Study	Daytime						Nighttime						L_{dn}[A]	CNEL[A]
	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}		
24-Hour (reference)	56.4	55.0	60.6	66.0	74.6	77.0	55.5	60.1	63.1	66.9	70.6	76.9	58.6	59.0

Note: Noise levels shown represent the maximum 1-hour noise levels recorded for each parameter (L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, L_{max}) during the daytime (7:00 a.m.-10:00 p.m.) and nighttime (10:00 p.m.-7:00 a.m.) hours.

Table 12 Ambient Noise in Project Site Vicinity (dBA)

Receptor	Daytime[B]						Nighttime[C]						L_{dn}[A]	CNEL[A]
	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}		
R1	60.7	48.4	52.2	60.0	70.8	80.9	55.5	60.1	63.1	66.9	70.6	76.9	60.7	60.7
R2	70.2	62.5	65.7	70.0	83.4	87.0	55.5	60.1	63.1	66.9	70.6	76.9	70.2	70.2
R3	55.4	55.1	56.5	57.6	58.7	60.8	55.2	59.2	60.1	64.4	54.5	62.9	55.4	55.4
R4	59.0	54.1	55.3	57.9	59.3	62.3	59.7	51.7	53.2	58.3	70.8	76.8	69.7	69.7
R5	57.5	54.5	57.4	62.1	65.6	68.9	52.4	51.6	53.3	55.7	58.0	61.5	62.4	62.4
R6	53.6	51.3	53.6	56.5	62.0	64.0	50.3	49.6	51.8	53.4	54.4	62.2	60.3	60.3
R7	50.8	47.1	50.6	54.4	59.2	61.2	48.0	47.7	48.6	49.4	50.7	59.6	52.3	52.3
R8	51.2	48.6	50.9	54.3	59.5	62.3	52.5	55.4	53.1	59.4	66.6	75.7	51.2	51.2
R9	57.0	51.2	54.0	56.9	61.7	67.8	59.0	59.7	62.4	65.3	72.7	85.1	53.9	56.4
R10	67.1	43.4	49.6	52.6	64.7	79.0	60.6	51.3	59.4	62.8	77.1	97.7	55.1	57.6
R11	44.4	42.5	43.9	47.5	52.8	56.4	54.7	55.9	58.8	63.9	72.3	82.2	44.4	44.4
R12	52.1	42.6	44.8	48.6	53.1	58.9	50.9	53.0	54.5	59.7	56.8	68.9	45.7	47.3

Footnotes:

A – Day-Night (L_{dn}) and CNEL values shown represent exterior noise levels at these locations. See Attachment B for more detail.

B – Daytime noise levels shown for each receptor represent actual noise levels measured at each receptor location during daytime hours (7:00 a.m.-10:00 p.m.).

C – Nighttime noise levels at R4, R5, R6 and R7 represent actual noise levels measured during nighttime hours (10:00 p.m.-7:00 a.m.). For receptors R8, R9, R10, R11 and R12, a dBA change was calculated by comparing measured daytime values at each of these locations to the measured noise level at the 24-hour reference location during the identical time period. The difference between these values (i.e., correction factor) is then applied to the applicable 24-hour nighttime maximum hour measurement to estimate the appropriate nighttime noise levels at each receptor location. Fore receptors R1 and R2, the nighttime maximum hour noise measurements collected at the 24-hour reference location were utilized. Please see Attachment B for more detail.

4.0 SIGNIFICANCE THRESHOLDS

According to the Appendix G Checklist in the CEQA Guidelines (CCR, Title 14, Division 6, Chapter 3, §15000 – 15387), a Project would have a significant effect if any of the following are true:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (see Sections 3.1.6, 3.1.7, 3.1.9 and 3.1.11).*

b) *Generation of excessive groundborne vibration or groundborne noise levels (see Sections 3.1.8 and 3.1.12).*

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels (see Section 6.1.3).*

4.1 San Bernardino County & City Noise Regulations

As described in Sections 3.1.6 through 3.1.10, both the County and City of San Bernardino have adopted various guidelines, requirements and policies related to noise within their General Plans and Municipal Codes/Ordinances. The San Bernardino County and City noise thresholds are utilized to address CEQA Checklist item *a)*.

The various units in Table 5 County standards, and subsequently in Table 11 and Table 12 (i.e., L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, L_{max}), are included to account for the wide variety of noise sources to which the standards may be applied. If a particular source generates a short duration noise (i.e., pile driving), this shorter timeframe should be reflected in the applicable noise standard when determining compliance with the policy/ordinance. For example, the L_{50} unit considers noises generated for at least 30 minutes in an hour, so it is best applied to relatively constant sources of noise. The L_{25} unit applies to noises generated for at least 15 minutes in an hour, so it applies to less constant sources of noise. Likewise, the $L_{8.3}$ and $L_{1.7}$ units apply to noise sources that are more and more variable, gradually reaching the L_{max} threshold which applies to all noises generated during the hour, no matter how short of duration the given noise source may be. In this way, the variety of measurement units included in this noise standard increase the versatility to the standard, so it can effectively be applied to many different types of noise impacts.

Conversely, the disadvantage of these noise units is the lack of valuable noise source reference data available in regulations and guidance documents. The majority of data available is in the units of L_{eq} and L_{max}, not L_{50}, L_{25}, etc. As such, simplifying assumptions are necessary in order to apply the County and City noise standards. The following simplifying assumptions are utilized in this NIA to accomplish this goal. Please note that these assumptions are conservative in nature, so the original intent of the noise standards remains intact with their implementation.

- For any given source of noise, there will be one unit of measurement in the noise standard (i.e., L_{50}, L_{25}, etc.) that will be most appropriate for the type of noise that it generates. In other words, as long as the noise source meets that specific standard, it will also meet all of the other standards. Due to the relatively constant intensity of the noise sources proposed for this Project (i.e., construction/mining equipment), the units of measurement that best represents this Project is the L_{50}. This is evidenced by equipment noise monitoring data from a previous Sespe study, specifically the Robertson Ready Mix EIR (July, 2000) Noise Assessment. See Attachment D for a relevant excerpt from the Robertson Ready Mix Noise Assessment.

Referring to Attachment D, while the noise sources shown are louder than the Project, they have similar operational characteristics (i.e., both mine operations with loaders, dozers, etc.). The excerpt in Attachment D also demonstrates that the intensity of the Project equipment noise sources is expected to be fairly constant (i.e., the difference between L_{max} and L_{50} ranges only from 0 dBA to 8 dBA) and, as described above, constant intensity noise sources are best represented by the L_{50}. Furthermore, by comparing Table 5 with the noise source data presented in Attachment D, it is evident that the L_{50} will be the first of the standards to be exceeded. Therefore, the L_{50} standard is utilized in this NIA as a surrogate for the L_{25}, $L_{8.3}$, and $L_{1.7}$ standards. While this logic would extend to the L_{max}, the L_{max} is kept in this NIA because relevant source data in these units is readily available (see Attachment D).

- Lastly, the relationship between the median (L_{50}) and the mean (L_{eq}) is a mathematical certainty: the mean of a set of numbers is always higher than or equal to the median. For this NIA, that means that the L_{eq} will always be larger than or equal to the L_{50}. As described previously, for constant intensity noise sources the two measurements are the same. The more variable the noise becomes, the larger the L_{eq} becomes in comparison to the L_{50}. Therefore, this NIA conservatively converts the L_{50} standard to units of L_{eq}.

Table 13 presents the applicable unadjusted Project noise thresholds, which are derived from the regulatory standards presented in Table 5 and the conservative, simplifying assumptions described above. Additionally, as directed by the San Bernardino County Code, whenever the measured ambient noise levels in Table 12 exceed the designated thresholds, the threshold is adjusted by +3 dBA to reflect the ambient noise level.

Table 13 Simplified San Bernardino County Noise Standards – Noise Limit Category

Timeframe	L_{eq}^{A}	L_{max}
Daytime (7:00 a.m. – 10:00 p.m.)	55 dB(A)	75 dB(A)
Nighttime (10:00 p.m. – 7:00 a.m.)	45 dB(A)	65 dB(A)

Source: County of San Bernardino County Code Chapter 83.01.080 (also see Table 5)

A – As described above, the L_{eq} County significance threshold is utilized as a conservative surrogate for the County L_{50}, L_{25}, $L_{8.3}$ and $L_{1.7}$ noise standards presented in Table 5.

Per the San Bernardino County Noise Standards, in cases where the existing ambient noise levels exceeds the applicable standards, then the noise level standard would be increased at +3 dBA increments to encompass the ambient noise. This concept corresponds with the change criterion described in Section 3.1.11, as a +3 dBA increase above the ambient is generally accepted as the minimum perceptible change in noise resulting from a source. Additionally, if ambient noise levels are within 1 dBA of the applicable significance threshold, the applicable County and City noise level standards are increased by +3 dBA increments to encompass the ambient (e.g., ambient level of 79.5 dB results in a significance threshold of 83 dB rather than 80 dB). Table 14 and Table 15 below presents the applicable San Bernardino County and City significance thresholds for each receptor, adjusted as needed to encompass the ambient noise levels presented in Table 12. Additional detail regarding these calculations are included in Attachment B.

Interior noise levels experienced at receptors were estimated by subtracting -20 dBA from the associated exterior noise levels. This is based on the Environmental Protection Agency's (EPA's) *Protective Noise Levels* document (EPA, 1974), which takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). Therefore, conservatively an

outdoor to indoor attenuation of -20 dBA's is assumed. This is also a conservative estimate of noise reduction because the EPA study is over 40 years old (1974) and construction materials and practices have progressed considerably since that time. It is assumed the proposed residences at R4 through R12 would likely have been constructed with materials and practices that provide more noise attenuation than what was available in 1974. See Attachment D for an excerpt from the EPA guidance document.

Table 14 and Table 15 below presents the applicable San Bernardino County and City significance thresholds for each receptor. These noise thresholds are utilized to address CEQA Checklist item *a)* in Section 6.1.1 below.

4.2 Project-Related Noise Level Increase

As discussed in Section 3.1.11, the FICON change criterion is commonly used to show expected public reaction to changes in environmental noise levels due to a new noise source (i.e., mine equipment). This table was developed on the basis of test subjects' reaction to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source (i.e., mining equipment). In addition to the applicable County and City noise criteria presented above, the change criterion presented in Table 7 is also utilized to address CEQA Checklist items *a)*.

Using this FICON criteria, where pre-Project ambient noise levels are less than 60 dBA L_{dn}, a +5 dBA or greater increase in noise levels would be considered a significant impact. Where pre-Project ambient conditions are between 60 and 65 dBA L_{dn}, a +3 dBA increase in noise levels due to a Project is required for a finding of significant impact. Finally, in areas already exposed to higher noise levels, specifically pre-Project noise levels in excess of 65 dBA L_{dn}, a +1.5 dB increase is considered by FICON as the threshold criteria for determining significance.

4.3 Vibration Significance Thresholds

As discussed in Section 3.1.8, the San Bernardino County Code requires that no new sources of vibration "be allowed which produce a particle velocity greater than or equal to two-tenths inches per second (0.2 in/sec) measured at or beyond the lot line (i.e., property boundary). Therefore, a peak particle velocity (PPV) of 0.2 inches per second (in/sec) will be utilized to determine the significance of Project vibration impacts per CEQA Checklist item *b)*.

Table 14 Applicable San Bernardino County & City Significance Thresholds (dBA)

Receptor	Daytime (7:00 a.m. – 10:00 p.m.)						Nighttime (10:00 p.m. – 7:00 a.m.)					
	L_{eq}			L_{max}			L_{eq}			L_{max}		
	Ambient	Threshold	Adjusted Threshold	Ambient	Threshold	Adjusted Threshold	Ambient	Threshold	Adjusted Threshold	Ambient	Threshold	Adjusted Threshold
R1	60.7	55	**63.7**	80.9	75	**83.9**	55.5	45	**58.5**	76.9	65	**79.9**
R2	70.2	55	**73.2**	87.0	75	**90.0**	55.5	45	**58.5**	76.9	65	**79.9**
R3	55.4	55	**58.4**	60.8	75	**75**	55.2	45	**58.2**	62.9	65	**65**
R4	59.0	55	**62.0**	62.3	75	**75**	59.7	45	**62.7**	76.8	65	**79.8**
R5	57.5	55	**60.5**	68.9	75	**75**	52.4	45	**55.4**	61.5	65	**65**
R6	53.6	55	**55**	64.0	75	**75**	50.3	45	**53.3**	62.2	65	**65**
R7	50.8	55	**55**	61.2	75	**75**	48.0	45	**51.0**	59.6	65	**65**
R8	51.2	55	**55**	62.3	75	**75**	52.5	45	**55.5**	75.7	65	**78.7**
R9	57.0	55	**60.0**	67.8	75	**75**	59.0	45	**62.0**	85.1	65	**88.1**
R10	67.1	55	**70.1**	79.0	75	**82.0**	60.6	45	**63.6**	97.7	65	**100.7**
R11	44.4	55	**55**	56.4	75	**75**	54.7	45	**57.7**	82.2	65	**85.2**
R12	52.1	55	**55**	58.9	75	**75**	50.9	45	**53.9**	68.9	65	**71.9**

Table 15 Applicable San Bernardino County Standards – Adjacent Mobile Noise Sources (dBA)

Receptor	Interior – Day-Night (L_{dn})			Exterior – Day-Night (L_{dn})		
	Ambient	Threshold[A]	Adjusted Threshold	Ambient	Threshold[A]	Adjusted Threshold
R1	40.7	45	**45**	60.7	65	**65**
R2	50.2	---	**---**	70.2	---	**---**
R3	35.4	---	**---**	55.4	---	**---**
R4	49.7	45	**52.7**	69.7	60	**72.7**
R5	42.4	45	**45**	62.4	60	**65.4**
R6	40.3	45	**45**	60.3	60	**63.3**
R7	32.3	45	**45**	52.3	60	**60**
R8	31.2	45	**45**	51.2	60	**60**
R9	33.9	45	**45**	53.9	60	**60**
R10	35.1	45	**45**	55.1	60	**60**
R11	24.4	45	**45**	44.4	60	**60**
R12	25.7	45	**45**	45.7	60	**60**

Note: See calculations/footnotes within Attachment B for more details. Please note, there are no applicable Day-Night (L_{dn}) noise thresholds for industrial receptors (i.e., R2/R3).
A – Per Table 6 above, neither the County/City of San Bernardino publishes applicable 24-hour L_{dn} significance thresholds for industrial receptors (i.e., R2 and R3). Therefore, no interior or exterior L_{dn} significance thresholds for Receptors R2 or R3 are shown above.

5.0 METHODOLOGIES

To quantify the noise generated by the Project noise sources (i.e., mining/construction equipment) reference data was gathered from the Federal Highway Administration's (FHWA) *Roadway Construction Noise Model User Guide* (Federal Highway Administration, 2006). See Table 16 below and Attachment C for more detail.

To determine the average (L_{eq}) and maximum sound pressure level (L_{max}) generated by initial site clearing/ground preparation and berm construction activities (i.e., dozers), FHWA reference data was utilized. Mining operation/extraction of aggregate equipment (i.e., dozers, grader, loader) L_{eq} and L_{max} source noise sound pressure levels were also determined using FHWA reference data. Please see Attachment D which shows the FHWA source noise data utilized to quantify the noise levels of Project sources (i.e., mining equipment).

As discussed previously, following Project approval initial site clearing/ground preparation and construction of the perimeter berm would commence. Two (2) dozers and/or scrapers would be used to clear the mine area and remove minimal subsoil and topsoil from the Project site. Topsoil and subsoil will then be used to construct a 10-foot high earthen berm, using the same dozers and/or scrapers, along the entire length of site's southern boundary. Per specifications provided by Vulcan, it is assumed no other mining equipment or aggregate excavation operations would occur during this initial Project phase. Based upon discussion with the Vulcan and information gathered from the previous projects, this process is expected to take approximately three (3) month. Following site preparation, removal of topsoil/subsoil and construction of the perimeter berm, extraction of the aggregate would commence at grade within the northeast corner of the Project site mining area.

Once the site is cleared and perimeter berm constructed, mining in Area Q would commence in one (1) mining phase, initiating in the northeast corner of the site and reaching a final depth of 120-feet bgs. Material extraction activities at the Project site will involve the use of excavators/graders, dozers, scrapers and loaders in the same manner as is currently being done at Vulcan's Cajon Creek Quarry (i.e., Area L) to the north. Mining in the Area Q Quarry will not involve any significant changes to the existing operations as currently ongoing at the Cajon Creek Quarry. Specifically, when mining (extraction of the aggregate) is completed at Area L, the existing equipment (i.e., dozers, front-end loaders, graders) would be relocated to the Area Q Quarry site. Once extracted, mined materials will be transported via conveyor system from Area Q to the existing conveyance infrastructure in place at Area L. From there, material will then be processed at the San Bernardino facility or one of Vulcan's other permitted locations in the same manner as is currently being done with the aggregate from Area L. As described previously, no on-road haul trucks will leave the Area Q site onto public roadways and no material processing would occur onsite.

Table 16 shows each equipment type that would be utilized by the Project. Usage fraction (%) and maximum sound pressure level (L_{max}) noise data shown are FHWA default values. Source noise calculations in Attachment C provide more detail.

Table 16 Reference Equipment Noise Data

Noise Source	Usage (%)	L_{max} @ 100-feet (dBA)	L_{eq} @ 50-feet (dBA)
Dozer (x2)	40%	82	78
Scraper	40%	85	81
Front-End Loader	40%	79	75
Grader	40%	85	81

Mine Equipment Sources: Federal Highway Administration (FHWA, 2006). See Attachment C for more detail.

5.1 Project Design Features that Reduce Noise

Consistent with San Bernardino County and City General Plan Policies outlined in Section 3.1.6 and Section 3.1.9 respectively, the following elements of the Project have been designed to minimize adverse noise impacts on surrounding land uses. Also see Attachment F for more details.

- Blasting would not be used for the proposed mining operations.
- As discussed above, prior to any mining activities and/or significant materials excavation, a approximately 10-foot high earthen/landscaped berm would be built along the entire length of the Project site's southern boundary. The berm will be constructed with sufficient length and height to break line-of-sight between adjacent residential receptors in Muscoy and mine areas. The berm will serve as the primary storage location for topsoil and subsoil removed from the Area Q Quarry site.
- No excavation of material or overburden would take place within twenty-five (25) to fifty (50) feet from the public right-of-way or other property lines.
- There would be no off-site on-road haul truck trip leaving or entering the Project site from public roads.

6.0 PROJECT-LEVEL IMPACTS & MITIGATION MEASURES

6.1 Impact Assessment

6.1.1 Generation of Noise Levels in Excess of Applicable Standards

Impact Statement

Impact NO-1: *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?* **(Appendix G Threshold Criteria (a))**

Impact Analysis

To address the CEQA Criteria *a)*, the applicable San Bernardino County and City General Plan and Noise Ordinance criteria presented in Table 14 and Table 15 are utilized. Additionally, the FICON change criterion, discussed in Section 4.2 and presented in Table 7, is also utilized to address CEQA Criteria *a)*.

Table 17 through Table 22 below show the predicted change in noise level at each receptor during the initial ground preparation/berm construction phase and during the operational mining operations/extraction of aggregates phase, and compares the results to the applicable San Bernardino County and City significance thresholds presented in Table 14 and Table 15.

Referring to Table 17 and Table 18 below, shielding and noise attenuation was excluded from noise level assessment during the initial ground preparation phase, prior to construction of the 10-foot high topsoil perimeter berm along the Project site's southern boundary. Additionally, shielding and noise attention from the existing earthen berm (approximately 8-feet high) located outside the Project area south of the Devil Creek Diversion Channel, was also conservatively not accounted for in the impact calculations. This is because the initial Project phase would begin at grade with nothing, other than the existing berm south of the Devil Creek Diversion Channel, blocking line-of-sight between mobile equipment and nearby receptors to the south. Until the proposed approximately 10-foot high vegetated earthen berm is installed adjacent to the residential receptors in Muscoy (i.e., R4 through R12), conservatively no noise attenuation was assumed as these receptors will have an unobstructed view of the operating equipment (i.e., dozers). Once installed, noise attenuation can be assumed as the berm will sufficiently break line-of-sight between source and receptor. Please see Attachment F which presents calculations and detail (e.g., receptor/equipment heights, noise transmission paths, etc.) relating to estimate noise attenuation provided by the approximately 10-foot high earthen berm once it's constructed. Therefore, the predicted noise levels during initial ground preparation/berm construction are conservative for future operations by assessing the noise impacts expected at the very beginning (i.e., first 3-months) of the Project, which represent the worst-case noise levels.

As shown in Table 17 and Table 18, worst-case noise levels during initial ground preparation/berm construction exceed the applicable San Bernardino County/City daytime L_{eq} noise thresholds at Receptors R4, R5, R6, R7, R8, R9, R11 and R12. Additionally, nighttime L_{eq} and Day-Night (L_{dn}) noise levels also exceed applicable County/City thresholds at Receptors R4, R5, R6, R7, R8, R9, R10, R11 and R12. Lastly, applicable County and City nighttime L_{max} thresholds are also exceeded at Receptors R5, R6 and R7. It is important to note that these exceedances will be short-term and temporary in nature. The initial Project phase, which will involve removal of topsoil/subsoil from the site and construction of the approximately 10-foot berm along the southern site perimeter, is expected to conservatively take 3-months maximum.

Table 17 Initial Site Preparation/Berm Construction – County L_{eq} & L_{max} Criteria

Receptor	Daytime (7:00 a.m. – 10:00 p.m.)						Nighttime (10:00 p.m. – 7:00 a.m.)					
	L_{eq} (dBA)			L_{max} (dBA)			L_{eq} (dBA)			L_{max} (dBA)		
	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?
R1	37.9	63.7	No	41.9	83.9	No	37.9	58.5	No	41.9	79.9	No
R2	47.0	73.2	No	51.0	90.0	No	47.0	58.5	No	51.0	79.9	No
R3	52.3	58.4	No	56.3	75	No	52.3	58.2	No	56.3	65	No
R4	62.3	62.0	**Yes**	66.3	75	No	62.3	62.7	No	66.3	79.8	No
R5	63.4	60.5	**Yes**	67.4	75	No	63.4	55.4	**Yes**	67.4	65	**Yes**
R6	63.4	55	**Yes**	67.4	75	No	63.4	53.3	**Yes**	67.4	65	**Yes**
R7	63.4	55	**Yes**	67.4	75	No	63.4	51.0	**Yes**	67.4	65	**Yes**
R8	63.6	55	**Yes**	67.6	75	No	63.6	55.5	**Yes**	67.6	78.7	No
R9	66.2	60.0	**Yes**	70.2	75	No	66.2	62.0	**Yes**	70.2	88.1	No
R10	64.4	70.1	No	68.4	82.0	No	64.4	63.6	**Yes**	68.4	100.7	No
R11	60.5	55	**Yes**	64.4	75	No	60.5	57.7	**Yes**	64.4	85.2	No
R12	58.6	55	**Yes**	62.5	75	No	58.6	53.9	**Yes**	62.5	71.9	No

Table 18 Initial Site Preparation/Berm Construction – County/City Day-Night (L_{dn}) Criteria

Receptor	Interior – Day-Night (L_{dn}, dBA)			Exterior – Day-Night (L_{dn}, dBA)		
	Project Noise	Threshold[A]	Significant?	Project Noise	Threshold[A]	Significant?
R1	24.4	45	No	44.4	65	No
R2	33.4	---	---	53.4	---	---
R3	38.7	---	---	58.7	---	---
R4	48.8	52.7	No	68.8	72.7	No
R5	49.8	45	**Yes**	69.8	65.4	**Yes**
R6	49.8	45	**Yes**	69.8	63.3	**Yes**
R7	49.8	45	**Yes**	69.8	60	**Yes**
R8	50.1	45	**Yes**	70.1	60	**Yes**
R9	52.6	45	**Yes**	72.6	60	**Yes**
R10	50.8	45	**Yes**	70.8	60	**Yes**
R11	46.9	45	**Yes**	66.9	60	**Yes**
R12	45.0	45	No	65.0	60	**Yes**

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County/City significance threshold.

A – Per Table 6 above, neither the County/City of San Bernardino publishes applicable 24-hour L_{dn} significance thresholds for industrial receptors (i.e., R2 and R3). Therefore, no interior or exterior L_{dn} significance thresholds for Receptors R2 or R3 are shown above.

In addition to the applicable San Bernardino County and City noise standards, the FICON change criterion presented in Table 7 is also utilized to determine the significance of Project noise impacts. Using the FICON criteria discussed in Section 4.2, where pre-Project ambient noise levels are less than 60 dBA L_{dn}, a +5 dBA or greater increase in noise levels would be considered a significant impact. Where pre-Project ambient conditions are between 60 and 65 dBA L_{dn}, a +3 dBA increase in noise levels due to a Project is required for a finding of significant impact. Finally, in areas already exposed to higher noise levels, specifically pre-Project noise levels in excess of 65 dBA L_{dn}, a +1.5 dB increase is considered by FICON as the threshold criteria for determining significance. Please see Attachment C and Attachment E for more details.

Table 19 and Table 20 below show the predicted increase in noise level experienced at each receptor during initial site preparation (removal of topsoil/subsoil)/berm construction activities and mining operations (extraction of aggregates) respectively. This change is compared to the appropriate FICON change criterion present in Table 7 to determine significance. For informational purposes, the FICON results are also used to estimate the human reaction to noise increases experienced at each receptor based on the criteria presented in Table 8. The calculated noise levels for both initial ground preparation/berm construction and mining operations conservatively assume that the mining equipment (i.e., dozers, graders, loaders) would be operating simultaneously in the areas immediately adjacent to nearby receptors. In reality, it is unlikely that equipment would operate for an extended amount of time in these worst-case areas. Additionally, the impact calculations conservatively do not account for the shielding and noise attention provide by the existing earthen berm (approximately 8-feet high) located outside the Project area south of the Devil Creek Diversion Channel.

Referring to Table 19, initial ground preparation/berm construction activities would increase noise levels above the applicable FICON change criterion at Receptors R5 through R12. Noise increases at these receptors range from an approximately +6.9 dBA increase, or "clearly noticeable", at Receptor R5, to an approximately +16.6 dBA increase, or "about twice as loud", at Receptor R11. As discussed above, it's important to note that these exceedances will be short-term and temporary in nature (maximum 3-months).

Table 19 Initial Site Preparation/Berm Construction – Project Noise Level Increases

Site	Ambient L_{eq} (dBA)[A]	Total Project Noise Level (dBA)[E]	Change (dBA)[B]	FICON Significance Threshold[C]	Significant?	Subjective Reaction[D]
R1	60.7	60.8	0.0	+3	No	Imperceptible
R2	70.2	70.2	0.0	+1.5	No	Imperceptible
R3	55.4	57.2	1.7	+5	No	Imperceptible
R4	59.0	64.0	5.0	+5	No	Just Barely Perceptible
R5	57.5	64.4	6.9	+5	**Yes**	**Clearly Noticeable**
R6	53.6	63.8	10.2	+5	**Yes**	**About Twice as Loud**
R7	50.8	63.6	12.9	+5	**Yes**	**About Twice as Loud**
R8	51.2	63.9	12.7	+5	**Yes**	**About Twice as Loud**
R9	57.0	66.7	9.7	+5	**Yes**	**About Twice as Loud**
R10	67.1	69.0	1.9	+1.5	**Yes**	Imperceptible
R11	44.4	60.6	16.1	+5	**Yes**	**About Twice as Loud**
R12	52.1	59.4	7.3	+5	**Yes**	**Clearly Noticeable**

Note: Values shown in **bold** represent a potentially significant impact. See footnotes below on next page and under Table 20.

See Table 20 below for footnotes A, B, C and D.
E – Total Project daytime noise levels estimated during the initial ground preparation/berm construction activities do not account for the noise attenuation provided by the approximately 10-foot high berm that would be install prior to mining (see Section 5.1 above).

Following the removal of subsoil/topsoil and construction of the perimeter berm, extraction of aggregate/mining operations would commence at grade within the northeast corner of the Project site mining area. Because the 10-foot high berm will be installed prior to material extraction, worst-case noise levels during mining take into account the noise attenuation provided by the earthen berm. Barrier insertion loss calculations presented in Attachment F show that the 10-foot high berm would result in approximate noise reductions ranging from -16.1 dBA (e.g., at R12) to -16.5 dBA (e.g., at R9) between the Project sources (i.e., mining equipment) and the residential receptors (i.e., R4 through R12) located to the south. Therefore, the appropriate noise reductions have been applied to the Project noise levels presented in Table 21 and Table 22 below. These noise levels represent worst-case mining operations noise levels, when mobile equipment (i.e., dozers, scrapers, loader, grader) is operating in the mining areas closets to each receptor. Over time, as the excavation pit proceeds to a final depth of approximately 120-feet, equipment noise would be increasingly shielded due to the attenuation provided by the deepening pit walls. Please see Attachment F, which presents calculations and details (e.g., receptor/equipment heights, noise transmission paths, etc.) relating to estimate noise attenuation provided by the approximately 10-foot high earthen berm.

Referring to Table 21 and Table 22, noise levels during mining operations (i.e., excavation of aggregate, once the berm is constructed) do not exceed any of the applicable San Bernardino County or City noise thresholds at any receptor. Additionally, as shown in Table 20, mining/material excavation operations would not increase noise levels above the applicable FICON change criterion at any receptor. This is due to the noise attenuation provided by the 10-foot high earthen berm, which will be installed along the entire southern boundary of the Project site adjacent to residential receptors (i.e., R4 through R12) prior to mining operations. Please note, as described previously, the impact calculations conservatively do not account for the shielding and noise attention provide by the existing earthen berm (approximately 8-feet high) located outside the Project area south of the Devil Creek Diversion Channel.

Table 20 Mining/Excavation – Project Noise Level Increases

Site	Ambient L_{eq} (dBA)[A]	Total Project Noise Level (dBA)	Change (dBA)[B]	FICON Significance Threshold[C]	Significant?	Subjective Reaction[D]
R1	60.7	60.8	0.1	+3	No	Imperceptible
R2	70.2	70.2	0.0	+1.5	No	Imperceptible
R3	55.4	58.6	3.2	+5	No	Just Barely Perceptible
R4	59.0	59.5	0.5	+5	No	Imperceptible
R5	57.5	58.3	0.8	+5	No	Imperceptible
R6	53.6	55.4	1.8	+5	No	Imperceptible
R7	50.8	53.7	2.9	+5	No	Just Barely Perceptible
R8	51.2	54.0	2.9	+5	No	Just Barely Perceptible
R9	57.0	58.5	1.5	+5	No	Imperceptible
R10	67.1	67.2	0.1	+1.5	No	Imperceptible
R11	44.4	49.4	5.0	+5	No	Just Barely Perceptible
R12	52.1	53.0	0.9	+5	No	Imperceptible

Notes: Values shown in **bold** represent a potentially significant impact. See Attachment C and footnotes below for more detail.

A – See Table 12 and Table 14 for the ambient noise levels at each receptor.

B – Values shown represent the dBA increase in noise experienced at each receptor resulting from Project noise sources (i.e., berm construction, mining equipment operation, etc.)

C – Please see Table 7 and Section 3.1.11 for more details regarding the appropriate FICON change criterion utilized to determine the significance of Project-related noise level increases at each receptor.

D – See Table 8 for subjective reactions to changes in noise levels. The subjective reactions shown are for informational purposes only, and are not utilized to determine the significance of Project impacts. A decibel change of +6 dBA is considered potentially significant (i.e., "clearly noticeable"). Source: *Fundamentals of Noise and Vibration Analysis for Engineers* (Norton & Karczub, 2003)

Table 21 Mining/Excavation – County L_{eq} & L_{max} Criteria

Receptor	Daytime (7:00 a.m. – 10:00 p.m.)						Nighttime (10:00 p.m. – 7:00 a.m.)					
	L_{eq} (dBA)			L_{max} (dBA)			L_{eq} (dBA)			L_{max} (dBA)		
	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?
R1	41.5	63.7	No	45.4	83.9	No	41.5	58.5	No	45.4	79.9	No
R2	50.6	73.2	No	54.5	90.0	No	50.6	58.5	No	54.5	79.9	No
R3	55.8	58.4	No	59.8	75	No	55.8	58.2	No	59.8	65	No
R4	49.6	62.0	No	53.5	75	No	49.6	62.7	No	53.5	79.8	No
R5	50.6	60.5	No	54.6	75	No	50.6	55.4	No	54.6	65	No
R6	50.6	55	No	54.6	75	No	50.6	53.3	No	54.6	65	No
R7	50.6	55	No	54.6	75	No	50.6	51.0	No	54.6	65	No
R8	50.9	55	No	54.8	75	No	50.9	55.5	No	54.8	78.7	No
R9	53.2	60.0	No	57.2	75	No	53.2	62.0	No	57.2	88.1	No
R10	51.5	70.1	No	55.5	82.0	No	51.5	63.6	No	55.5	100.7	No
R11	47.8	55	No	51.8	75	No	47.8	57.7	No	51.8	85.2	No
R12	46.0	55	No	50.0	75	No	46.0	53.9	No	50.0	71.9	No

Table 22 Mining/Excavation – County/City Day-Night (L_{dn}) Criteria

Receptor	Interior – Day-Night (L_{dn})			Exterior – Day-Night (L_{dn})		
	Project Noise	Threshold	Significant?	Project Noise	Threshold	Significant?
R1	27.9	45	No	47.9	65	No
R2	37.0	---	---	57.0	---	---
R3	42.2	---	---	62.2	---	---
R4	36.0	52.7	No	56.0	72.7	No
R5	37.0	45	No	57.0	65.4	No
R6	37.0	45	No	57.0	63.3	No
R7	37.0	45	No	57.0	60	No
R8	37.3	45	No	57.3	60	No
R9	39.7	45	No	59.7	60	No
R10	37.9	45	No	57.9	60	No
R11	34.2	45	No	54.2	60	No
R12	32.4	45	No	52.4	60	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County/City significance threshold.

A – Per Table 6 above, neither the County/City of San Bernardino publishes applicable 24-hour L_{dn} significance thresholds for industrial receptors (i.e., R2 and R3). Therefore, no interior or exterior L_{dn} significance thresholds for Receptors R2 or R3 are shown above.

Level of Significance Before Mitigation

During the construction phase (i.e., site preparation/berm construction), the Project would increase ambient noise levels in excess of applicable standards at Receptors 4 (R4), 5 (R5), 6 (R6), 7 (R7), 8 (R8), 9 (R9), 10 (R10), 11 (R11), and 12 (R12). Therefore, the Project impacts are potentially significant.

Mitigation Measures

As shown in Table 17 and Table 18, at the very beginning of the Project prior to installation of the 10-foot high perimeter topsoil storage berm, noise impacts at Receptors R4 through R12 located in Muscoy exceed various San Bernardino County and City L_{eq}, L_{max}, and L_{dn} noise standards. Additionally, as shown in Table 19, these initial Project operations would increase noise levels above the applicable FICON change criterion at Receptors R5 through R12. Ultimately, to ensure noise levels do not exceed these applicable threshold criteria, control measures sufficient to obtain noise reductions ranging from -0.3 dBA's (i.e., nighttime L_{eq} at R4) to -12.4 dBA's (i.e., nighttime L_{eq} at R7) would need to be implemented.

At the onset of the Project (i.e., prior to installation of the 10-foot high perimeter berm), there are no feasible noise control measures that would sufficiently reduce equipment noise so as not to exceed the applicable San Bernardino County and City noise thresholds at certain receptors (i.e., Receptors R1, R4, and R5). However, these equipment noise impacts resulting from topsoil removal and berm construction are short-term and temporary in nature (3-months maximum). Per the San Bernardino County Development Standards, specifically §83.01.080(g)(3)-Exempt Noise of the San Bernardino County Development Standards (San Bernardino County, 2009), noise such as "temporary construction, maintenance, repair or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays" are considered exempt from County noise ordinance regulations. Berm construction using heavy equipment, specifically two (2) dozers and/or scrapers, falls within this category of exempt construction noise sources. Therefore, to ensure temporary noise impacts during topsoil removal/berm construction do not create a substantial nuisance at nearby receptors, the following **Mitigation Measure NO-1** is recommended:

> ***Mitigation Measure NO-1:*** *Berm construction activities shall only occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday as defined by the §83.01.080(g)(3)-Exempt Noise of the San Bernardino County Development Standards.*

As discussed above, once the approximately 10-foot high topsoil/subsoil storage berm is installed it would provide significant noise attenuation as it would sufficiently break line-of-sight between Project noise sources and receptors located in Muscoy to the south. Please see Attachment F which presents calculations and detail (e.g., receptor/equipment heights, noise transmission paths, etc.) relating to estimate noise attenuation provided by the approximately 10-foot high earthen berm. Specifically, the barrier insertion loss calculations presented in Attachment F show that the earthen berm would result in approximate noise reductions ranging from -16.1 dBA (e.g., at R12) to -16.5 dBA (e.g., at R9) between the Project sources (i.e., mining equipment) and the residential receptors (i.e., R4 through R12). By applying these noise attenuations at each affected receptor (see Attachment E), controlled noise levels presented in Table 21 and Table 22 are in compliance with County and City noise standards. Although Table 21 and Table 22 show noise levels from mining operations/excavation rather than controlled noise levels for initial site clearing/berm construction, because normal mining operations involves two (2) additional pieces of heavy duty equipment, specifically a loader and grader in addition to the two (2) dozers/scrapers used during initial ground preparation/berm construction, it can be assumed that once the approximately 10-foot high berm is installed future construction/mining equipment impacts will also be less than

significant during all subsequent Project phases. Additionally, the impact calculations conservatively do not account for the shielding and noise attention provide by the existing earthen berm (approximately 8-feet high) located outside the Project area south of the Devil Creek Diversion Channel.

Regarding the FICON change criterion, for reference the following Table 23 shows the expected noise increases at affected receptors (i.e., R5 through R12) after taking into account the noise attenuation provided by the 10-foot high perimeter berm.

Table 23 Project Noise Level Increases w/ Perimeter Berm

Site	Ambient L_{eq} (dBA)	Total Project Noise Level (dBA)[A]	Change (dBA)[B]	FICON Significance Threshold[C]	Significant?	Subjective Reaction[D]
R5	57.5	57.9	0.4	+5	No	Imperceptible
R6	53.6	54.5	0.9	+5	No	Imperceptible
R7	50.8	52.3	1.6	+5	No	Imperceptible
R8	51.2	52.7	1.5	+5	No	Imperceptible
R9	57.0	57.7	0.8	+5	No	Imperceptible
R10	67.1	67.2	0.1	+1.5	No	Imperceptible
R11	44.4	47.4	2.9	+5	No	Just Barely Perceptible
R12	52.1	52.5	0.4	+5	No	Imperceptible

Footnotes:

A – Reductions are applied to Receptors R5 through R12 due to the noise attenuation provided by the installation of a 10-foot earthen berm along the entire southern Project site property boundary adjacent to residential receptors. See Figure 5 (Attachment A) for the berm location and Attachment E for more details regarding the insertion loss calculations.

B – Values shown represent the dBA increase in noise experienced at each receptor resulting from Project noise sources (i.e., berm construction, mining equipment operation, etc.). Please note, this increase takes into account noise attenuation due to the 10-foot earthen berm.

C – Please see Table 7 and Section 3.1.11 for more details regarding the appropriate FICON change criterion utilized to determine the significance of Project-related noise level increases at each receptor.

D – See Table 8 for subjective reactions to changes in noise levels. The subjective reactions shown are for informational purposes only, and are not utilized to determine the significance of Project impacts. A decibel change of +6 dBA is considered potentially significant (i.e., "clearly noticeable"). Source: *Fundamentals of Noise and Vibration Analysis for Engineers* (Norton & Karczub, 2003)

It is important to note this analysis was designed to produce conservative worst-case Project noise impacts at nearby receptors. In reality, when taking into account additional shielding or absorption effects from intervening topography/vegetation between source and receptor, including the existing earthen berm south of the Devil Creek Diversion Channel, and the fact that the majority of mining equipment will not operate simultaneously near the outermost Project site boundaries, as was assumed in this analysis, noise levels are expected to be less than those calculated within this NIA. Furthermore, as the excavation pit proceeds to a final depth of approximately 120-feet, equipment noise would be increasingly shielded due to the attenuation provided by the deepening pit walls.

Level of Significance After Mitigation

Upon implementation of Project design features described in Section 5.1 and adherence to the requirements outlined in County Development Standards §83.01.080(g)(3) (i.e., Mitigation Measure NO-1), Project impacts to nearby receptors would be **less than significant** with **no additional mitigation required**.

6.1.2 Generation of Excessive Groundborne Vibration

Impact Statement

Impact NO-2: *Generation of excessive groundborne vibration or groundborne noise levels?* **(Appendix G Threshold Criteria (b))**
Impact Analysis

The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration, 2006) document provides guidelines for assessing vibration impacts resulting from construction activities. Table 24 below lists vibration source levels for common types of construction equipment, in terms of peak particle velocity (PPV) in units of inches per second at a distance of 25-feet.

Table 24 Vibration Source Level for Construction Equipment

Equipment	PPV (in/sec) @ 25-feet away
Vibratory Roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Vibratory Roller	0.210

Source: *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans, 2013), *Transit Noise and Vibration Impact Assessment* (FTA, 2006).

To assess Project vibration impacts at each receptor location, the reference PPV value of 0.089 inches per second (i.e., large bulldozer) is utilized. It is assumed that nothing larger or more powerful than a large bulldozer would operate at the Project site in close proximity to nearby receptors. The distance shown represents the measured distance from the closest boundary of the active mining area to the nearest property line of the receptor. Using this information, Table 25 summarizes the predicted groundborne vibration impacts resulting from the Project. Significance was determined by comparing the predicted change in groundborne vibration to the applicable San Bernardino County Code vibration threshold outlined in Section 4.3.

Table 25 Predicted Project Vibration Levels at Receptors

Receptors	Distance (feet)	Predicted Vibration – PPV (in/sec)[A]	Applicable San Bernardino County Significance Threshold – PPV (in/sec	Significant?
R1	7,135	0.000	≤ 0.2	No
R2	2,505	0.001	≤ 0.2	No
R3	1,365	0.001	≤ 0.2	No
R4	430	0.004	≤ 0.2	No
R5	380	0.004	≤ 0.2	No
R6	380	0.004	≤ 0.2	No
R7	380	0.004	≤ 0.2	No
R8	370	0.005	≤ 0.2	No
R9	275	0.006	≤ 0.2	No
R10	339	0.005	≤ 0.2	No

Receptors	Distance (feet)	Predicted Vibration – PPV (in/sec)[A]	Applicable San Bernardino County Significance Threshold – PPV (in/sec	Significant?
R11	534	0.003	≤ 0.2	No
R12	665	0.002	≤ 0.2	No

Note: See Attachment C for more detail.
A – The Project vibration levels shown above are considered "barely perceptible" per Caltrans guidance (Caltrans, 2013).

As shown in Table 25, predicted vibration impacts to nearby receptors were well below the applicable San Bernardino County significance threshold. It should also be noted that predicted vibration impacts at nearby receptors are considered "barely perceptible" per Caltrans criteria (see Table 9) for human response (i.e., ≤ 0.035 PPV in/sec). Therefore, groundborne vibration impacts to nearby receptors resulting from Project operations are **less than significant** with **no mitigation required**.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Level of Significance After Mitigation

Not Applicable.

6.1.3 Airport Land Use/Vicinity Analysis

Impact Statement

Impact NO-3: *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?* **(Appendix G Threshold Criteria (c))**

Impact Analysis

The proposed Project site is not located within 2.0 miles of any private or public airports or airstrips, or in an area governed by an airport land use plan. The closest airport/airstrip is Ontario International Airport, located approximately 13 miles southwest of the Project site. Please see Figure 1 which displays the location of this airport in relation to the Project site. Furthermore, the Project does not involve creation of a new noise-sensitive land uses (i.e., residences). Therefore, the Project would have **no impact** related to airport/airstrip noise levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Level of Significance After Mitigation

Not Applicable.

7.0 FINDINGS

This Noise Impact Assessment finds that:

- Temporary construction Project phase impacts during initial ground preparation/berm construction are mitigated to the extent feasible and will comply with applicable San Bernardino County requirements;
- Mining operations noise impacts are less than significant at nearby receptors; and
- Project groundborne vibration impacts are less than significant at nearby receptors.

8.0 REFERENCE

Bollard Acoustical Consultants, Inc. (2005). *Environmental Noise Assessment - Sacramento Aggregates Mining Expansion.* Auburn, CA: Bollard Acoustical Consultants.

Caltrans. (2013). *Transportation and Construction Vibration Guidance Manual.* California Department of Transportation, Noise, Vibration, and Hazardous Waste Management Office. Sacramento, CA: California Department of Transportation.

City of San Bernardino. (2005). *City of San Bernardino General Plan 2005.* Planning Division. San Bernardino, CA: City of San Bernardino.

EPA. (1974). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* U.S. Environmental Protection Agency. Washington, D.C. 20460: U.S. EPA. Retrieved 2017

Federal Highway Administration. (2006). *Roadway Construction Noise Model User's Guide.* Washington, DC: U.S. Department of Transportation.

Federal Transit Administration. (2006). *Transit Noise and Vibration Impact Assessment.* Washington, DC: U.S. Department of Transportation.

FHWA. (2000). *Noise Barrier Design Handbook.* Federal Highway Administration. Washington D.C.: FHWA.

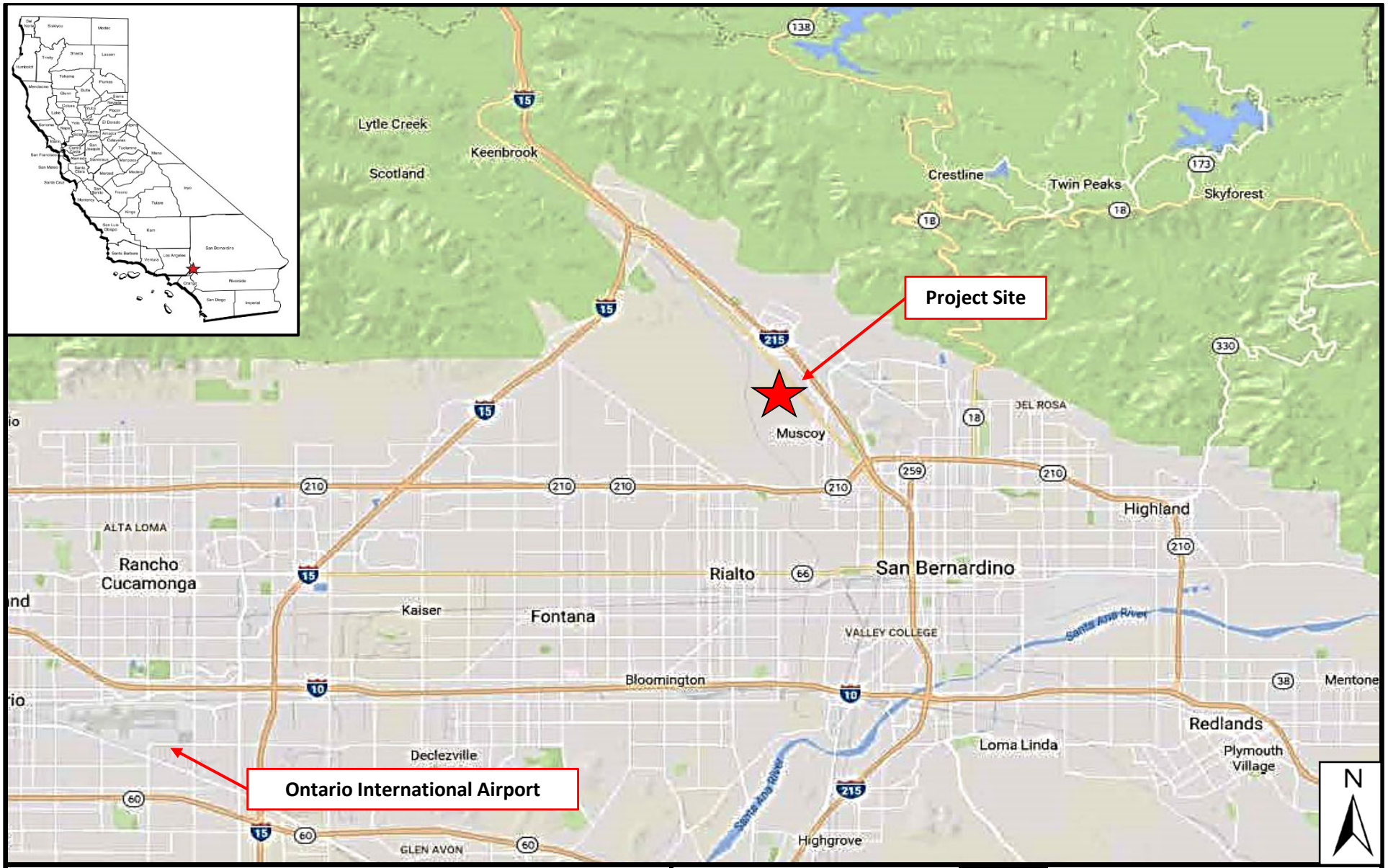
Norton, M., & Karczub, D. (2003). *Fundementals of Noise and Vibration Analysis for Engineers.* Cambridge, U.K.: Cambridge University Press.

San Bernardino County. (2009). *County of San Bernardino - 2007 Development Code.* Land Use Services Division. San Bernardino, CA: San Bernardino County. Retrieved from http://cms.sbcounty.gov/portals/5/planning/development%20code/2007_development_code_08-20-09.pdf

San Bernardino County. (2014, November 9). *San Bernardino County 2007 General Plan.* County of San Bernardino, Land Use Services Division. San Bernardino, CA 92415-0182: San Bernardino County.

ATTACHMENT A

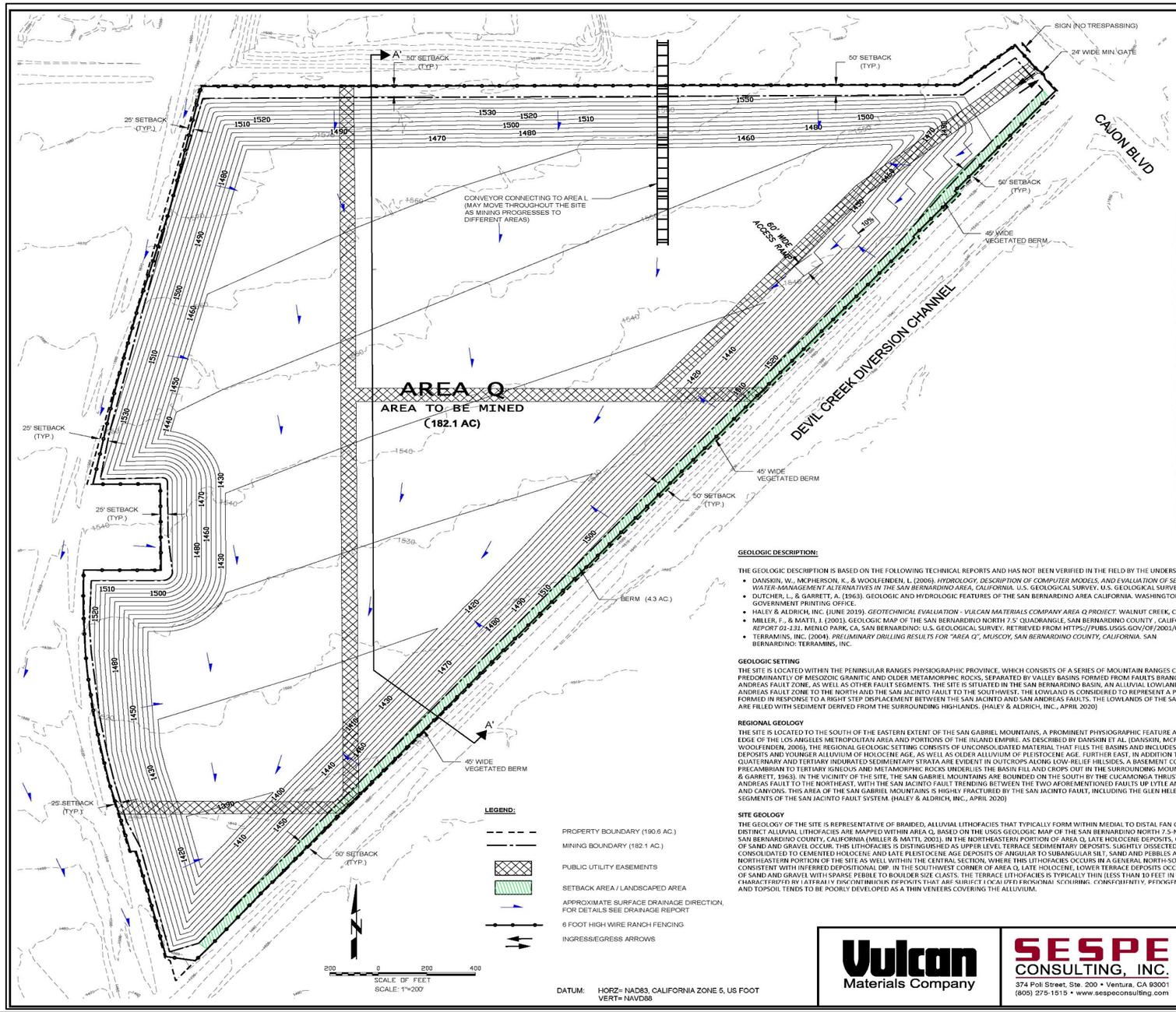
Figures



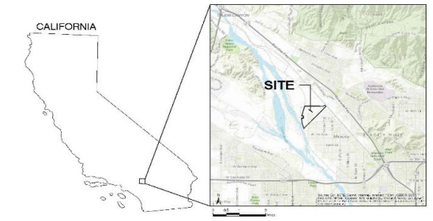
Source: Google Earth 2018

SESPE CONSULTING, INC.

FIGURE 1	REGIONAL LOCATION MAP Area Q Quarry Project Vulcan Materials Company San Bernardino County, California		
PROJECT #:	VU01.17.78	DATE:	2/14/18
SCALE:	N/A	DRAWN BY:	GPS



DATUM: HORZ= NAD83, CALIFORNIA ZONE 5, US FOOT
VERT= NAVD88



APN
262-201-11
262-201-12
262-201-13
262-201-14
262-211-02
262-211-03
262-211-04
262-211-05
262-211-06
262-221-03
262-221-04
262-221-05
262-221-09
262-221-10
262-221-11
262-221-12
262-221-13
262-221-17
262-221-21
262-221-29
262-221-30
262-231-01
262-241-13
262-241-14
262-241-16
262-241-26
TOTAL ACRES: 190.6

VULCAN AREA Q MINE SITE INFORMATION

MINERAL COMMODITY:	SAND AND GRAVEL
APPLICANT: OPERATOR: FEE LAND OWNER:	VULCAN MATERIALS COMPANY - WESTERN DIVISION 500 N. BRAND AVENUE, SUITE 500 GLENDALE, CALIFORNIA 91203 (931) 768-2641
MINERAL RIGHTS OF FEE LAND:	VULCAN MATERIALS COMPANY - WESTERN DIVISION 500 N. BRAND AVENUE, SUITE 500 GLENDALE, CALIFORNIA 91203 (931) 768-2641
OWNER OF MINING LAND:	VULCAN MATERIALS COMPANY - WESTERN DIVISION 500 N. BRAND AVENUE, SUITE 500 GLENDALE, CALIFORNIA 91203 (931) 768-2641
PLAN DESIGN:	SESPE CONSULTING 374 POLI ST., STE. 200 • VENTURA CALIFORNIA 93001 (805) 275-1515
MAP PREPARER & SOURCE:	SESPE CONSULTING 374 POLI ST., STE. 200 • VENTURA CALIFORNIA 93001 (805) 275-1515
LAND USE ZONING:	COMMUNITY INDUSTRIAL (IC)
BASE MAP SOURCES:	TOPOGRAPHY: DIGITAL MAPPING, INC., 8/30/2005.
CONTOURS INTERVAL:	10 FEET

NOTES:

1. RECLAMATION OF THE SITE WILL INCLUDE SITE CLEANUP, PUBLIC SAFETY MEASURES, DRAINAGE CONTROLS, RECONTOURING AND RIPPING WHERE APPLICABLE, AND REVEGETATION UTILIZING NATIVE SPECIES, MONITORING AND MAINTENANCE.
2. PROPERTY BOUNDARY BASED ON ALTA SURVEY PREPARED APRIL 2006 BY DAWSON SURVEYING, INC.; JUNE 2008 ALTA SURVEY FOR LOT LINE ADJUSTMENT FOR APN: 0262-241-26, PREPARED BY GORDON EDWARDS, PLS #6678; AND SEPTEMBER 2019 LOT LINE ADJUSTMENT FOR APN: 0262-221-17, PREPARED BY JOSEPH PAOLLA, PLS #7557

INITIATION/TERMINATION MINING DATES:

MINING INITIATION:	2023
MINING TERMINATION:	APPROXIMATELY 2053

TIMEFRAMES SHOWN ABOVE ARE APPROXIMATE ESTIMATIONS, AND MAY CHANGE DEPENDING ON MARKET DEMANDS, ETC. MINING IN AREA Q WILL COMMENCE ONCE MINING IN AREA L IS COMPLETE

GEOLOGIC DESCRIPTION:

THE GEOLOGIC DESCRIPTION IS BASED ON THE FOLLOWING TECHNICAL REPORTS AND HAS NOT BEEN VERIFIED IN THE FIELD BY THE UNDERSIGNED:

- DANSKIN, W., MCPHERSON, K., & WOOLFENDEN, L. (2006). *HYDROLOGY, DESCRIPTION OF COMPUTER MODELS, AND EVALUATION OF SELECTED WATER-MANAGEMENT ALTERNATIVES IN THE SAN BERNARDINO AREA, CALIFORNIA.* U.S. GEOLOGICAL SURVEY. U.S. GEOLOGICAL SURVEY.
- DUTCHER, L., & GARRETT, A. (1963). GEOLOGIC AND HYDROLOGIC FEATURES OF THE SAN BERNARDINO AREA CALIFORNIA. WASHINGTON, D.C.: US GOVERNMENT PRINTING OFFICE.
- HALEY & ALDRICH, INC. (JUNE 2019). *GEOTECHNICAL EVALUATION - VULCAN MATERIALS COMPANY AREA Q PROJECT.* WALNUT CREEK, CA: HALEY & ALDRICH, INC.
- MILLER, F., & MATTI, J. (2001). GEOLOGIC MAP OF THE SAN BERNARDINO NORTH 7.5' QUADRANGLE, SAN BERNARDINO COUNTY , CALIFORNIA. *OPEN-FILE REPORT 01-132.* MENLO PARK, CA, SAN BERNARDINO: U.S. GEOLOGICAL SURVEY. RETRIEVED FROM HTTPS://PUBS.USGS.GOV/OF/2001/0131.
- TERRAMINS, INC. (2004). *PRELIMINARY DRILLING RESULTS FOR "AREA Q", MUSCOY, SAN BERNARDINO COUNTY, CALIFORNIA.* SAN BERNARDINO: TERRAMINS, INC.

GEOLOGIC SETTING

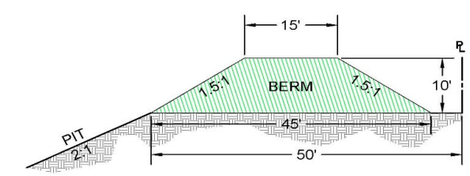
THE SITE IS LOCATED WITHIN THE PENINSULAR RANGES PHYSIOGRAPHIC PROVINCE, WHICH CONSISTS OF A SERIES OF MOUNTAIN RANGES CONSISTING PREDOMINANTLY OF MESOZOIC GRANITIC AND OLDER METAMORPHIC ROCKS, SEPARATED BY VALLEY BASINS FORMED FROM FAULTS BRANCHING FROM THE SAN ANDREAS FAULT ZONE, AS WELL AS OTHER FAULT SEGMENTS. THE SITE IS SITUATED IN THE SAN BERNARDINO BASIN, AN ALLUVIAL LOWLAND BOUNDED BY THE SAN ANDREAS FAULT ZONE TO THE NORTH AND THE SAN JACINTO FAULT TO THE SOUTHWEST. THE LOWLAND IS CONSIDERED TO REPRESENT A PULL-APART BASIN FORMED IN RESPONSE TO A RIGHT STEP DISPLACEMENT BETWEEN THE SAN JACINTO AND SAN ANDREAS FAULTS. THE LOWLANDS OF THE SAN BERNARDINO BASIN ARE FILLED WITH SEDIMENT DERIVED FROM THE SURROUNDING HIGHLANDS. (HALEY & ALDRICH, INC., APRIL 2020)

REGIONAL GEOLOGY

THE SITE IS LOCATED TO THE SOUTH OF THE EASTERN EXTENT OF THE SAN GABRIEL MOUNTAINS, A PROMINENT PHYSIOGRAPHIC FEATURE ALONG THE NORTHERN EDGE OF THE LOS ANGELES METROPOLITAN AREA AND PORTIONS OF THE INLAND EMPIRE. AS DESCRIBED BY DANSKIN ET AL. (DANSKIN, MCPHERSON, & WOOLFENDEN, 2006), THE REGIONAL GEOLOGIC SETTING CONSISTS OF UNCONSOLIDATED MATERIAL THAT FILLS THE BASINS AND INCLUDES RIVER-CHANNEL DEPOSITS AND YOUNGER ALLUVIUM OF HOLOCENE AGE, AS WELL AS OLDER ALLUVIUM OF PLEISTOCENE AGE. FURTHER EAST, IN ADDITION TO YOUNGER ALLUVIUM, QUATERNARY AND TERTIARY INDURATED SEDIMENTARY STRATA ARE EVIDENT IN OUTCROPS ALONG LOW-RELIEF HILLSIDES. A BASEMENT COMPLEX OF PRECAMBRIAN TO TERTIARY IGNEOUS AND METAMORPHIC ROCKS UNDERLIES THE BASIN FILL AND CROPS OUT IN THE SURROUNDING MOUNTAIN RANGES (DUTCHER & GARRETT, 1963). IN THE VICINITY OF THE SITE, THE SAN GABRIEL MOUNTAINS ARE BOUNDED ON THE SOUTH BY THE CUCAMONGA THRUST FAULT AND THE SAN ANDREAS FAULT TO THE NORTHEAST, WITH THE SAN JACINTO FAULT TRENDING BETWEEN THE TWO AFOREMENTIONED FAULTS UP LYTLE AND GLEN HELEN WASHES AND CANYONS. THIS AREA OF THE SAN GABRIEL MOUNTAINS IS HIGHLY FRACTURED BY THE SAN JACINTO FAULT, INCLUDING THE GLEN HELEN AND LYTLE CREEK SEGMENTS OF THE SAN JACINTO FAULT SYSTEM. (HALEY & ALDRICH, INC., APRIL 2020)

SITE GEOLOGY

THE GEOLOGY OF THE SITE IS REPRESENTATIVE OF BRAIDED, ALLUVIAL LITHOFACIES THAT TYPICALLY FORM WITHIN MEDIAL TO DISTAL FAN COMPLEXES. THREE (3) DISTINCT ALLUVIAL LITHOFACIES ARE MAPPED WITHIN AREA Q, BASED ON THE USGS GEOLOGIC MAP OF THE SAN BERNARDINO NORTH 7.5-MINUTE QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA (MILLER & MATTI, 2001). IN THE NORTHEASTERN PORTION OF AREA Q, LATE HOLOCENE DEPOSITS, CONSISTING PRIMARILY OF SAND AND GRAVEL OCCUR. THIS LITHOFACIES IS DISTINGUISHED AS UPPER LEVEL TERRACE SEDIMENTARY DEPOSITS. SLIGHTLY DISSECTED, SLIGHTLY CONSOLIDATED TO CEMENTED HOLOCENE AND LATE PLEISTOCENE AGE DEPOSITS OF ANGULAR TO SUBANGULAR SILT, SAND AND PEBBLES ALSO OCCUR IN THE NORTHEASTERN PORTION OF THE SITE AS WELL WITHIN THE CENTRAL SECTION, WHERE THIS LITHOFACIES OCCURS IN A GENERAL NORTH-SOUTH ORIENTATION CONSISTENT WITH INFERRED DEPOSITIONAL DIP. IN THE SOUTHWEST CORNER OF AREA Q, LATE HOLOCENE, LOWER TERRACE DEPOSITS OCCUR, CONSISTING CHIEFLY OF SAND AND GRAVEL WITH SPARSE PEBBLE TO BOULDER SIZE CLASTS. THE TERRACE LITHOFACIES IS TYPICALLY THIN (LESS THAN 10 FEET IN THICKNESS), AND CHARACTERIZED BY LATERALLY DISCONTINUOUS DEPOSITS THAT ARE SUBJECT LOCALIZED EROSIONAL SCOURING. CONSEQUENTLY, PEDOGENESIS IS CONSTRAINED AND TOPSOIL TENDS TO BE POORLY DEVELOPED AS A THIN VENEERS COVERING THE ALLUVIUM.



VEGETATED BERM CROSS - SECTION (TYP.)

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REVISIONS

MARK	DATE	DESCRIPTION	BY
	03/20/2019	INITIAL DRAFT	GJC

REVIEWED BY: DATE

APPROVED BY: DATE

VULCAN MATERIALS COMPANY AREA Q

MINING PLOT PLAN

SCALE: HORZ: AS SHOWN VERT: AS SHOWN
DRAWN BY: G.CAMUS
CHECKED BY: BGA / APS

Vulcan Materials Company / Sespe Consulting, Inc. (2020)

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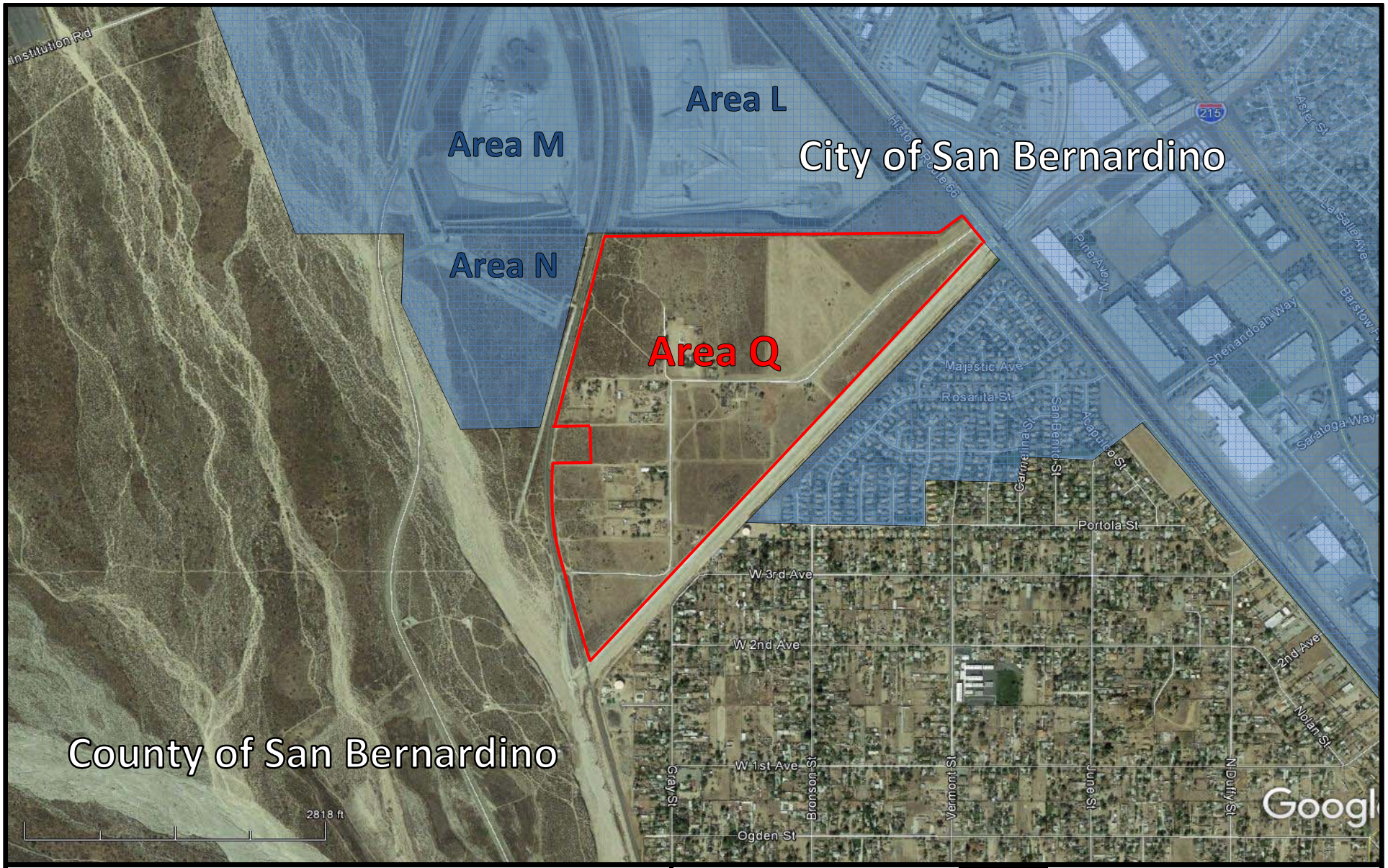
SESPE CONSULTING, INC.

FIGURE 2	AREA Q QUARRY - MINE PLAN Area Q Quarry Project Vulcan Materials Company San Bernardino County, California		
PROJECT #:	VU01.17.78	DATE:	3/16/20
SCALE:	See Above	DRAWN BY:	GPS



Source: Google Earth 2018

Approximate Area Q Property Boundaries

Approximate City of San Bernardino Jurisdiction

N

SESPE CONSULTING, INC.

FIGURE 3	COUNTY & CITY JURISIDICTIONS Area Q Quarry Project Vulcan Materials Company San Bernardino County, California		
PROJECT #:	VU01.17.78	DATE:	2/14/19
SCALE:	See Above	DRAWN BY:	GPS

RECEPTORS

#1 - Commercial (Glen Helen Rehabilitation Center)
#2 - Industrial (DSC Logistics)
#3 - Industrial (Pacific Coast Steel)
#4 - Residential
#5 - Residential
#6 - Residential
#7 - Residential
#8 - Residential
#9 - Residential
#10 - Residential
#11 - Residential
#12 - Residential

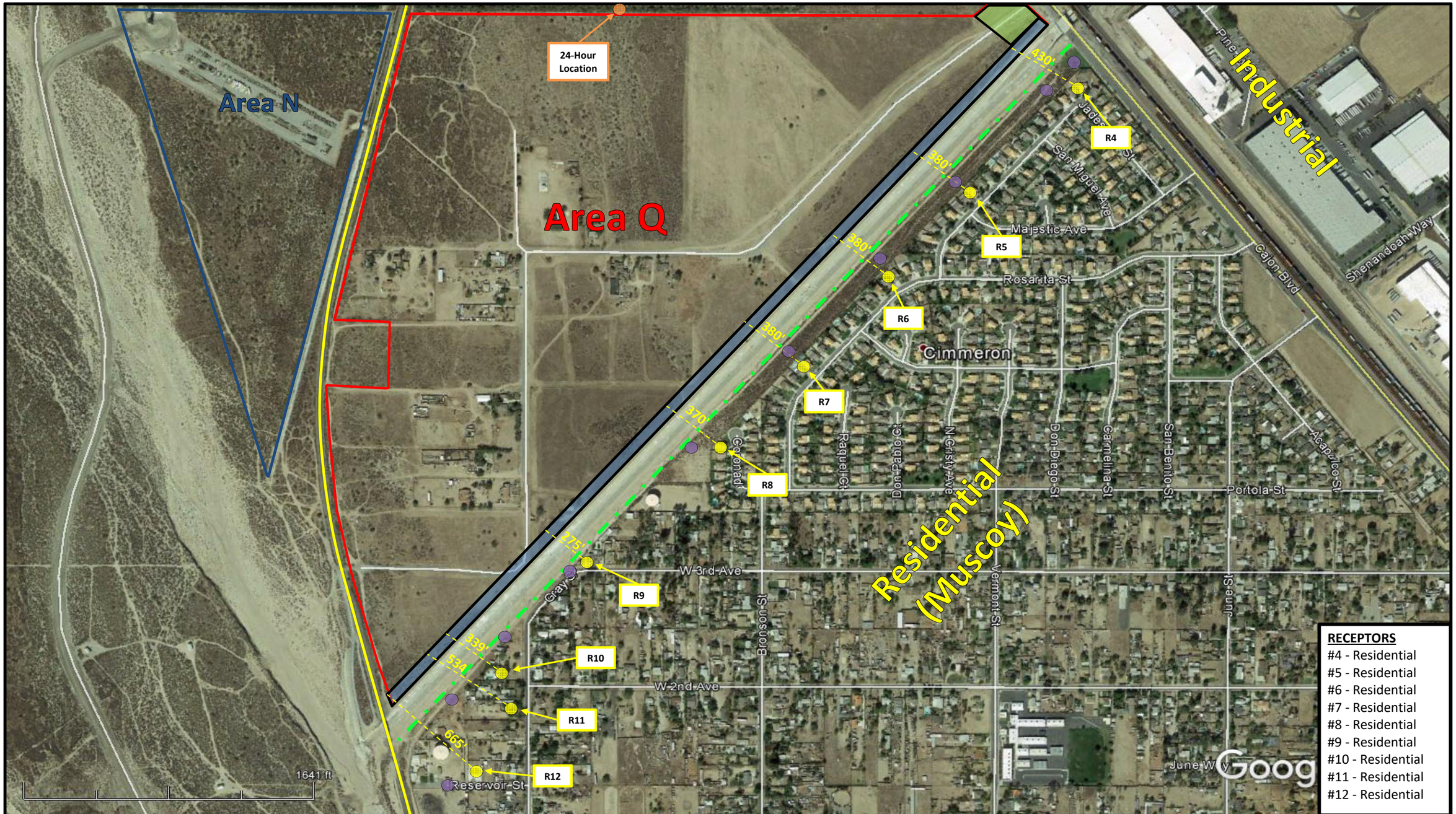
Source: Google Earth 2018

- Approximate Area Q Property Boundaries
- Approximate Boundaries of Vulcan's Existing Extraction Site(s)
- Railroad Lines (Southern Pacific Railroad)
- Approximate Location of Existing Devil Creek Diversion Berm
- Area Will Not Be Mined
- 50-foot Property Boundary Setback / Earthen Berm (10-feet high, 45-feet wide).
- Long-Duration (24-hour) Monitoring Location
- Short-Duration (15-minute) Monitoring Locations
- Receptor Locations

N

SESPE CONSULTING, INC.

FIGURE 4	NOISE RECEPTOR LOCATIONS Area Q Quarry Project Vulcan Materials Company San Bernardino County, California		
PROJECT #:	VU01.17.78	DATE:	3/15/19
SCALE:	See Above	DRAWN BY:	GPS



Source: Google Earth 2018

- Approximate Area Q Property Boundaries
- Approximate Boundaries of Vulcan's Existing Extraction Site(s)
- Railroad Lines (Southern Pacific Railroad)
- Approximate Location of Existing Devil Creek Diversion Berm
- Area Will Not Be Mined
- 50-foot Property Boundary Setback / Earthen Berm (10-feet high, 45-feet wide)
- Long-Duration (24-hour) Monitoring Location
- Short-Duration (15-minute) Monitoring Locations
- Residential Receptor Locations

N

SESPE CONSULTING, INC.

FIGURE 5	RESIDENTIAL RECEPTORS LOCATIONS Area Q Quarry Project Vulcan Materials Company San Bernardino County, California		
PROJECT #:	VU01.17.78	DATE:	2/14/19
SCALE:	See Above	DRAWN BY:	GPS

ATTACHMENT B

Ambient Noise Summary & Meter Data Log

Ambient/Baseline Noise Measurements Summary + Applicable Significance Thresholds

San Bernardino County / City Significance Thresholds

Ambient Noise Levels - 24-Hour Reference Location (dBA)

Study	Date	Duration	Time Start	Time Stop	Daytime - Max 1-Hour (7:00 a.m. - 10:00 p.m.)		Nighttime - Max 1-Hour (10:00 p.m. - 7:00 a.m.)		Interior[E]		Exterior	
					L_{eq}	L_{max}	L_{eq}	L_{max}	L_{dn}	CNEL	L_{dn}	CNEL
Reference Location	11/30/2017 - 12/1/2017	24-Hour	11:48:22 a.m.	11:48:22 a.m.	56.4	77.0	55.5	76.9	38.6	39.0	58.6	59.0

Ambient Noise Levels & Applicable San Bernardino County / City Significance Thresholds (dBA)

Receptors	Receptor Type	Daytime (7:00 a.m. - 10:00 p.m.) - Max 1-Hour						Nighttime (10:00 p.m. - 7:00 a.m.) - Max 1-Hour						Day-Night (L_{dn})[C]					
		L_{eq}			L_{max}			L_{eq}			L_{max}			Exterior			Interior[E]		
		Ambient[A]	Threshold[F]	Adjusted Threshold[G]	Ambient[A]	Threshold[F]	Adjusted Threshold[G]	Ambient[B]	Threshold[F]	Adjusted Threshold[G]	Ambient[B]	Threshold[F]	Adjusted Threshold[G]	Ambient[D]	Threshold[F]	Adjusted Threshold[G]	Ambient[D]	Threshold[F]	Adjusted Threshold[G]
R1	Commercial	60.7	55	**63.7**	80.9	75	**83.9**	55.5	45	**58.5**	76.9	65	**79.9**	60.7	65	**65**	40.7	45	**45**
R2	Industrial	70.2	55	**73.2**	87.0	75	**90.0**	55.5	45	**58.5**	76.9	65	**79.9**	70.2	---	---	50.2	---	---
R3	Industrial	55.4	55	**58.4**	60.8	75	**75**	55.2	45	**58.2**	62.9	65	**65**	55.4	---	---	35.4	---	---
R4	Residential	59.0	55	**62.0**	62.3	75	**75**	59.7	45	**62.7**	76.8	65	**79.8**	69.7	60	**72.7**	49.7	45	**52.7**
R5	Residential	57.5	55	**60.5**	68.9	75	**75**	52.4	45	**55.4**	61.5	65	**65**	62.4	60	**65.4**	42.4	45	**45**
R6	Residential	53.6	55	**55**	64.0	75	**75**	50.3	45	**53.3**	62.2	65	**65**	60.3	60	**63.3**	40.3	45	**45**
R7	Residential	50.8	55	**55**	61.2	75	**75**	48.0	45	**51.0**	59.6	65	**65**	52.3	60	**60**	32.3	45	**45**
R8	Residential	51.2	55	**55**	62.3	75	**75**	52.5	45	**55.5**	75.7	65	**78.7**	51.2	60	**60**	31.2	45	**45**
R9	Residential	57.0	55	**60.0**	67.8	75	**75**	59.0	45	**62.0**	85.1	65	**88.1**	53.9	60	**60**	33.9	45	**45**
R10	Residential	67.1	55	**70.1**	79.0	75	**82.0**	60.6	45	**63.6**	97.7	65	**100.7**	55.1	60	**60**	35.1	45	**45**
R11	Residential	44.4	55	**55**	56.4	75	**75**	54.7	45	**57.7**	82.2	65	**85.2**	44.4	60	**60**	24.4	45	**45**
R12	Residential	52.1	55	**55**	58.9	75	**75**	50.9	45	**53.9**	68.9	65	**71.9**	45.7	60	**60**	25.7	45	**45**

FOOTNOTES:

A - Daytime L_{eq} and L_{max} noise levels shown for each receptor represent actual noise levels measured at each receptor location during daytime hours (7:00 a.m. - 10:00 p.m.) on 11/30/17 and 12/1/17.

B - Nighttime noise levels shown for each receptor were determined using three (3) methods:

1 - Nighttime L_{eq} and L_{max} noise levels for residential Receptors 4, 5, 6 and 7 (i.e., R4, R5, R6, R7) represent actual noise levels measured during nighttime hours (10:00 p.m. - 7:00 a.m.) on 12/1/17.

2 - For the remaining residential receptor locations (i.e., R8, R9, R10, R11, R12) and one industrial receptor (i.e., R3) where nighttime noise levels were not measured, a dBA ±change was calculated by comparing measured daytime values (i.e., L_{eq} and L_{max}) at each of these locations to the measured noise level at the 24-hour reference location during the identical time period. The difference between these values (i.e., correction factor) is then applied to the applicable 24-hour nighttime maximum hour measurements (i.e., L_{eq} and L_{max}) to estimate the appropriate nighttime noise levels at each receptor location.

3 - For commercial Receptor 1 (R1) and industrial Receptor 2 (R2), the nighttime maximum hour (i.e., L_{eq} and L_{max}) noise measurements collected at the 24-hour reference location were utilized to represent nighttime noise levels at R1 and R2. Due to large discrepancies when comparing the noise environment at these receptors to the noise environment at the 24-hour reference location, it would not be appropriate to use a correction factor to estimate nighttime noise at R1 and R2. Additionally, using the 24-hour reference nighttime data is the conservative approach, as in reality nighttime noise at R1 and R2 is expected to be louder than what was measured at the 24-hour location due to these receptors close proximity to loud noise sources (e.g., railroads, roadways, industrial sites, firing range, etc.)

C - Day-Night Average Noise Level (L_{dn}) is a long-term (i.e., 24-hour) average weighted sound level, where a +10 dBA weight is added to noise occurring during nighttime hours (10:00 p.m. - 7:00 a.m.). This noise metrics is meant to account for the extra annoyance noise impacts cause during the quieter nighttime hours.

D - Exterior L_{dn} noise levels were estimated by comparing the measured noise levels at each receptor location to the noise level measured at the 24-hour reference location during the same time period. The difference derived from this comparison represents a correction factor, which is then applied to the L_{dn} levels measured at the 24-hour reference location to estimate the corresponding L_{dn} levels at each receptor location. Please note, L_{dn} penalties (i.e., +10 for nighttime) were applied as applicable to both the receptor measurements and 24-hour reference measurement prior to completing the correction factor comparison.

E - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of -20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). This is a conservatively low estimate of noise attenuation as residents are expected to generally keep windows closed, especially those facing sources of noise. This -20 dBA attenuation is applied to the exterior L_{dn} values to determine interior noise levels.

F - Values shown represent the applicable San Bernardino County and City of San Bernardino noise significance thresholds, taken from these jurisdiction's General Plans and City/County Ordinances. Please note, significance thresholds vary depending on the land use category (i.e., residential, commercial, industrial) of the given receptor. Also note that certain County/City significance thresholds, specifically L_{50}, L_{25}, $L_{8.3}$ and $L_{1.7}$ for daytime and nighttime, are not being utilized and have been removed by incorporating certain simplifying assumptions (see Section 4.1 within the NIA). There are no L_{dn} significance thresholds for industrial receptors.

G - Per the San Bernardino County Code Chapter 83.01.080 (Noise Ordinance) "if the measured ambient level exceeds" any of the noise limit categories (i.e. significance thresholds), then "the allowable noise exposure standard shall be increased to reflect the ambient noise level." As such, if the measured/estimated ambient noise level exceeds the applicable standard, then the ambient noise level +3 dBA is utilized as the significant threshold. A +3 dB changes is generally accepted as the minimum change/increase in noise level perceptible to the human ear within an average noise environment (Bruel & Kjaer, 2002).

Total Baseline Measurement Summary + Adjusted Significance Thresholds

San Bernardino County / City Significance Thresholds

Ambient Noise Levels - 24-Hour Reference Location

Study	Date	Duration	Time Start	Time Stop	Daytime (7:00 a.m. - 10:00 p.m.) - Max 1-Hour						Nighttime (10:00 p.m. - 7:00 a.m.) - Max 1-Hour						Interior[E]		Exterior	
					L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{dn}	CNEL	L_{dn}	CNEL
Reference Location	11/30/2017 - 12/1/2017	24-Hour	11:48:22 a.m.	11:48:22 a.m.	56.4	55.0	60.6	66.0	74.6	77.0	55.5	60.1	63.1	66.9	70.6	76.9	38.6	39.0	58.6	59.0

Ambient Noise Levels & Adjusted San Bernardino County / City Significance Thresholds (dBA)

Noise Metrics		Receptor 1 (R1) Commercial			Receptor 2 (R2) Industrial			Receptor 3 (R3) Industrial			Receptor 4 (R4) Residential			Receptor 5 (R5) Residential			Receptor 6 (R6) Residential			Receptor 7 (R7) Residential			Receptor 8 (R8) Residential		
		Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]
Daytime[A]	L_{eq}	60.7	60	63.7	70.2	70	73.2	55.4	70	70	59.0	55	62.0	57.5	55	60.5	53.6	55	55	50.8	55	55	51.2	55	55
	L_{50}	48.4	55	55	62.5	55	65.5	55.1	55	58.1	54.1	55	57.1	54.5	55	57.5	51.3	55	55	47.1	55	55	48.6	55	55
	L_{25}	52.2	60	60	65.7	60	68.7	56.5	60	60	55.3	60	60	57.4	60	60	53.6	60	60	50.6	60	60	50.9	60	60
	$L_{8.3}$	60.0	65	65	70.0	65	73.0	57.6	65	65	57.9	65	65	62.1	65	65	56.5	65	65	54.4	65	65	54.3	65	65
	$L_{1.7}$	70.8	70	73.8	83.4	70	86.4	58.7	70	70	59.3	70	70	65.6	70	70	62.0	70	70	59.2	70	70	59.5	70	70
	L_{max}	80.9	75	83.9	87.0	75	90.0	60.8	75	75	62.3	75	75	68.9	75	75	64.0	75	75	61.2	75	75	62.3	75	75
Nighttime[B]	L_{eq}	55.5	60	60	55.5	70	70	55.2	70	70	59.7	45	62.7	52.4	45	55.4	50.3	45	53.3	48.0	45	51.0	52.5	45	55.5
	L_{50}	60.1	45	63.1	60.1	45	63.1	59.2	45	62.2	51.7	45	54.7	51.6	45	54.6	49.6	45	52.6	47.7	45	50.7	55.4	45	58.4
	L_{25}	63.1	50	66.1	63.1	50	66.1	60.1	50	63.1	53.2	50	56.2	53.3	50	56.3	51.8	50	54.8	48.6	50	50	53.1	50	56.1
	$L_{8.3}$	66.9	55	69.9	66.9	55	69.9	64.4	55	67.4	58.3	55	61.3	55.7	55	58.7	53.4	55	55	49.4	55	55	59.4	55	62.4
	$L_{1.7}$	70.6	60	73.6	70.6	60	73.6	54.5	60	60	70.8	60	73.8	58.0	60	60	54.4	60	60	50.7	60	60	66.6	60	69.6
	L_{max}	76.9	65	79.9	76.9	65	79.9	62.9	65	65	76.8	65	79.8	61.5	65	65	62.2	65	65	59.6	65	65	75.7	65	78.7
Day-Night (L_{dn})[C]	Interior[E]	40.7	45	45	50.2	---	---	35.4	---	---	49.7	45	52.7	42.4	45	45	40.3	45	45	32.3	45	45	31.2	45	45
	Exterior[D]	60.7	65	65	70.2	---	---	55.4	---	---	69.7	60	72.7	62.4	60	65.4	60.3	60	63.3	52.3	60	60	51.2	60	60
CNEL[C]	Interior[E]	40.7	45	45	50.2	---	---	35.4	---	---	49.7	45	52.7	42.4	45	45	40.3	45	45	32.3	45	45	31.2	45	45
	Exterior[D]	60.7	65	65	70.2	---	---	55.4	---	---	69.7	60	72.7	62.4	60	65.4	60.3	60	63.3	52.3	60	60	51.2	60	60

FOOTNOTES:

A - Daytime noise levels shown for each receptor represent actual noise levels measured at each receptor location during daytime hours (7:00 a.m. - 10:00 p.m.) on 11/30/17 and 12/1/17.

B - Nighttime noise levels shown for each receptor were determined using three (3) methods:

1 - Nighttime noise levels for residential Receptors 4, 5, 6 and 7 (i.e., R4, R5, R6, R7) represent actual noise levels measured during nighttime hours (10:00 p.m. - 7:00 a.m.) on 12/1/17.

2 - For the remaining residential receptor locations (i.e., R8, R9, R10, R11, R12) and one industrial receptor (i.e., R3) where nighttime noise levels were not measured, a dBA±change was calculated by comparing measured daytime values (i.e., L_{eq} and L_{max}) at each of these locations to the measured noise level at the 24-hour reference location during the identical time period. The difference between these values (i.e., correction factor) is then applied to the applicable 24-hour nighttime maximum hour measurements (i.e., L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, L_{max}) to estimate the appropriate nighttime noise levels at each receptor location.

3 - For commercial Receptor 1 (R1) and industrial Receptor 2 (R2), the nighttime maximum hour (i.e., L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, L_{max}) noise measurements collected at the 24-hour reference location were utilized to represent nighttime noise levels at R1 and R2. Due to large discrepancies when comparing the noise environment at these receptors to the noise environment at the 24-hour reference location, it would not be appropriate to use a correction factor to estimate nighttime noise at R1 and R2. Additionally, using the 24-hour reference nighttime data is the conservative approach, as in reality nighttime noise at R1 and R2 is expected to be louder than what was measured at the 24-hour location due to these receptors close proximity to loud noise sources (e.g., railroads, roadways, industrial sites, firing range, etc.)

C - Day-Night Average Noise Level (L_{dn}) is a long-term (i.e., 24-hour) average weighted sound level, where a +10 dBA weight is added to noise occurring during nighttime hours (10:00 p.m. - 7:00 a.m.). Community Noise Equivalent Level (CNEL) is also a long term (i.e., 24-hour) average weighted sound level, where a +10 dBA penalty is added to noise occurring during nighttime hours (10:00 p.m. - 7:00 a.m.) and a +5 penalty is added to noise occurring during evening hours (7:00 p.m. - 10:00 p.m.). Both of these noise metrics are meant to account for the extra annoyance noise impacts cause during the quieter evening and nighttime hours.

D - Exterior L_{dn} and CNEL noise levels were estimated by comparing the measured noise levels at each receptor location to the noise level measured at the 24-hour reference location during the same time period. The difference derived from this comparison represents a correction factor, which is then applied to the L_{dn} and CNEL levels measured at the 24-hour reference location to estimate the corresponding L_{dn} and CNEL levels at each receptor location. Please note, L_{dn} and CNEL penalties (i.e., +5 for evening, +10 for nighttime) were applied as applicable to both the receptor measurements and 24-hour reference measurement prior to completing the correction factor comparison.

E - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of -20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). This is a conservatively low estimate of noise attenuation as residents are expected to generally keep windows closed, especially those facing sources of noise. This -20 dBA attenuation is applied to the exterior L_{dn} and CNEL values to determine interior noise levels.

F - Values shown represent the applicable San Bernardino County and City of San Bernardino noise significance thresholds, taken from these jurisdiction's General Plans and City/County Ordinances. Please note, significance thresholds vary depending on the land use category (i.e., residential, commercial, industrial) of the given receptor. There are no L_{dn} or CNEL significance thresholds for industrial receptors.

G - Per the San Bernardino County Code Chapter 83.01.080 (Noise Ordinance) "if the measured ambient level exceeds" any of the noise limit categories (i.e., significance thresholds), then "the allowable noise exposure standard shall be increased to reflect the ambient noise level." As such, if the measured/estimated ambient noise level exceeds the applicable standard, then the ambient noise level +3 dBA is utilized as the significant threshold. A +3 dB changes is generally accepted as the minimum change/increase in noise level perceptible to the human ear within an average noise environment (Bruel & Kjaer, 2002).

Total Baseline Measurement Summary + Adjusted Significance Thresholds

San Bernardino County / City Significance Thresholds

Ambient Noise Levels & Adjusted San Bernardino County/City Significance Thresholds (dBA)

Noise Metrics		Receptor 9 (R9) Residential			Receptor 10 (R10) Residential			Receptor 11 (R11) Residential			Receptor 12 (R12) Residential		
		Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]	Noise	Unadjusted Threshold[F]	Adjusted Threshold[G]
Daytime[A]	L_{eq}	57.0	55	60.0	67.1	55	70.1	44.4	55	55	52.1	55	55
	L_{50}	51.2	55	55	43.4	55	55	42.5	55	55	42.6	55	55
	L_{25}	54.0	60	60	49.6	60	60	43.9	60	60	44.8	60	60
	$L_{8.3}$	56.9	65	65	52.6	65	65	47.5	65	65	48.6	65	65
	$L_{1.7}$	61.7	70	70	64.7	70	70	52.8	70	70	53.1	70	70
	L_{max}	67.8	75	75	79.0	75	82.0	56.4	75	75	58.9	75	75
Nighttime[B]	L_{eq}	59.0	45	62.0	60.6	45	63.6	54.7	45	57.7	50.9	45	53.9
	L_{50}	59.7	45	62.7	51.3	45	54.3	55.9	45	58.9	53.0	45	56.0
	L_{25}	62.4	50	65.4	59.4	50	62.4	58.8	50	61.8	54.5	50	57.5
	$L_{8.3}$	65.3	55	68.3	62.8	55	65.8	63.9	55	66.9	59.7	55	62.7
	$L_{1.7}$	72.7	60	75.7	77.1	60	80.1	72.3	60	75.3	56.8	60	60
	L_{max}	85.1	65	88.1	97.7	65	100.7	82.2	65	85.2	68.9	65	71.9
Day-Night (L_{dn})[C]	Interior[E]	33.9	45	45	35.1	45	45	24.4	45	45	25.7	45	45
	Exterior[D]	53.9	60	60	55.1	60	60	44.4	60	60	45.7	60	60
CNEL[C]	Interior[E]	36.4	45	45	37.6	45	45	24.4	45	45	27.3	45	45
	Exterior[D]	56.4	60	60	57.6	60	60	44.4	60	60	47.3	60	60

FOOTNOTES:

See Previous Sheet

Ambient/Baseline Measurement Summary + Correction Factors

Long-Duration (24-Hour) + Short-Duration (15-Min.) Noise Measurement Comparison

24-Hour Ambient Noise Levels - Hourly Summary (11/30/17 & 12/1/17)

Date	Time of Day	Hour of Day	Measured Noise Data (dBA)						L_{dn}	CNEL
			L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}		
12/1/2017	12:00:00 AM	0	47.1	45.2	50.5	55.6	57.6	58.4	58.6	59.0
	1:00:00 AM	1	55.5	60.1	63.1	66.9	68.1	69.3		
	2:00:00 AM	2	50.8	47.2	54.8	59.4	63.2	67.1		
	3:00:00 AM	3	49.2	48.1	50.7	58.8	61.2	66.1		
	4:00:00 AM	4	50.4	49.9	53.0	60.1	62.1	72.0		
	5:00:00 AM	5	53.1	55.1	58.2	60.9	63.6	66.6		
	6:00:00 AM	6	54.8	52.6	57.0	64.5	67.6	68.8		
	7:00:00 AM	7	52.3	52.8	54.7	61.5	62.7	63.5		
	8:00:00 AM	8	51.9	52.7	57.2	60.0	60.8	61.0		
	9:00:00 AM	9	49.0	48.5	51.0	55.5	62.0	68.2		
	10:00:00 AM	10	51.6	48.8	57.0	61.0	64.2	67.1		
11/30/17 & 12/1/17	11:00:00 AM	11	47.9	47.6	51.2	59.1	61.0	61.8		
11/30/2017	12:00:00 PM	12	50.1	50.3	54.4	58.9	61.6	64.2		
	1:00:00 PM	13	47.5	49.0	50.1	56.4	63.3	65.6		
	2:00:00 PM	14	48.0	48.1	53.2	57.3	62.7	63.9		
	3:00:00 PM	15	46.6	49.1	50.9	53.9	55.0	55.3		
	4:00:00 PM	16	52.7	52.8	56.1	59.5	74.6	74.8		
	5:00:00 PM	17	50.9	49.5	55.5	59.5	62.7	62.8		
	6:00:00 PM	18	52.8	53.6	57.1	61.1	62.9	66.6		
	7:00:00 PM	19	51.2	49.8	55.9	58.4	63.1	64.2		
	8:00:00 PM	20	51.1	48.5	53.2	59.9	62.6	70.6		
	9:00:00 PM	21	56.4	55.0	60.6	66.0	73.4	77.0		
	10:00:00 PM	22	52.2	47.5	56.0	62.0	70.4	76.9		
	11:00:00 PM	23	52.1	51.5	56.0	61.4	70.6	72.0		

15-Minute Ambient Noise Levels & Correction Factors

Study	Time of Day		Distance to 24-Hour	Distance to Railroad (ft.)		L_{eq} (dBA)		
	Time Start	Time Stop		East	West	15-Min.	24-Hour	Diff.[A]
#2	3:21:02 p.m.	3:36:02 p.m.	7,932	7,611	6,214	60.7	46.8	13.9
#3	3:58:05 p.m.	4:13:05 p.m.	3,056	156	1,355	70.2	48.5	21.7
#4	4:17:24 p.m.	4:32:24 p.m.	1,543	285	2,420	55.4	55.7	-0.3
#5	4:37:37 p.m.	4:52:37 p.m.	1,435	860	2,740	52.2	49.8	2.5
#6	5:36:14 p.m.	5:51:14 p.m.	2,336	382	3,581	52.0	46.9	5.1
#7	5:56:15 p.m.	6:11:15 p.m.	2,070	1,022	3,271	57.5	55.4	2.1
#8	6:13:49 p.m.	6:28:49 p.m.	2,047	1,818	2,893	53.6	52.4	1.3
#9	6:31:59 p.m.	6:46:59 p.m.	2,236	2,519	2,575	50.8	51.5	-0.7
#10	7:09:30 p.m.	7:24:30 p.m.	3,413	4,318	1,211	54.6	47.5	7.1
#11	7:36:40 p.m.	7:51:40 p.m.	3,777	4,695	881	43.1	47.5	-4.4
#12	7:54:07 p.m.	8:09:07 p.m.	4,836	5,728	176	43.1	52.5	-9.3
#13	6:02:26 a.m.	6:17:26 a.m.	2,336	382	3,581	59.7	51.3	8.4
#14	6:21:08 a.m.	6:36:08 a.m.	2,070	1,022	3,271	52.4	58.4	-6.0
#15	6:38:54 a.m.	6:53:54 a.m.	2,047	1,818	2,893	50.3	54.4	-4.1
#16	6:56:58 a.m.	7:11:58 a.m.	2,236	2,519	2,575	48.0	50.4	-2.4
#17	7:15:29 a.m.	7:30:29 a.m.	2,640	3,254	2,147	51.2	54.2	-3.0
#18	7:42:01 a.m.	7:57:01 a.m.	2,502	181	3,693	58.1	49.9	8.2
#19	8:09:55 a.m.	8:24:55 a.m.	3,413	4,318	1,211	53.2	53.3	-0.1
#20	8:27:50 a.m.	8:42:50 a.m.	3,777	4,695	881	67.1	52.5	14.6
#21	8:45:06 a.m.	9:00:06 a.m.	4,285	5,229	474	44.4	45.2	-0.7
#22	9:12:21 a.m.	9:27:21 a.m.	4,836	5,728	176	50.8	51.4	-0.6
#23	9:28:26 a.m.	9:43:26 a.m.	4,836	5,728	176	43.0	46.7	-3.7
#24	10:10:44 a.m.	10:25:44 a.m.	1,426	2,584	1,812	53.5	55.1	-1.6
#25	10:29:56 a.m.	10:44:56 a.m.	268	2,082	1,245	45.2	51.6	-6.4

Baseline Measurement - Study #1 (24-Hour)

Study	Date	Duration	Time Start	Time Stop	Daytime (7:00 a.m.-10:00 p.m.) - Max 1-Hour						Nighttime (10:00 p.m.-7:00 a.m.) - Max 1-Hour						Interior		Exterior	
					L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{dn}	CNEL	L_{dn}	CNEL
#1	11/30/2017 - 12/1/2017	24-Hour	11:48:22 a.m.	11:48:22 a.m.	56.4	55.0	60.6	66.0	74.6	77.0	55.5	60.1	63.1	66.9	70.6	76.9	38.6	39.0	58.6	59.0

FOOTNOTES:

A - The dBA change shown above was calculated by comparing the measured values (L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$ and L_{max}) at each short-duration (15-min) receptor to the measured noise level (i.e., L_{eq}, L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$ and L_{max}) at the long-duration (24-hour) reference location during the same time period. The difference (i.e., correction factor) shown above is then applied to the measured 24-hour data points to quantify the nighttime (10:00 p.m. - 7:00 a.m.), L_{dn} and CNEL noise levels at each receptor location.

Ambient/Baseline Measurement Summary + Correction Factors

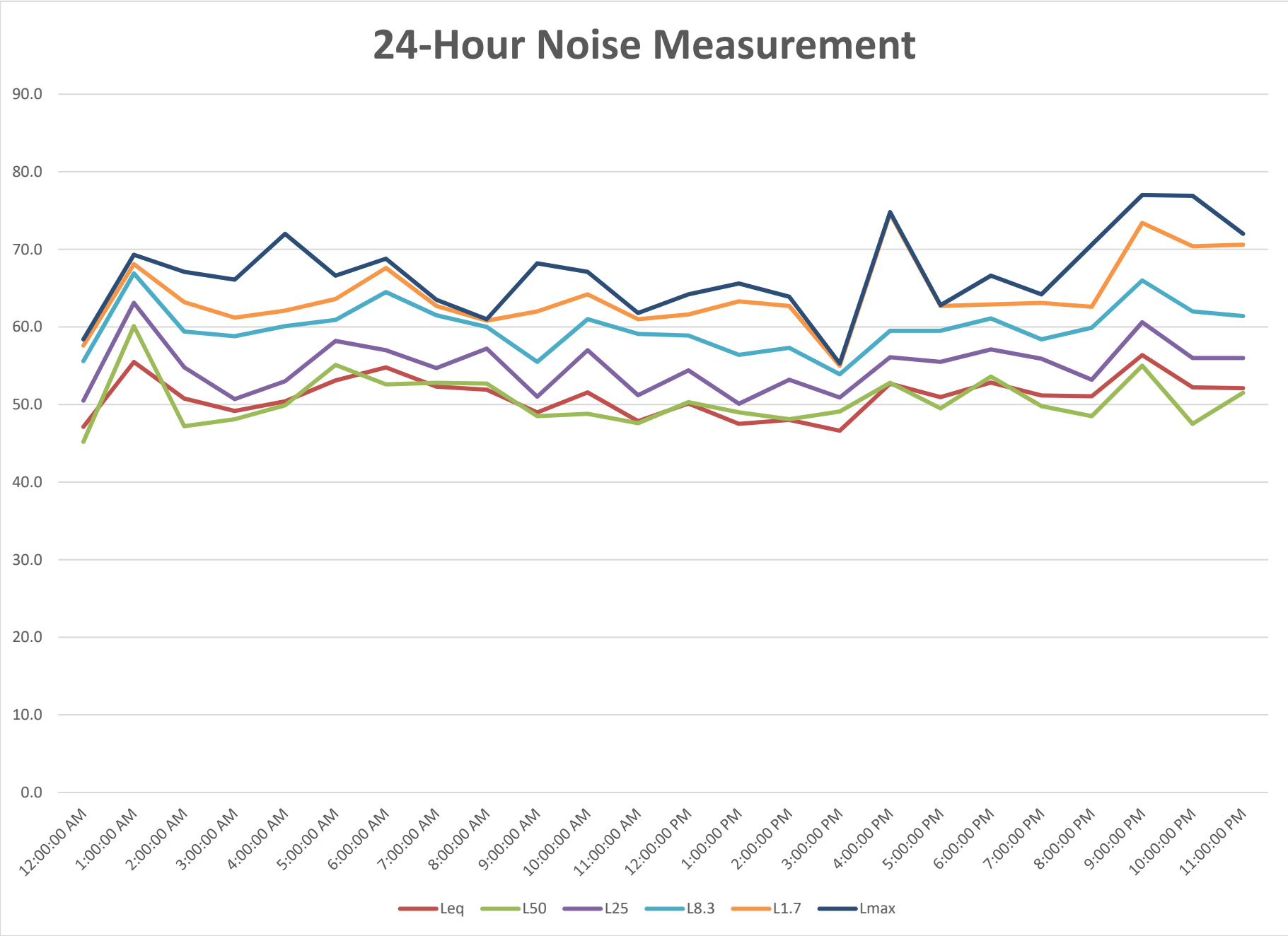
Long-Duration (24-Hour) + Short-Duration (15-Min.) Noise Measurement Comparison

15-Minute Ambient Noise Levels & Correction Factors

Study	L_{50} (dBA)			L_{25} (dBA)			$L_{8.3}$ (dBA)			$L_{1.7}$ (dBA)			L_{max} (dBA)			L_{dn} (dBA)			CNEL (dBA)		
	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]	15-Min.	24-Hour	Diff.[A]
#2	48.4	49.8	-1.4	52.2	50.9	1.3	60.0	53.3	6.7	70.8	55.0	15.8	80.9	55.0	25.9	60.7	46.8	13.9	60.7	46.8	13.9
#3	62.5	51.0	11.5	65.7	52.9	12.8	70.0	53.5	16.5	83.4	54.7	28.7	87.0	54.7	32.3	70.2	48.5	21.7	70.2	48.5	21.7
#4	55.1	56.0	-0.9	56.5	59.5	-3.0	57.6	60.1	-2.5	58.7	74.8	-16.1	60.8	74.8	-14.0	55.4	55.7	-0.3	55.4	55.7	-0.3
#5	48.0	52.3	-4.3	52.7	53.4	-0.7	57.4	55.9	1.5	58.9	59.1	-0.2	60.4	59.1	1.3	52.2	49.8	2.5	52.2	49.8	2.5
#6	51.7	48.8	2.9	52.4	49.5	2.9	53.6	50.5	3.1	54.6	50.5	4.1	57.6	50.5	7.1	52.0	46.9	5.1	52.0	46.9	5.1
#7	54.5	57.1	-2.6	57.4	61.1	-3.7	62.1	62.2	-0.1	65.6	62.7	2.9	68.9	62.7	6.2	57.5	55.4	2.1	57.5	55.4	2.1
#8	51.3	56.9	-5.6	53.6	57.2	-3.6	56.5	60.4	-3.9	62.0	62.9	-0.9	64.0	62.9	1.1	53.6	52.4	1.3	53.6	52.4	1.3
#9	47.1	51.1	-4.0	50.6	54.5	-3.9	54.4	60.0	-5.6	59.2	60.0	-0.8	61.2	60.0	1.2	50.8	51.5	-0.7	50.8	51.5	-0.7
#10	50.8	48.7	2.1	54.7	52.1	2.6	57.0	56.4	0.6	64.1	58.2	5.9	70.0	58.2	11.8	54.6	47.5	7.1	59.6	52.5	7.1
#11	40.3	47.9	-7.6	40.9	48.6	-7.7	43.0	54.9	-11.9	53.3	55.9	-2.6	62.0	55.9	6.1	43.1	47.5	-4.4	48.1	52.5	-4.4
#12	42.3	52.0	-9.7	43.9	54.8	-10.9	45.2	56.6	-11.4	47.4	70.6	-23.2	54.9	70.6	-15.7	43.1	52.5	-9.3	48.1	57.5	-9.3
#13	51.7	52.6	-0.9	53.2	53.8	-0.6	58.3	59.6	-1.3	70.8	61.2	9.6	76.8	61.2	15.6	69.7	61.3	8.4	69.7	61.3	8.4
#14	51.6	57.9	-6.3	53.3	64.5	-11.2	55.7	67.6	-11.9	58.0	68.8	-10.8	61.5	68.8	-7.3	62.4	68.4	-6.0	62.4	68.4	-6.0
#15	49.6	51.2	-1.6	51.8	57.0	-5.2	53.4	64.2	-10.8	54.4	65.9	-11.5	62.2	65.9	-3.7	60.3	64.4	-4.1	60.3	64.4	-4.1
#16	47.7	52.1	-4.4	48.6	53.6	-5.0	49.4	54.3	-4.9	50.7	57.6	-6.9	59.6	57.6	2.0	52.3	55.9	-3.6	52.3	55.9	-3.6
#17	48.6	53.3	-4.7	50.9	60.9	-10.0	54.3	61.8	-7.5	59.5	63.5	-4.0	62.3	63.5	-1.2	51.2	54.2	-3.0	51.2	54.2	-3.0
#18	56.5	52.6	3.9	58.2	53.8	4.4	62.2	54.7	7.5	63.9	54.8	9.1	67.0	54.8	12.2	58.1	49.9	8.2	58.1	49.9	8.2
#19	51.6	54.6	-3.0	53.3	57.4	-4.1	56.7	60.5	-3.8	59.3	61.0	-1.7	65.5	61.0	4.5	53.2	53.3	-0.1	53.2	53.3	-0.1
#20	46.4	56.5	-10.1	58.2	57.9	0.3	62.2	58.5	3.7	76.1	60.6	15.5	96.0	60.6	35.4	67.1	52.5	14.6	67.1	52.5	14.6
#21	42.5	46.7	-4.2	43.9	48.2	-4.3	47.5	50.5	-3.0	52.8	51.1	1.7	56.4	51.1	5.3	44.4	45.2	-0.7	44.4	45.2	-0.7
#22	44.4	48.8	-4.4	47.6	54.3	-6.7	54.6	55.2	-0.6	61.8	68.2	-6.4	66.0	68.2	-2.2	50.8	51.4	-0.6	50.8	51.4	-0.6
#23	41.0	48.2	-7.2	42.8	50.9	-8.1	45.9	55.5	-9.6	50.1	62.0	-11.9	55.9	62.0	-6.1	43.0	46.7	-3.7	43.0	46.7	-3.7
#24	46.1	55.4	-9.3	52.0	60.2	-8.2	56.3	64.2	-7.9	63.8	67.1	-3.3	68.3	67.1	1.2	53.5	55.1	-1.6	53.5	55.1	-1.6
#25	43.5	48.5	-5.0	46.5	53.1	-6.6	49.4	61.0	-11.6	51.0	61.5	-10.5	54.6	61.5	-6.9	45.2	51.6	-6.4	45.2	51.6	-6.4

FOOTNOTES:

See Previous Sheet


24-Hour Noise Measurement
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Leq
L50
L25
L8.3
L1.7
Lmax

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
Study #1		0:01:00	0:01:00	11:49:22 AM		11	Day	53.0		199526.23		59.2													53.0	199526.23	53.0	199526.23
24-Hour		0:02:00	0:02:00	11:50:22 AM		11	Day	54.7		295120.92		59.1													54.7	295120.92	54.7	295120.92
Reference		0:03:00	0:03:00	11:51:22 AM		11	Day	44.6		28840.32		46.4													44.6	28840.32	44.6	28840.32
Location		0:04:00	0:04:00	11:52:22 AM		11	Day	44.4		27542.29		48.1													44.4	27542.29	44.4	27542.29
		0:05:00	0:05:00	11:53:22 AM		11	Day	46.2		41686.94		49.0													46.2	41686.94	46.2	41686.94
		0:06:00	0:06:00	11:54:22 AM		11	Day	52.6		181970.09		57.1													52.6	181970.09	52.6	181970.09
		0:07:00	0:07:00	11:55:22 AM		11	Day	53.1		204173.79		57.0													53.1	204173.79	53.1	204173.79
		0:08:00	0:08:00	11:56:22 AM		11	Day	53.7		234422.88		55.4													53.7	234422.88	53.7	234422.88
		0:09:00	0:09:00	11:57:22 AM		11	Day	52.9		194984.46		55.4													52.9	194984.46	52.9	194984.46
		0:10:00	0:10:00	11:58:22 AM		11	Day	47.3		53703.18		50.2													47.3	53703.18	47.3	53703.18
		0:11:00	0:11:00	11:59:22 AM		11	Day	45.4		34673.69		48.0		47.9		47.6		51.2		59.1		61.0		61.8	45.4	34673.69	45.4	34673.69
		0:12:00	0:12:00	12:00:22 PM		12	Day	44.7		29512.09		47.1													44.7	29512.09	44.7	29512.09
		0:13:00	0:13:00	12:01:22 PM		12	Day	44.9		30902.95		48.6													44.9	30902.95	44.9	30902.95
		0:14:00	0:14:00	12:02:22 PM		12	Day	44.8		30199.52		48.3													44.8	30199.52	44.8	30199.52
		0:15:00	0:15:00	12:03:22 PM		12	Day	45.3		33884.42		48.8													45.3	33884.42	45.3	33884.42
		0:16:00	0:16:00	12:04:22 PM		12	Day	44.4		27542.29		47.7													44.4	27542.29	44.4	27542.29
		0:17:00	0:17:00	12:05:22 PM		12	Day	45.5		35481.34		49.8													45.5	35481.34	45.5	35481.34
		0:18:00	0:18:00	12:06:22 PM		12	Day	44.9		30902.95		48.9													44.9	30902.95	44.9	30902.95
		0:19:00	0:19:00	12:07:22 PM		12	Day	44.4		27542.29		47.3													44.4	27542.29	44.4	27542.29
		0:20:00	0:20:00	12:08:22 PM		12	Day	44.1		25703.96		47.5													44.1	25703.96	44.1	25703.96
		0:21:00	0:21:00	12:09:22 PM		12	Day	44.4		27542.29		47.0													44.4	27542.29	44.4	27542.29
		0:22:00	0:22:00	12:10:22 PM		12	Day	45.6		36307.81		48.2													45.6	36307.81	45.6	36307.81
		0:23:00	0:23:00	12:11:22 PM		12	Day	46.0		39810.72		49.0													46.0	39810.72	46.0	39810.72
		0:24:00	0:24:00	12:12:22 PM		12	Day	46.3		42657.95		50.0													46.3	42657.95	46.3	42657.95
		0:25:00	0:25:00	12:13:22 PM		12	Day	48.2		66069.34		53.5													48.2	66069.34	48.2	66069.34
		0:26:00	0:26:00	12:14:22 PM		12	Day	49.9		97723.72		52.4													49.9	97723.72	49.9	97723.72
		0:27:00	0:27:00	12:15:22 PM		12	Day	52.6		181970.09		54.4													52.6	181970.09	52.6	181970.09
		0:28:00	0:28:00	12:16:22 PM		12	Day	49.9		97723.72		51.6													49.9	97723.72	49.9	97723.72
		0:29:00	0:29:00	12:17:22 PM		12	Day	48.7		74131.02		50.4													48.7	74131.02	48.7	74131.02
		0:30:00	0:30:00	12:18:22 PM		12	Day	46.0		39810.72		48.8													46.0	39810.72	46.0	39810.72
		0:31:00	0:31:00	12:19:22 PM		12	Day	49.9		97723.72		52.9													49.9	97723.72	49.9	97723.72
		0:32:00	0:32:00	12:20:22 PM		12	Day	54.3		269153.48		56.5													54.3	269153.48	54.3	269153.48
		0:33:00	0:33:00	12:21:22 PM		12	Day	54.5		281838.29		55.9													54.5	281838.29	54.5	281838.29
		0:34:00	0:34:00	12:22:22 PM		12	Day	58.3		676082.98		60.0													58.3	676082.98	58.3	676082.98
		0:35:00	0:35:00	12:23:22 PM		12	Day	53.3		213796.21		58.9													53.3	213796.21	53.3	213796.21
		0:36:00	0:36:00	12:24:22 PM		12	Day	47.2		52480.75		50.3													47.2	52480.75	47.2	52480.75
		0:37:00	0:37:00	12:25:22 PM		12	Day	46.0		39810.72		49.3													46.0	39810.72	46.0	39810.72
		0:38:00	0:38:00	12:26:22 PM		12	Day	45.1		32359.37		46.7													45.1	32359.37	45.1	32359.37
		0:39:00	0:39:00	12:27:22 PM		12	Day	47.6		57543.99		52.9													47.6	57543.99	47.6	57543.99
		0:40:00	0:40:00	12:28:22 PM		12	Day	46.4		43651.58		49.2													46.4	43651.58	46.4	43651.58
		0:41:00	0:41:00	12:29:22 PM		12	Day	50.4		109647.82		55.2													50.4	109647.82	50.4	109647.82
		0:42:00	0:42:00	12:30:22 PM		12	Day	55.2		331131.12		58.8													55.2	331131.12	55.2	331131.12
		0:43:00	0:43:00	12:31:22 PM		12	Day	55.7		371535.23		61.2													55.7	371535.23	55.7	371535.23
		0:44:00	0:44:00	12:32:22 PM		12	Day	49.8		95499.26		53.4													49.8	95499.26	49.8	95499.26
		0:45:00	0:45:00	12:33:22 PM		12	Day	50.1		102329.30		58.1													50.1	102329.30	50.1	102329.30
		0:46:00	0:46:00	12:34:22 PM		12	Day	51.6		144543.98		58.5													51.6	144543.98	51.6	144543.98
		0:47:00	0:47:00	12:35:22 PM		12	Day	47.5		56234.13		50.1													47.5	56234.13	47.5	56234.13
		0:48:00	0:48:00	12:36:22 PM		12	Day	51.4		138038.43		55.5													51.4	138038.43	51.4	138038.43
		0:49:00	0:49:00	12:37:22 PM		12	Day	50.1		102329.30		54.0													50.1	102329.30	50.1	102329.30
		0:50:00	0:50:00	12:38:22 PM		12	Day	48.6		72443.60		54.8													48.6	72443.60	48.6	72443.60
		0:51:00	0:51:00	12:39:22 PM		12	Day	46.2		41686.94		47.8													46.2	41686.94	46.2	41686.94
		0:52:00	0:52:00	12:40:22 PM		12	Day	46.2		41686.94		49.9													46.2	41686.94	46.2	41686.94
		0:53:00	0:53:00	12:41:22 PM		12	Day	49.0		79432.82		50.7													49.0	79432.82	49.0	79432.82
		0:54:00	0:54:00	12:42:22 PM		12	Day	48.8		75857.76		54.1													48.8	75857.76	48.8	75857.76
		0:55:00	0:55:00	12:43:22 PM		12	Day	47.7		58884.37		51.1													47.7	58884.37	47.7	58884.37
		0:56:00	0:56:00	12:44:22 PM		12	Day	46.2		41686.94		48.1													46.2	41686.94	46.2	41686.94
		0:57:00	0:57:00	12:45:22 PM		12	Day	45.7		37153.52		48.6													45.7	37153.52	45.7	37153.52
		0:58:00	0:58:00	12:46:22 PM		12	Day	52.1		162181.01		61.6													52.1	162181.01	52.1	162181.01
		0:59:00	0:59:00	12:47:22 PM		12	Day	57.5		562341.33		64.2													57.5	562341.33	57.5	562341.33
		1:00:00	1:00:00	12:48:22 PM		12	Day	49.7		93325.43		52.4													49.7	93325.43	49.7	93325.43
		1:01:00	1:01:00	12:49:22 PM		12	Day	52.9		194984.46		55.4													52.9	194984.46	52.9	194984.46
		1:02:00	1:02:00	12:50:22 PM		12	Day	51.5		141253.75		53.9													51.5	141253.75	51.5	141253.75
		1:03:00	1:03:00	12:51:22 PM		12	Day	47.1		51286.14		49.7													47.1	51286.14	47.1	51286.14
		1:04:00	1:04:00	12:52:22 PM		12	Day	44.2		26302.68		47.8													44.2	26302.68	44.2	26302.68
		1:05:00	1:05:00	12:53:22 PM		12	Day	45.0		31622.78		48.1													45.0	31622.78	45.0	31622.78
		1:06:00	1:06:00	12:54:22 PM		12	Day	46.3		42657.95		49.3													46.3	42657.95	46.3	42657.95
		1:07:00	1:07:00	12:55:22 PM		12	Day	45.2		33113.11		48.4													45.2	33113.11	45.2	33113.11
		1:08:00	1:08:00	12:56:22 PM		12	Day	45.8		38018.94		47.5													45.8	38018.94	45.8	38018.94
		1:09:00	1:09:00	12:57:22 PM		12	Day	46.9		48977.88		51.5													46.9	48977.88	46.9	48977.88
		1:10:00	1:10:00	12:58:22 PM		12	Day	48.0		63095.73		50.1													48.0	63095.73	48.0	63095.73
		1:11:00	1:11:00	12:59:22 PM		12	Day	47.5		56234.13		48.5		50.1		50.3		54.4		58.9		61.6		64.2	47.5	56234.13	47.5	56234.13
		1:12:00	1:12:00	1:00:22 PM		13	Day	47.1		51286.14		49.7													47.1	51286.14	47.1	51286.14
		1:13:00	1:13:00	1:01:22 PM		13	Day	46.4		43651.58		48.6													46.4	43651.58	46.4	43651.58
		1:14:00	1:14:00	1:02:22 PM		13	Day	45.3		33884.42		48.0													45.3	33884.42	45.3	33884.42
		1:15:00	1:15:00	1:03:22 PM		13	Day	45.3		33884.42		47.0													45.3	33884.42	45.3	33884.42
		1:16:00	1:16:00	1:04:22 PM		13	Day	46.6		45708.82		49.3													46.6	45708.82	46.6	45708.82
		1:17:00	1:17:00	1:05:22 PM		13	Day	50.6		114815.36		57.0													50.6	114815.36	50.6	114815.36
		1:18:00	1:18:00	1:06:22 PM		13	Day	46.0		39810.72		49.0													46.0	39810.72	46.0	39810.72
		1:19:00	1:19:00	1:07:22 PM		13	Day	44.8		30199.52		46.7													44.8	30199.52	44.8	30199.52
		1:20:00	1:20:00	1:08:22 PM		13	Day	45.0		31622.78		48.0													45.0	31622.78	45.0	31622.78

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		1:21:00	1:21:00	1:09:22 PM		13	Day	51.2		131825.67		61.2													51.2	131825.67	51.2	131825.67
		1:22:00	1:22:00	1:10:22 PM		13	Day	45.4		34673.69		47.4													45.4	34673.69	45.4	34673.69
		1:23:00	1:23:00	1:11:22 PM		13	Day	48.9		77624.71		51.0													48.9	77624.71	48.9	77624.71
		1:24:00	1:24:00	1:12:22 PM		13	Day	50.4		109647.82		53.6													50.4	109647.82	50.4	109647.82
		1:25:00	1:25:00	1:13:22 PM		13	Day	52.3		169824.37		54.5													52.3	169824.37	52.3	169824.37
		1:26:00	1:26:00	1:14:22 PM		13	Day	54.5		281838.29		63.3													54.5	281838.29	54.5	281838.29
		1:27:00	1:27:00	1:15:22 PM		13	Day	49.5		89125.09		50.9													49.5	89125.09	49.5	89125.09
		1:28:00	1:28:00	1:16:22 PM		13	Day	46.4		43651.58		48.6													46.4	43651.58	46.4	43651.58
		1:29:00	1:29:00	1:17:22 PM		13	Day	45.7		37153.52		49.7													45.7	37153.52	45.7	37153.52
		1:30:00	1:30:00	1:18:22 PM		13	Day	45.9		38904.51		48.8													45.9	38904.51	45.9	38904.51
		1:31:00	1:31:00	1:19:22 PM		13	Day	45.4		34673.69		49.0													45.4	34673.69	45.4	34673.69
		1:32:00	1:32:00	1:20:22 PM		13	Day	47.5		56234.13		50.9													47.5	56234.13	47.5	56234.13
		1:33:00	1:33:00	1:21:22 PM		13	Day	45.2		33113.11		49.0													45.2	33113.11	45.2	33113.11
		1:34:00	1:34:00	1:22:22 PM		13	Day	44.9		30902.95		47.8													44.9	30902.95	44.9	30902.95
		1:35:00	1:35:00	1:23:22 PM		13	Day	45.7		37153.52		50.2													45.7	37153.52	45.7	37153.52
		1:36:00	1:36:00	1:24:22 PM		13	Day	45.7		37153.52		48.9													45.7	37153.52	45.7	37153.52
		1:37:00	1:37:00	1:25:22 PM		13	Day	46.1		40738.03		48.0													46.1	40738.03	46.1	40738.03
		1:38:00	1:38:00	1:26:22 PM		13	Day	47.7		58884.37		50.1													47.7	58884.37	47.7	58884.37
		1:39:00	1:39:00	1:27:22 PM		13	Day	48.4		69183.10		49.9													48.4	69183.10	48.4	69183.10
		1:40:00	1:40:00	1:28:22 PM		13	Day	46.3		42657.95		47.6													46.3	42657.95	46.3	42657.95
		1:41:00	1:41:00	1:29:22 PM		13	Day	47.0		50118.72		48.9													47.0	50118.72	47.0	50118.72
		1:42:00	1:42:00	1:30:22 PM		13	Day	49.5		89125.09		51.5													49.5	89125.09	49.5	89125.09
		1:43:00	1:43:00	1:31:22 PM		13	Day	49.5		89125.09		52.1													49.5	89125.09	49.5	89125.09
		1:44:00	1:44:00	1:32:22 PM		13	Day	47.6		57543.99		50.9													47.6	57543.99	47.6	57543.99
		1:45:00	1:45:00	1:33:22 PM		13	Day	45.4		34673.69		46.9													45.4	34673.69	45.4	34673.69
		1:46:00	1:46:00	1:34:22 PM		13	Day	45.3		33884.42		47.7													45.3	33884.42	45.3	33884.42
		1:47:00	1:47:00	1:35:22 PM		13	Day	46.1		40738.03		49.2													46.1	40738.03	46.1	40738.03
		1:48:00	1:48:00	1:36:22 PM		13	Day	45.2		33113.11		47.7													45.2	33113.11	45.2	33113.11
		1:49:00	1:49:00	1:37:22 PM		13	Day	45.7		37153.52		47.9													45.7	37153.52	45.7	37153.52
		1:50:00	1:50:00	1:38:22 PM		13	Day	46.5		44668.36		49.5													46.5	44668.36	46.5	44668.36
		1:51:00	1:51:00	1:39:22 PM		13	Day	46.4		43651.58		47.8													46.4	43651.58	46.4	43651.58
		1:52:00	1:52:00	1:40:22 PM		13	Day	46.4		43651.58		49.9													46.4	43651.58	46.4	43651.58
		1:53:00	1:53:00	1:41:22 PM		13	Day	47.7		58884.37		49.8													47.7	58884.37	47.7	58884.37
		1:54:00	1:54:00	1:42:22 PM		13	Day	45.8		38018.94		48.1													45.8	38018.94	45.8	38018.94
		1:55:00	1:55:00	1:43:22 PM		13	Day	45.4		34673.69		49.1													45.4	34673.69	45.4	34673.69
		1:56:00	1:56:00	1:44:22 PM		13	Day	46.2		41686.94		48.7													46.2	41686.94	46.2	41686.94
		1:57:00	1:57:00	1:45:22 PM		13	Day	45.8		38018.94		47.7													45.8	38018.94	45.8	38018.94
		1:58:00	1:58:00	1:46:22 PM		13	Day	45.3		33884.42		48.3													45.3	33884.42	45.3	33884.42
		1:59:00	1:59:00	1:47:22 PM		13	Day	45.8		38018.94		49.2													45.8	38018.94	45.8	38018.94
		2:00:00	2:00:00	1:48:22 PM		13	Day	45.1		32359.37		48.1													45.1	32359.37	45.1	32359.37
		2:01:00	2:01:00	1:49:22 PM		13	Day	45.2		33113.11		48.9													45.2	33113.11	45.2	33113.11
		2:02:00	2:02:00	1:50:22 PM		13	Day	52.6		181970.09		65.6													52.6	181970.09	52.6	181970.09
		2:03:00	2:03:00	1:51:22 PM		13	Day	45.0		31622.78		47.6													45.0	31622.78	45.0	31622.78
		2:04:00	2:04:00	1:52:22 PM		13	Day	44.6		28840.32		47.5													44.6	28840.32	44.6	28840.32
		2:05:00	2:05:00	1:53:22 PM		13	Day	45.3		33884.42		49.1													45.3	33884.42	45.3	33884.42
		2:06:00	2:06:00	1:54:22 PM		13	Day	45.4		34673.69		48.5													45.4	34673.69	45.4	34673.69
		2:07:00	2:07:00	1:55:22 PM		13	Day	45.5		35481.34		47.9													45.5	35481.34	45.5	35481.34
		2:08:00	2:08:00	1:56:22 PM		13	Day	46.0		39810.72		49.3													46.0	39810.72	46.0	39810.72
		2:09:00	2:09:00	1:57:22 PM		13	Day	50.3		107151.93		56.4													50.3	107151.93	50.3	107151.93
		2:10:00	2:10:00	1:58:22 PM		13	Day	44.8		30199.52		49.8													44.8	30199.52	44.8	30199.52
		2:11:00	2:11:00	1:59:22 PM		13	Day	44.9		30902.95		47.9			47.5		49.0		50.1		56.4		63.3		65.6	44.9	30902.95	44.9	30902.95
		2:12:00	2:12:00	2:00:22 PM		14	Day	44.1		25703.96		46.4														44.1	25703.96	44.1	25703.96
		2:13:00	2:13:00	2:01:22 PM		14	Day	46.0		39810.72		48.6														46.0	39810.72	46.0	39810.72
		2:14:00	2:14:00	2:02:22 PM		14	Day	45.5		35481.34		48.5														45.5	35481.34	45.5	35481.34
		2:15:00	2:15:00	2:03:22 PM		14	Day	46.1		40738.03		48.3														46.1	40738.03	46.1	40738.03
		2:16:00	2:16:00	2:04:22 PM		14	Day	44.5		28183.83		49.7														44.5	28183.83	44.5	28183.83
		2:17:00	2:17:00	2:05:22 PM		14	Day	45.3		33884.42		48.2														45.3	33884.42	45.3	33884.42
		2:18:00	2:18:00	2:06:22 PM		14	Day	51.2		131825.67		59.3														51.2	131825.67	51.2	131825.67
		2:19:00	2:19:00	2:07:22 PM		14	Day	48.2		66069.34		56.7														48.2	66069.34	48.2	66069.34
		2:20:00	2:20:00	2:08:22 PM		14	Day	44.8		30199.52		48.4														44.8	30199.52	44.8	30199.52
		2:21:00	2:21:00	2:09:22 PM		14	Day	43.8		23988.33		48.8														43.8	23988.33	43.8	23988.33
		2:22:00	2:22:00	2:10:22 PM		14	Day	46.4		43651.58		49.1														46.4	43651.58	46.4	43651.58
		2:23:00	2:23:00	2:11:22 PM		14	Day	44.1		25703.96		48.1														44.1	25703.96	44.1	25703.96
		2:24:00	2:24:00	2:12:22 PM		14	Day	45.1		32359.37		48.0														45.1	32359.37	45.1	32359.37
		2:25:00	2:25:00	2:13:22 PM		14	Day	42.7		18620.87		45.8														42.7	18620.87	42.7	18620.87
		2:26:00	2:26:00	2:14:22 PM		14	Day	45.9		38904.51		47.9														45.9	38904.51	45.9	38904.51
		2:27:00	2:27:00	2:15:22 PM		14	Day	44.6		28840.32		46.6														44.6	28840.32	44.6	28840.32
		2:28:00	2:28:00	2:16:22 PM		14	Day	45.7		37153.52		47.6														45.7	37153.52	45.7	37153.52
		2:29:00	2:29:00	2:17:22 PM		14	Day	49.8		95499.26		54.2														49.8	95499.26	49.8	95499.26
		2:30:00	2:30:00	2:18:22 PM		14	Day	55.0		316227.77		57.2														55.0	316227.77	55.0	316227.77
		2:31:00	2:31:00	2:19:22 PM		14	Day	52.5		177827.94		54.2														52.5	177827.94	52.5	177827.94
		2:32:00	2:32:00	2:20:22 PM		14	Day	52.7		186208.71		54.7														52.7	186208.71	52.7	186208.71
		2:33:00	2:33:00	2:21:22 PM		14	Day	55.9		389045.14		57.2														55.9	389045.14	55.9	389045.14
		2:34:00	2:34:00	2:22:22 PM		14	Day	49.4		87096.36		53.6														49.4	87096.36	49.4	87096.36
		2:35:00	2:35:00	2:23:22 PM		14	Day	45.8		38018.94		48.1														45.8	38018.94	45.8	38018.94
		2:36:00	2:36:00	2:24:22 PM		14	Day	44.6		28840.32		46.0														44.6	28840.32	44.6	28840.32
		2:37:00	2:37:00	2:25:22 PM		14	Day	43.3		21379.62		46.2														43.3	21379.62	43.3	21379.62
		2:38:00	2:38:00	2:26:22 PM		14	Day	43.0		19952.62		45.6														43.0	19952.62	43.0	19952.62
		2:39:00	2:39:00	2:27:22 PM		14	Day	42.9		19498.45		45.3														42.9	19498.45	42.9	19498.45
		2:40:00	2:40:00	2:28:22 PM		14	Day	43.4		21877.62		47.0														43.4	21877.62	43.4	21877.62

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		2:41:00	2:41:00	2:29:22 PM		14	Day	43.8		23988.33		46.5													43.8	23988.33	43.8	23988.33
		2:42:00	2:42:00	2:30:22 PM		14	Day	45.5		35481.34		48.5													45.5	35481.34	45.5	35481.34
		2:43:00	2:43:00	2:31:22 PM		14	Day	45.2		33113.11		47.9													45.2	33113.11	45.2	33113.11
		2:44:00	2:44:00	2:32:22 PM		14	Day	56.5		446683.59		63.9													56.5	446683.59	56.5	446683.59
		2:45:00	2:45:00	2:33:22 PM		14	Day	46.7		46773.51		48.1													46.7	46773.51	46.7	46773.51
		2:46:00	2:46:00	2:34:22 PM		14	Day	49.3		85113.80		53.2													49.3	85113.80	49.3	85113.80
		2:47:00	2:47:00	2:35:22 PM		14	Day	47.7		58884.37		52.8													47.7	58884.37	47.7	58884.37
		2:48:00	2:48:00	2:36:22 PM		14	Day	45.1		32359.37		46.8													45.1	32359.37	45.1	32359.37
		2:49:00	2:49:00	2:37:22 PM		14	Day	44.8		30199.52		48.2													44.8	30199.52	44.8	30199.52
		2:50:00	2:50:00	2:38:22 PM		14	Day	45.6		36307.81		48.5													45.6	36307.81	45.6	36307.81
		2:51:00	2:51:00	2:39:22 PM		14	Day	52.2		165958.69		62.7													52.2	165958.69	52.2	165958.69
		2:52:00	2:52:00	2:40:22 PM		14	Day	45.0		31622.78		47.7													45.0	31622.78	45.0	31622.78
		2:53:00	2:53:00	2:41:22 PM		14	Day	42.5		17782.79		44.3													42.5	17782.79	42.5	17782.79
		2:54:00	2:54:00	2:42:22 PM		14	Day	44.9		30902.95		47.2													44.9	30902.95	44.9	30902.95
		2:55:00	2:55:00	2:43:22 PM		14	Day	44.6		28840.32		46.6													44.6	28840.32	44.6	28840.32
		2:56:00	2:56:00	2:44:22 PM		14	Day	44.0		25118.86		46.1													44.0	25118.86	44.0	25118.86
		2:57:00	2:57:00	2:45:22 PM		14	Day	43.6		22908.68		47.6													43.6	22908.68	43.6	22908.68
		2:58:00	2:58:00	2:46:22 PM		14	Day	44.3		26915.35		46.8													44.3	26915.35	44.3	26915.35
		2:59:00	2:59:00	2:47:22 PM		14	Day	44.2		26302.68		50.1													44.2	26302.68	44.2	26302.68
		3:00:00	3:00:00	2:48:22 PM		14	Day	46.6		45708.82		54.1													46.6	45708.82	46.6	45708.82
		3:01:00	3:01:00	2:49:22 PM		14	Day	41.8		15135.61		44.7													41.8	15135.61	41.8	15135.61
		3:02:00	3:02:00	2:50:22 PM		14	Day	43.5		22387.21		45.8													43.5	22387.21	43.5	22387.21
		3:03:00	3:03:00	2:51:22 PM		14	Day	43.0		19952.62		45.6													43.0	19952.62	43.0	19952.62
		3:04:00	3:04:00	2:52:22 PM		14	Day	43.4		21877.62		44.9													43.4	21877.62	43.4	21877.62
		3:05:00	3:05:00	2:53:22 PM		14	Day	43.2		20892.96		45.3													43.2	20892.96	43.2	20892.96
		3:06:00	3:06:00	2:54:22 PM		14	Day	49.8		95499.26		59.0													49.8	95499.26	49.8	95499.26
		3:07:00	3:07:00	2:55:22 PM		14	Day	49.3		85113.80		57.3													49.3	85113.80	49.3	85113.80
		3:08:00	3:08:00	2:56:22 PM		14	Day	43.2		20892.96		46.3													43.2	20892.96	43.2	20892.96
		3:09:00	3:09:00	2:57:22 PM		14	Day	45.6		36307.81		50.5													45.6	36307.81	45.6	36307.81
		3:10:00	3:10:00	2:58:22 PM		14	Day	49.9		97723.72		53.5													49.9	97723.72	49.9	97723.72
		3:11:00	3:11:00	2:59:22 PM		14	Day	44.1		25703.96		47.5		48.0		48.1		53.2		57.3		62.7		63.9	44.1	25703.96	44.1	25703.96
		3:12:00	3:12:00	3:00:22 PM		15	Day	43.8		23988.33		50.2													43.8	23988.33	43.8	23988.33
		3:13:00	3:13:00	3:01:22 PM		15	Day	42.7		18620.87		48.2													42.7	18620.87	42.7	18620.87
		3:14:00	3:14:00	3:02:22 PM		15	Day	39.0		7943.28		40.3													39.0	7943.28	39.0	7943.28
		3:15:00	3:15:00	3:03:22 PM		15	Day	39.2		8317.64		41.3													39.2	8317.64	39.2	8317.64
		3:16:00	3:16:00	3:04:22 PM		15	Day	39.5		8912.51		42.8													39.5	8912.51	39.5	8912.51
		3:17:00	3:17:00	3:05:22 PM		15	Day	39.3		8511.38		41.9													39.3	8511.38	39.3	8511.38
		3:18:00	3:18:00	3:06:22 PM		15	Day	39.2		8317.64		42.7													39.2	8317.64	39.2	8317.64
		3:19:00	3:19:00	3:07:22 PM		15	Day	37.9		6165.95		40.7													37.9	6165.95	37.9	6165.95
		3:20:00	3:20:00	3:08:22 PM		15	Day	38.7		7413.10		43.0													38.7	7413.10	38.7	7413.10
		3:21:00	3:21:00	3:09:22 PM		15	Day	34.4		2754.23		35.4													34.4	2754.23	34.4	2754.23
		3:22:00	3:22:00	3:10:22 PM		15	Day	39.5		8912.51		42.7													39.5	8912.51	39.5	8912.51
		3:23:00	3:23:00	3:11:22 PM		15	Day	41.7		14791.08		48.0													41.7	14791.08	41.7	14791.08
		3:24:00	3:24:00	3:12:22 PM		15	Day	49.9		97723.72		54.1													49.9	97723.72	49.9	97723.72
		3:25:00	3:25:00	3:13:22 PM		15	Day	43.5		22387.21		50.3													43.5	22387.21	43.5	22387.21
		3:26:00	3:26:00	3:14:22 PM		15	Day	35.0		3162.28		37.0													35.0	3162.28	35.0	3162.28
		3:27:00	3:27:00	3:15:22 PM		15	Day	40.0		10000.00		42.7													40.0	10000.00	40.0	10000.00
		3:28:00	3:28:00	3:16:22 PM		15	Day	37.1		5128.61		40.4													37.1	5128.61	37.1	5128.61
		3:29:00	3:29:00	3:17:22 PM		15	Day	36.1		4073.80		39.8													36.1	4073.80	36.1	4073.80
		3:30:00	3:30:00	3:18:22 PM		15	Day	42.0		15848.93		45.3													42.0	15848.93	42.0	15848.93
		3:31:00	3:31:00	3:19:22 PM		15	Day	43.8		23988.33		46.3													43.8	23988.33	43.8	23988.33
		3:32:00	3:32:00	3:20:22 PM		15	Day	46.6		45708.82		49.1													46.6	45708.82	46.6	45708.82
	Study #2	3:33:00	3:33:00	3:21:22 PM		15	Day	45.8	60.8	38018.94	1212563.02	47.6	70.7												45.8	38018.94	45.8	38018.94
	Study #2	3:34:00	3:34:00	3:22:22 PM		15	Day	45.9	54.4	38904.51	277162.01	47.9	62.0												45.9	38904.51	45.9	38904.51
	Study #2	3:35:00	3:35:00	3:23:22 PM	Helicopter, Firing range, Cars on nearby roadways	15	Day	47.0	71.5	50118.72	14268036.53	50.9	80.9												47.0	50118.72	47.0	50118.72
	Study #2	3:36:00	3:36:00	3:24:22 PM		15	Day	53.6	48.0	229086.77	62796.78	55.0	55.5												53.6	229086.77	53.6	229086.77
	Study #2	3:37:00	3:37:00	3:25:22 PM		15	Day	50.2	47.1	104712.85	51842.04	51.9	53.1												50.2	104712.85	50.2	104712.85
	Study #2	3:38:00	3:38:00	3:26:22 PM		15	Day	47.2	45.7	52480.75	37352.79	48.7	53.4												47.2	52480.75	47.2	52480.75
	Study #2	3:39:00	3:39:00	3:27:22 PM		15	Day	46.3	60.1	42657.95	1013672.53	50.3	72.2												46.3	42657.95	46.3	42657.95
	Study #2	3:40:00	3:40:00	3:28:22 PM		15	Day	40.7	54.4	11748.98	276091.19	50.2	63.4												40.7	11748.98	40.7	11748.98
	Study #2	3:41:00	3:41:00	3:29:22 PM		15	Day	45.9	48.0	38904.51	63359.08	53.3	58.0												45.9	38904.51	45.9	38904.51
	Study #2	3:42:00	3:42:00	3:30:22 PM		15	Day	38.3	42.8	6760.83	19177.24	45.6	51.4												38.3	6760.83	38.3	6760.83
	Study #2	3:43:00	3:43:00	3:31:22 PM		15	Day	35.7	47.6	3715.35	57466.87	41.3	54.1												35.7	3715.35	35.7	3715.35
	Study #2	3:44:00	3:44:00	3:32:22 PM		15	Day	39.2	48.9	8317.64	77221.59	45.7	52.7												39.2	8317.64	39.2	8317.64
	Study #2	3:45:00	3:45:00	3:33:22 PM		15	Day	45.9	50.2	38904.51	104843.36	49.8	55.2												45.9	38904.51	45.9	38904.51
	Study #2	3:46:00	3:46:00	3:34:22 PM		15	Day	46.5	49.8	44668.36	95010.03	49.9	59.5												46.5	44668.36	46.5	44668.36
	Study #2	3:47:00	3:47:00	3:35:22 PM		15	Day	41.3	50.8	13489.63	119687.50	48.8	57.8		46.8		49.8		50.9		53.3		55.0		41.3	13489.63	41.3	13489.63
		3:48:00	3:48:00	3:36:22 PM		15	Day	45.6		36307.81		47.8													45.6	36307.81	45.6	36307.81
		3:49:00	3:49:00	3:37:22 PM		15	Day	45.4		34673.69		47.2													45.4	34673.69	45.4	34673.69
		3:50:00	3:50:00	3:38:22 PM		15	Day	48.5		70794.58		53.9													48.5	70794.58	48.5	70794.58
		3:51:00	3:51:00	3:39:22 PM		15	Day	52.2		165958.69		54.5													52.2	165958.69	52.2	165958.69
		3:52:00	3:52:00	3:40:22 PM		15	Day	52.4		173780.08		55.3													52.4	173780.08	52.4	173780.08
		3:53:00	3:53:00	3:41:22 PM		15	Day	50.4		109647.82		52.9													50.4	109647.82	50.4	109647.82
		3:54:00	3:54:00	3:42:22 PM		15	Day	49.4		87096.36		52.2													49.4	87096.36	49.4	87096.36
		3:55:00	3:55:00	3:43:22 PM		15	Day	47.7		58884.37		50.4													47.7	58884.37	47.7	58884.37
		3:56:00	3:56:00	3:44:22 PM		15	Day	46.5		44668.36		48.5													46.5	44668.36	46.5	44668.36

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		3:57:00	3:57:00	3:45:22 PM		15	Day	49.0		79432.82		51.3													49.0	79432.82	49.0	79432.82
		3:58:00	3:58:00	3:46:22 PM		15	Day	49.9		97723.72		51.1													49.9	97723.72	49.9	97723.72
		3:59:00	3:59:00	3:47:22 PM		15	Day	49.1		81283.05		51.6													49.1	81283.05	49.1	81283.05
		4:00:00	4:00:00	3:48:22 PM		15	Day	46.0		39810.72		49.3													46.0	39810.72	46.0	39810.72
		4:01:00	4:01:00	3:49:22 PM		15	Day	46.4		43651.58		49.8													46.4	43651.58	46.4	43651.58
		4:02:00	4:02:00	3:50:22 PM		15	Day	46.1		40738.03		49.7													46.1	40738.03	46.1	40738.03
		4:03:00	4:03:00	3:51:22 PM		15	Day	43.6		22908.68		46.1													43.6	22908.68	43.6	22908.68
		4:04:00	4:04:00	3:52:22 PM		15	Day	48.3		67608.30		50.7													48.3	67608.30	48.3	67608.30
		4:05:00	4:05:00	3:53:22 PM		15	Day	47.1		51286.14		49.2													47.1	51286.14	47.1	51286.14
		4:06:00	4:06:00	3:54:22 PM		15	Day	47.8		60255.96		50.3													47.8	60255.96	47.8	60255.96
		4:07:00	4:07:00	3:55:22 PM		15	Day	45.9		38904.51		48.4													45.9	38904.51	45.9	38904.51
		4:08:00	4:08:00	3:56:22 PM		15	Day	45.2		33113.11		46.8													45.2	33113.11	45.2	33113.11
		4:09:00	4:09:00	3:57:22 PM		15	Day	46.7		46773.51		50.4													46.7	46773.51	46.7	46773.51
	Study #3	4:10:00	4:10:00	3:58:22 PM		15	Day	50.8	61.1	120226.44	1290917.24	53.5	69.4												50.8	120226.44	50.8	120226.44
	Study #3	4:11:00	4:11:00	3:59:22 PM		15	Day	48.9	61.2	77624.71	1314971.28	51.0	67.7	46.6		49.1		50.9		53.9		55.0		55.3	48.9	77624.71	48.9	77624.71
	Study #3	4:12:00	4:12:00	4:00:22 PM	BNSF Train (east)	16	Day	48.3	80.6	67608.30	113819190.23	50.3	87.0												48.3	67608.30	48.3	67608.30
	Study #3	4:13:00	4:13:00	4:01:22 PM		16	Day	47.7	68.2	58884.37	6657886.16	50.6	75.3												47.7	58884.37	47.7	58884.37
	Study #3	4:14:00	4:14:00	4:02:22 PM		16	Day	46.8	67.0	47863.01	5049836.24	48.5	71.5												46.8	47863.01	46.8	47863.01
	Study #3	4:15:00	4:15:00	4:03:22 PM		16	Day	46.5	66.9	44668.36	4896175.79	48.3	71.7												46.5	44668.36	46.5	44668.36
	Study #3	4:16:00	4:16:00	4:04:22 PM		16	Day	48.1	71.7	64565.42	14763466.45	52.1	78.5												48.1	64565.42	48.1	64565.42
	Study #3	4:17:00	4:17:00	4:05:22 PM		16	Day	47.3	59.9	53703.18	981475.87	50.0	69.0												47.3	53703.18	47.3	53703.18
	Study #3	4:18:00	4:18:00	4:06:22 PM		16	Day	48.1	59.9	64565.42	980546.90	53.2	68.0												48.1	64565.42	48.1	64565.42
	Study #3	4:19:00	4:19:00	4:07:22 PM		16	Day	47.7	62.5	58884.37	1784256.19	51.8	70.4												47.7	58884.37	47.7	58884.37
	Study #3	4:20:00	4:20:00	4:08:22 PM		16	Day	49.6	59.7	91201.08	937283.73	52.9	67.8												49.6	91201.08	49.6	91201.08
	Study #3	4:21:00	4:21:00	4:09:22 PM		16	Day	46.6	60.6	45708.82	1155166.26	50.8	70.0												46.6	45708.82	46.6	45708.82
	Study #3	4:22:00	4:22:00	4:10:22 PM		16	Day	46.9	62.0	48977.88	1577868.94	52.3	69.5												46.9	48977.88	46.9	48977.88
	Study #3	4:23:00	4:23:00	4:11:22 PM		16	Day	47.5	55.5	56234.13	357450.34	51.0	65.5												47.5	56234.13	47.5	56234.13
	Study #3	4:24:00	4:24:00	4:12:22 PM		16	Day	51.9	59.2	154881.66	835963.39	54.7	57.7		48.5		51.0		52.9		53.5		54.7		51.9	154881.66	51.9	154881.66
		4:25:00	4:25:00	4:13:22 PM		16	Day	49.9		97723.72		52.8													49.9	97723.72	49.9	97723.72
		4:26:00	4:26:00	4:14:22 PM		16	Day	49.4		87096.36		54.3													49.4	87096.36	49.4	87096.36
		4:27:00	4:27:00	4:15:22 PM		16	Day	60.3		1071519.31		74.6													60.3	1071519.31	60.3	1071519.31
		4:28:00	4:28:00	4:16:22 PM		16	Day	49.5		89125.09		52.3													49.5	89125.09	49.5	89125.09
	Study #4	4:29:00	4:29:00	4:17:22 PM		16	Day	49.3	53.1	85113.80	205207.06	50.8	57.7												49.3	85113.80	49.3	85113.80
	Study #4	4:30:00	4:30:00	4:18:22 PM		16	Day	48.3	51.8	67608.30	151369.18	50.6	57.5												48.3	67608.30	48.3	67608.30
	Study #4	4:31:00	4:31:00	4:19:22 PM		16	Day	47.8	56.3	60255.96	426125.31	49.7	59.7												47.8	60255.96	47.8	60255.96
	Study #4	4:32:00	4:32:00	4:20:22 PM		16	Day	56.4	55.5	436515.83	352129.53	59.5	57.4												56.4	436515.83	56.4	436515.83
	Study #4	4:33:00	4:33:00	4:21:22 PM		16	Day	56.3	56.2	426579.52	413791.47	57.8	59.3												56.3	426579.52	56.3	426579.52
	Study #4	4:34:00	4:34:00	4:22:22 PM		16	Day	54.9	57.9	309029.54	613861.69	56.0	60.6												54.9	309029.54	54.9	309029.54
	Study #4	4:35:00	4:35:00	4:23:22 PM		16	Day	56.6	57.6	457088.19	569792.11	58.0	59.3												56.6	457088.19	56.6	457088.19
	Study #4	4:36:00	4:36:00	4:24:22 PM		16	Day	59.1	55.4	812830.52	346258.07	60.0	59.3												59.1	812830.52	59.1	812830.52
	Study #4	4:37:00	4:37:00	4:25:22 PM		16	Day	55.4	55.5	346736.85	357029.82	59.0	59.2												55.4	346736.85	55.4	346736.85
	Study #4	4:38:00	4:38:00	4:26:22 PM		16	Day	48.8	53.9	75857.76	245889.07	51.5	56.7												48.8	75857.76	48.8	75857.76
	Study #4	4:39:00	4:39:00	4:27:22 PM		16	Day	51.4	55.0	138038.43	315776.17	60.1	60.4												51.4	138038.43	51.4	138038.43
	Study #4	4:40:00	4:40:00	4:28:22 PM		16	Day	63.4	55.2	2187761.62	334036.22	74.8	59.8												63.4	2187761.62	63.4	2187761.62
	Study #4	4:41:00	4:41:00	4:29:22 PM		16	Day	48.9	54.7	77624.71	292577.14	54.1	59.2												48.9	77624.71	48.9	77624.71
	Study #4	4:42:00	4:42:00	4:30:22 PM		16	Day	48.5	55.1	70794.58	327032.11	52.9	60.8												48.5	70794.58	48.5	70794.58
	Study #4	4:43:00	4:43:00	4:31:22 PM		16	Day	47.6	54.6	57543.99	291558.46	51.3	58.2		55.7		56.0		59.5		60.1		74.8		47.6	57543.99	47.6	57543.99
		4:44:00	4:44:00	4:32:22 PM		16	Day	47.8		60255.96		50.8													47.8	60255.96	47.8	60255.96
		4:45:00	4:45:00	4:33:22 PM		16	Day	48.2		66069.34		51.4													48.2	66069.34	48.2	66069.34
		4:46:00	4:46:00	4:34:22 PM		16	Day	49.5		89125.09		52.7													49.5	89125.09	49.5	89125.09
		4:47:00	4:47:00	4:35:22 PM		16	Day	49.4		87096.36		52.6													49.4	87096.36	49.4	87096.36
		4:48:00	4:48:00	4:36:22 PM		16	Day	47.8		60255.96		50.1													47.8	60255.96	47.8	60255.96
	Study #5	4:49:00	4:49:00	4:37:22 PM		16	Day	45.9	51.9	38904.51	153336.09	48.7	54.6												45.9	38904.51	45.9	38904.51
	Study #5	4:50:00	4:50:00	4:38:22 PM		16	Day	47.2	51.6	52480.75	146149.71	49.1	53.6												47.2	52480.75	47.2	52480.75
	Study #5	4:51:00	4:51:00	4:39:22 PM		16	Day	47.5	48.8	56234.13	75963.86	49.0	51.6												47.5	56234.13	47.5	56234.13
	Study #5	4:52:00	4:52:00	4:40:22 PM		16	Day	54.2	48.8	263026.80	75584.04	59.1	52.9												54.2	263026.80	54.2	263026.80
	Study #5	4:53:00	4:53:00	4:41:22 PM		16	Day	49.7	47.0	93325.43	50435.91	55.9	50.4												49.7	93325.43	49.7	93325.43
	Study #5	4:54:00	4:54:00	4:42:22 PM		16	Day	47.6	44.0	57543.99	25240.72	49.4	47.4												47.6	57543.99	47.6	57543.99
	Study #5	4:55:00	4:55:00	4:43:22 PM		16	Day	48.6	45.4	72443.60	34959.02	52.9	48.2												48.6	72443.60	48.6	72443.60
	Study #5	4:56:00	4:56:00	4:44:22 PM		16	Day	49.7	45.4	93325.43	34856.28	51.4	48.1												49.7	93325.43	49.7	93325.43
	Study #5	4:57:00	4:57:00	4:45:22 PM		16	Day	47.8	46.7	60255.96	47073.54	50.0	51.0												47.8	60255.96	47.8	60255.96
	Study #5	4:58:00	4:58:00	4:46:22 PM		16	Day	49.6	47.3	91201.08	53955.81	53.0	51.7												49.6	91201.08	49.6	91201.08
	Study #5	4:59:00	4:59:00	4:47:22 PM		16	Day	48.9	46.9	77624.71	48580.20	51.0	51.9												48.9	77624.71	48.9	77624.71
	Study #5	5:00:00	5:00:00	4:48:22 PM		16	Day	49.1	53.0	81283.05	200697.29	53.8	57.3												49.1	81283.05	49.1	81283.05
	Study #5	5:01:00	5:01:00	4:49:22 PM		16	Day	50.9	56.9	123026.88	488908.36	52.8	58.2												50.9	123026.88	50.9	123026.88
	Study #5	5:02:00	5:02:00	4:50:22 PM		16	Day	51.2	55.9	131825.67	385947.70	52.3	56.9												51.2	131825.67	51.2	131825.67
	Study #5	5:03:00	5:03:00	4:51:22 PM		16	Day	51.4	58.4	138038.43	693989.52	53.4	60.4		49.8		52.3		53.4		55.9		59.1		51.4	138038.43	51.4	138038.43
		5:04:00	5:04:00	4:52:22 PM		16	Day	52.0		158489.32		53.6													52.0	158489.32	52.0	158489.32
		5:05:00	5:05:00	4:53:22 PM		16	Day	54.0		251188.64		57.3													54.0	251188.64	54.0	251188.64
		5:06:00	5:06:00	4:54:22 PM		16	Day	53.1		204173.79		57.7													53.1	204173.79	53.1	204173.79
		5:07:00	5:07:00	4:55:22 PM		16	Day	51.4		138038.43		55.2													51.4	138038.43	51.4	138038.43
		5:08:00	5:08:00	4:56:22 PM		16	Day	53.2		208929.61		56.1													53.2	208929.61	53.2	208929.61
		5:09:00	5:09:00	4:57:22 PM		16	Day	51.6		144543.98		56.3													51.6	144543.98	51.6	144543.98
		5:10:00	5:10:00	4:58:22 PM		16	Day	53.4		218776.16		56.4													53.4	218776.16	53.4	218776.16
		5:11:00	5:11:00	4:59:22 PM		16	Day	52.8		190546.07		57.4		52.7		52.8		56.1		59.5		74.6		74.8	52.8	190546.07	52.8	190546.07
		5:12:00	5:12:00	5:00:22 PM		17	Day	53.1		204173.79		56.0													53.1	204173.79	53.1	204173.79
		5:13:00	5:13:00	5:01:22 PM		17	Day	52.9		194984.46		57.8													52.9	194984.46	52.9	194984.46
		5:14:00	5:14:00	5:02:22 PM		17	Day	51.4		138038.43		56.0													51.4	138038.43	51.4	138038.43
		5:15:00	5:15:00	5:03:22 PM		17	Day	51.6		144543.98		56.9													51.6	144543.98	51.6	144543.98

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		5:16:00	5:16:00	5:04:22 PM		17	Day	52.5		177827.94		57.2													52.5	177827.94	52.5	177827.94
		5:17:00	5:17:00	5:05:22 PM		17	Day	52.8		190546.07		57.6													52.8	190546.07	52.8	190546.07
		5:18:00	5:18:00	5:06:22 PM		17	Day	53.6		229086.77		57.4													53.6	229086.77	53.6	229086.77
		5:19:00	5:19:00	5:07:22 PM		17	Day	52.1		162181.01		54.9													52.1	162181.01	52.1	162181.01
		5:20:00	5:20:00	5:08:22 PM		17	Day	52.9		194984.46		57.1													52.9	194984.46	52.9	194984.46
		5:21:00	5:21:00	5:09:22 PM		17	Day	50.9		123026.88		55.5													50.9	123026.88	50.9	123026.88
		5:22:00	5:22:00	5:10:22 PM		17	Day	44.1		25703.96		44.9													44.1	25703.96	44.1	25703.96
		5:23:00	5:23:00	5:11:22 PM		17	Day	49.1		81283.05		57.2													49.1	81283.05	49.1	81283.05
		5:24:00	5:24:00	5:12:22 PM		17	Day	50.2		104712.85		53.5													50.2	104712.85	50.2	104712.85
		5:25:00	5:25:00	5:13:22 PM		17	Day	48.5		70794.58		49.8													48.5	70794.58	48.5	70794.58
		5:26:00	5:26:00	5:14:22 PM		17	Day	45.1		32359.37		47.4													45.1	32359.37	45.1	32359.37
		5:27:00	5:27:00	5:15:22 PM		17	Day	46.3		42657.95		53.2													46.3	42657.95	46.3	42657.95
		5:28:00	5:28:00	5:16:22 PM		17	Day	47.8		60255.96		49.6													47.8	60255.96	47.8	60255.96
		5:29:00	5:29:00	5:17:22 PM		17	Day	47.1		51286.14		48.4													47.1	51286.14	47.1	51286.14
		5:30:00	5:30:00	5:18:22 PM		17	Day	45.1		32359.37		47.6													45.1	32359.37	45.1	32359.37
		5:31:00	5:31:00	5:19:22 PM		17	Day	47.3		53703.18		50.3													47.3	53703.18	47.3	53703.18
		5:32:00	5:32:00	5:20:22 PM		17	Day	45.0		31622.78		47.4													45.0	31622.78	45.0	31622.78
		5:33:00	5:33:00	5:21:22 PM		17	Day	43.8		23988.33		44.8													43.8	23988.33	43.8	23988.33
		5:34:00	5:34:00	5:22:22 PM		17	Day	43.7		23442.29		45.3													43.7	23442.29	43.7	23442.29
		5:35:00	5:35:00	5:23:22 PM		17	Day	45.1		32359.37		50.6													45.1	32359.37	45.1	32359.37
		5:36:00	5:36:00	5:24:22 PM		17	Day	46.4		43651.58		49.7													46.4	43651.58	46.4	43651.58
		5:37:00	5:37:00	5:25:22 PM		17	Day	45.9		38904.51		47.2													45.9	38904.51	45.9	38904.51
		5:38:00	5:38:00	5:26:22 PM		17	Day	45.3		33884.42		47.0													45.3	33884.42	45.3	33884.42
		5:39:00	5:39:00	5:27:22 PM		17	Day	44.7		29512.09		46.6													44.7	29512.09	44.7	29512.09
		5:40:00	5:40:00	5:28:22 PM		17	Day	45.4		34673.69		46.6													45.4	34673.69	45.4	34673.69
		5:41:00	5:41:00	5:29:22 PM		17	Day	45.0		31622.78		46.6													45.0	31622.78	45.0	31622.78
		5:42:00	5:42:00	5:30:22 PM		17	Day	45.5		35481.34		47.2													45.5	35481.34	45.5	35481.34
		5:43:00	5:43:00	5:31:22 PM		17	Day	44.8		30199.52		46.4													44.8	30199.52	44.8	30199.52
		5:44:00	5:44:00	5:32:22 PM		17	Day	44.6		28840.32		46.4													44.6	28840.32	44.6	28840.32
		5:45:00	5:45:00	5:33:22 PM		17	Day	44.4		27542.29		46.2													44.4	27542.29	44.4	27542.29
		5:46:00	5:46:00	5:34:22 PM		17	Day	44.7		29512.09		47.0													44.7	29512.09	44.7	29512.09
		5:47:00	5:47:00	5:35:22 PM		17	Day	44.4		27542.29		46.3													44.4	27542.29	44.4	27542.29
	Study #6	5:48:00	5:48:00	5:36:22 PM		17	Day	45.3	53.9	33884.42	247129.42	46.5	57.6												45.3	33884.42	45.3	33884.42
	Study #6	5:49:00	5:49:00	5:37:22 PM		17	Day	47.2	52.0	52480.75	159739.59	48.9	54.9												47.2	52480.75	47.2	52480.75
	Study #6	5:50:00	5:50:00	5:38:22 PM		17	Day	47.8	51.7	60255.96	149375.74	49.7	55.1												47.8	60255.96	47.8	60255.96
	Study #6	5:51:00	5:51:00	5:39:22 PM		17	Day	47.3	51.7	53703.18	148034.16	49.3	55.6												47.3	53703.18	47.3	53703.18
	Study #6	5:52:00	5:52:00	5:40:22 PM		17	Day	46.1	51.9	40738.03	153112.08	48.8	54.2												46.1	40738.03	46.1	40738.03
	Study #6	5:53:00	5:53:00	5:41:22 PM		17	Day	46.6	51.8	45708.82	149812.64	48.3	53.4												46.6	45708.82	46.6	45708.82
	Study #6	5:54:00	5:54:00	5:42:22 PM		17	Day	47.1	51.8	51286.14	152897.60	49.5	53.8												47.1	51286.14	47.1	51286.14
	Study #6	5:55:00	5:55:00	5:43:22 PM		17	Day	47.5	52.8	56234.13	191444.55	48.8	56.2												47.5	56234.13	47.5	56234.13
	Study #6	5:56:00	5:56:00	5:44:22 PM		17	Day	47.1	51.8	51286.14	150554.05	48.9	54.5												47.1	51286.14	47.1	51286.14
	Study #6	5:57:00	5:57:00	5:45:22 PM		17	Day	46.2	50.8	41686.94	119364.73	48.1	52.7												46.2	41686.94	46.2	41686.94
	Study #6	5:58:00	5:58:00	5:46:22 PM		17	Day	45.5	51.8	35481.34	151425.32	46.9	55.0												45.5	35481.34	45.5	35481.34
	Study #6	5:59:00	5:59:00	5:47:22 PM		17	Day	46.8	51.4	47863.01	137744.11	48.3	54.4												46.8	47863.01	46.8	47863.01
	Study #6	6:00:00	6:00:00	5:48:22 PM		17	Day	47.2	52.6	52480.75	181573.35	50.5	55.2												47.2	52480.75	47.2	52480.75
	Study #6	6:01:00	6:01:00	5:49:22 PM		17	Day	47.8	51.6	60255.96	143403.73	50.5	53.7												47.8	60255.96	47.8	60255.96
	Study #6	6:02:00	6:02:00	5:50:22 PM		17	Day	46.9	51.7	48977.88	147991.46	48.7	54.7		46.9		48.8		49.5		50.5		50.5		46.9	48977.88	46.9	48977.88
		6:03:00	6:03:00	5:51:22 PM		17	Day	47.4		54954.09		49.4													47.4	54954.09	47.4	54954.09
		6:04:00	6:04:00	5:52:22 PM		17	Day	47.7		58884.37		49.5													47.7	58884.37	47.7	58884.37
		6:05:00	6:05:00	5:53:22 PM		17	Day	48.7		74131.02		50.4													48.7	74131.02	48.7	74131.02
		6:06:00	6:06:00	5:54:22 PM		17	Day	49.4		87096.36		53.0													49.4	87096.36	49.4	87096.36
		6:07:00	6:07:00	5:55:22 PM		17	Day	58.5		707945.78		62.8													58.5	707945.78	58.5	707945.78
	Study #7	6:08:00	6:08:00	5:56:22 PM		17	Day	59.3	56.3	851138.04	426914.09	62.2	58.7												59.3	851138.04	59.3	851138.04
	Study #7	6:09:00	6:09:00	5:57:22 PM	Train (east)	17	Day	59.7	64.3	933254.30	2678899.14	62.7	68.9												59.7	933254.30	59.7	933254.30
	Study #7	6:10:00	6:10:00	5:58:22 PM		17	Day	57.6	60.8	575439.94	1212639.69	59.5	66.8												57.6	575439.94	57.6	575439.94
	Study #7	6:11:00	6:11:00	5:59:22 PM		17	Day	57.5	58.4	562341.33	687633.29	61.1	67.1	50.9		49.5		55.5		59.5		62.7		62.8	57.5	562341.33	57.5	562341.33
	Study #7	6:12:00	6:12:00	6:00:22 PM		18	Day	53.8	56.2	239883.29	418491.12	56.4	60.1												53.8	239883.29	53.8	239883.29
	Study #7	6:13:00	6:13:00	6:01:22 PM		18	Day	55.6	56.1	363078.05	404216.41	57.8	58.0												55.6	363078.05	55.6	363078.05
	Study #7	6:14:00	6:14:00	6:02:22 PM		18	Day	55.4	61.3	346736.85	1339155.56	57.1	64.3												55.4	346736.85	55.4	346736.85
	Study #7	6:15:00	6:15:00	6:03:22 PM		18	Day	57.5	54.6	562341.33	287710.94	61.1	58.1												57.5	562341.33	57.5	562341.33
	Study #7	6:16:00	6:16:00	6:04:22 PM		18	Day	54.7	53.4	295120.92	217064.24	58.1	57.9												54.7	295120.92	54.7	295120.92
	Study #7	6:17:00	6:17:00	6:05:22 PM		18	Day	52.5	49.5	177827.94	88267.89	55.6	51.7												52.5	177827.94	52.5	177827.94
	Study #7	6:18:00	6:18:00	6:06:22 PM		18	Day	51.6	52.9	144543.98	193746.50	55.5	57.4												51.6	144543.98	51.6	144543.98
	Study #7	6:19:00	6:19:00	6:07:22 PM		18	Day	48.4	51.5	69183.10	141833.01	53.0	53.7												48.4	69183.10	48.4	69183.10
	Study #7	6:20:00	6:20:00	6:08:22 PM		18	Day	46.6	51.0	45708.82	126162.17	48.2	52.3												46.6	45708.82	46.6	45708.82
	Study #7	6:21:00	6:21:00	6:09:22 PM		18	Day	45.0	51.7	31622.78	146390.91	47.5	58.7												45.0	31622.78	45.0	31622.78
	Study #7	6:22:00	6:22:00	6:10:22 PM		18	Day	43.4	51.2	21877.62	130401.09	45.1	57.3		55.4		57.1		61.1		62.2		62.7		43.4	21877.62	43.4	21877.62
		6:23:00	6:23:00	6:11:22 PM		18	Day	43.3		21379.62		44.5													43.3	21379.62	43.3	21379.62
		6:24:00	6:24:00	6:12:22 PM		18	Day	43.5		22387.21		44.8													43.5	22387.21	43.5	22387.21
	Study #8	6:25:00	6:25:00	6:13:22 PM		18	Day	52.1	50.6	162181.01	114299.78	62.9	55.2												52.1	162181.01	52.1	162181.01
	Study #8	6:26:00	6:26:00	6:14:22 PM		18	Day	51.5	50.7	141253.75	117086.79	56.9	53.6												51.5	141253.75	51.5	141253.75
	Study #8	6:27:00	6:27:00	6:15:22 PM		18	Day	52.1	50.8	162181.01	120809.00	57.2	54.0												52.1	162181.01	52.1	162181.01
	Study #8	6:28:00	6:28:00	6:16:22 PM		18	Day	49.9	48.8	97723.72	75987.10	53.6	50.4												49.9	97723.72	49.9	97723.72
	Study #8	6:29:00	6:29:00	6:17:22 PM		18	Day	47.7	50.8	58884.37	121194.45	48.8	53.2												47.7	58884.37	47.7	58884.37
	Study #8	6:30:00	6:30:00	6:18:22 PM		18	Day	49.8	48.9	95499.26	77514.46	53.2	50.3												49.8	95499.26	49.8	95499.26
	Study #8	6:31:00	6:31:00	6:19:22 PM		18	Day	52.3	50.2	169824.37	105383.07	55.5	52.7												52.3	169824.37	52.3	169824.37
	Study #8	6:32:00	6:32:00	6:20:22 PM	Train (east)	18	Day	48.0	56.6	63095.73	452650.21	49.8	61.6												48.0	63095.73	48.0	63095.73
	Study #8	6:33:00	6:33:00	6:21:22 PM		18	Day	51.0	55.5	125892.54	355943.05	53.6	59.9												51.0	125892.54	51.0	125892.54
	Study #8	6:34:00	6:34:00	6:22:22 PM		18	Day	54.7	54.0	295120.92	252001.82	58.1	56.9												54.7	295120.92	54.7	295120.92
	Study #8	6:35:00	6:35:00	6:23:22 PM		18	Day	55.6	49.6	363078.05	91011.86	57.1	50.7												55.6	363078.05	55.6	363078.05

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #8	6:36:00	6:36:00	6:24:22 PM		18	Day	52.5	51.9	177827.94	156615.98	57.0	53.9												52.5	177827.94	52.5	177827.94
	Study #8	6:37:00	6:37:00	6:25:22 PM		18	Day	50.3	52.0	107151.93	158700.29	51.5	54.0												50.3	107151.93	50.3	107151.93
	Study #8	6:38:00	6:38:00	6:26:22 PM	Train (east)	18	Day	54.3	57.9	269153.48	621287.67	60.4	63.6												54.3	269153.48	54.3	269153.48
	Study #8	6:39:00	6:39:00	6:27:22 PM		18	Day	54.8	58.0	301995.17	638256.93	57.1	64.0		52.4		56.9		57.2		60.4		62.9		54.8	301995.17	54.8	301995.17
		6:40:00	6:40:00	6:28:22 PM		18	Day	56.4		436515.83		58.8													56.4	436515.83	56.4	436515.83
		6:41:00	6:41:00	6:29:22 PM		18	Day	57.4		549540.87		59.8													57.4	549540.87	57.4	549540.87
		6:42:00	6:42:00	6:30:22 PM		18	Day	56.4		436515.83		58.8													56.4	436515.83	56.4	436515.83
	Study #9	6:43:00	6:43:00	6:31:22 PM	Train (east)	18	Day	57.6	58.5	575439.94	706122.49	60.0	61.2												57.6	575439.94	57.6	575439.94
	Study #9	6:44:00	6:44:00	6:32:22 PM		18	Day	58.1	53.6	645654.23	229321.43	61.6	55.9												58.1	645654.23	58.1	645654.23
	Study #9	6:45:00	6:45:00	6:33:22 PM		18	Day	52.8	53.1	190546.07	206065.58	56.9	58.1												52.8	190546.07	52.8	190546.07
	Study #9	6:46:00	6:46:00	6:34:22 PM		18	Day	48.8	46.4	75857.76	43165.25	51.1	48.5												48.8	75857.76	48.8	75857.76
	Study #9	6:47:00	6:47:00	6:35:22 PM		18	Day	45.8	46.7	38018.94	46542.23	48.4	47.9												45.8	38018.94	45.8	38018.94
	Study #9	6:48:00	6:48:00	6:36:22 PM		18	Day	46.8	45.6	47863.01	36212.38	52.8	46.4												46.8	47863.01	46.8	47863.01
	Study #9	6:49:00	6:49:00	6:37:22 PM		18	Day	47.0	45.5	50118.72	35160.09	49.2	46.9												47.0	50118.72	47.0	50118.72
	Study #9	6:50:00	6:50:00	6:38:22 PM		18	Day	46.4	47.1	43651.58	51303.76	48.0	48.7												46.4	43651.58	46.4	43651.58
	Study #9	6:51:00	6:51:00	6:39:22 PM		18	Day	47.2	47.2	52480.75	52396.21	50.3	50.7												47.2	52480.75	47.2	52480.75
	Study #9	6:52:00	6:52:00	6:40:22 PM		18	Day	48.2	49.0	66069.34	80195.35	54.0	51.6												48.2	66069.34	48.2	66069.34
	Study #9	6:53:00	6:53:00	6:41:22 PM		18	Day	49.4	49.7	87096.36	92527.57	52.2	52.2												49.4	87096.36	49.4	87096.36
	Study #9	6:54:00	6:54:00	6:42:22 PM		18	Day	50.4	50.2	109647.82	105667.70	54.5	53.4												50.4	109647.82	50.4	109647.82
	Study #9	6:55:00	6:55:00	6:43:22 PM		18	Day	47.3	46.5	53703.18	44793.21	49.6	49.6												47.3	53703.18	47.3	53703.18
	Study #9	6:56:00	6:56:00	6:44:22 PM		18	Day	46.0	45.6	39810.72	36070.99	47.9	49.3												46.0	39810.72	46.0	39810.72
	Study #9	6:57:00	6:57:00	6:45:22 PM		18	Day	44.4	42.9	27542.29	19365.61	46.1	44.7		51.5		51.1		54.5		60.0		60.0		44.4	27542.29	44.4	27542.29
		6:58:00	6:58:00	6:46:22 PM		18	Day	43.6		22908.68		45.1													43.6	22908.68	43.6	22908.68
		6:59:00	6:59:00	6:47:22 PM		18	Day	43.9		24547.09		45.7													43.9	24547.09	43.9	24547.09
		7:00:00	7:00:00	6:48:22 PM		18	Day	43.5		22387.21		45.7													43.5	22387.21	43.5	22387.21
		7:01:00	7:01:00	6:49:22 PM		18	Day	47.6		57543.99		51.7													47.6	57543.99	47.6	57543.99
		7:02:00	7:02:00	6:50:22 PM		18	Day	51.7		147910.84		55.9													51.7	147910.84	51.7	147910.84
		7:03:00	7:03:00	6:51:22 PM		18	Day	49.8		95499.26		53.7													49.8	95499.26	49.8	95499.26
		7:04:00	7:04:00	6:52:22 PM		18	Day	47.3		53703.18		50.8													47.3	53703.18	47.3	53703.18
		7:05:00	7:05:00	6:53:22 PM		18	Day	49.2		83176.38		55.6													49.2	83176.38	49.2	83176.38
		7:06:00	7:06:00	6:54:22 PM		18	Day	43.1		20417.38		44.9													43.1	20417.38	43.1	20417.38
		7:07:00	7:07:00	6:55:22 PM		18	Day	43.6		22908.68		49.8													43.6	22908.68	43.6	22908.68
		7:08:00	7:08:00	6:56:22 PM		18	Day	42.8		19054.61		44.1													42.8	19054.61	42.8	19054.61
		7:09:00	7:09:00	6:57:22 PM		18	Day	44.4		27542.29		47.5													44.4	27542.29	44.4	27542.29
		7:10:00	7:10:00	6:58:22 PM		18	Day	55.1		323593.66		61.7													55.1	323593.66	55.1	323593.66
		7:11:00	7:11:00	6:59:22 PM		18	Day	63.3		2137962.09		66.6		52.8		53.6		57.1		61.1		62.9		66.6	63.3	2137962.09	63.3	2137962.09
		7:12:00	7:12:00	7:00:22 PM		19	Day	59.8		954992.59		64.2													59.8	954992.59	64.8	3019951.72
		7:13:00	7:13:00	7:01:22 PM		19	Day	56.9		489778.82		58.4													56.9	489778.82	61.9	1548816.62
		7:14:00	7:14:00	7:02:22 PM		19	Day	56.5		446683.59		57.9													56.5	446683.59	61.5	1412537.54
		7:15:00	7:15:00	7:03:22 PM		19	Day	55.2		331131.12		56.5													55.2	331131.12	60.2	1047128.55
		7:16:00	7:16:00	7:04:22 PM		19	Day	60.1		1023292.99		63.1													60.1	1023292.99	65.1	3235936.57
		7:17:00	7:17:00	7:05:22 PM		19	Day	58.4		691830.97		62.0													58.4	691830.97	63.4	2187761.62
		7:18:00	7:18:00	7:06:22 PM		19	Day	53.7		234422.88		58.3													53.7	234422.88	58.7	741310.24
		7:19:00	7:19:00	7:07:22 PM		19	Day	50.0		100000.00		51.9													50.0	100000.00	55.0	316227.77
		7:20:00	7:20:00	7:08:22 PM		19	Day	44.3		26915.35		48.5													44.3	26915.35	49.3	85113.80
	Study #10	7:21:00	7:21:00	7:09:22 PM		19	Day	42.6	62.5	18197.01	1788162.86	43.8	70.0												42.6	18197.01	47.6	57543.99
	Study #10	7:22:00	7:22:00	7:10:22 PM		19	Day	43.0	55.5	19952.62	356350.22	45.9	59.5												43.0	19952.62	48.0	63095.73
	Study #10	7:23:00	7:23:00	7:11:22 PM		19	Day	43.0	54.6	19952.62	286296.85	44.6	60.4												43.0	19952.62	48.0	63095.73
	Study #10	7:24:00	7:24:00	7:12:22 PM		19	Day	44.2	54.8	26302.68	300137.57	50.5	61.4												44.2	26302.68	49.2	83176.38
	Study #10	7:25:00	7:25:00	7:13:22 PM		19	Day	42.1	52.5	16218.10	179332.08	43.7	58.2												42.1	16218.10	47.1	51286.14
	Study #10	7:26:00	7:26:00	7:14:22 PM		19	Day	43.7	49.2	23442.29	83934.14	50.8	56.3												43.7	23442.29	48.7	74131.02
	Study #10	7:27:00	7:27:00	7:15:22 PM		19	Day	47.3	49.4	53703.18	86665.40	52.1	53.6												47.3	53703.18	52.3	169824.37
	Study #10	7:28:00	7:28:00	7:16:22 PM		19	Day	44.7	45.8	29512.09	38169.01	50.2	47.6												44.7	29512.09	49.7	93325.43
	Study #10	7:29:00	7:29:00	7:17:22 PM		19	Day	43.5	49.0	22387.21	78629.58	47.8	62.2												43.5	22387.21	48.5	70794.58
	Study #10	7:30:00	7:30:00	7:18:22 PM		19	Day	43.0	46.2	19952.62	41646.64	44.6	48.3												43.0	19952.62	48.0	63095.73
	Study #10	7:31:00	7:31:00	7:19:22 PM		19	Day	44.6	51.4	28840.32	137218.60	47.9	55.4												44.6	28840.32	49.6	91201.08
	Study #10	7:32:00	7:32:00	7:20:22 PM		19	Day	52.7	55.6	186208.71	367107.41	58.2	61.8												52.7	186208.71	57.7	588843.66
	Study #10	7:33:00	7:33:00	7:21:22 PM		19	Day	52.2	52.3	165958.69	169301.82	55.9	62.2												52.2	165958.69	57.2	524807.46
	Study #10	7:34:00	7:34:00	7:22:22 PM		19	Day	52.3	53.4	169824.37	219431.16	56.4	60.7												52.3	169824.37	57.3	537031.80
	Study #10	7:35:00	7:35:00	7:23:22 PM		19	Day	46.7	52.2	46773.51	164452.61	48.7	56.6		47.5		48.7		52.1		56.4		58.2		46.7	46773.51	51.7	147910.84
		7:36:00	7:36:00	7:24:22 PM		19	Day	51.3		134896.29		57.8													51.3	134896.29	56.3	426579.52
		7:37:00	7:37:00	7:25:22 PM		19	Day	53.3		213796.21		55.9													53.3	213796.21	58.3	676082.98
		7:38:00	7:38:00	7:26:22 PM		19	Day	53.9		245470.89		59.4													53.9	245470.89	58.9	776247.12
		7:39:00	7:39:00	7:27:22 PM		19	Day	50.0		100000.00		53.6													50.0	100000.00	55.0	316227.77
		7:40:00	7:40:00	7:28:22 PM		19	Day	49.9		97723.72		55.3													49.9	97723.72	54.9	309029.54
		7:41:00	7:41:00	7:29:22 PM		19	Day	45.6		36307.81		49.8													45.6	36307.81	50.6	114815.36
		7:42:00	7:42:00	7:30:22 PM		19	Day	44.1		25703.96		45.1													44.1	25703.96	49.1	81283.05
		7:43:00	7:43:00	7:31:22 PM		19	Day	45.0		31622.78		46.3													45.0	31622.78	50.0	100000.00
		7:44:00	7:44:00	7:32:22 PM		19	Day	49.3		85113.80		51.8													49.3	85113.80	54.3	269153.48
		7:45:00	7:45:00	7:33:22 PM		19	Day	53.9		245470.89		57.7													53.9	245470.89	58.9	776247.12
		7:46:00	7:46:00	7:34:22 PM		19	Day	51.8		151356.12		57.4													51.8	151356.12	56.8	478630.09
		7:47:00	7:47:00	7:35:22 PM		19	Day	50.6		114815.36		51.9													50.6	114815.36	55.6	363078.05
	Study #11	7:48:00	7:48:00	7:36:22 PM		19	Day	52.3	50.5	169824.37	111707.94	55.9	60.2												52.3	169824.37	57.3	537031.80
	Study #11	7:49:00	7:49:00	7:37:22 PM		19	Day	51.6	41.5	144543.98	14157.97	53.9	44.3												51.6	144543.98	56.6	457088.19
	Study #11	7:50:00	7:50:00	7:38:22 PM		19	Day	50.2	40.6	104712.85	11382.31	54.9	42.9												50.2	104712.85	55.2	331131.12
	Study #11	7:51:00	7:51:00	7:39:22 PM		19	Day	45.8	40.4	38018.94	10996.78	47.9	42.4												45.8	38018.94	50.8	120226.44
	Study #11	7:52:00	7:52:00	7:40:22 PM		19	Day	43.7	40.1	23442.29	10156.17	45.0	41.0												43.7	23442.29	48.7	74131.02
	Study #11	7:53:00	7:53:00	7:41:22 PM		19	Day	43.2	39.7	20892.96	9319.40	44.7	40.3												43.2	20892.96	48.2	66069.34
	Study #11	7:54:00	7:54:00	7:42:22 PM		19	Day	42.9	40.2	19498.45	10437.20	44.9	41.6												42.9	19498.45	47.9	61659.50
	Study #11	7:55:00	7:55:00	7:43:22 PM		19	Day	44.3	46.7	26915.35	47052.56	46.8	62.0												44.3	26915.35	49.3	85113.80

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #11	7:56:00	7:56:00	7:44:22 PM		19	Day	45.5	40.6	35481.34	11444.98	46.9	46.1												45.5	35481.34	50.5	112201.85
	Study #11	7:57:00	7:57:00	7:45:22 PM		19	Day	46.8	40.5	47863.01	11347.01	48.4	41.9												46.8	47863.01	51.8	151356.12
	Study #11	7:58:00	7:58:00	7:46:22 PM		19	Day	47.6	40.6	57543.99	11502.10	48.6	43.2												47.6	57543.99	52.6	181970.09
	Study #11	7:59:00	7:59:00	7:47:22 PM		19	Day	47.0	40.3	50118.72	10605.71	48.2	41.4												47.0	50118.72	52.0	158489.32
	Study #11	8:00:00	8:00:00	7:48:22 PM		19	Day	47.1	40.2	51286.14	10397.47	48.6	41.4												47.1	51286.14	52.1	162181.01
	Study #11	8:01:00	8:01:00	7:49:22 PM		19	Day	45.2	40.1	33113.11	10132.96	47.0	41.0												45.2	33113.11	50.2	104712.85
	Study #11	8:02:00	8:02:00	7:50:22 PM		19	Day	42.9	41.0	19498.45	12734.55	44.9	45.0		47.5		47.9		48.6		54.9		55.9		42.9	19498.45	47.9	61659.50
		8:03:00	8:03:00	7:51:22 PM		19	Day	41.8		15135.61		43.6													41.8	15135.61	46.8	47863.01
		8:04:00	8:04:00	7:52:22 PM		19	Day	40.0		10000.00		42.4													40.0	10000.00	45.0	31622.78
		8:05:00	8:05:00	7:53:22 PM		19	Day	40.1		10232.93		41.4													40.1	10232.93	45.1	32359.37
	Study #12	8:06:00	8:06:00	7:54:22 PM		19	Day	40.6	43.1	11481.54	20336.16	41.6	54.9												40.6	11481.54	45.6	36307.81
	Study #12	8:07:00	8:07:00	7:55:22 PM		19	Day	40.8	40.4	12022.64	10871.70	41.9	43.1												40.8	12022.64	45.8	38018.94
	Study #12	8:08:00	8:08:00	7:56:22 PM		19	Day	41.3	42.3	13489.63	17127.52	43.1	44.8												41.3	13489.63	46.3	42657.95
	Study #12	8:09:00	8:09:00	7:57:22 PM		19	Day	44.7	45.5	29512.09	35772.05	47.9	48.6												44.7	29512.09	49.7	93325.43
	Study #12	8:10:00	8:10:00	7:58:22 PM		19	Day	50.5	45.3	112201.85	34199.62	53.4	51.4												50.5	112201.85	55.5	354813.39
	Study #12	8:11:00	8:11:00	7:59:22 PM		19	Day	51.9	43.7	154881.66	23243.77	54.1	54.6	51.2		49.8		55.9		58.4		63.1		64.2	51.9	154881.66	56.9	489778.82
	Study #12	8:12:00	8:12:00	8:00:22 PM		20	Day	54.3	43.5	269153.48	22448.20	56.6	45.5												54.3	269153.48	59.3	851138.04
	Study #12	8:13:00	8:13:00	8:01:22 PM		20	Day	53.5	43.7	223872.11	23330.55	56.1	46.8												53.5	223872.11	58.5	707945.78
	Study #12	8:14:00	8:14:00	8:02:22 PM		20	Day	50.1	42.6	102329.30	18364.15	51.8	44.9												50.1	102329.30	55.1	323593.66
	Study #12	8:15:00	8:15:00	8:03:22 PM		20	Day	49.7	43.7	93325.43	23647.88	52.0	45.8												49.7	93325.43	54.7	295120.92
	Study #12	8:16:00	8:16:00	8:04:22 PM		20	Day	48.2	41.6	66069.34	14289.85	50.8	43.5												48.2	66069.34	53.2	208929.61
	Study #12	8:17:00	8:17:00	8:05:22 PM		20	Day	51.0	40.9	125892.54	12406.89	54.8	42.4												51.0	125892.54	56.0	398107.17
	Study #12	8:18:00	8:18:00	8:06:22 PM		20	Day	61.0	41.2	1258925.41	13155.11	70.6	43.3												61.0	1258925.41	66.0	3981071.71
	Study #12	8:19:00	8:19:00	8:07:22 PM		20	Day	51.0	41.3	125892.54	13553.85	53.0	43.4												51.0	125892.54	56.0	398107.17
	Study #12	8:20:00	8:20:00	8:08:22 PM		20	Day	47.7	44.3	58884.37	26692.29	50.8	48.3		52.5		52.0		54.8		56.6		70.6		47.7	58884.37	52.7	186208.71
		8:21:00	8:21:00	8:09:22 PM		20	Day	50.5		112201.85		53.6													50.5	112201.85	55.5	354813.39
		8:22:00	8:22:00	8:10:22 PM		20	Day	56.3		426579.52		61.4													56.3	426579.52	61.3	1348962.88
		8:23:00	8:23:00	8:11:22 PM		20	Day	51.0		125892.54		53.2													51.0	125892.54	56.0	398107.17
		8:24:00	8:24:00	8:12:22 PM		20	Day	50.5		112201.85		51.6													50.5	112201.85	55.5	354813.39
		8:25:00	8:25:00	8:13:22 PM		20	Day	47.8		60255.96		50.7													47.8	60255.96	52.8	190546.07
		8:26:00	8:26:00	8:14:22 PM		20	Day	46.8		47863.01		52.4													46.8	47863.01	51.8	151356.12
		8:27:00	8:27:00	8:15:22 PM		20	Day	43.9		24547.09		46.8													43.9	24547.09	48.9	77624.71
		8:28:00	8:28:00	8:16:22 PM		20	Day	44.5		28183.83		45.5													44.5	28183.83	49.5	89125.09
		8:29:00	8:29:00	8:17:22 PM		20	Day	45.2		33113.11		50.2													45.2	33113.11	50.2	104712.85
		8:30:00	8:30:00	8:18:22 PM		20	Day	43.5		22387.21		45.0													43.5	22387.21	48.5	70794.58
		8:31:00	8:31:00	8:19:22 PM		20	Day	44.2		26302.68		46.3													44.2	26302.68	49.2	83176.38
		8:32:00	8:32:00	8:20:22 PM		20	Day	48.3		67608.30		51.9													48.3	67608.30	53.3	213796.21
		8:33:00	8:33:00	8:21:22 PM		20	Day	54.4		275422.87		59.7													54.4	275422.87	59.4	870963.59
		8:34:00	8:34:00	8:22:22 PM		20	Day	57.7		588843.66		59.4													57.7	588843.66	62.7	1862087.14
		8:35:00	8:35:00	8:23:22 PM		20	Day	57.8		602559.59		59.9													57.8	602559.59	62.8	1905460.72
		8:36:00	8:36:00	8:24:22 PM		20	Day	51.0		125892.54		54.9													51.0	125892.54	56.0	398107.17
		8:37:00	8:37:00	8:25:22 PM		20	Day	47.3		53703.18		48.4													47.3	53703.18	52.3	169824.37
		8:38:00	8:38:00	8:26:22 PM		20	Day	47.9		61659.50		50.4													47.9	61659.50	52.9	194984.46
		8:39:00	8:39:00	8:27:22 PM		20	Day	45.3		33884.42		46.5													45.3	33884.42	50.3	107151.93
		8:40:00	8:40:00	8:28:22 PM		20	Day	44.5		28183.83		47.9													44.5	28183.83	49.5	89125.09
		8:41:00	8:41:00	8:29:22 PM		20	Day	43.9		24547.09		46.7													43.9	24547.09	48.9	77624.71
		8:42:00	8:42:00	8:30:22 PM		20	Day	56.6		457088.19		62.6													56.6	457088.19	61.6	1445439.77
		8:43:00	8:43:00	8:31:22 PM		20	Day	44.0		25118.86		48.1													44.0	25118.86	49.0	79432.82
		8:44:00	8:44:00	8:32:22 PM		20	Day	43.4		21877.62		45.2													43.4	21877.62	48.4	69183.10
		8:45:00	8:45:00	8:33:22 PM		20	Day	43.8		23988.33		45.4													43.8	23988.33	48.8	75857.76
		8:46:00	8:46:00	8:34:22 PM		20	Day	44.9		30902.95		49.8													44.9	30902.95	49.9	97723.72
		8:47:00	8:47:00	8:35:22 PM		20	Day	44.8		30199.52		47.6													44.8	30199.52	49.8	95499.26
		8:48:00	8:48:00	8:36:22 PM		20	Day	47.0		50118.72		52.1													47.0	50118.72	52.0	158489.32
		8:49:00	8:49:00	8:37:22 PM		20	Day	58.0		630957.34		59.9													58.0	630957.34	63.0	1995262.31
		8:50:00	8:50:00	8:38:22 PM		20	Day	55.4		346736.85		57.2													55.4	346736.85	60.4	1096478.20
		8:51:00	8:51:00	8:39:22 PM		20	Day	54.7		295120.92		56.7													54.7	295120.92	59.7	933254.30
		8:52:00	8:52:00	8:40:22 PM		20	Day	49.1		81283.05		53.2													49.1	81283.05	54.1	257039.58
		8:53:00	8:53:00	8:41:22 PM		20	Day	47.4		54954.09		48.5													47.4	54954.09	52.4	173780.08
		8:54:00	8:54:00	8:42:22 PM		20	Day	45.1		32359.37		47.2													45.1	32359.37	50.1	102329.30
		8:55:00	8:55:00	8:43:22 PM		20	Day	43.0		19952.62		44.3													43.0	19952.62	48.0	63095.73
		8:56:00	8:56:00	8:44:22 PM		20	Day	42.8		19054.61		44.1													42.8	19054.61	47.8	60255.96
		8:57:00	8:57:00	8:45:22 PM		20	Day	42.9		19498.45		44.2													42.9	19498.45	47.9	61659.50
		8:58:00	8:58:00	8:46:22 PM		20	Day	42.5		17782.79		45.0													42.5	17782.79	47.5	56234.13
		8:59:00	8:59:00	8:47:22 PM		20	Day	42.3		16982.44		44.0													42.3	16982.44	47.3	53703.18
		9:00:00	9:00:00	8:48:22 PM		20	Day	42.3		16982.44		44.1													42.3	16982.44	47.3	53703.18
		9:01:00	9:01:00	8:49:22 PM		20	Day	43.7		23442.29		46.5													43.7	23442.29	48.7	74131.02
		9:02:00	9:02:00	8:50:22 PM		20	Day	44.7		29512.09		46.6													44.7	29512.09	49.7	93325.43
		9:03:00	9:03:00	8:51:22 PM		20	Day	43.5		22387.21		45.5													43.5	22387.21	48.5	70794.58
		9:04:00	9:04:00	8:52:22 PM		20	Day	43.3		21379.62		44.7													43.3	21379.62	48.3	67608.30
		9:05:00	9:05:00	8:53:22 PM		20	Day	44.7		29512.09		46.7													44.7	29512.09	49.7	93325.43
		9:06:00	9:06:00	8:54:22 PM		20	Day	45.1		32359.37		47.4													45.1	32359.37	50.1	102329.30
		9:07:00	9:07:00	8:55:22 PM		20	Day	44.3		26915.35		46.4													44.3	26915.35	49.3	85113.80
		9:08:00	9:08:00	8:56:22 PM		20	Day	43.8		23988.33		45.5													43.8	23988.33	48.8	75857.76
		9:09:00	9:09:00	8:57:22 PM		20	Day	43.3		21379.62		44.9													43.3	21379.62	48.3	67608.30
		9:10:00	9:10:00	8:58:22 PM		20	Day	43.1		20417.38		45.0													43.1	20417.38	48.1	64565.42
		9:11:00	9:11:00	8:59:22 PM		20	Day	43.6		22908.68		46.3		51.1		48.5		53.2		59.9		62.6		70.6	43.6	22908.68	48.6	72443.60
		9:12:00	9:12:00	9:00:22 PM		21	Day	52.4		173780.08		56.0													52.4	173780.08	57.4	549540.87
		9:13:00	9:13:00	9:01:22 PM		21	Day	49.7		93325.43		55.1													49.7	93325.43	54.7	295120.92
		9:14:00	9:14:00	9:02:22 PM		21	Day	43.7		23442.29		45.5													43.7	23442.29	48.7	74131.02
		9:15:00	9:15:00	9:03:22 PM		21	Day	44.3		26915.35		46.2													44.3	26915.35	49.3	85113.80

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		9:16:00	9:16:00	9:04:22 PM		21	Day	43.4		21877.62		44.6													43.4	21877.62	48.4	69183.10
		9:17:00	9:17:00	9:05:22 PM		21	Day	43.8		23988.33		45.5													43.8	23988.33	48.8	75857.76
		9:18:00	9:18:00	9:06:22 PM		21	Day	44.2		26302.68		48.1													44.2	26302.68	49.2	83176.38
		9:19:00	9:19:00	9:07:22 PM		21	Day	55.0		316227.77		61.4													55.0	316227.77	60.0	1000000.00
		9:20:00	9:20:00	9:08:22 PM		21	Day	56.7		467735.14		60.6													56.7	467735.14	61.7	1479108.39
		9:21:00	9:21:00	9:09:22 PM		21	Day	53.5		223872.11		56.2													53.5	223872.11	58.5	707945.78
		9:22:00	9:22:00	9:10:22 PM		21	Day	49.8		95499.26		51.3													49.8	95499.26	54.8	301995.17
		9:23:00	9:23:00	9:11:22 PM		21	Day	47.1		51286.14		48.7													47.1	51286.14	52.1	162181.01
		9:24:00	9:24:00	9:12:22 PM		21	Day	46.2		41686.94		48.0													46.2	41686.94	51.2	131825.67
		9:25:00	9:25:00	9:13:22 PM		21	Day	46.1		40738.03		47.9													46.1	40738.03	51.1	128824.96
		9:26:00	9:26:00	9:14:22 PM		21	Day	45.4		34673.69		46.8													45.4	34673.69	50.4	109647.82
		9:27:00	9:27:00	9:15:22 PM		21	Day	44.5		28183.83		45.6													44.5	28183.83	49.5	89125.09
		9:28:00	9:28:00	9:16:22 PM		21	Day	44.8		30199.52		46.8													44.8	30199.52	49.8	95499.26
		9:29:00	9:29:00	9:17:22 PM		21	Day	45.6		36307.81		47.8													45.6	36307.81	50.6	114815.36
		9:30:00	9:30:00	9:18:22 PM		21	Day	45.1		32359.37		47.9													45.1	32359.37	50.1	102329.30
		9:31:00	9:31:00	9:19:22 PM		21	Day	43.0		19952.62		45.3													43.0	19952.62	48.0	63095.73
		9:32:00	9:32:00	9:20:22 PM		21	Day	43.2		20892.96		47.8													43.2	20892.96	48.2	66069.34
		9:33:00	9:33:00	9:21:22 PM		21	Day	45.4		34673.69		51.7													45.4	34673.69	50.4	109647.82
		9:34:00	9:34:00	9:22:22 PM		21	Day	45.8		38018.94		47.8													45.8	38018.94	50.8	120226.44
		9:35:00	9:35:00	9:23:22 PM		21	Day	48.9		77624.71		53.5													48.9	77624.71	53.9	245470.89
		9:36:00	9:36:00	9:24:22 PM		21	Day	57.5		562341.33		60.7													57.5	562341.33	62.5	1778279.41
		9:37:00	9:37:00	9:25:22 PM		21	Day	57.0		501187.23		59.8													57.0	501187.23	62.0	1584893.19
		9:38:00	9:38:00	9:26:22 PM		21	Day	51.3		134896.29		54.3													51.3	134896.29	56.3	426579.52
		9:39:00	9:39:00	9:27:22 PM		21	Day	52.4		173780.08		54.6													52.4	173780.08	57.4	549540.87
		9:40:00	9:40:00	9:28:22 PM		21	Day	59.4		870963.59		62.3													59.4	870963.59	64.4	2754228.70
		9:41:00	9:41:00	9:29:22 PM		21	Day	59.8		954992.59		62.2													59.8	954992.59	64.8	3019951.72
		9:42:00	9:42:00	9:30:22 PM		21	Day	54.3		269153.48		59.4													54.3	269153.48	59.3	851138.04
		9:43:00	9:43:00	9:31:22 PM		21	Day	48.0		63095.73		50.2													48.0	63095.73	53.0	199526.23
		9:44:00	9:44:00	9:32:22 PM		21	Day	45.3		33884.42		46.6													45.3	33884.42	50.3	107151.93
		9:45:00	9:45:00	9:33:22 PM		21	Day	45.0		31622.78		47.7													45.0	31622.78	50.0	100000.00
		9:46:00	9:46:00	9:34:22 PM		21	Day	59.6		912010.84		66.0													59.6	912010.84	64.6	2884031.50
		9:47:00	9:47:00	9:35:22 PM		21	Day	50.6		114815.36		58.8													50.6	114815.36	55.6	363078.05
		9:48:00	9:48:00	9:36:22 PM		21	Day	45.2		33113.11		47.1													45.2	33113.11	50.2	104712.85
		9:49:00	9:49:00	9:37:22 PM		21	Day	46.2		41686.94		47.6													46.2	41686.94	51.2	131825.67
		9:50:00	9:50:00	9:38:22 PM		21	Day	50.9		123026.88		57.4													50.9	123026.88	55.9	389045.14
		9:51:00	9:51:00	9:39:22 PM		21	Day	47.1		51286.14		49.7													47.1	51286.14	52.1	162181.01
		9:52:00	9:52:00	9:40:22 PM		21	Day	48.5		70794.58		51.3													48.5	70794.58	53.5	223872.11
		9:53:00	9:53:00	9:41:22 PM		21	Day	53.7		234422.88		57.9													53.7	234422.88	58.7	741310.24
		9:54:00	9:54:00	9:42:22 PM		21	Day	53.2		208929.61		55.5													53.2	208929.61	58.2	660693.45
		9:55:00	9:55:00	9:43:22 PM		21	Day	52.8		190546.07		55.7													52.8	190546.07	57.8	602559.59
		9:56:00	9:56:00	9:44:22 PM		21	Day	57.1		512861.38		60.7													57.1	512861.38	62.1	1621810.10
		9:57:00	9:57:00	9:45:22 PM		21	Day	56.5		446683.59		61.0													56.5	446683.59	61.5	1412537.54
		9:58:00	9:58:00	9:46:22 PM		21	Day	55.9		389045.14		64.5													55.9	389045.14	60.9	1230268.77
		9:59:00	9:59:00	9:47:22 PM		21	Day	52.4		173780.08		55.0													52.4	173780.08	57.4	549540.87
		10:00:00	10:00:00	9:48:22 PM		21	Day	50.9		123026.88		53.6													50.9	123026.88	55.9	389045.14
		10:01:00	10:01:00	9:49:22 PM		21	Day	51.5		141253.75		55.7													51.5	141253.75	56.5	446683.59
		10:02:00	10:02:00	9:50:22 PM		21	Day	64.0		2511886.43		67.4													64.0	2511886.43	69.0	7943282.35
		10:03:00	10:03:00	9:51:22 PM		21	Day	63.3		2137962.09		69.3													63.3	2137962.09	68.3	6760829.75
		10:04:00	10:04:00	9:52:22 PM		21	Day	58.9		776247.12		62.4													58.9	776247.12	63.9	2454708.92
		10:05:00	10:05:00	9:53:22 PM		21	Day	58.2		660693.45		60.2													58.2	660693.45	63.2	2089296.13
		10:06:00	10:06:00	9:54:22 PM		21	Day	57.8		602559.59		59.5													57.8	602559.59	62.8	1905460.72
		10:07:00	10:07:00	9:55:22 PM		21	Day	64.7		2951209.23		73.4													64.7	2951209.23	69.7	9332543.01
		10:08:00	10:08:00	9:56:22 PM		21	Day	68.0		6309573.44		77.0													68.0	6309573.44	73.0	19952623.15
		10:09:00	10:09:00	9:57:22 PM		21	Day	57.8		602559.59		63.7													57.8	602559.59	62.8	1905460.72
		10:10:00	10:10:00	9:58:22 PM		21	Day	50.4		109647.82		56.4													50.4	109647.82	55.4	346736.85
		10:11:00	10:11:00	9:59:22 PM		21	Day	43.8		23988.33		45.7		56.4		55.0		60.6		66.0		73.4		77.0	43.8	23988.33	48.8	75857.76
		10:12:00	10:12:00	10:00:22 PM		22	Night	47.9		61659.50		50.7													57.9	616595.00	57.9	616595.00
		10:13:00	10:13:00	10:01:22 PM		22	Night	44.2		26302.68		47.0													54.2	263026.80	54.2	263026.80
		10:14:00	10:14:00	10:02:22 PM		22	Night	42.5		17782.79		49.0													52.5	177827.94	52.5	177827.94
		10:15:00	10:15:00	10:03:22 PM		22	Night	40.3		10715.19		41.7													50.3	107151.93	50.3	107151.93
		10:16:00	10:16:00	10:04:22 PM		22	Night	40.3		10715.19		42.6													50.3	107151.93	50.3	107151.93
		10:17:00	10:17:00	10:05:22 PM		22	Night	43.5		22387.21		47.5													53.5	223872.11	53.5	223872.11
		10:18:00	10:18:00	10:06:22 PM		22	Night	41.2		13182.57		45.2													51.2	131825.67	51.2	131825.67
		10:19:00	10:19:00	10:07:22 PM		22	Night	38.5		7079.46		43.0													48.5	70794.58	48.5	70794.58
		10:20:00	10:20:00	10:08:22 PM		22	Night	38.6		7244.36		41.5													48.6	72443.60	48.6	72443.60
		10:21:00	10:21:00	10:09:22 PM		22	Night	39.9		9772.37		44.6													49.9	97723.72	49.9	97723.72
		10:22:00	10:22:00	10:10:22 PM		22	Night	38.3		6760.83		40.8													48.3	67608.30	48.3	67608.30
		10:23:00	10:23:00	10:11:22 PM		22	Night	39.8		9549.93		42.4													49.8	95499.26	49.8	95499.26
		10:24:00	10:24:00	10:12:22 PM		22	Night	41.8		15135.61		43.9													51.8	151356.12	51.8	151356.12
		10:25:00	10:25:00	10:13:22 PM		22	Night	43.7		23442.29		47.0													53.7	234422.88	53.7	234422.88
		10:26:00	10:26:00	10:14:22 PM		22	Night	48.7		74131.02		55.9													58.7	741310.24	58.7	741310.24
		10:27:00	10:27:00	10:15:22 PM		22	Night	58.7		741310.24		62.5													68.7	7413102.41	68.7	7413102.41
		10:28:00	10:28:00	10:16:22 PM		22	Night	59.0		794328.23		63.2													69.0	7943282.35	69.0	7943282.35
		10:29:00	10:29:00	10:17:22 PM		22	Night	57.8		602559.59		62.0													67.8	6025595.86	67.8	6025595.86
		10:30:00	10:30:00	10:18:22 PM		22	Night	50.6		114815.36		55.6													60.6	1148153.62	60.6	1148153.62
		10:31:00	10:31:00	10:19:22 PM		22	Night	43.1		20417.38		46.7													53.1	204173.79	53.1	204173.79
		10:32:00	10:32:00	10:20:22 PM		22	Night	39.2		8317.64		40.8													49.2	83176.38	49.2	83176.38
		10:33:00	10:33:00	10:21:22 PM		22	Night	38.3		6760.83		40.9													48.3	67608.30	48.3	67608.30
		10:34:00	10:34:00	10:22:22 PM		22	Night	53.2		208929.61		59.7													63.2	2089296.13	63.2	2089296.13
		10:35:00	10:35:00	10:23:22 PM		22	Night	51.1		128824.96		58.7													61.1	1288249.55	61.1	1288249.55

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		10:36:00	10:36:00	10:24:22 PM		22	Night	41.7		14791.08		48.0													51.7	147910.84	51.7	147910.84
		10:37:00	10:37:00	10:25:22 PM		22	Night	35.8		3801.89		38.4													45.8	38018.94	45.8	38018.94
		10:38:00	10:38:00	10:26:22 PM		22	Night	37.4		5495.41		41.7													47.4	54954.09	47.4	54954.09
		10:39:00	10:39:00	10:27:22 PM		22	Night	37.0		5011.87		40.9													47.0	50118.72	47.0	50118.72
		10:40:00	10:40:00	10:28:22 PM		22	Night	37.0		5011.87		39.4													47.0	50118.72	47.0	50118.72
		10:41:00	10:41:00	10:29:22 PM		22	Night	38.8		7585.78		46.3													48.8	75857.76	48.8	75857.76
		10:42:00	10:42:00	10:30:22 PM		22	Night	48.2		66069.34		52.5													58.2	660693.45	58.2	660693.45
		10:43:00	10:43:00	10:31:22 PM		22	Night	41.4		13803.84		43.8													51.4	138038.43	51.4	138038.43
		10:44:00	10:44:00	10:32:22 PM		22	Night	44.7		29512.09		51.6													54.7	295120.92	54.7	295120.92
		10:45:00	10:45:00	10:33:22 PM		22	Night	45.9		38904.51		49.1													55.9	389045.14	55.9	389045.14
		10:46:00	10:46:00	10:34:22 PM		22	Night	50.4		109647.82		54.6													60.4	1096478.20	60.4	1096478.20
		10:47:00	10:47:00	10:35:22 PM		22	Night	56.8		478630.09		59.0													66.8	4786300.92	66.8	4786300.92
		10:48:00	10:48:00	10:36:22 PM		22	Night	54.4		275422.87		58.5													64.4	2754228.70	64.4	2754228.70
		10:49:00	10:49:00	10:37:22 PM		22	Night	52.4		173780.08		58.3													62.4	1737800.83	62.4	1737800.83
		10:50:00	10:50:00	10:38:22 PM		22	Night	46.9		48977.88		49.6													56.9	489778.82	56.9	489778.82
		10:51:00	10:51:00	10:39:22 PM		22	Night	45.6		36307.81		49.1													55.6	363078.05	55.6	363078.05
		10:52:00	10:52:00	10:40:22 PM		22	Night	46.6		45708.82		49.4													56.6	457088.19	56.6	457088.19
		10:53:00	10:53:00	10:41:22 PM		22	Night	55.7		371535.23		59.7													65.7	3715352.29	65.7	3715352.29
		10:54:00	10:54:00	10:42:22 PM		22	Night	56.0		398107.17		57.4													66.0	3981071.71	66.0	3981071.71
		10:55:00	10:55:00	10:43:22 PM		22	Night	65.2		3311311.21		76.9													75.2	33113112.15	75.2	33113112.15
		10:56:00	10:56:00	10:44:22 PM		22	Night	58.9		776247.12		70.4													68.9	7762471.17	68.9	7762471.17
		10:57:00	10:57:00	10:45:22 PM		22	Night	48.8		75857.76		61.9													58.8	758577.58	58.8	758577.58
		10:58:00	10:58:00	10:46:22 PM		22	Night	54.5		281838.29		57.8													64.5	2818382.93	64.5	2818382.93
		10:59:00	10:59:00	10:47:22 PM		22	Night	53.1		204173.79		56.0													63.1	2041737.94	63.1	2041737.94
		11:00:00	11:00:00	10:48:22 PM		22	Night	48.6		72443.60		51.5													58.6	724435.96	58.6	724435.96
		11:01:00	11:01:00	10:49:22 PM		22	Night	47.2		52480.75		49.3													57.2	524807.46	57.2	524807.46
		11:02:00	11:02:00	10:50:22 PM		22	Night	43.4		21877.62		45.3													53.4	218776.16	53.4	218776.16
		11:03:00	11:03:00	10:51:22 PM		22	Night	41.4		13803.84		42.9													51.4	138038.43	51.4	138038.43
		11:04:00	11:04:00	10:52:22 PM		22	Night	39.5		8912.51		40.9													49.5	89125.09	49.5	89125.09
		11:05:00	11:05:00	10:53:22 PM		22	Night	39.1		8128.31		40.5													49.1	81283.05	49.1	81283.05
		11:06:00	11:06:00	10:54:22 PM		22	Night	39.9		9772.37		43.9													49.9	97723.72	49.9	97723.72
		11:07:00	11:07:00	10:55:22 PM		22	Night	41.3		13489.63		43.0													51.3	134896.29	51.3	134896.29
		11:08:00	11:08:00	10:56:22 PM		22	Night	39.7		9332.54		40.5													49.7	93325.43	49.7	93325.43
		11:09:00	11:09:00	10:57:22 PM		22	Night	40.5		11220.18		42.2													50.5	112201.85	50.5	112201.85
		11:10:00	11:10:00	10:58:22 PM		22	Night	41.4		13803.84		42.9													51.4	138038.43	51.4	138038.43
		11:11:00	11:11:00	10:59:22 PM		22	Night	44.3		26915.35		47.5			52.2		47.5		56.0		62.0		70.4		76.9	54.3	269153.48	54.3	269153.48
		11:12:00	11:12:00	11:00:22 PM		23	Night	44.0		25118.86		47.3													54.0	251188.64	54.0	251188.64
		11:13:00	11:13:00	11:01:22 PM		23	Night	50.5		112201.85		54.4													60.5	1122018.45	60.5	1122018.45
		11:14:00	11:14:00	11:02:22 PM		23	Night	50.0		100000.00		51.8													60.0	1000000.00	60.0	1000000.00
		11:15:00	11:15:00	11:03:22 PM		23	Night	51.4		138038.43		54.9													61.4	1380384.26	61.4	1380384.26
		11:16:00	11:16:00	11:04:22 PM		23	Night	48.8		75857.76		53.4													58.8	758577.58	58.8	758577.58
		11:17:00	11:17:00	11:05:22 PM		23	Night	44.2		26302.68		45.4													54.2	263026.80	54.2	263026.80
		11:18:00	11:18:00	11:06:22 PM		23	Night	47.4		54954.09		50.9													57.4	549540.87	57.4	549540.87
		11:19:00	11:19:00	11:07:22 PM		23	Night	50.1		102329.30		53.4													60.1	1023292.99	60.1	1023292.99
		11:20:00	11:20:00	11:08:22 PM		23	Night	49.3		85113.80		52.8													59.3	851138.04	59.3	851138.04
		11:21:00	11:21:00	11:09:22 PM		23	Night	50.4		109647.82		57.1													60.4	1096478.20	60.4	1096478.20
		11:22:00	11:22:00	11:10:22 PM		23	Night	47.4		54954.09		50.4													57.4	549540.87	57.4	549540.87
		11:23:00	11:23:00	11:11:22 PM		23	Night	53.9		245470.89		59.6													63.9	2454708.92	63.9	2454708.92
		11:24:00	11:24:00	11:12:22 PM		23	Night	59.1		812830.52		61.3													69.1	8128305.16	69.1	8128305.16
		11:25:00	11:25:00	11:13:22 PM		23	Night	55.3		338844.16		58.1													65.3	3388441.56	65.3	3388441.56
		11:26:00	11:26:00	11:14:22 PM		23	Night	50.5		112201.85		52.0													60.5	1122018.45	60.5	1122018.45
		11:27:00	11:27:00	11:15:22 PM		23	Night	53.9		245470.89		58.0													63.9	2454708.92	63.9	2454708.92
		11:28:00	11:28:00	11:16:22 PM		23	Night	57.4		549540.87		62.4													67.4	5495408.74	67.4	5495408.74
		11:29:00	11:29:00	11:17:22 PM		23	Night	54.4		275422.87		58.2													64.4	2754228.70	64.4	2754228.70
		11:30:00	11:30:00	11:18:22 PM		23	Night	48.2		66069.34		50.5													58.2	660693.45	58.2	660693.45
		11:31:00	11:31:00	11:19:22 PM		23	Night	44.9		30902.95		46.5													54.9	309029.54	54.9	309029.54
		11:32:00	11:32:00	11:20:22 PM		23	Night	44.1		25703.96		45.1													54.1	257039.58	54.1	257039.58
		11:33:00	11:33:00	11:21:22 PM		23	Night	48.9		77624.71		55.1													58.9	776247.12	58.9	776247.12
		11:34:00	11:34:00	11:22:22 PM		23	Night	45.1		32359.37		47.6													55.1	323593.66	55.1	323593.66
		11:35:00	11:35:00	11:23:22 PM		23	Night	44.1		25703.96		46.6													54.1	257039.58	54.1	257039.58
		11:36:00	11:36:00	11:24:22 PM		23	Night	44.0		25118.86		45.7													54.0	251188.64	54.0	251188.64
		11:37:00	11:37:00	11:25:22 PM		23	Night	44.3		26915.35		47.2													54.3	269153.48	54.3	269153.48
		11:38:00	11:38:00	11:26:22 PM		23	Night	44.9		30902.95		51.2													54.9	309029.54	54.9	309029.54
		11:39:00	11:39:00	11:27:22 PM		23	Night	43.1		20417.38		45.0													53.1	204173.79	53.1	204173.79
		11:40:00	11:40:00	11:28:22 PM		23	Night	43.0		19952.62		45.0													53.0	199526.23	53.0	199526.23
		11:41:00	11:41:00	11:29:22 PM		23	Night	44.4		27542.29		46.6													54.4	275422.87	54.4	275422.87
		11:42:00	11:42:00	11:30:22 PM		23	Night	43.9		24547.09		46.2													53.9	245470.89	53.9	245470.89
		11:43:00	11:43:00	11:31:22 PM		23	Night	58.5		707945.78		72.0													68.5	7079457.84	68.5	7079457.84
		11:44:00	11:44:00	11:32:22 PM		23	Night	57.0		501187.23		70.6													67.0	5011872.34	67.0	5011872.34
		11:45:00	11:45:00	11:33:22 PM		23	Night	43.3		21379.62		45.9													53.3	213796.21	53.3	213796.21
		11:46:00	11:46:00	11:34:22 PM		23	Night	45.4		34673.69		47.5													55.4	346736.85	55.4	346736.85
		11:47:00	11:47:00	11:35:22 PM		23	Night	44.9		30902.95		47.4													54.9	309029.54	54.9	309029.54
		11:48:00	11:48:00	11:36:22 PM		23	Night	43.9		24547.09		45.1													53.9	245470.89	53.9	245470.89
		11:49:00	11:49:00	11:37:22 PM		23	Night	45.6		36307.81		47.1													55.6	363078.05	55.6	363078.05
		11:50:00	11:50:00	11:38:22 PM		23	Night	44.9		30902.95		46.9													54.9	309029.54	54.9	309029.54
		11:51:00	11:51:00	11:39:22 PM		23	Night	43.4		21877.62		45.0													53.4	218776.16	53.4	218776.16
		11:52:00	11:52:00	11:40:22 PM		23	Night	44.1		25703.96		45.7													54.1	257039.58	54.1	257039.58
		11:53:00	11:53:00	11:41:22 PM		23	Night	44.3		26915.35		46.4													54.3	269153.48	54.3	269153.48
		11:54:00	11:54:00	11:42:22 PM		23	Night	45.6		36307.81		47.6													55.6	363078.05	55.6	363078.05
		11:55:00	11:55:00	11:43:22 PM		23	Night	47.8		60255.96		51.5													57.8	602559.59	57.8	602559.59

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		11:56:00	11:56:00	11:44:22 PM		23	Night	49.5		89125.09		52.1													59.5	891250.94	59.5	891250.94
		11:57:00	11:57:00	11:45:22 PM		23	Night	47.5		56234.13		48.7													57.5	562341.33	57.5	562341.33
		11:58:00	11:58:00	11:46:22 PM		23	Night	49.4		87096.36		51.8													59.4	870963.59	59.4	870963.59
		11:59:00	11:59:00	11:47:22 PM		23	Night	50.6		114815.36		54.4													60.6	1148153.62	60.6	1148153.62
		12:00:00	12:00:00	11:48:22 PM		23	Night	48.6		72443.60		49.8													58.6	724435.96	58.6	724435.96
		12:01:00	12:01:00	11:49:22 PM		23	Night	48.9		77624.71		50.5													58.9	776247.12	58.9	776247.12
		12:02:00	12:02:00	11:50:22 PM		23	Night	51.9		154881.66		54.3													61.9	1548816.62	61.9	1548816.62
		12:03:00	12:03:00	11:51:22 PM		23	Night	50.3		107151.93		51.5													60.3	1071519.31	60.3	1071519.31
		12:04:00	12:04:00	11:52:22 PM		23	Night	50.7		117489.76		51.9													60.7	1174897.55	60.7	1174897.55
		12:05:00	12:05:00	11:53:22 PM		23	Night	54.3		269153.48		60.0													64.3	2691534.80	64.3	2691534.80
		12:06:00	12:06:00	11:54:22 PM		23	Night	59.2		831763.77		62.0													69.2	8317637.71	69.2	8317637.71
		12:07:00	12:07:00	11:55:22 PM		23	Night	60.1		1023292.99		61.4													70.1	10232929.92	70.1	10232929.92
		12:08:00	12:08:00	11:56:22 PM		23	Night	59.3		851138.04		60.5													69.3	8511380.38	69.3	8511380.38
		12:09:00	12:09:00	11:57:22 PM		23	Night	52.1		162181.01		56.0													62.1	1621810.10	62.1	1621810.10
		12:10:00	12:10:00	11:58:22 PM		23	Night	52.7		186208.71		59.4													62.7	1862087.14	62.7	1862087.14
		12:11:00	12:11:00	11:59:22 PM		23	Night	48.7		74131.02		54.6		52.1		51.5		56.0		61.4		70.6		72.0	58.7	741310.24	58.7	741310.24
		12:12:00	12:12:00	12:00:22 AM		0	Night	46.6		45708.82		50.5													56.6	457088.19	56.6	457088.19
		12:13:00	12:13:00	12:01:22 AM		0	Night	43.6		22908.68		45.5													53.6	229086.77	53.6	229086.77
		12:14:00	12:14:00	12:02:22 AM		0	Night	43.7		23442.29		44.6													53.7	234422.88	53.7	234422.88
		12:15:00	12:15:00	12:03:22 AM		0	Night	43.0		19952.62		44.8													53.0	199526.23	53.0	199526.23
		12:16:00	12:16:00	12:04:22 AM		0	Night	49.7		93325.43		55.5													59.7	933254.30	59.7	933254.30
		12:17:00	12:17:00	12:05:22 AM		0	Night	46.5		44668.36		55.2													56.5	446683.59	56.5	446683.59
		12:18:00	12:18:00	12:06:22 AM		0	Night	42.2		16595.87		45.0													52.2	165958.69	52.2	165958.69
		12:19:00	12:19:00	12:07:22 AM		0	Night	43.0		19952.62		46.0													53.0	199526.23	53.0	199526.23
		12:20:00	12:20:00	12:08:22 AM		0	Night	42.8		19054.61		44.1													52.8	190546.07	52.8	190546.07
		12:21:00	12:21:00	12:09:22 AM		0	Night	43.6		22908.68		46.1													53.6	229086.77	53.6	229086.77
		12:22:00	12:22:00	12:10:22 AM		0	Night	42.6		18197.01		44.3													52.6	181970.09	52.6	181970.09
		12:23:00	12:23:00	12:11:22 AM		0	Night	42.8		19054.61		44.6													52.8	190546.07	52.8	190546.07
		12:24:00	12:24:00	12:12:22 AM		0	Night	47.6		57543.99		53.2													57.6	575439.94	57.6	575439.94
		12:25:00	12:25:00	12:13:22 AM		0	Night	55.3		338844.16		57.2													65.3	3388441.56	65.3	3388441.56
		12:26:00	12:26:00	12:14:22 AM		0	Night	54.5		281838.29		58.4													64.5	2818382.93	64.5	2818382.93
		12:27:00	12:27:00	12:15:22 AM		0	Night	53.7		234422.88		56.1													63.7	2344228.82	63.7	2344228.82
		12:28:00	12:28:00	12:16:22 AM		0	Night	53.4		218776.16		55.3													63.4	2187761.62	63.4	2187761.62
		12:29:00	12:29:00	12:17:22 AM		0	Night	52.3		169824.37		55.0													62.3	1698243.65	62.3	1698243.65
		12:30:00	12:30:00	12:18:22 AM		0	Night	46.0		39810.72		52.5													56.0	398107.17	56.0	398107.17
		12:31:00	12:31:00	12:19:22 AM		0	Night	42.8		19054.61		46.0													52.8	190546.07	52.8	190546.07
		12:32:00	12:32:00	12:20:22 AM		0	Night	41.9		15488.17		44.4													51.9	154881.66	51.9	154881.66
		12:33:00	12:33:00	12:21:22 AM		0	Night	40.5		11220.18		42.9													50.5	112201.85	50.5	112201.85
		12:34:00	12:34:00	12:22:22 AM		0	Night	40.3		10715.19		41.3													50.3	107151.93	50.3	107151.93
		12:35:00	12:35:00	12:23:22 AM		0	Night	42.0		15848.93		44.5													52.0	158489.32	52.0	158489.32
		12:36:00	12:36:00	12:24:22 AM		0	Night	42.0		15848.93		45.4													52.0	158489.32	52.0	158489.32
		12:37:00	12:37:00	12:25:22 AM		0	Night	40.2		10471.29		42.4													50.2	104712.85	50.2	104712.85
		12:38:00	12:38:00	12:26:22 AM		0	Night	42.0		15848.93		46.5													52.0	158489.32	52.0	158489.32
		12:39:00	12:39:00	12:27:22 AM		0	Night	42.9		19498.45		44.6													52.9	194984.46	52.9	194984.46
		12:40:00	12:40:00	12:28:22 AM		0	Night	49.7		93325.43		55.6													59.7	933254.30	59.7	933254.30
		12:41:00	12:41:00	12:29:22 AM		0	Night	52.7		186208.71		55.5													62.7	1862087.14	62.7	1862087.14
		12:42:00	12:42:00	12:30:22 AM		0	Night	48.8		75857.76		50.6													58.8	758577.58	58.8	758577.58
		12:43:00	12:43:00	12:31:22 AM		0	Night	46.1		40738.03		47.2													56.1	407380.28	56.1	407380.28
		12:44:00	12:44:00	12:32:22 AM		0	Night	45.8		38018.94		47.7													55.8	380189.40	55.8	380189.40
		12:45:00	12:45:00	12:33:22 AM		0	Night	45.4		34673.69		47.1													55.4	346736.85	55.4	346736.85
		12:46:00	12:46:00	12:34:22 AM		0	Night	44.9		30902.95		48.1													54.9	309029.54	54.9	309029.54
		12:47:00	12:47:00	12:35:22 AM		0	Night	42.5		17782.79		45.2													52.5	177827.94	52.5	177827.94
		12:48:00	12:48:00	12:36:22 AM		0	Night	40.5		11220.18		42.2													50.5	112201.85	50.5	112201.85
		12:49:00	12:49:00	12:37:22 AM		0	Night	41.1		12882.50		42.3													51.1	128824.96	51.1	128824.96
		12:50:00	12:50:00	12:38:22 AM		0	Night	41.3		13489.63		42.8													51.3	134896.29	51.3	134896.29
		12:51:00	12:51:00	12:39:22 AM		0	Night	40.7		11748.98		42.1													50.7	117489.76	50.7	117489.76
		12:52:00	12:52:00	12:40:22 AM		0	Night	42.3		16982.44		43.7													52.3	169824.37	52.3	169824.37
		12:53:00	12:53:00	12:41:22 AM		0	Night	44.0		25118.86		46.8													54.0	251188.64	54.0	251188.64
		12:54:00	12:54:00	12:42:22 AM		0	Night	52.5		177827.94		57.6													62.5	1778279.41	62.5	1778279.41
		12:55:00	12:55:00	12:43:22 AM		0	Night	50.6		114815.36		53.6													60.6	1148153.62	60.6	1148153.62
		12:56:00	12:56:00	12:44:22 AM		0	Night	47.7		58884.37		49.6													57.7	588843.66	57.7	588843.66
		12:57:00	12:57:00	12:45:22 AM		0	Night	47.7		58884.37		48.8													57.7	588843.66	57.7	588843.66
		12:58:00	12:58:00	12:46:22 AM		0	Night	44.7		29512.09		47.2													54.7	295120.92	54.7	295120.92
		12:59:00	12:59:00	12:47:22 AM		0	Night	43.4		21877.62		44.8													53.4	218776.16	53.4	218776.16
		13:00:00	13:00:00	12:48:22 AM		0	Night	42.7		18620.87		43.9													52.7	186208.71	52.7	186208.71
		13:01:00	13:01:00	12:49:22 AM		0	Night	41.1		12882.50		42.4													51.1	128824.96	51.1	128824.96
		13:02:00	13:02:00	12:50:22 AM		0	Night	40.9		12302.69		42.5													50.9	123026.88	50.9	123026.88
		13:03:00	13:03:00	12:51:22 AM		0	Night	41.3		13489.63		43.3													51.3	134896.29	51.3	134896.29
		13:04:00	13:04:00	12:52:22 AM		0	Night	40.3		10715.19		41.7													50.3	107151.93	50.3	107151.93
		13:05:00	13:05:00	12:53:22 AM		0	Night	40.2		10471.29		41.8													50.2	104712.85	50.2	104712.85
		13:06:00	13:06:00	12:54:22 AM		0	Night	41.2		13182.57		42.3													51.2	131825.67	51.2	131825.67
		13:07:00	13:07:00	12:55:22 AM		0	Night	42.6		18197.01		44.0													52.6	181970.09	52.6	181970.09
		13:08:00	13:08:00	12:56:22 AM		0	Night	42.3		16982.44		43.4													52.3	169824.37	52.3	169824.37
		13:09:00	13:09:00	12:57:22 AM		0	Night	43.1		20417.38		44.4													53.1	204173.79	53.1	204173.79
		13:10:00	13:10:00	12:58:22 AM		0	Night	42.7		18620.87		44.2													52.7	186208.71	52.7	186208.71
		13:11:00	13:11:00	12:59:22 AM		0	Night	42.3		16982.44		44.3		47.1		45.2		50.5		55.6		57.6		58.4	52.3	169824.37	52.3	169824.37
		13:12:00	13:12:00	1:00:22 AM		1	Night	44.1		25703.96		46.3													54.1	257039.58	54.1	257039.58
		13:13:00	13:13:00	1:01:22 AM		1	Night	41.8		15135.61		43.4													51.8	151356.12	51.8	151356.12
		13:14:00	13:14:00	1:02:22 AM		1	Night	42.4		17378.01		44.6													52.4	173780.08	52.4	173780.08
		13:15:00	13:15:00	1:03:22 AM		1	Night	44.0		25118.86		45.7													54.0	251188.64	54.0	251188.64

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		13:16:00	13:16:00	1:04:22 AM			1 Night	46.9		48977.88		51.3													56.9	489778.82	56.9	489778.82
		13:17:00	13:17:00	1:05:22 AM			1 Night	50.5		112201.85		53.4													60.5	1122018.45	60.5	1122018.45
		13:18:00	13:18:00	1:06:22 AM			1 Night	55.1		323593.66		57.7													65.1	3235936.57	65.1	3235936.57
		13:19:00	13:19:00	1:07:22 AM			1 Night	57.3		537031.80		59.8													67.3	5370317.96	67.3	5370317.96
		13:20:00	13:20:00	1:08:22 AM			1 Night	46.8		47863.01		47.9													56.8	478630.09	56.8	478630.09
		13:21:00	13:21:00	1:09:22 AM			1 Night	47.4		54954.09		51.2													57.4	549540.87	57.4	549540.87
		13:22:00	13:22:00	1:10:22 AM			1 Night	45.6		36307.81		47.5													55.6	363078.05	55.6	363078.05
		13:23:00	13:23:00	1:11:22 AM			1 Night	48.2		66069.34		50.3													58.2	660693.45	58.2	660693.45
		13:24:00	13:24:00	1:12:22 AM			1 Night	50.8		120226.44		53.5													60.8	1202264.43	60.8	1202264.43
		13:25:00	13:25:00	1:13:22 AM			1 Night	57.8		602559.59		61.1													67.8	6025595.86	67.8	6025595.86
		13:26:00	13:26:00	1:14:22 AM			1 Night	52.7		186208.71		54.9													62.7	1862087.14	62.7	1862087.14
		13:27:00	13:27:00	1:15:22 AM			1 Night	61.5		1412537.54		65.5													71.5	14125375.45	71.5	14125375.45
		13:28:00	13:28:00	1:16:22 AM			1 Night	61.9		1548816.62		65.8													71.9	15488166.19	71.9	15488166.19
		13:29:00	13:29:00	1:17:22 AM			1 Night	57.1		512861.38		58.2													67.1	5128613.84	67.1	5128613.84
		13:30:00	13:30:00	1:18:22 AM			1 Night	57.6		575439.94		58.3													67.6	5754399.37	67.6	5754399.37
		13:31:00	13:31:00	1:19:22 AM			1 Night	59.8		954992.59		62.9													69.8	9549925.86	69.8	9549925.86
		13:32:00	13:32:00	1:20:22 AM			1 Night	57.4		549540.87		62.1													67.4	5495408.74	67.4	5495408.74
		13:33:00	13:33:00	1:21:22 AM			1 Night	46.0		39810.72		54.7													56.0	398107.17	56.0	398107.17
		13:34:00	13:34:00	1:22:22 AM			1 Night	44.5		28183.83		46.6													54.5	281838.29	54.5	281838.29
		13:35:00	13:35:00	1:23:22 AM			1 Night	45.9		38904.51		48.3													55.9	389045.14	55.9	389045.14
		13:36:00	13:36:00	1:24:22 AM			1 Night	48.4		69183.10		49.8													58.4	691830.97	58.4	691830.97
		13:37:00	13:37:00	1:25:22 AM			1 Night	51.3		134896.29		57.1													61.3	1348962.88	61.3	1348962.88
		13:38:00	13:38:00	1:26:22 AM			1 Night	56.7		467735.14		60.1													66.7	4677351.41	66.7	4677351.41
		13:39:00	13:39:00	1:27:22 AM			1 Night	60.1		1023292.99		61.9													70.1	10232929.92	70.1	10232929.92
		13:40:00	13:40:00	1:28:22 AM			1 Night	58.4		691830.97		62.4													68.4	6918309.71	68.4	6918309.71
		13:41:00	13:41:00	1:29:22 AM			1 Night	54.6		288403.15		61.0													64.6	2884031.50	64.6	2884031.50
		13:42:00	13:42:00	1:30:22 AM			1 Night	55.1		323593.66		61.2													65.1	3235936.57	65.1	3235936.57
		13:43:00	13:43:00	1:31:22 AM			1 Night	53.4		218776.16		54.8													63.4	2187761.62	63.4	2187761.62
		13:44:00	13:44:00	1:32:22 AM			1 Night	53.7		234422.88		64.8													63.7	2344228.82	63.7	2344228.82
		13:45:00	13:45:00	1:33:22 AM			1 Night	50.6		114815.36		52.3													60.6	1148153.62	60.6	1148153.62
		13:46:00	13:46:00	1:34:22 AM			1 Night	55.9		389045.14		69.3													65.9	3890451.45	65.9	3890451.45
		13:47:00	13:47:00	1:35:22 AM			1 Night	47.8		60255.96		49.2													57.8	602559.59	57.8	602559.59
		13:48:00	13:48:00	1:36:22 AM			1 Night	53.4		218776.16		67.1													63.4	2187761.62	63.4	2187761.62
		13:49:00	13:49:00	1:37:22 AM			1 Night	49.6		91201.08		60.7													59.6	912010.84	59.6	912010.84
		13:50:00	13:50:00	1:38:22 AM			1 Night	52.9		194984.46		65.3													62.9	1949844.60	62.9	1949844.60
		13:51:00	13:51:00	1:39:22 AM			1 Night	50.8		120226.44		62.9													60.8	1202264.43	60.8	1202264.43
		13:52:00	13:52:00	1:40:22 AM			1 Night	48.8		75857.76		51.0													58.8	758577.58	58.8	758577.58
		13:53:00	13:53:00	1:41:22 AM			1 Night	54.3		269153.48		68.1													64.3	2691534.80	64.3	2691534.80
		13:54:00	13:54:00	1:42:22 AM			1 Night	49.4		87096.36		54.1													59.4	870963.59	59.4	870963.59
		13:55:00	13:55:00	1:43:22 AM			1 Night	56.3		426579.52		66.9													66.3	4265795.19	66.3	4265795.19
		13:56:00	13:56:00	1:44:22 AM			1 Night	55.0		316227.77		60.3													65.0	3162277.66	65.0	3162277.66
		13:57:00	13:57:00	1:45:22 AM			1 Night	58.6		724435.96		67.9													68.6	7244359.60	68.6	7244359.60
		13:58:00	13:58:00	1:46:22 AM			1 Night	59.2		831763.77		63.1													69.2	8317637.71	69.2	8317637.71
		13:59:00	13:59:00	1:47:22 AM			1 Night	61.4		1380384.26		64.8													71.4	13803842.65	71.4	13803842.65
		14:00:00	14:00:00	1:48:22 AM			1 Night	60.5		1122018.45		64.6													70.5	11220184.54	70.5	11220184.54
		14:01:00	14:01:00	1:49:22 AM			1 Night	55.0		316227.77		58.1													65.0	3162277.66	65.0	3162277.66
		14:02:00	14:02:00	1:50:22 AM			1 Night	54.0		251188.64		60.9													64.0	2511886.43	64.0	2511886.43
		14:03:00	14:03:00	1:51:22 AM			1 Night	55.5		354813.39		60.3													65.5	3548133.89	65.5	3548133.89
		14:04:00	14:04:00	1:52:22 AM			1 Night	54.6		288403.15		61.3													64.6	2884031.50	64.6	2884031.50
		14:05:00	14:05:00	1:53:22 AM			1 Night	59.6		912010.84		63.2													69.6	9120108.39	69.6	9120108.39
		14:06:00	14:06:00	1:54:22 AM			1 Night	57.4		549540.87		65.5													67.4	5495408.74	67.4	5495408.74
		14:07:00	14:07:00	1:55:22 AM			1 Night	53.3		213796.21		63.4													63.3	2137962.09	63.3	2137962.09
		14:08:00	14:08:00	1:56:22 AM			1 Night	50.2		104712.85		53.6													60.2	1047128.55	60.2	1047128.55
		14:09:00	14:09:00	1:57:22 AM			1 Night	51.5		141253.75		58.3													61.5	1412537.54	61.5	1412537.54
		14:10:00	14:10:00	1:58:22 AM			1 Night	50.7		117489.76		56.0													60.7	1174897.55	60.7	1174897.55
		14:11:00	14:11:00	1:59:22 AM			1 Night	52.8		190546.07		60.3			55.5		60.1		63.1		66.9		68.1		69.3	62.8	1905460.72	62.8	1905460.72
		14:12:00	14:12:00	2:00:22 AM			2 Night	54.4		275422.87		58.8													64.4	2754228.70	64.4	2754228.70
		14:13:00	14:13:00	2:01:22 AM			2 Night	61.2		1318256.74		67.1													71.2	13182567.39	71.2	13182567.39
		14:14:00	14:14:00	2:02:22 AM			2 Night	60.4		1096478.20		63.2													70.4	10964781.96	70.4	10964781.96
		14:15:00	14:15:00	2:03:22 AM			2 Night	55.2		331131.12		59.2													65.2	3311311.21	65.2	3311311.21
		14:16:00	14:16:00	2:04:22 AM			2 Night	49.6		91201.08		55.2													59.6	912010.84	59.6	912010.84
		14:17:00	14:17:00	2:05:22 AM			2 Night	45.6		36307.81		53.3													55.6	363078.05	55.6	363078.05
		14:18:00	14:18:00	2:06:22 AM			2 Night	42.4		17378.01		44.7													52.4	173780.08	52.4	173780.08
		14:19:00	14:19:00	2:07:22 AM			2 Night	41.7		14791.08		43.7													51.7	147910.84	51.7	147910.84
		14:20:00	14:20:00	2:08:22 AM			2 Night	41.8		15135.61		44.7													51.8	151356.12	51.8	151356.12
		14:21:00	14:21:00	2:09:22 AM			2 Night	41.9		15488.17		50.2													51.9	154881.66	51.9	154881.66
		14:22:00	14:22:00	2:10:22 AM			2 Night	43.3		21379.62		48.1													53.3	213796.21	53.3	213796.21
		14:23:00	14:23:00	2:11:22 AM			2 Night	42.9		19498.45		45.5													52.9	194984.46	52.9	194984.46
		14:24:00	14:24:00	2:12:22 AM			2 Night	42.9		19498.45		44.9													52.9	194984.46	52.9	194984.46
		14:25:00	14:25:00	2:13:22 AM			2 Night	43.6		22908.68		46.0													53.6	229086.77	53.6	229086.77
		14:26:00	14:26:00	2:14:22 AM			2 Night	42.7		18620.87		44.5													52.7	186208.71	52.7	186208.71
		14:27:00	14:27:00	2:15:22 AM			2 Night	42.3		16982.44		43.9													52.3	169824.37	52.3	169824.37
		14:28:00	14:28:00	2:16:22 AM			2 Night	43.4		21877.62		45.3													53.4	218776.16	53.4	218776.16
		14:29:00	14:29:00	2:17:22 AM			2 Night	43.6		22908.68		45.9													53.6	229086.77	53.6	229086.77
		14:30:00	14:30:00	2:18:22 AM			2 Night	42.3		16982.44		44.4													52.3	169824.37	52.3	169824.37
		14:31:00	14:31:00	2:19:22 AM			2 Night	43.0		19952.62		47.2													53.0	199526.23	53.0	199526.23
		14:32:00	14:32:00	2:20:22 AM			2 Night	43.7		23442.29		45.4													53.7	234422.88	53.7	234422.88
		14:33:00	14:33:00	2:21:22 AM			2 Night	44.1		25703.96		45.9													54.1	257039.58	54.1	257039.58
		14:34:00	14:34:00	2:22:22 AM			2 Night	45.3		33884.42		47.3													55.3	338844.16	55.3	338844.16
		14:35:00	14:35:00	2:23:22 AM			2 Night	48.9		77624.71		52.3													58.9	776247.12	58.9	776247.12

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		14:36:00	14:36:00	2:24:22 AM		2	Night	43.5		22387.21		45.6													53.5	223872.11	53.5	223872.11
		14:37:00	14:37:00	2:25:22 AM		2	Night	45.4		34673.69		49.9													55.4	346736.85	55.4	346736.85
		14:38:00	14:38:00	2:26:22 AM		2	Night	46.8		47863.01		49.4													56.8	478630.09	56.8	478630.09
		14:39:00	14:39:00	2:27:22 AM		2	Night	52.0		158489.32		56.0													62.0	1584893.19	62.0	1584893.19
		14:40:00	14:40:00	2:28:22 AM		2	Night	53.7		234422.88		57.4													63.7	2344228.82	63.7	2344228.82
		14:41:00	14:41:00	2:29:22 AM		2	Night	52.2		165958.69		54.8													62.2	1659586.91	62.2	1659586.91
		14:42:00	14:42:00	2:30:22 AM		2	Night	52.8		190546.07		55.1													62.8	1905460.72	62.8	1905460.72
		14:43:00	14:43:00	2:31:22 AM		2	Night	55.0		316227.77		57.5													65.0	3162277.66	65.0	3162277.66
		14:44:00	14:44:00	2:32:22 AM		2	Night	56.9		489778.82		59.4													66.9	4897788.19	66.9	4897788.19
		14:45:00	14:45:00	2:33:22 AM		2	Night	53.0		199526.23		57.5													63.0	1995262.31	63.0	1995262.31
		14:46:00	14:46:00	2:34:22 AM		2	Night	51.0		125892.54		53.6													61.0	1258925.41	61.0	1258925.41
		14:47:00	14:47:00	2:35:22 AM		2	Night	51.8		151356.12		55.2													61.8	1513561.25	61.8	1513561.25
		14:48:00	14:48:00	2:36:22 AM		2	Night	46.5		44668.36		47.2													56.5	446683.59	56.5	446683.59
		14:49:00	14:49:00	2:37:22 AM		2	Night	46.8		47863.01		48.0													56.8	478630.09	56.8	478630.09
		14:50:00	14:50:00	2:38:22 AM		2	Night	45.4		34673.69		46.5													55.4	346736.85	55.4	346736.85
		14:51:00	14:51:00	2:39:22 AM		2	Night	43.4		21877.62		44.7													53.4	218776.16	53.4	218776.16
		14:52:00	14:52:00	2:40:22 AM		2	Night	42.6		18197.01		43.6													52.6	181970.09	52.6	181970.09
		14:53:00	14:53:00	2:41:22 AM		2	Night	42.8		19054.61		44.7													52.8	190546.07	52.8	190546.07
		14:54:00	14:54:00	2:42:22 AM		2	Night	43.5		22387.21		44.8													53.5	223872.11	53.5	223872.11
		14:55:00	14:55:00	2:43:22 AM		2	Night	43.3		21379.62		45.4													53.3	213796.21	53.3	213796.21
		14:56:00	14:56:00	2:44:22 AM		2	Night	42.0		15848.93		46.3													52.0	158489.32	52.0	158489.32
		14:57:00	14:57:00	2:45:22 AM		2	Night	43.0		19952.62		45.4													53.0	199526.23	53.0	199526.23
		14:58:00	14:58:00	2:46:22 AM		2	Night	43.5		22387.21		44.4													53.5	223872.11	53.5	223872.11
		14:59:00	14:59:00	2:47:22 AM		2	Night	48.2		66069.34		51.1													58.2	660693.45	58.2	660693.45
		15:00:00	15:00:00	2:48:22 AM		2	Night	55.9		389045.14		60.5													65.9	3890451.45	65.9	3890451.45
		15:01:00	15:01:00	2:49:22 AM		2	Night	55.7		371535.23		59.7													65.7	3715352.29	65.7	3715352.29
		15:02:00	15:02:00	2:50:22 AM		2	Night	48.5		70794.58		51.4													58.5	707945.78	58.5	707945.78
		15:03:00	15:03:00	2:51:22 AM		2	Night	44.2		26302.68		46.4													54.2	263026.80	54.2	263026.80
		15:04:00	15:04:00	2:52:22 AM		2	Night	42.4		17378.01		44.9													52.4	173780.08	52.4	173780.08
		15:05:00	15:05:00	2:53:22 AM		2	Night	41.4		13803.84		43.5													51.4	138038.43	51.4	138038.43
		15:06:00	15:06:00	2:54:22 AM		2	Night	41.2		13182.57		42.8													51.2	131825.67	51.2	131825.67
		15:07:00	15:07:00	2:55:22 AM		2	Night	42.4		17378.01		46.2													52.4	173780.08	52.4	173780.08
		15:08:00	15:08:00	2:56:22 AM		2	Night	46.2		41686.94		49.6													56.2	416869.38	56.2	416869.38
		15:09:00	15:09:00	2:57:22 AM		2	Night	49.1		81283.05		51.8													59.1	812830.52	59.1	812830.52
		15:10:00	15:10:00	2:58:22 AM		2	Night	44.8		30199.52		48.1													54.8	301995.17	54.8	301995.17
		15:11:00	15:11:00	2:59:22 AM		2	Night	43.4		21877.62		45.2		50.8		47.2		54.8		59.4		63.2		67.1	53.4	218776.16	53.4	218776.16
		15:12:00	15:12:00	3:00:22 AM		3	Night	44.6		28840.32		46.4													54.6	288403.15	54.6	288403.15
		15:13:00	15:13:00	3:01:22 AM		3	Night	43.2		20892.96		45.0													53.2	208929.61	53.2	208929.61
		15:14:00	15:14:00	3:02:22 AM		3	Night	43.1		20417.38		47.2													53.1	204173.79	53.1	204173.79
		15:15:00	15:15:00	3:03:22 AM		3	Night	44.3		26915.35		48.7													54.3	269153.48	54.3	269153.48
		15:16:00	15:16:00	3:04:22 AM		3	Night	47.8		60255.96		50.5													57.8	602559.59	57.8	602559.59
		15:17:00	15:17:00	3:05:22 AM		3	Night	49.0		79432.82		50.7													59.0	794328.23	59.0	794328.23
		15:18:00	15:18:00	3:06:22 AM		3	Night	49.1		81283.05		51.5													59.1	812830.52	59.1	812830.52
		15:19:00	15:19:00	3:07:22 AM		3	Night	44.8		30199.52		48.4													54.8	301995.17	54.8	301995.17
		15:20:00	15:20:00	3:08:22 AM		3	Night	42.2		16595.87		44.1													52.2	165958.69	52.2	165958.69
		15:21:00	15:21:00	3:09:22 AM		3	Night	43.0		19952.62		47.4													53.0	199526.23	53.0	199526.23
		15:22:00	15:22:00	3:10:22 AM		3	Night	41.1		12882.50		42.5													51.1	128824.96	51.1	128824.96
		15:23:00	15:23:00	3:11:22 AM		3	Night	40.8		12022.64		42.2													50.8	120226.44	50.8	120226.44
		15:24:00	15:24:00	3:12:22 AM		3	Night	41.1		12882.50		43.9													51.1	128824.96	51.1	128824.96
		15:25:00	15:25:00	3:13:22 AM		3	Night	42.2		16595.87		46.2													52.2	165958.69	52.2	165958.69
		15:26:00	15:26:00	3:14:22 AM		3	Night	43.1		20417.38		46.1													53.1	204173.79	53.1	204173.79
		15:27:00	15:27:00	3:15:22 AM		3	Night	41.6		14454.40		43.0													51.6	144543.98	51.6	144543.98
		15:28:00	15:28:00	3:16:22 AM		3	Night	41.5		14125.38		43.2													51.5	141253.75	51.5	141253.75
		15:29:00	15:29:00	3:17:22 AM		3	Night	42.1		16218.10		44.1													52.1	162181.01	52.1	162181.01
		15:30:00	15:30:00	3:18:22 AM		3	Night	42.6		18197.01		44.9													52.6	181970.09	52.6	181970.09
		15:31:00	15:31:00	3:19:22 AM		3	Night	43.3		21379.62		46.3													53.3	213796.21	53.3	213796.21
		15:32:00	15:32:00	3:20:22 AM		3	Night	42.6		18197.01		45.0													52.6	181970.09	52.6	181970.09
		15:33:00	15:33:00	3:21:22 AM		3	Night	41.0		12589.25		43.4													51.0	125892.54	51.0	125892.54
		15:34:00	15:34:00	3:22:22 AM		3	Night	41.6		14454.40		43.0													51.6	144543.98	51.6	144543.98
		15:35:00	15:35:00	3:23:22 AM		3	Night	45.1		32359.37		47.8													55.1	323593.66	55.1	323593.66
		15:36:00	15:36:00	3:24:22 AM		3	Night	48.3		67608.30		49.4													58.3	676082.98	58.3	676082.98
		15:37:00	15:37:00	3:25:22 AM		3	Night	48.5		70794.58		50.0													58.5	707945.78	58.5	707945.78
		15:38:00	15:38:00	3:26:22 AM		3	Night	48.6		72443.60		49.9													58.6	724435.96	58.6	724435.96
		15:39:00	15:39:00	3:27:22 AM		3	Night	48.6		72443.60		51.1													58.6	724435.96	58.6	724435.96
		15:40:00	15:40:00	3:28:22 AM		3	Night	48.6		72443.60		51.1													58.6	724435.96	58.6	724435.96
		15:41:00	15:41:00	3:29:22 AM		3	Night	47.5		56234.13		50.7													57.5	562341.33	57.5	562341.33
		15:42:00	15:42:00	3:30:22 AM		3	Night	44.1		25703.96		46.7													54.1	257039.58	54.1	257039.58
		15:43:00	15:43:00	3:31:22 AM		3	Night	43.8		23988.33		45.8													53.8	239883.29	53.8	239883.29
		15:44:00	15:44:00	3:32:22 AM		3	Night	44.9		30902.95		48.1													54.9	309029.54	54.9	309029.54
		15:45:00	15:45:00	3:33:22 AM		3	Night	46.5		44668.36		50.1													56.5	446683.59	56.5	446683.59
		15:46:00	15:46:00	3:34:22 AM		3	Night	45.4		34673.69		49.3													55.4	346736.85	55.4	346736.85
		15:47:00	15:47:00	3:35:22 AM		3	Night	46.1		40738.03		49.5													56.1	407380.28	56.1	407380.28
		15:48:00	15:48:00	3:36:22 AM		3	Night	55.1		323593.66		61.2													65.1	3235936.57	65.1	3235936.57
		15:49:00	15:49:00	3:37:22 AM		3	Night	56.1		407380.28		59.3													66.1	4073802.78	66.1	4073802.78
		15:50:00	15:50:00	3:38:22 AM		3	Night	50.0		100000.00		54.8													60.0	1000000.00	60.0	1000000.00
		15:51:00	15:51:00	3:39:22 AM		3	Night	48.9		77624.71		55.3													58.9	776247.12	58.9	776247.12
		15:52:00	15:52:00	3:40:22 AM		3	Night	59.9		977237.22		66.1													69.9	9772372.21	69.9	9772372.21
		15:53:00	15:53:00	3:41:22 AM		3	Night	58.4		691830.97		60.7													68.4	6918309.71	68.4	6918309.71
		15:54:00	15:54:00	3:42:22 AM		3	Night	56.4		436515.83		58.8													66.4	4365158.32	66.4	4365158.32
		15:55:00	15:55:00	3:43:22 AM		3	Night	46.7		46773.51		51.9													56.7	467735.14	56.7	467735.14

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		15:56:00	15:56:00	3:44:22 AM		3	Night	44.4		27542.29		48.1													54.4	275422.87	54.4	275422.87
		15:57:00	15:57:00	3:45:22 AM		3	Night	44.6		28840.32		50.3													54.6	288403.15	54.6	288403.15
		15:58:00	15:58:00	3:46:22 AM		3	Night	45.1		32359.37		47.7													55.1	323593.66	55.1	323593.66
		15:59:00	15:59:00	3:47:22 AM		3	Night	46.0		39810.72		48.5													56.0	398107.17	56.0	398107.17
		16:00:00	16:00:00	3:48:22 AM		3	Night	45.6		36307.81		47.7													55.6	363078.05	55.6	363078.05
		16:01:00	16:01:00	3:49:22 AM		3	Night	44.3		26915.35		47.8													54.3	269153.48	54.3	269153.48
		16:02:00	16:02:00	3:50:22 AM		3	Night	42.7		18620.87		44.9													52.7	186208.71	52.7	186208.71
		16:03:00	16:03:00	3:51:22 AM		3	Night	43.0		19952.62		44.9													53.0	199526.23	53.0	199526.23
		16:04:00	16:04:00	3:52:22 AM		3	Night	45.5		35481.34		47.7													55.5	354813.39	55.5	354813.39
		16:05:00	16:05:00	3:53:22 AM		3	Night	48.4		69183.10		50.9													58.4	691830.97	58.4	691830.97
		16:06:00	16:06:00	3:54:22 AM		3	Night	51.3		134896.29		54.9													61.3	1348962.88	61.3	1348962.88
		16:07:00	16:07:00	3:55:22 AM		3	Night	48.0		63095.73		49.3													58.0	630957.34	58.0	630957.34
		16:08:00	16:08:00	3:56:22 AM		3	Night	47.4		54954.09		49.2													57.4	549540.87	57.4	549540.87
		16:09:00	16:09:00	3:57:22 AM		3	Night	45.0		31622.78		49.6													55.0	316227.77	55.0	316227.77
		16:10:00	16:10:00	3:58:22 AM		3	Night	43.5		22387.21		45.6													53.5	223872.11	53.5	223872.11
		16:11:00	16:11:00	3:59:22 AM		3	Night	43.3		21379.62		45.9			49.2		48.1		50.7		58.8		61.2		66.1	53.3	213796.21	53.3	213796.21
		16:12:00	16:12:00	4:00:22 AM		4	Night	43.7		23442.29		45.5													53.7	234422.88	53.7	234422.88
		16:13:00	16:13:00	4:01:22 AM		4	Night	44.2		26302.68		46.4													54.2	263026.80	54.2	263026.80
		16:14:00	16:14:00	4:02:22 AM		4	Night	44.5		28183.83		46.3													54.5	281838.29	54.5	281838.29
		16:15:00	16:15:00	4:03:22 AM		4	Night	45.1		32359.37		47.3													55.1	323593.66	55.1	323593.66
		16:16:00	16:16:00	4:04:22 AM		4	Night	45.9		38904.51		50.0													55.9	389045.14	55.9	389045.14
		16:17:00	16:17:00	4:05:22 AM		4	Night	46.8		47863.01		49.0													56.8	478630.09	56.8	478630.09
		16:18:00	16:18:00	4:06:22 AM		4	Night	56.5		446683.59		60.1													66.5	4466835.92	66.5	4466835.92
		16:19:00	16:19:00	4:07:22 AM		4	Night	57.6		575439.94		61.9													67.6	5754399.37	67.6	5754399.37
		16:20:00	16:20:00	4:08:22 AM		4	Night	52.9		194984.46		56.5													62.9	1949844.60	62.9	1949844.60
		16:21:00	16:21:00	4:09:22 AM		4	Night	49.7		93325.43		52.9													59.7	933254.30	59.7	933254.30
		16:22:00	16:22:00	4:10:22 AM		4	Night	48.3		67608.30		51.1													58.3	676082.98	58.3	676082.98
		16:23:00	16:23:00	4:11:22 AM		4	Night	46.4		43651.58		49.1													56.4	436515.83	56.4	436515.83
		16:24:00	16:24:00	4:12:22 AM		4	Night	46.2		41686.94		49.6													56.2	416869.38	56.2	416869.38
		16:25:00	16:25:00	4:13:22 AM		4	Night	45.0		31622.78		47.5													55.0	316227.77	55.0	316227.77
		16:26:00	16:26:00	4:14:22 AM		4	Night	43.1		20417.38		44.5													53.1	204173.79	53.1	204173.79
		16:27:00	16:27:00	4:15:22 AM		4	Night	43.7		23442.29		47.0													53.7	234422.88	53.7	234422.88
		16:28:00	16:28:00	4:16:22 AM		4	Night	43.5		22387.21		45.4													53.5	223872.11	53.5	223872.11
		16:29:00	16:29:00	4:17:22 AM		4	Night	45.8		38018.94		48.3													55.8	380189.40	55.8	380189.40
		16:30:00	16:30:00	4:18:22 AM		4	Night	45.4		34673.69		48.1													55.4	346736.85	55.4	346736.85
		16:31:00	16:31:00	4:19:22 AM		4	Night	45.4		34673.69		49.1													55.4	346736.85	55.4	346736.85
		16:32:00	16:32:00	4:20:22 AM		4	Night	50.9		123026.88		54.5													60.9	1230268.77	60.9	1230268.77
		16:33:00	16:33:00	4:21:22 AM		4	Night	47.7		58884.37		49.7													57.7	588843.66	57.7	588843.66
		16:34:00	16:34:00	4:22:22 AM		4	Night	49.0		79432.82		53.0													59.0	794328.23	59.0	794328.23
		16:35:00	16:35:00	4:23:22 AM		4	Night	57.5		562341.33		60.3													67.5	5623413.25	67.5	5623413.25
		16:36:00	16:36:00	4:24:22 AM		4	Night	58.5		707945.78		62.1													68.5	7079457.84	68.5	7079457.84
		16:37:00	16:37:00	4:25:22 AM		4	Night	53.7		234422.88		56.1													63.7	2344228.82	63.7	2344228.82
		16:38:00	16:38:00	4:26:22 AM		4	Night	50.0		100000.00		51.9													60.0	1000000.00	60.0	1000000.00
		16:39:00	16:39:00	4:27:22 AM		4	Night	47.8		60255.96		50.5													57.8	602559.59	57.8	602559.59
		16:40:00	16:40:00	4:28:22 AM		4	Night	47.5		56234.13		50.2													57.5	562341.33	57.5	562341.33
		16:41:00	16:41:00	4:29:22 AM		4	Night	45.7		37153.52		47.8													55.7	371535.23	55.7	371535.23
		16:42:00	16:42:00	4:30:22 AM		4	Night	45.2		33113.11		47.4													55.2	331131.12	55.2	331131.12
		16:43:00	16:43:00	4:31:22 AM		4	Night	45.0		31622.78		48.3													55.0	316227.77	55.0	316227.77
		16:44:00	16:44:00	4:32:22 AM		4	Night	46.5		44668.36		51.1													56.5	446683.59	56.5	446683.59
		16:45:00	16:45:00	4:33:22 AM		4	Night	45.2		33113.11		48.9													55.2	331131.12	55.2	331131.12
		16:46:00	16:46:00	4:34:22 AM		4	Night	44.0		25118.86		45.6													54.0	251188.64	54.0	251188.64
		16:47:00	16:47:00	4:35:22 AM		4	Night	45.2		33113.11		46.9													55.2	331131.12	55.2	331131.12
		16:48:00	16:48:00	4:36:22 AM		4	Night	47.9		61659.50		52.6													57.9	616595.00	57.9	616595.00
		16:49:00	16:49:00	4:37:22 AM		4	Night	45.8		38018.94		54.9													55.8	380189.40	55.8	380189.40
		16:50:00	16:50:00	4:38:22 AM		4	Night	46.4		43651.58		49.2													56.4	436515.83	56.4	436515.83
		16:51:00	16:51:00	4:39:22 AM		4	Night	49.9		97723.72		51.9													59.9	977237.22	59.9	977237.22
		16:52:00	16:52:00	4:40:22 AM		4	Night	49.6		91201.08		52.0													59.6	912010.84	59.6	912010.84
		16:53:00	16:53:00	4:41:22 AM		4	Night	49.6		91201.08		51.5													59.6	912010.84	59.6	912010.84
		16:54:00	16:54:00	4:42:22 AM		4	Night	46.2		41686.94		49.5													56.2	416869.38	56.2	416869.38
		16:55:00	16:55:00	4:43:22 AM		4	Night	42.6		18197.01		44.9													52.6	181970.09	52.6	181970.09
		16:56:00	16:56:00	4:44:22 AM		4	Night	44.8		30199.52		47.4													54.8	301995.17	54.8	301995.17
		16:57:00	16:57:00	4:45:22 AM		4	Night	53.6		229086.77		57.3													63.6	2290867.65	63.6	2290867.65
		16:58:00	16:58:00	4:46:22 AM		4	Night	54.3		269153.48		56.0													64.3	2691534.80	64.3	2691534.80
		16:59:00	16:59:00	4:47:22 AM		4	Night	52.3		169824.37		54.8													62.3	1698243.65	62.3	1698243.65
		17:00:00	17:00:00	4:48:22 AM		4	Night	49.6		91201.08		54.0													59.6	912010.84	59.6	912010.84
		17:01:00	17:01:00	4:49:22 AM		4	Night	47.8		60255.96		49.8													57.8	602559.59	57.8	602559.59
		17:02:00	17:02:00	4:50:22 AM		4	Night	45.7		37153.52		49.1													55.7	371535.23	55.7	371535.23
		17:03:00	17:03:00	4:51:22 AM		4	Night	43.2		20892.96		44.4													53.2	208929.61	53.2	208929.61
		17:04:00	17:04:00	4:52:22 AM		4	Night	42.7		18620.87		44.7													52.7	186208.71	52.7	186208.71
		17:05:00	17:05:00	4:53:22 AM		4	Night	43.6		22908.68		46.3													53.6	229086.77	53.6	229086.77
		17:06:00	17:06:00	4:54:22 AM		4	Night	46.6		45708.82		49.9													56.6	457088.19	56.6	457088.19
		17:07:00	17:07:00	4:55:22 AM		4	Night	49.2		83176.38		51.0													59.2	831763.77	59.2	831763.77
		17:08:00	17:08:00	4:56:22 AM		4	Night	58.3		676082.98		72.0													68.3	6760829.75	68.3	6760829.75
		17:09:00	17:09:00	4:57:22 AM		4	Night	46.8		47863.01		49.9													56.8	478630.09	56.8	478630.09
		17:10:00	17:10:00	4:58:22 AM		4	Night	48.1		64565.42		51.6													58.1	645654.23	58.1	645654.23
		17:11:00	17:11:00	4:59:22 AM		4	Night	51.9		154881.66		54.8			50.4		49.9		53.0		60.1		62.1		72.0	61.9	1548816.62	61.9	1548816.62
		17:12:00	17:12:00	5:00:22 AM		5	Night	50.7		117489.76		53.3													60.7	1174897.55	60.7	1174897.55
		17:13:00	17:13:00	5:01:22 AM		5	Night	46.8		47863.01		49.7													56.8	478630.09	56.8	478630.09
		17:14:00	17:14:00	5:02:22 AM		5	Night	44.1		25703.96		45.9													54.1	257039.58	54.1	257039.58
		17:15:00	17:15:00	5:03:22 AM		5	Night	44.3		26915.35		46.9													54.3	269153.48	54.3	269153.48

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		17:16:00	17:16:00	5:04:22 AM		5	Night	43.4		21877.62		45.5													53.4	218776.16	53.4	218776.16
		17:17:00	17:17:00	5:05:22 AM		5	Night	46.2		41686.94		49.4													56.2	416869.38	56.2	416869.38
		17:18:00	17:18:00	5:06:22 AM		5	Night	46.2		41686.94		49.5													56.2	416869.38	56.2	416869.38
		17:19:00	17:19:00	5:07:22 AM		5	Night	44.5		28183.83		46.7													54.5	281838.29	54.5	281838.29
		17:20:00	17:20:00	5:08:22 AM		5	Night	45.3		33884.42		47.1													55.3	338844.16	55.3	338844.16
		17:21:00	17:21:00	5:09:22 AM		5	Night	45.3		33884.42		46.8													55.3	338844.16	55.3	338844.16
		17:22:00	17:22:00	5:10:22 AM		5	Night	51.2		131825.67		55.1													61.2	1318256.74	61.2	1318256.74
		17:23:00	17:23:00	5:11:22 AM		5	Night	56.5		446683.59		59.1													66.5	4466835.92	66.5	4466835.92
		17:24:00	17:24:00	5:12:22 AM		5	Night	57.2		524807.46		59.3													67.2	5248074.60	67.2	5248074.60
		17:25:00	17:25:00	5:13:22 AM		5	Night	54.5		281838.29		60.9													64.5	2818382.93	64.5	2818382.93
		17:26:00	17:26:00	5:14:22 AM		5	Night	51.3		134896.29		55.8													61.3	1348962.88	61.3	1348962.88
		17:27:00	17:27:00	5:15:22 AM		5	Night	48.0		63095.73		50.2													58.0	630957.34	58.0	630957.34
		17:28:00	17:28:00	5:16:22 AM		5	Night	46.7		46773.51		49.4													56.7	467735.14	56.7	467735.14
		17:29:00	17:29:00	5:17:22 AM		5	Night	46.2		41686.94		47.6													56.2	416869.38	56.2	416869.38
		17:30:00	17:30:00	5:18:22 AM		5	Night	47.1		51286.14		49.6													57.1	512861.38	57.1	512861.38
		17:31:00	17:31:00	5:19:22 AM		5	Night	46.9		48977.88		50.3													56.9	489778.82	56.9	489778.82
		17:32:00	17:32:00	5:20:22 AM		5	Night	47.8		60255.96		49.9													57.8	602559.59	57.8	602559.59
		17:33:00	17:33:00	5:21:22 AM		5	Night	47.6		57543.99		49.8													57.6	575439.94	57.6	575439.94
		17:34:00	17:34:00	5:22:22 AM		5	Night	50.6		114815.36		55.2													60.6	1148153.62	60.6	1148153.62
		17:35:00	17:35:00	5:23:22 AM		5	Night	50.6		114815.36		55.0													60.6	1148153.62	60.6	1148153.62
		17:36:00	17:36:00	5:24:22 AM		5	Night	48.8		75857.76		52.5													58.8	758577.58	58.8	758577.58
		17:37:00	17:37:00	5:25:22 AM		5	Night	49.6		91201.08		52.8													59.6	912010.84	59.6	912010.84
		17:38:00	17:38:00	5:26:22 AM		5	Night	50.5		112201.85		52.8													60.5	1122018.45	60.5	1122018.45
		17:39:00	17:39:00	5:27:22 AM		5	Night	49.1		81283.05		52.3													59.1	812830.52	59.1	812830.52
		17:40:00	17:40:00	5:28:22 AM		5	Night	50.1		102329.30		51.3													60.1	1023292.99	60.1	1023292.99
		17:41:00	17:41:00	5:29:22 AM		5	Night	52.8		190546.07		56.0													62.8	1905460.72	62.8	1905460.72
		17:42:00	17:42:00	5:30:22 AM		5	Night	55.0		316227.77		57.8													65.0	3162277.66	65.0	3162277.66
		17:43:00	17:43:00	5:31:22 AM		5	Night	55.2		331131.12		57.8													65.2	3311311.21	65.2	3311311.21
		17:44:00	17:44:00	5:32:22 AM		5	Night	53.1		204173.79		58.2													63.1	2041737.94	63.1	2041737.94
		17:45:00	17:45:00	5:33:22 AM		5	Night	53.8		239883.29		59.1													63.8	2398832.92	63.8	2398832.92
		17:46:00	17:46:00	5:34:22 AM		5	Night	56.3		426579.52		59.0													66.3	4265795.19	66.3	4265795.19
		17:47:00	17:47:00	5:35:22 AM		5	Night	56.7		467735.14		59.3													66.7	4677351.41	66.7	4677351.41
		17:48:00	17:48:00	5:36:22 AM		5	Night	55.5		354813.39		59.7													65.5	3548133.89	65.5	3548133.89
		17:49:00	17:49:00	5:37:22 AM		5	Night	51.8		151356.12		54.7													61.8	1513561.25	61.8	1513561.25
		17:50:00	17:50:00	5:38:22 AM		5	Night	52.6		181970.09		55.5													62.6	1819700.86	62.6	1819700.86
		17:51:00	17:51:00	5:39:22 AM		5	Night	50.9		123026.88		52.2													60.9	1230268.77	60.9	1230268.77
		17:52:00	17:52:00	5:40:22 AM		5	Night	56.7		467735.14		60.8													66.7	4677351.41	66.7	4677351.41
		17:53:00	17:53:00	5:41:22 AM		5	Night	57.9		616595.00		61.3													67.9	6165950.02	67.9	6165950.02
		17:54:00	17:54:00	5:42:22 AM		5	Night	58.6		724435.96		62.8													68.6	7244359.60	68.6	7244359.60
		17:55:00	17:55:00	5:43:22 AM		5	Night	62.4		1737800.83		66.6													72.4	17378008.29	72.4	17378008.29
		17:56:00	17:56:00	5:44:22 AM		5	Night	54.2		263026.80		63.6													64.2	2630267.99	64.2	2630267.99
		17:57:00	17:57:00	5:45:22 AM		5	Night	49.9		97723.72		53.9													59.9	977237.22	59.9	977237.22
		17:58:00	17:58:00	5:46:22 AM		5	Night	50.7		117489.76		56.6													60.7	1174897.55	60.7	1174897.55
		17:59:00	17:59:00	5:47:22 AM		5	Night	52.6		181970.09		57.1													62.6	1819700.86	62.6	1819700.86
		18:00:00	18:00:00	5:48:22 AM		5	Night	54.7		295120.92		59.0													64.7	2951209.23	64.7	2951209.23
		18:01:00	18:01:00	5:49:22 AM		5	Night	55.0		316227.77		57.5													65.0	3162277.66	65.0	3162277.66
		18:02:00	18:02:00	5:50:22 AM		5	Night	53.1		204173.79		57.6													63.1	2041737.94	63.1	2041737.94
		18:03:00	18:03:00	5:51:22 AM		5	Night	49.3		85113.80		53.8													59.3	851138.04	59.3	851138.04
		18:04:00	18:04:00	5:52:22 AM		5	Night	48.9		77624.71		53.7													58.9	776247.12	58.9	776247.12
		18:05:00	18:05:00	5:53:22 AM		5	Night	51.8		151356.12		58.2													61.8	1513561.25	61.8	1513561.25
		18:06:00	18:06:00	5:54:22 AM		5	Night	53.1		204173.79		55.8													63.1	2041737.94	63.1	2041737.94
		18:07:00	18:07:00	5:55:22 AM		5	Night	52.5		177827.94		59.4													62.5	1778279.41	62.5	1778279.41
		18:08:00	18:08:00	5:56:22 AM		5	Night	52.6		181970.09		55.5													62.6	1819700.86	62.6	1819700.86
		18:09:00	18:09:00	5:57:22 AM		5	Night	51.4		138038.43		55.1													61.4	1380384.26	61.4	1380384.26
		18:10:00	18:10:00	5:58:22 AM		5	Night	51.0		125892.54		53.4													61.0	1258925.41	61.0	1258925.41
		18:11:00	18:11:00	5:59:22 AM		5	Night	49.8		95499.26		51.7		53.1		55.1		58.2		60.9		63.6		66.6	59.8	954992.59	59.8	954992.59
		18:12:00	18:12:00	6:00:22 AM		6	Night	49.1		81283.05		51.0													59.1	812830.52	59.1	812830.52
		18:13:00	18:13:00	6:01:22 AM		6	Night	49.7		93325.43		51.7													59.7	933254.30	59.7	933254.30
	Study #13	18:14:00	18:14:00	6:02:22 AM		6	Night	49.4	50.7	87096.36	118219.22	52.6	57.4												59.4	870963.59	59.4	870963.59
	Study #13	18:15:00	18:15:00	6:03:22 AM		6	Night	49.8	52.2	95499.26	167289.49	51.9	57.5												59.8	954992.59	59.8	954992.59
	Study #13	18:16:00	18:16:00	6:04:22 AM		6	Night	49.4	51.6	87096.36	144970.62	52.5	54.4												59.4	870963.59	59.4	870963.59
	Study #13	18:17:00	18:17:00	6:05:22 AM		6	Night	49.3	50.7	85113.80	116425.22	52.0	53.7												59.3	851138.04	59.3	851138.04
	Study #13	18:18:00	18:18:00	6:06:22 AM		6	Night	49.6	50.4	91201.08	108399.23	52.9	53.4												59.6	912010.84	59.6	912010.84
	Study #13	18:19:00	18:19:00	6:07:22 AM		6	Night	50.0	53.5	100000.00	221467.49	57.8	60.9												60.0	1000000.00	60.0	1000000.00
	Study #13	18:20:00	18:20:00	6:08:22 AM		6	Night	49.8	52.0	95499.26	156967.92	52.2	55.1												59.8	954992.59	59.8	954992.59
	Study #13	18:21:00	18:21:00	6:09:22 AM		6	Night	48.7	51.9	74131.02	156203.07	50.5	55.9												58.7	741310.24	58.7	741310.24
	Study #13	18:22:00	18:22:00	6:10:22 AM		6	Night	49.7	54.3	93325.43	269160.05	52.7	59.8												59.7	933254.30	59.7	933254.30
	Study #13	18:23:00	18:23:00	6:11:22 AM		6	Night	51.0	70.5	125892.54	11248365.29	53.8	76.8												61.0	1258925.41	61.0	1258925.41
	Study #13	18:24:00	18:24:00	6:12:22 AM		6	Night	56.5	58.3	446683.59	681644.05	59.6	61.5												66.5	4466835.92	66.5	4466835.92
	Study #13	18:25:00	18:25:00	6:13:22 AM		6	Night	55.1	54.0	323593.66	251643.64	61.2	58.7												65.1	3235936.57	65.1	3235936.57
	Study #13	18:26:00	18:26:00	6:14:22 AM		6	Night	50.4	50.4	109647.82	110645.22	51.7	51.7												60.4	1096478.20	60.4	1096478.20
	Study #13	18:27:00	18:27:00	6:15:22 AM		6	Night	49.0	51.8	79432.82	153077.38	50.5	55.0												59.0	794328.23	59.0	794328.23
	Study #13	18:28:00	18:28:00	6:16:22 AM		6	Night	51.5	51.6	141253.75	146146.41	53.8	60.7		51.3		52.6		53.8		59.6		61.2		61.5	1412537.54	61.5	1412537.54
		18:29:00	18:29:00	6:17:22 AM		6	Night	51.9		154881.66		53.4													61.9	1548816.62	61.9	1548816.62
		18:30:00	18:30:00	6:18:22 AM		6	Night	51.8		151356.12		54.3													61.8	1513561.25	61.8	1513561.25
		18:31:00	18:31:00	6:19:22 AM		6	Night	50.9		123026.88		53.8													60.9	1230268.77	60.9	1230268.77
		18:32:00	18:32:00	6:20:22 AM		6	Night	50.4		109647.82		53.1													60.4	1096478.20	60.4	1096478.20
	Study #14	18:33:00	18:33:00	6:21:22 AM		6	Night	50.1	50.9	102329.30	122648.74	52.1	53.6												60.1	1023292.99	60.1	1023292.99
	Study #14	18:34:00	18:34:00	6:22:22 AM		6	Night	51.0	52.7	125892.54	185653.28	52.4	56.1												61.0	1258925.41	61.0	1258925.41
	Study #14	18:35:00	18:35:00	6:23:22 AM		6	Night	50.9	51.0	123026.88	125682.54	53.6	57.2												60.9	1230268.77	60.9	1230268.77

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #14	18:36:00	18:36:00	6:24:22 AM	Train (east + west)	6	Night	51.6	54.8	144543.98	301941.76	53.6	58.8												61.6	1445439.77	61.6	1445439.77
	Study #14	18:37:00	18:37:00	6:25:22 AM		6	Night	54.7	54.8	295120.92	301886.55	60.7	56.9												64.7	2951209.23	64.7	2951209.23
	Study #14	18:38:00	18:38:00	6:26:22 AM		6	Night	64.5	55.0	2818382.93	316053.40	67.6	57.1												74.5	28183829.31	74.5	28183829.31
	Study #14	18:39:00	18:39:00	6:27:22 AM	Train (east)	6	Night	60.9	56.7	1230268.77	473068.52	63.2	61.5												70.9	12302687.71	70.9	12302687.71
	Study #14	18:40:00	18:40:00	6:28:22 AM		6	Night	61.1	51.6	1288249.55	144744.19	64.8	52.9												71.1	12882495.52	71.1	12882495.52
	Study #14	18:41:00	18:41:00	6:29:22 AM		6	Night	59.0	51.6	794328.23	144046.71	60.5	52.6												69.0	7943282.35	69.0	7943282.35
	Study #14	18:42:00	18:42:00	6:30:22 AM		6	Night	61.1	51.4	1288249.55	139171.50	64.5	53.4												71.1	12882495.52	71.1	12882495.52
	Study #14	18:43:00	18:43:00	6:31:22 AM		6	Night	61.5	51.5	1412537.54	140861.44	68.8	56.1												71.5	14125375.45	71.5	14125375.45
	Study #14	18:44:00	18:44:00	6:32:22 AM		6	Night	55.7	47.6	371535.23	57036.32	57.9	51.8												65.7	3715352.29	65.7	3715352.29
	Study #14	18:45:00	18:45:00	6:33:22 AM		6	Night	50.5	47.0	112201.85	50222.45	53.5	51.4												60.5	1122018.45	60.5	1122018.45
	Study #14	18:46:00	18:46:00	6:34:22 AM		6	Night	48.8	46.3	75857.76	42736.45	50.6	47.1												58.8	758577.58	58.8	758577.58
	Study #14	18:47:00	18:47:00	6:35:22 AM		6	Night	49.1	47.0	81283.05	50008.56	52.2	48.3		58.4		57.9		64.5		67.6		68.8		59.1	812830.52	59.1	812830.52
		18:48:00	18:48:00	6:36:22 AM		6	Night	50.2		104712.85		51.4													60.2	1047128.55	60.2	1047128.55
		18:49:00	18:49:00	6:37:22 AM		6	Night	50.2		104712.85		51.9													60.2	1047128.55	60.2	1047128.55
	Study #15	18:50:00	18:50:00	6:38:22 AM		6	Night	49.1	48.2	81283.05	66577.52	50.8	53.4												59.1	812830.52	59.1	812830.52
	Study #15	18:51:00	18:51:00	6:39:22 AM		6	Night	48.2	46.7	66069.34	46904.34	50.1	49.6												58.2	660693.45	58.2	660693.45
	Study #15	18:52:00	18:52:00	6:40:22 AM		6	Night	48.7	47.2	74131.02	52686.99	50.5	52.3												58.7	741310.24	58.7	741310.24
	Study #15	18:53:00	18:53:00	6:41:22 AM		6	Night	48.5	46.8	70794.58	47380.77	51.0	52.1												58.5	707945.78	58.5	707945.78
	Study #15	18:54:00	18:54:00	6:42:22 AM		6	Night	48.4	46.4	69183.10	43505.27	50.3	47.8												58.4	691830.97	58.4	691830.97
	Study #15	18:55:00	18:55:00	6:43:22 AM		6	Night	48.5	46.2	70794.58	41800.02	51.3	49.2												58.5	707945.78	58.5	707945.78
	Study #15	18:56:00	18:56:00	6:44:22 AM		6	Night	49.0	48.1	79432.82	65129.30	50.7	50.3												59.0	794328.23	59.0	794328.23
	Study #15	18:57:00	18:57:00	6:45:22 AM		6	Night	52.2	52.8	165958.69	192471.23	58.2	57.4												62.2	1659586.91	62.2	1659586.91
	Study #15	18:58:00	18:58:00	6:46:22 AM	Train (west)	6	Night	62.9	53.0	1949844.60	197929.65	65.9	54.7												72.9	19498446.00	72.9	19498446.00
	Study #15	18:59:00	18:59:00	6:47:22 AM		6	Night	58.4	52.3	691830.97	171281.95	64.2	54.5												68.4	6918309.71	68.4	6918309.71
	Study #15	19:00:00	19:00:00	6:48:22 AM		6	Night	55.7	51.1	371535.23	129498.25	57.0	52.8												65.7	3715352.29	65.7	3715352.29
	Study #15	19:01:00	19:01:00	6:49:22 AM		6	Night	51.2	52.1	131825.67	163859.42	53.0	54.1												61.2	1318256.74	61.2	1318256.74
	Study #15	19:02:00	19:02:00	6:50:22 AM		6	Night	49.9	51.7	97723.72	149005.03	51.5	57.8												59.9	977237.22	59.9	977237.22
	Study #15	19:03:00	19:03:00	6:51:22 AM		6	Night	49.8	51.9	95499.26	155565.66	51.2	58.7												59.8	954992.59	59.8	954992.59
	Study #15	19:04:00	19:04:00	6:52:22 AM		6	Night	49.7	48.4	93325.43	69695.33	51.1	62.2		54.4		51.2		57.0		64.2		65.9		59.7	933254.30	59.7	933254.30
		19:05:00	19:05:00	6:53:22 AM		6	Night	49.5		89125.09		51.2													59.5	891250.94	59.5	891250.94
		19:06:00	19:06:00	6:54:22 AM		6	Night	50.1		102329.30		52.1													60.1	1023292.99	60.1	1023292.99
		19:07:00	19:07:00	6:55:22 AM		6	Night	49.6		91201.08		51.8													59.6	912010.84	59.6	912010.84
	Study #16	19:08:00	19:08:00	6:56:22 AM		6	Night	51.1	48.5	128824.96	71270.51	53.9	59.6												61.1	1288249.55	61.1	1288249.55
	Study #16	19:09:00	19:09:00	6:57:22 AM		6	Night	50.4	47.8	109647.82	60760.98	53.0	50.5												60.4	1096478.20	60.4	1096478.20
	Study #16	19:10:00	19:10:00	6:58:22 AM		6	Night	50.1	46.7	102329.30	46842.75	52.1	49.8												60.1	1023292.99	60.1	1023292.99
	Study #16	19:11:00	19:11:00	6:59:22 AM		6	Night	50.8	46.5	120226.44	45038.96	52.6	48.1	54.8		52.6		57.0		64.5		67.6		68.8	60.8	1202264.43	60.8	1202264.43
	Study #16	19:12:00	19:12:00	7:00:22 AM		7	Day	49.7	47.9	93325.43	61389.71	51.0	50.9												49.7	93325.43	49.7	93325.43
	Study #16	19:13:00	19:13:00	7:01:22 AM		7	Day	49.4	46.7	87096.36	47169.56	50.6	48.9												49.4	87096.36	49.4	87096.36
	Study #16	19:14:00	19:14:00	7:02:22 AM		7	Day	50.9	47.6	123026.88	57823.11	54.3	49.8												50.9	123026.88	50.9	123026.88
	Study #16	19:15:00	19:15:00	7:03:22 AM		7	Day	50.7	49.0	117489.76	79827.65	57.6	52.1												50.7	117489.76	50.7	117489.76
	Study #16	19:16:00	19:16:00	7:04:22 AM		7	Day	50.0	48.6	100000.00	73037.97	51.4	50.5												50.0	100000.00	50.0	100000.00
	Study #16	19:17:00	19:17:00	7:05:22 AM		7	Day	51.0	49.0	125892.54	79888.84	53.6	51.5												51.0	125892.54	51.0	125892.54
	Study #16	19:18:00	19:18:00	7:06:22 AM		7	Day	51.0	47.5	125892.54	56755.04	52.8	48.7												51.0	125892.54	51.0	125892.54
	Study #16	19:19:00	19:19:00	7:07:22 AM		7	Day	49.8	48.5	95499.26	70829.59	51.6	51.1												49.8	95499.26	49.8	95499.26
	Study #16	19:20:00	19:20:00	7:08:22 AM		7	Day	49.9	47.3	97723.72	54018.66	51.3	50.5												49.9	97723.72	49.9	97723.72
	Study #16	19:21:00	19:21:00	7:09:22 AM		7	Day	50.5	48.4	112201.85	68555.52	51.9	50.5												50.5	112201.85	50.5	112201.85
	Study #16	19:22:00	19:22:00	7:10:22 AM		7	Day	50.4	48.3	109647.82	68260.03	51.6	49.8		50.4		52.1		53.6		54.3		57.6		50.4	109647.82	50.4	109647.82
		19:23:00	19:23:00	7:11:22 AM		7	Day	49.8		95499.26		53.9													49.8	95499.26	49.8	95499.26
		19:24:00	19:24:00	7:12:22 AM		7	Day	50.3		107151.93		51.6													50.3	107151.93	50.3	107151.93
		19:25:00	19:25:00	7:13:22 AM		7	Day	50.6		114815.36		52.5													50.6	114815.36	50.6	114815.36
		19:26:00	19:26:00	7:14:22 AM		7	Day	50.0		100000.00		51.0													50.0	100000.00	50.0	100000.00
	Study #17	19:27:00	19:27:00	7:15:22 AM		7	Day	50.4	49.6	109647.82	91752.62	52.1	52.2												50.4	109647.82	50.4	109647.82
	Study #17	19:28:00	19:28:00	7:16:22 AM		7	Day	49.8	48.3	95499.26	67737.81	51.3	49.9												49.8	95499.26	49.8	95499.26
	Study #17	19:29:00	19:29:00	7:17:22 AM		7	Day	50.2	48.0	104712.85	63326.10	52.6	49.6												50.2	104712.85	50.2	104712.85
	Study #17	19:30:00	19:30:00	7:18:22 AM	Train (east)	7	Day	51.7	57.1	147910.84	513834.06	54.4	62.3												51.7	147910.84	51.7	147910.84
	Study #17	19:31:00	19:31:00	7:19:22 AM		7	Day	57.2	55.1	524807.46	322288.97	61.8	59.4												57.2	524807.46	57.2	524807.46
	Study #17	19:32:00	19:32:00	7:20:22 AM		7	Day	60.4	54.5	1096478.20	278670.75	63.5	57.1												60.4	1096478.20	60.4	1096478.20
	Study #17	19:33:00	19:33:00	7:21:22 AM		7	Day	57.0	51.7	501187.23	148515.05	60.9	55.8												57.0	501187.23	57.0	501187.23
	Study #17	19:34:00	19:34:00	7:22:22 AM		7	Day	56.4	50.0	436515.83	98908.25	61.7	53.6												56.4	436515.83	56.4	436515.83
	Study #17	19:35:00	19:35:00	7:23:22 AM		7	Day	52.6	47.9	181970.09	61865.40	54.4	50.7												52.6	181970.09	52.6	181970.09
	Study #17	19:36:00	19:36:00	7:24:22 AM		7	Day	51.4	46.5	138038.43	44950.37	54.1	50.5												51.4	138038.43	51.4	138038.43
	Study #17	19:37:00	19:37:00	7:25:22 AM		7	Day	50.9	48.8	123026.88	75182.73	52.6	53.7												50.9	123026.88	50.9	123026.88
	Study #17	19:38:00	19:38:00	7:26:22 AM		7	Day	50.5	47.5	112201.85	56051.77	52.6	54.5												50.5	112201.85	50.5	112201.85
	Study #17	19:39:00	19:39:00	7:27:22 AM		7	Day	49.8	47.5	95499.26	55628.60	52.1	53.4												49.8	95499.26	49.8	95499.26
	Study #17	19:40:00	19:40:00	7:28:22 AM		7	Day	50.5	47.5	112201.85	55680.82	52.7	50.9												50.5	112201.85	50.5	112201.85
	Study #17	19:41:00	19:41:00	7:29:22 AM		7	Day	51.1	45.4	128824.96	34492.95	53.3	49.5		54.2		53.3		60.9		61.8		63.5		51.1	128824.96	51.1	128824.96
		19:42:00	19:42:00	7:30:22 AM		7	Day	50.6		114815.36		53.8													50.6	114815.36	50.6	114815.36
		19:43:00	19:43:00	7:31:22 AM		7	Day	49.9		97723.72		54.1													49.9	97723.72	49.9	97723.72
		19:44:00	19:44:00	7:32:22 AM		7	Day	51.9		154881.66		61.5													51.9	154881.66	51.9	154881.66
		19:45:00	19:45:00	7:33:22 AM		7	Day	51.1		128824.96		58.6													51.1	128824.96	51.1	128824.96
		19:46:00	19:46:00	7:34:22 AM		7	Day	50.3		107151.93		52.4													50.3	107151.93	50.3	107151.93
		19:47:00	19:47:00	7:35:22 AM		7	Day	50.4		109647.82		58.9													50.4	109647.82	50.4	109647.82
		19:48:00	19:48:00	7:36:22 AM		7	Day	53.9		245470.89		59.8													53.9	245470.89	53.9	245470.89
		19:49:00	19:49:00	7:37:22 AM		7	Day	59.9		977237.22		62.7													59.9	977237.22	59.9	977237.22
		19:50:00	19:50:00	7:38:22 AM		7	Day	55.8		380189.40		59.7													55.8	380189.40	55.8	380189.40
		19:51:00	19:51:00	7:39:22 AM		7	Day	54.1		257039.58		58.8													54.1	257039.58	54.1	257039.58
		19:52:00	19:52:00	7:40:22 AM		7	Day	53.6		229086.77		55.5													53.6	229086.77	53.6	229086.77
		19:53:00	19:53:00	7:41:22 AM		7	Day	52.1		162181.01		54.3													52.1	162181.01	52.1	162181.01
	Study #18	19:54:00	19:54:00	7:42:22 AM		7	Day	50.6	58.5	114815.36	702351.90	53.6	62.5												50.6	114815.36	50.6	114815.36

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #18	19:55:00	19:55:00	7:43:22 AM		7 Day		50.8	58.0	120226.44	637452.02	52.6	63.2												50.8	120226.44	50.8	120226.44
	Study #18	19:56:00	19:56:00	7:44:22 AM		7 Day		51.5	58.4	141253.75	687540.24	52.9	62.0												51.5	141253.75	51.5	141253.75
	Study #18	19:57:00	19:57:00	7:45:22 AM		7 Day		50.1	58.8	102329.30	752128.86	54.5	67.0												50.1	102329.30	50.1	102329.30
	Study #18	19:58:00	19:58:00	7:46:22 AM		7 Day		50.3	55.4	107151.93	347091.74	53.8	58.1												50.3	107151.93	50.3	107151.93
	Study #18	19:59:00	19:59:00	7:47:22 AM		7 Day		49.8	55.4	95499.26	350551.15	51.3	59.0												49.8	95499.26	49.8	95499.26
	Study #18	20:00:00	20:00:00	7:48:22 AM		7 Day		49.6	56.1	91201.08	403706.30	52.0	59.9												49.6	91201.08	49.6	91201.08
	Study #18	20:01:00	20:01:00	7:49:22 AM		7 Day		49.6	59.9	91201.08	984651.95	52.8	65.8												49.6	91201.08	49.6	91201.08
	Study #18	20:02:00	20:02:00	7:50:22 AM	Union Pacific Train (east)	7 Day		49.1	63.5	81283.05	2249043.71	50.7	66.0												49.1	81283.05	49.1	81283.05
	Study #18	20:03:00	20:03:00	7:51:22 AM		7 Day		49.3	58.3	85113.80	682063.50	50.9	63.6												49.3	85113.80	49.3	85113.80
	Study #18	20:04:00	20:04:00	7:52:22 AM		7 Day		48.8	56.2	75857.76	420639.42	50.3	59.7												48.8	75857.76	48.8	75857.76
	Study #18	20:05:00	20:05:00	7:53:22 AM		7 Day		49.0	55.3	79432.82	338888.26	50.8	58.2												49.0	79432.82	49.0	79432.82
	Study #18	20:06:00	20:06:00	7:54:22 AM		7 Day		49.6	55.2	91201.08	332008.36	54.8	59.6												49.6	91201.08	49.6	91201.08
	Study #18	20:07:00	20:07:00	7:55:22 AM		7 Day		49.9	56.2	97723.72	414296.63	54.7	60.2												49.9	97723.72	49.9	97723.72
	Study #18	20:08:00	20:08:00	7:56:22 AM		7 Day		49.8	54.9	95499.26	305734.30	51.0	56.5		49.9		52.6		53.8		54.7		54.8		49.8	95499.26	49.8	95499.26
		20:09:00	20:09:00	7:57:22 AM		7 Day		49.3		85113.80		50.9													49.3	85113.80	49.3	85113.80
		20:10:00	20:10:00	7:58:22 AM		7 Day		49.4		87096.36		50.6													49.4	87096.36	49.4	87096.36
		20:11:00	20:11:00	7:59:22 AM		7 Day		48.5		70794.58		50.2		52.3		52.8		54.7		61.5		62.7		63.5	48.5	70794.58	48.5	70794.58
		20:12:00	20:12:00	8:00:22 AM		8 Day		48.1		64565.42		49.7													48.1	64565.42	48.1	64565.42
		20:13:00	20:13:00	8:01:22 AM		8 Day		48.5		70794.58		50.0													48.5	70794.58	48.5	70794.58
		20:14:00	20:14:00	8:02:22 AM		8 Day		48.3		67608.30		50.6													48.3	67608.30	48.3	67608.30
		20:15:00	20:15:00	8:03:22 AM		8 Day		48.6		72443.60		51.2													48.6	72443.60	48.6	72443.60
		20:16:00	20:16:00	8:04:22 AM		8 Day		48.8		75857.76		49.8													48.8	75857.76	48.8	75857.76
		20:17:00	20:17:00	8:05:22 AM		8 Day		50.5		112201.85		55.6													50.5	112201.85	50.5	112201.85
		20:18:00	20:18:00	8:06:22 AM		8 Day		57.1		512861.38		60.8													57.1	512861.38	57.1	512861.38
		20:19:00	20:19:00	8:07:22 AM		8 Day		56.4		436515.83		59.2													56.4	436515.83	56.4	436515.83
		20:20:00	20:20:00	8:08:22 AM		8 Day		56.9		489778.82		59.6													56.9	489778.82	56.9	489778.82
	Study #19	20:21:00	20:21:00	8:09:22 AM		8 Day		54.4	52.8	275422.87	191237.93	57.2	59.8												54.4	275422.87	54.4	275422.87
	Study #19	20:22:00	20:22:00	8:10:22 AM		8 Day		53.3	55.4	213796.21	350545.47	55.6	61.6												53.3	213796.21	53.3	213796.21
	Study #19	20:23:00	20:23:00	8:11:22 AM		8 Day		54.1	53.0	257039.58	201273.77	56.2	56.3												54.1	257039.58	54.1	257039.58
	Study #19	20:24:00	20:24:00	8:12:22 AM		8 Day		55.3	51.7	338844.16	149262.55	60.5	54.6												55.3	338844.16	55.3	338844.16
	Study #19	20:25:00	20:25:00	8:13:22 AM		8 Day		54.8	57.2	301995.17	529903.03	57.4	65.5												54.8	301995.17	54.8	301995.17
	Study #19	20:26:00	20:26:00	8:14:22 AM		8 Day		51.8	52.1	151356.12	160918.62	53.6	57.6												51.8	151356.12	51.8	151356.12
	Study #19	20:27:00	20:27:00	8:15:22 AM		8 Day		50.2	48.3	104712.85	67989.73	54.2	50.5												50.2	104712.85	50.2	104712.85
	Study #19	20:28:00	20:28:00	8:16:22 AM		8 Day		49.7	50.3	93325.43	107810.86	54.2	55.9												49.7	93325.43	49.7	93325.43
	Study #19	20:29:00	20:29:00	8:17:22 AM		8 Day		49.1	50.8	81283.05	118877.50	53.0	53.2												49.1	81283.05	49.1	81283.05
	Study #19	20:30:00	20:30:00	8:18:22 AM		8 Day		49.3	57.1	85113.80	508759.82	52.7	61.0												49.3	85113.80	49.3	85113.80
	Study #19	20:31:00	20:31:00	8:19:22 AM		8 Day		49.8	50.8	95499.26	119264.45	53.7	56.1												49.8	95499.26	49.8	95499.26
	Study #19	20:32:00	20:32:00	8:20:22 AM		8 Day		49.5	49.3	89125.09	85425.05	54.6	53.3												49.5	89125.09	49.5	89125.09
	Study #19	20:33:00	20:33:00	8:21:22 AM		8 Day		48.9	50.9	77624.71	122887.97	50.5	54.5												48.9	77624.71	48.9	77624.71
	Study #19	20:34:00	20:34:00	8:22:22 AM		8 Day		55.3	54.3	338844.16	270169.28	60.0	58.1												55.3	338844.16	55.3	338844.16
	Study #19	20:35:00	20:35:00	8:23:22 AM		8 Day		58.5	52.4	707945.78	173439.97	61.0	54.6		53.3		54.6		57.4		60.5		61.0		58.5	707945.78	58.5	707945.78
		20:36:00	20:36:00	8:24:22 AM		8 Day		55.6		363078.05		58.4													55.6	363078.05	55.6	363078.05
		20:37:00	20:37:00	8:25:22 AM		8 Day		53.5		223872.11		55.7													53.5	223872.11	53.5	223872.11
		20:38:00	20:38:00	8:26:22 AM		8 Day		52.4		173780.08		56.8													52.4	173780.08	52.4	173780.08
	Study #20	20:39:00	20:39:00	8:27:22 AM		8 Day		48.8	65.6	75857.76	3595641.73	50.7	71.9												48.8	75857.76	48.8	75857.76
	Study #20	20:40:00	20:40:00	8:28:22 AM	Car backfire	8 Day		48.7	78.5	74131.02	70217301.40	50.5	96.0												48.7	74131.02	48.7	74131.02
	Study #20	20:41:00	20:41:00	8:29:22 AM		8 Day		48.9	46.8	77624.71	48412.96	52.1	50.9												48.9	77624.71	48.9	77624.71
	Study #20	20:42:00	20:42:00	8:30:22 AM		8 Day		48.6	44.9	72443.60	30859.94	50.0	46.4												48.6	72443.60	48.6	72443.60
	Study #20	20:43:00	20:43:00	8:31:22 AM		8 Day		48.7	44.9	74131.02	31210.65	50.3	46.7												48.7	74131.02	48.7	74131.02
	Study #20	20:44:00	20:44:00	8:32:22 AM		8 Day		48.3	45.2	67608.30	32998.78	49.7	46.8												48.3	67608.30	48.3	67608.30
	Study #20	20:45:00	20:45:00	8:33:22 AM		8 Day		49.2	46.5	83176.38	44593.70	56.5	50.8												49.2	83176.38	49.2	83176.38
	Study #20	20:46:00	20:46:00	8:34:22 AM	Train (east)	8 Day		50.4	52.0	109647.82	159826.09	60.6	59.9												50.4	109647.82	50.4	109647.82
	Study #20	20:47:00	20:47:00	8:35:22 AM		8 Day		52.8	52.4	190546.07	174240.30	57.9	59.6												52.8	190546.07	52.8	190546.07
	Study #20	20:48:00	20:48:00	8:36:22 AM		8 Day		52.3	45.1	169824.37	32217.17	56.8	47.5												52.3	169824.37	52.3	169824.37
	Study #20	20:49:00	20:49:00	8:37:22 AM		8 Day		48.5	44.6	70794.58	29015.93	49.7	47.7												48.5	70794.58	48.5	70794.58
	Study #20	20:50:00	20:50:00	8:38:22 AM		8 Day		54.7	46.4	295120.92	43732.97	58.4	58.3												54.7	295120.92	54.7	295120.92
	Study #20	20:51:00	20:51:00	8:39:22 AM		8 Day		55.7	56.4	371535.23	440872.90	56.9	62.4												55.7	371535.23	55.7	371535.23
	Study #20	20:52:00	20:52:00	8:40:22 AM	Union Pacific Train (west)	8 Day		56.5	59.7	446683.59	935088.79	57.8	61.0												56.5	446683.59	56.5	446683.59
	Study #20	20:53:00	20:53:00	8:41:22 AM		8 Day		56.7	60.7	467735.14	1183826.60	58.5	63.4		52.5		56.5		57.9		58.5		60.6		56.7	467735.14	56.7	467735.14
		20:54:00	20:54:00	8:42:22 AM		8 Day		51.4		138038.43		58.2													51.4	138038.43	51.4	138038.43
		20:55:00	20:55:00	8:43:22 AM		8 Day		49.4		87096.36		51.8													49.4	87096.36	49.4	87096.36
		20:56:00	20:56:00	8:44:22 AM		8 Day		48.1		64565.42		50.0													48.1	64565.42	48.1	64565.42
	Study #21	20:57:00	20:57:00	8:45:22 AM		8 Day		47.5	50.5	56234.13	111774.51	50.5	56.4												47.5	56234.13	47.5	56234.13
	Study #21	20:58:00	20:58:00	8:46:22 AM		8 Day		46.4	43.7	43651.58	23261.90	48.2	51.7												46.4	43651.58	46.4	43651.58
	Study #21	20:59:00	20:59:00	8:47:22 AM		8 Day		45.8	41.7	38018.94	14649.94	47.3	43.5												45.8	38018.94	45.8	38018.94
	Study #21	21:00:00	21:00:00	8:48:22 AM		8 Day		44.8	41.8	30199.52	14999.18	46.6	42.8												44.8	30199.52	44.8	30199.52
	Study #21	21:01:00	21:01:00	8:49:22 AM		8 Day		44.0	45.6	25118.86	36570.32	45.4	51.4												44.0	25118.86	44.0	25118.86
	Study #21	21:02:00	21:02:00	8:50:22 AM		8 Day		44.8	44.9	30199.52	31194.61	47.4	51.7												44.8	30199.52	44.8	30199.52
	Study #21	21:03:00	21:03:00	8:51:22 AM		8 Day		43.3	41.9	21379.62	15366.68	44.7	44.0												43.3	21379.62	43.3	21379.62
	Study #21	21:04:00	21:04:00	8:52:22 AM		8 Day		44.9	42.7	30902.95	18460.65	46.7	45.6												44.9	30902.95	44.9	30902.95
	Study #21	21:05:00	21:05:00	8:53:22 AM		8 Day		46.5	46.0	44668.36	40218.84	48.3	50.2												46.5	44668.36	46.5	44668.36
	Study #21	21:06:00	21:06:00	8:54:22 AM		8 Day		44.8	42.4	30199.52	17564.73	46.4	43.8												44.8	30199.52	44.8	30199.52
	Study #21	21:07:00	21:07:00	8:55:22 AM		8 Day		43.6	42.6	22908.68	18406.11	44.6	46.4												43.6	22908.68	43.6	22908.68
	Study #21	21:08:00	21:08:00	8:56:22 AM		8 Day		44.1	42.4	25703.96	17493.96	45.1	47.1												44.1	25703.96	44.1	25703.96
	Study #21	21:09:00	21:09:00	8:57:22 AM		8 Day		45.5	42.4	35481.34	17234.45	51.1	48.1												45.5	35481.34	45.5	35481.34
	Study #21	21:10:00	21:10:00	8:58:22 AM		8 Day		44.9	42.3	30902.95	17123.23	48.0	47.0												44.9	30902.95	44.9	30902.95

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #21	21:11:00	21:11:00	8:59:22 AM		8	Day	44.5	43.4	28183.83	22055.04	46.5	46.7	51.9	45.2	52.7	46.7	57.2	48.2	60.0	50.5	60.8	51.1	61.0	44.5	28183.83	44.5	28183.83
		21:12:00	21:12:00	9:00:22 AM		9	Day	46.9		48977.88		48.6													46.9	48977.88	46.9	48977.88
		21:13:00	21:13:00	9:01:22 AM		9	Day	48.5		70794.58		51.8													48.5	70794.58	48.5	70794.58
		21:14:00	21:14:00	9:02:22 AM		9	Day	48.9		77624.71		51.0													48.9	77624.71	48.9	77624.71
		21:15:00	21:15:00	9:03:22 AM		9	Day	54.9		309029.54		59.9													54.9	309029.54	54.9	309029.54
		21:16:00	21:16:00	9:04:22 AM		9	Day	55.7		371535.23		59.1													55.7	371535.23	55.7	371535.23
		21:17:00	21:17:00	9:05:22 AM		9	Day	52.5		177827.94		54.1													52.5	177827.94	52.5	177827.94
		21:18:00	21:18:00	9:06:22 AM		9	Day	51.0		125892.54		54.0													51.0	125892.54	51.0	125892.54
		21:19:00	21:19:00	9:07:22 AM		9	Day	51.1		128824.96		53.9													51.1	128824.96	51.1	128824.96
		21:20:00	21:20:00	9:08:22 AM		9	Day	47.2		52480.75		49.2													47.2	52480.75	47.2	52480.75
		21:21:00	21:21:00	9:09:22 AM		9	Day	46.2		41686.94		48.0													46.2	41686.94	46.2	41686.94
		21:22:00	21:22:00	9:10:22 AM		9	Day	45.5		35481.34		46.8													45.5	35481.34	45.5	35481.34
		21:23:00	21:23:00	9:11:22 AM		9	Day	45.0		31622.78		46.3													45.0	31622.78	45.0	31622.78
	Study #22	21:24:00	21:24:00	9:12:22 AM		9	Day	46.1	44.2	40738.03	26004.38	48.5	51.1												46.1	40738.03	46.1	40738.03
	Study #22	21:25:00	21:25:00	9:13:22 AM		9	Day	47.0	42.7	50118.72	18635.13	48.9	44.9												47.0	50118.72	47.0	50118.72
	Study #22	21:26:00	21:26:00	9:14:22 AM		9	Day	46.6	43.4	45708.82	21831.52	48.6	46.7												46.6	45708.82	46.6	45708.82
	Study #22	21:27:00	21:27:00	9:15:22 AM		9	Day	46.7	42.6	46773.51	18038.49	48.8	46.0												46.7	46773.51	46.7	46773.51
	Study #22	21:28:00	21:28:00	9:16:22 AM		9	Day	46.0	44.3	39810.72	27205.50	47.5	48.7												46.0	39810.72	46.0	39810.72
	Study #22	21:29:00	21:29:00	9:17:22 AM	Helicopter	9	Day	48.9	52.1	77624.71	162282.80	54.3	58.2												48.9	77624.71	48.9	77624.71
	Study #22	21:30:00	21:30:00	9:18:22 AM		9	Day	61.3	48.0	1348962.88	63113.47	68.2	52.7												61.3	1348962.88	61.3	1348962.88
	Study #22	21:31:00	21:31:00	9:19:22 AM		9	Day	47.4	45.3	54954.09	33589.20	48.9	54.1												47.4	54954.09	47.4	54954.09
	Study #22	21:32:00	21:32:00	9:20:22 AM		9	Day	47.3	43.5	53703.18	22179.69	49.6	49.0												47.3	53703.18	47.3	53703.18
	Study #22	21:33:00	21:33:00	9:21:22 AM		9	Day	46.0	43.3	39810.72	21171.00	48.2	49.1												46.0	39810.72	46.0	39810.72
	Study #22	21:34:00	21:34:00	9:22:22 AM		9	Day	46.2	53.2	41686.94	211289.44	48.6	59.9												46.2	41686.94	46.2	41686.94
	Study #22	21:35:00	21:35:00	9:23:22 AM		9	Day	44.4	49.1	27542.29	81182.55	48.7	54.4												44.4	27542.29	44.4	27542.29
	Study #22	21:36:00	21:36:00	9:24:22 AM	Helicopter	9	Day	49.9	60.2	97723.72	1049590.65	54.3	66.0												49.9	97723.72	49.9	97723.72
	Study #22	21:37:00	21:37:00	9:25:22 AM		9	Day	49.5	47.0	89125.09	50071.82	55.2	55.5												49.5	89125.09	49.5	89125.09
	Study #22	21:38:00	21:38:00	9:26:22 AM		9	Day	44.8	42.2	30199.52	16591.89	47.7	45.3		51.4		48.8		54.3		55.2		68.2		44.8	30199.52	44.8	30199.52
		21:39:00	21:39:00	9:27:22 AM		9	Day	45.0		31622.78		48.0													45.0	31622.78	45.0	31622.78
	Study #23	21:40:00	21:40:00	9:28:22 AM		9	Day	45.2	43.6	33113.11	23103.89	48.3	49.8												45.2	33113.11	45.2	33113.11
	Study #23	21:41:00	21:41:00	9:29:22 AM		9	Day	45.2	45.7	33113.11	37290.62	47.8	52.8												45.2	33113.11	45.2	33113.11
	Study #23	21:42:00	21:42:00	9:30:22 AM		9	Day	47.9	42.7	61659.50	18495.19	50.9	48.9												47.9	61659.50	47.9	61659.50
	Study #23	21:43:00	21:43:00	9:31:22 AM		9	Day	46.0	40.3	39810.72	10773.16	47.8	41.4												46.0	39810.72	46.0	39810.72
	Study #23	21:44:00	21:44:00	9:32:22 AM		9	Day	45.1	41.1	32359.37	12924.24	46.6	42.4												45.1	32359.37	45.1	32359.37
	Study #23	21:45:00	21:45:00	9:33:22 AM		9	Day	45.6	40.5	36307.81	11306.27	47.8	42.9												45.6	36307.81	45.6	36307.81
	Study #23	21:46:00	21:46:00	9:34:22 AM		9	Day	44.8	40.9	30199.52	12338.10	47.6	42.3												44.8	30199.52	44.8	30199.52
	Study #23	21:47:00	21:47:00	9:35:22 AM		9	Day	45.5	40.2	35481.34	10437.20	49.4	41.3												45.5	35481.34	45.5	35481.34
	Study #23	21:48:00	21:48:00	9:36:22 AM		9	Day	45.0	40.3	31622.78	10677.40	47.9	41.8												45.0	31622.78	45.0	31622.78
	Study #23	21:49:00	21:49:00	9:37:22 AM		9	Day	51.1	40.3	128824.96	10650.43	62.0	42.7												51.1	128824.96	51.1	128824.96
	Study #23	21:50:00	21:50:00	9:38:22 AM		9	Day	46.0	40.4	39810.72	10878.32	49.2	42.4												46.0	39810.72	46.0	39810.72
	Study #23	21:51:00	21:51:00	9:39:22 AM		9	Day	45.3	40.8	33884.42	12061.17	47.6	42.1												45.3	33884.42	45.3	33884.42
	Study #23	21:52:00	21:52:00	9:40:22 AM		9	Day	45.4	42.8	34673.69	19147.15	48.2	44.4												45.4	34673.69	45.4	34673.69
	Study #23	21:53:00	21:53:00	9:41:22 AM		9	Day	48.8	47.8	75857.76	59998.82	55.5	52.9												48.8	75857.76	48.8	75857.76
	Study #23	21:54:00	21:54:00	9:42:22 AM		9	Day	47.4	46.0	54954.09	40179.04	52.0	55.9		46.7		48.2		50.9		55.5		62.0		47.4	54954.09	47.4	54954.09
		21:55:00	21:55:00	9:43:22 AM		9	Day	44.2		26302.68		47.4													44.2	26302.68	44.2	26302.68
		21:56:00	21:56:00	9:44:22 AM		9	Day	44.1		25703.96		47.8													44.1	25703.96	44.1	25703.96
		21:57:00	21:57:00	9:45:22 AM		9	Day	44.3		26915.35		48.4													44.3	26915.35	44.3	26915.35
		21:58:00	21:58:00	9:46:22 AM		9	Day	43.8		23988.33		46.9													43.8	23988.33	43.8	23988.33
		21:59:00	21:59:00	9:47:22 AM		9	Day	44.1		25703.96		47.1													44.1	25703.96	44.1	25703.96
		22:00:00	22:00:00	9:48:22 AM		9	Day	43.6		22908.68		47.1													43.6	22908.68	43.6	22908.68
		22:01:00	22:01:00	9:49:22 AM		9	Day	43.7		23442.29		46.9													43.7	23442.29	43.7	23442.29
		22:02:00	22:02:00	9:50:22 AM		9	Day	43.6		22908.68		47.1													43.6	22908.68	43.6	22908.68
		22:03:00	22:03:00	9:51:22 AM		9	Day	45.4		34673.69		51.0													45.4	34673.69	45.4	34673.69
		22:04:00	22:04:00	9:52:22 AM		9	Day	45.2		33113.11		49.0													45.2	33113.11	45.2	33113.11
		22:05:00	22:05:00	9:53:22 AM		9	Day	43.6		22908.68		45.9													43.6	22908.68	43.6	22908.68
		22:06:00	22:06:00	9:54:22 AM		9	Day	44.3		26915.35		47.2													44.3	26915.35	44.3	26915.35
		22:07:00	22:07:00	9:55:22 AM		9	Day	44.3		26915.35		47.7													44.3	26915.35	44.3	26915.35
		22:08:00	22:08:00	9:56:22 AM		9	Day	44.0		25118.86		47.8													44.0	25118.86	44.0	25118.86
		22:09:00	22:09:00	9:57:22 AM		9	Day	44.6		28840.32		48.0													44.6	28840.32	44.6	28840.32
		22:10:00	22:10:00	9:58:22 AM		9	Day	44.9		30902.95		48.7													44.9	30902.95	44.9	30902.95
		22:11:00	22:11:00	9:59:22 AM		9	Day	45.4		34673.69		48.5		49.0		48.5		51.0		55.5		62.0		68.2	45.4	34673.69	45.4	34673.69
		22:12:00	22:12:00	10:00:22 AM		10	Day	44.3		26915.35		46.0													44.3	26915.35	44.3	26915.35
		22:13:00	22:13:00	10:01:22 AM		10	Day	44.8		30199.52		48.8													44.8	30199.52	44.8	30199.52
		22:14:00	22:14:00	10:02:22 AM		10	Day	43.3		21379.62		46.9													43.3	21379.62	43.3	21379.62
		22:15:00	22:15:00	10:03:22 AM		10	Day	50.2		104712.85		57.5													50.2	104712.85	50.2	104712.85
		22:16:00	22:16:00	10:04:22 AM		10	Day	45.8		38018.94		50.5													45.8	38018.94	45.8	38018.94
		22:17:00	22:17:00	10:05:22 AM		10	Day	43.8		23988.33		46.8													43.8	23988.33	43.8	23988.33
		22:18:00	22:18:00	10:06:22 AM		10	Day	42.2		16595.87		44.7													42.2	16595.87	42.2	16595.87
		22:19:00	22:19:00	10:07:22 AM		10	Day	43.5		22387.21		46.1													43.5	22387.21	43.5	22387.21
		22:20:00	22:20:00	10:08:22 AM		10	Day	45.8		38018.94		48.8													45.8	38018.94	45.8	38018.94
		22:21:00	22:21:00	10:09:22 AM		10	Day	44.1		25703.96		47.6													44.1	25703.96	44.1	25703.96
	Study #24	22:22:00	22:22:00	10:10:22 AM		10	Day	44.4	48.8	27542.29	76267.02	46.0	53.5												44.4	27542.29	44.4	27542.29
	Study #24	22:23:00	22:23:00	10:11:22 AM	Train (west)	10	Day	48.2	55.0	66069.34	313929.15	51.0	57.5												48.2	66069.34	48.2	66069.34
	Study #24	22:24:00	22:24:00	10:12:22 AM	Large truck pass by on nearby dirt road	10	Day	58.6	61.8	724435.96	1513340.12	64.0	68.3												58.6	724435.96	58.6	724435.96
	Study #24	22:25:00	22:25:00	10:13:22 AM		10	Day	62.5	47.4	1778279.41	54623.11	64.2	53.7												62.5	1778279.41	62.5	1778279.41
	Study #24	22:26:00	22:26:00	10:14:22 AM		10	Day	57.4	42.6	549540.87	18304.55	60.2	45.3												57.4	549540.87	57.4	549540.87
	Study #24	22:27:00	22:27:00	10:15:22 AM		10	Day	51.9	49.8	154881.66	95593.40	55.4	57.6												51.9	154881.66	51.9	154881.66

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	Study #24	22:28:00	22:28:00	10:16:22 AM	Plane flyover	10	Day	54.7	53.3	295120.92	214073.41	59.8	57.9												54.7	295120.92	54.7	295120.92
	Study #24	22:29:00	22:29:00	10:17:22 AM		10	Day	52.2	48.3	165958.69	67720.00	57.8	52.4												52.2	165958.69	52.2	165958.69
	Study #24	22:30:00	22:30:00	10:18:22 AM		10	Day	49.6	42.3	91201.08	16905.35	53.4	53.1												49.6	91201.08	49.6	91201.08
	Study #24	22:31:00	22:31:00	10:19:22 AM		10	Day	44.9	42.7	30902.95	18589.38	48.2	54.9												44.9	30902.95	44.9	30902.95
	Study #24	22:32:00	22:32:00	10:20:22 AM	Train (east)	10	Day	43.6	59.0	22908.68	790656.12	45.4	67.4												43.6	22908.68	43.6	22908.68
	Study #24	22:33:00	22:33:00	10:21:22 AM		10	Day	58.9	48.7	776247.12	73412.22	67.1	60.0												58.9	776247.12	58.9	776247.12
	Study #24	22:34:00	22:34:00	10:22:22 AM		10	Day	44.9	37.4	30902.95	5520.13	51.7	41.2												44.9	30902.95	44.9	30902.95
	Study #24	22:35:00	22:35:00	10:23:22 AM		10	Day	41.7	43.3	14791.08	21269.33	44.1	52.4												41.7	14791.08	41.7	14791.08
	Study #24	22:36:00	22:36:00	10:24:22 AM		10	Day	49.9	49.5	97723.72	88801.98	57.7	54.7		55.1		55.4		60.2		64.2		67.1		49.9	97723.72	49.9	97723.72
		22:37:00	22:37:00	10:25:22 AM		10	Day	49.1		81283.05		55.6													49.1	81283.05	49.1	81283.05
		22:38:00	22:38:00	10:26:22 AM		10	Day	52.2		165958.69		57.0													52.2	165958.69	52.2	165958.69
		22:39:00	22:39:00	10:27:22 AM		10	Day	50.9		123026.88		57.6													50.9	123026.88	50.9	123026.88
		22:40:00	22:40:00	10:28:22 AM		10	Day	50.7		117489.76		59.5													50.7	117489.76	50.7	117489.76
	Study #25	22:41:00	22:41:00	10:29:22 AM		10	Day	46.8	48.2	47863.01	65846.24	53.1	54.6												46.8	47863.01	46.8	47863.01
	Study #25	22:42:00	22:42:00	10:30:22 AM	Train (west)	10	Day	56.2	50.1	416869.38	101171.67	58.7	52.8												56.2	416869.38	56.2	416869.38
	Study #25	22:43:00	22:43:00	10:31:22 AM		10	Day	58.7	49.6	741310.24	91266.11	61.0	50.9												58.7	741310.24	58.7	741310.24
	Study #25	22:44:00	22:44:00	10:32:22 AM		10	Day	57.9	45.7	616595.00	36848.71	61.5	47.7												57.9	616595.00	57.9	616595.00
	Study #25	22:45:00	22:45:00	10:33:22 AM		10	Day	47.4	41.5	54954.09	14109.94	51.1	44.0												47.4	54954.09	47.4	54954.09
	Study #25	22:46:00	22:46:00	10:34:22 AM		10	Day	42.9	41.5	19498.45	14030.38	44.9	45.0												42.9	19498.45	42.9	19498.45
	Study #25	22:47:00	22:47:00	10:35:22 AM		10	Day	45.1	38.2	32359.37	6590.96	48.8	39.0												45.1	32359.37	45.1	32359.37
	Study #25	22:48:00	22:48:00	10:36:22 AM		10	Day	42.9	38.3	19498.45	6760.83	45.0	38.5												42.9	19498.45	42.9	19498.45
	Study #25	22:49:00	22:49:00	10:37:22 AM		10	Day	42.6	42.9	18197.01	19281.90	44.5	45.2												42.6	18197.01	42.6	18197.01
	Study #25	22:50:00	22:50:00	10:38:22 AM		10	Day	46.1	43.1	40738.03	20441.75	48.6	45.1												46.1	40738.03	46.1	40738.03
	Study #25	22:51:00	22:51:00	10:39:22 AM		10	Day	43.7	42.7	23442.29	18650.07	45.2	44.3												43.7	23442.29	43.7	23442.29
	Study #25	22:52:00	22:52:00	10:40:22 AM	Train (east)	10	Day	43.4	46.1	21877.62	40833.37	44.7	48.1												43.4	21877.62	43.4	21877.62
	Study #25	22:53:00	22:53:00	10:41:22 AM		10	Day	46.0	45.4	39810.72	34630.95	48.0	47.3												46.0	39810.72	46.0	39810.72
	Study #25	22:54:00	22:54:00	10:42:22 AM		10	Day	46.0	41.0	39810.72	12699.36	48.5	46.8												46.0	39810.72	46.0	39810.72
	Study #25	22:55:00	22:55:00	10:43:22 AM		10	Day	43.0	41.8	19952.62	15035.33	46.9	46.2		51.6		48.5		53.1		61.0		61.5		43.0	19952.62	43.0	19952.62
		22:56:00	22:56:00	10:44:22 AM		10	Day	44.5		28183.83		46.6													44.5	28183.83	44.5	28183.83
		22:57:00	22:57:00	10:45:22 AM		10	Day	47.8		60255.96		51.3													47.8	60255.96	47.8	60255.96
		22:58:00	22:58:00	10:46:22 AM		10	Day	49.2		83176.38		54.7													49.2	83176.38	49.2	83176.38
		22:59:00	22:59:00	10:47:22 AM		10	Day	44.1		25703.96		46.9													44.1	25703.96	44.1	25703.96
		23:00:00	23:00:00	10:48:22 AM		10	Day	43.8		23988.33		46.3													43.8	23988.33	43.8	23988.33
		23:01:00	23:01:00	10:49:22 AM		10	Day	45.1		32359.37		47.9													45.1	32359.37	45.1	32359.37
		23:02:00	23:02:00	10:50:22 AM		10	Day	54.0		251188.64		59.4													54.0	251188.64	54.0	251188.64
		23:03:00	23:03:00	10:51:22 AM		10	Day	43.4		21877.62		45.3													43.4	21877.62	43.4	21877.62
		23:04:00	23:04:00	10:52:22 AM		10	Day	43.5		22387.21		46.4													43.5	22387.21	43.5	22387.21
		23:05:00	23:05:00	10:53:22 AM		10	Day	44.6		28840.32		46.4													44.6	28840.32	44.6	28840.32
		23:06:00	23:06:00	10:54:22 AM		10	Day	42.8		19054.61		45.0													42.8	19054.61	42.8	19054.61
		23:07:00	23:07:00	10:55:22 AM		10	Day	44.9		30902.95		49.8													44.9	30902.95	44.9	30902.95
		23:08:00	23:08:00	10:56:22 AM		10	Day	45.6		36307.81		47.7													45.6	36307.81	45.6	36307.81
		23:09:00	23:09:00	10:57:22 AM		10	Day	44.7		29512.09		48.0													44.7	29512.09	44.7	29512.09
		23:10:00	23:10:00	10:58:22 AM		10	Day	45.7		37153.52		48.9													45.7	37153.52	45.7	37153.52
		23:11:00	23:11:00	10:59:22 AM		10	Day	46.1		40738.03		48.8		51.6		48.8		57.0		61.0		64.2		67.1	46.1	40738.03	46.1	40738.03
		23:12:00	23:12:00	11:00:22 AM		11	Day	45.0		31622.78		48.4													45.0	31622.78	45.0	31622.78
		23:13:00	23:13:00	11:01:22 AM		11	Day	45.0		31622.78		46.8													45.0	31622.78	45.0	31622.78
		23:14:00	23:14:00	11:02:22 AM		11	Day	45.4		34673.69		47.1													45.4	34673.69	45.4	34673.69
		23:15:00	23:15:00	11:03:22 AM		11	Day	44.9		30902.95		48.3													44.9	30902.95	44.9	30902.95
		23:16:00	23:16:00	11:04:22 AM		11	Day	45.2		33113.11		46.8													45.2	33113.11	45.2	33113.11
		23:17:00	23:17:00	11:05:22 AM		11	Day	44.4		27542.29		47.6													44.4	27542.29	44.4	27542.29
		23:18:00	23:18:00	11:06:22 AM		11	Day	43.9		24547.09		46.3													43.9	24547.09	43.9	24547.09
		23:19:00	23:19:00	11:07:22 AM		11	Day	46.1		40738.03		47.9													46.1	40738.03	46.1	40738.03
		23:20:00	23:20:00	11:08:22 AM		11	Day	44.9		30902.95		47.2													44.9	30902.95	44.9	30902.95
		23:21:00	23:21:00	11:09:22 AM		11	Day	44.8		30199.52		48.5													44.8	30199.52	44.8	30199.52
		23:22:00	23:22:00	11:10:22 AM		11	Day	43.8		23988.33		46.5													43.8	23988.33	43.8	23988.33
		23:23:00	23:23:00	11:11:22 AM		11	Day	43.9		24547.09		46.1													43.9	24547.09	43.9	24547.09
		23:24:00	23:24:00	11:12:22 AM		11	Day	45.2		33113.11		48.2													45.2	33113.11	45.2	33113.11
		23:25:00	23:25:00	11:13:22 AM		11	Day	44.2		26302.68		46.2													44.2	26302.68	44.2	26302.68
		23:26:00	23:26:00	11:14:22 AM		11	Day	52.5		177827.94		58.9													52.5	177827.94	52.5	177827.94
		23:27:00	23:27:00	11:15:22 AM		11	Day	45.9		38904.51		53.2													45.9	38904.51	45.9	38904.51
		23:28:00	23:28:00	11:16:22 AM		11	Day	42.9		19498.45		45.1													42.9	19498.45	42.9	19498.45
		23:29:00	23:29:00	11:17:22 AM		11	Day	43.1		20417.38		45.4													43.1	20417.38	43.1	20417.38
		23:30:00	23:30:00	11:18:22 AM		11	Day	42.6		18197.01		45.4													42.6	18197.01	42.6	18197.01
		23:31:00	23:31:00	11:19:22 AM		11	Day	43.4		21877.62		45.7													43.4	21877.62	43.4	21877.62
		23:32:00	23:32:00	11:20:22 AM		11	Day	44.6		28840.32		46.7													44.6	28840.32	44.6	28840.32
		23:33:00	23:33:00	11:21:22 AM		11	Day	44.5		28183.83		48.3													44.5	28183.83	44.5	28183.83
		23:34:00	23:34:00	11:22:22 AM		11	Day	45.3		33884.42		47.6													45.3	33884.42	45.3	33884.42
		23:35:00	23:35:00	11:23:22 AM		11	Day	43.3		21379.62		46.5													43.3	21379.62	43.3	21379.62
		23:36:00	23:36:00	11:24:22 AM		11	Day	43.8		23988.33		47.2													43.8	23988.33	43.8	23988.33
		23:37:00	23:37:00	11:25:22 AM		11	Day	44.9		30902.95		47.6													44.9	30902.95	44.9	30902.95
		23:38:00	23:38:00	11:26:22 AM		11	Day	44.3		26915.35		47.3													44.3	26915.35	44.3	26915.35
		23:39:00	23:39:00	11:27:22 AM		11	Day	44.5		28183.83		46.2													44.5	28183.83	44.5	28183.83
		23:40:00	23:40:00	11:28:22 AM		11	Day	44.0		25118.86		45.2													44.0	25118.86	44.0	25118.86
		23:41:00	23:41:00	11:29:22 AM		11	Day	44.5		28183.83		47.1													44.5	28183.83	44.5	28183.83
		23:42:00	23:42:00	11:30:22 AM		11	Day	44.9		30902.95		47.2													44.9	30902.95	44.9	30902.95
		23:43:00	23:43:00	11:31:22 AM		11	Day	43.3		21379.62		45.8													43.3	21379.62	43.3	21379.62
		23:44:00	23:44:00	11:32:22 AM		11	Day	46.8		47863.01		49.4													46.8	47863.01	46.8	47863.01
		23:45:00	23:45:00	11:33:22 AM		11	Day	50.4		109647.82		53.1													50.4	109647.82	50.4	109647.82
		23:46:00	23:46:00	11:34:22 AM		11	Day	45.3		33884.42		46.7													45.3	33884.42	45.3	33884.42

Long-Duration Measurement (24-Hour Reference Location)

Study (24-Hour)	Study (15-Min)	Study Time	Session Time	Time of Day	15-Minute Field Notes	Hour of Day	Day/ Night	24-Hour L_{avg}	15-Min L_{avg}	24-Hour $10^{(Leq/10)}$	15-Min $10^{(Leq/10)}$	24-Hour L_{max}	15-Min L_{max}	24-Hour L_{eq} 1-Hour	24-Hour L_{eq} 15-Min	24-Hour L_{50} 1-Hour	24-Hour L_{50} 15-Min	24-Hour L_{25} 1-Hour	24-Hour L_{25} 15-Min	24-Hour $L_{8.3}$ 1-Hour	24-Hour $L_{8.3}$ 15-Min	24-Hour $L_{1.7}$ 1-Hour	24-Hour $L_{1.7}$ 15-Min	24-Hour L_{max} 1-Hour	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
		23:47:00	23:47:00	11:35:22 AM		11	Day	44.3		26915.35		47.4													44.3	26915.35	44.3	26915.35
		23:48:00	23:48:00	11:36:22 AM		11	Day	44.7		29512.09		47.8													44.7	29512.09	44.7	29512.09
		23:49:00	23:49:00	11:37:22 AM		11	Day	43.6		22908.68		44.9													43.6	22908.68	43.6	22908.68
		23:50:00	23:50:00	11:38:22 AM		11	Day	43.6		22908.68		45.9													43.6	22908.68	43.6	22908.68
		23:51:00	23:51:00	11:39:22 AM		11	Day	43.9		24547.09		47.1													43.9	24547.09	43.9	24547.09
		23:52:00	23:52:00	11:40:22 AM		11	Day	51.9		154881.66		60.3													51.9	154881.66	51.9	154881.66
		23:53:00	23:53:00	11:41:22 AM		11	Day	52.9		194984.46		57.6													52.9	194984.46	52.9	194984.46
		23:54:00	23:54:00	11:42:22 AM		11	Day	45.9		38904.51		51.2													45.9	38904.51	45.9	38904.51
		23:55:00	23:55:00	11:43:22 AM		11	Day	48.0		63095.73		52.8													48.0	63095.73	48.0	63095.73
		23:56:00	23:56:00	11:44:22 AM		11	Day	44.8		30199.52		45.9													44.8	30199.52	44.8	30199.52
		23:57:00	23:57:00	11:45:22 AM		11	Day	45.4		34673.69		47.9													45.4	34673.69	45.4	34673.69
		23:58:00	23:58:00	11:46:22 AM		11	Day	51.4		138038.43		61.0													51.4	138038.43	51.4	138038.43
		23:59:00	23:59:00	11:47:22 AM		11	Day	45.3		33884.42		47.9													45.3	33884.42	45.3	33884.42
		24:00:00	24:00:00	11:48:22 AM		11	Day	50.3		107151.93		61.8													50.3	107151.93	50.3	107151.93

24-Hour Noise Data: 1-Hour (dBA)

Time of Day	Hour of Day	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{dn}	CNEL
12:00:00 a.m.	0	47.1	45.2	50.5	55.6	57.6	58.4	58.6	59.0
1:00:00 a.m.	1	55.5	60.1	63.1	66.9	68.1	69.3		
2:00:00 a.m.	2	50.8	47.2	54.8	59.4	63.2	67.1		
3:00:00 a.m.	3	49.2	48.1	50.7	58.8	61.2	66.1		
4:00:00 a.m.	4	50.4	49.9	53.0	60.1	62.1	72.0		
5:00:00 a.m.	5	53.1	55.1	58.2	60.9	63.6	66.6		
6:00:00 a.m.	6	54.8	52.6	57.0	64.5	67.6	68.8		
7:00:00 a.m.	7	52.3	52.8	54.7	61.5	62.7	63.5		
8:00:00 a.m.	8	51.9	52.7	57.2	60.0	60.8	61.0		
9:00:00 a.m.	9	49.0	48.5	51.0	55.5	62.0	68.2		
10:00:00 a.m.	10	51.6	48.8	57.0	61.0	64.2	67.1		
11:00:00 a.m.	11	47.9	47.6	51.2	59.1	61.0	61.8		
12:00:00 p.m.	12	50.1	50.3	54.4	58.9	61.6	64.2		
1:00:00 p.m.	13	47.5	49.0	50.1	56.4	63.3	65.6		
2:00:00 p.m.	14	48.0	48.1	53.2	57.3	62.7	63.9		
3:00:00 p.m.	15	46.6	49.1	50.9	53.9	55.0	55.3		
4:00:00 p.m.	16	52.7	52.8	56.1	59.5	74.6	74.8		
5:00:00 p.m.	17	50.9	49.5	55.5	59.5	62.7	62.8		
6:00:00 p.m.	18	52.8	53.6	57.1	61.1	62.9	66.6		
7:00:00 p.m.	19	51.2	49.8	55.9	58.4	63.1	64.2		
8:00:00 p.m.	20	51.1	48.5	53.2	59.9	62.6	70.6		
9:00:00 p.m.	21	56.4	55.0	60.6	66.0	73.4	77.0		
10:00:00 p.m.	22	52.2	47.5	56.0	62.0	70.4	76.9		
11:00:00 p.m.	23	52.1	51.5	56.0	61.4	70.6	72.0		

24-Hour Noise Data: 15-Minute (dBA)

Study #	Hour of Day	Time of Day	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	L_{dn}	CNEL
#2	3 p.m.	Day	46.8	49.8	50.9	53.3	55.0	55.0	46.8	46.8
#3	3/4 p.m.	Day	48.5	51.0	52.9	53.5	54.7	54.7	48.5	48.5
#4	4 p.m.	Day	55.7	56.0	59.5	60.1	74.8	74.8	55.7	55.7
#5	4 p.m.	Day	49.8	52.3	53.4	55.9	59.1	59.1	49.8	49.8
#6	5 p.m.	Day	46.9	48.8	49.5	50.5	50.5	50.5	46.9	46.9
#7	5/6 p.m.	Day	55.4	57.1	61.1	62.2	62.7	62.7	55.4	55.4
#8	6 p.m.	Day	52.4	56.9	57.2	60.4	62.9	62.9	52.4	52.4
#9	6 p.m.	Day	51.5	51.1	54.5	60.0	60.0	60.0	51.5	51.5
#10	7 p.m.	Day	47.5	48.7	52.1	56.4	58.2	58.2	47.5	52.5
#11	7 p.m.	Day	47.5	47.9	48.6	54.9	55.9	55.9	47.5	52.5
#12	7/8 p.m.	Day	52.5	52.0	54.8	56.6	70.6	70.6	52.5	57.5
#13	6 a.m.	Night	51.3	52.6	53.8	59.6	61.2	61.2	61.3	61.3
#14	6 a.m.	Night	58.4	57.9	64.5	67.6	68.8	68.8	68.4	68.4
#15	6 a.m.	Night	54.4	51.2	57.0	64.2	65.9	65.9	64.4	64.4
#16	6/7 a.m.	Night/Day	50.4	52.1	53.6	54.3	57.6	57.6	55.9	55.9
#17	7 a.m.	Day	54.2	53.3	60.9	61.8	63.5	63.5	54.2	54.2
#18	7 a.m.	Day	49.9	52.6	53.8	54.7	54.8	54.8	49.9	49.9
#19	8 a.m.	Day	53.3	54.6	57.4	60.5	61.0	61.0	53.3	53.3
#20	8 a.m.	Day	52.5	56.5	57.9	58.5	60.6	60.6	52.5	52.5
#21	8 a.m.	Day	45.2	46.7	48.2	50.5	51.1	51.1	45.2	45.2
#22	9 a.m.	Day	51.4	48.8	54.3	55.2	68.2	68.2	51.4	51.4
#23	9 a.m.	Day	46.7	48.2	50.9	55.5	62.0	62.0	46.7	46.7
#24	10 a.m.	Day	55.1	55.4	60.2	64.2	67.1	67.1	55.1	55.1
#25	10 a.m.	Day	51.6	48.5	53.1	61.0	61.5	61.5	51.6	51.6

Short-Duration (Studies #2 through #25)

Receptors R1 - R12

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
Study #2	0:00:10	0:00:10	3:21:12 PM	21.00		50.8	120226.44			54.2						50.8	120226.44	50.8	120226.44
Receptor 1	0:00:20	0:00:20	3:21:22 PM	21.00		50.5	112201.85			53.6						50.5	112201.85	50.5	112201.85
	0:00:30	0:00:30	3:21:32 PM	21.00		49.8	95499.26			52.1						49.8	95499.26	49.8	95499.26
	0:00:40	0:00:40	3:21:42 PM	21.00		58.3	676082.98			67.3						58.3	676082.98	58.3	676082.98
	0:00:50	0:00:50	3:21:52 PM	21.00		67.2	5248074.60			70.7						67.2	5248074.60	67.2	5248074.60
	0:01:00	0:01:00	3:22:02 PM	22.00		60.1	1023292.99	60.8	1212563.02	62.6	70.7					60.1	1023292.99	60.1	1023292.99
	0:01:10	0:01:10	3:22:12 PM	22.00		53.0	199526.23			55.2						53.0	199526.23	53.0	199526.23
	0:01:20	0:01:20	3:22:22 PM	22.00		49.7	93325.43			51.8						49.7	93325.43	49.7	93325.43
	0:01:30	0:01:30	3:22:32 PM	22.00		45.7	37153.52			47.6						45.7	37153.52	45.7	37153.52
	0:01:40	0:01:40	3:22:42 PM	22.00		47.6	57543.99			51.0						47.6	57543.99	47.6	57543.99
	0:01:50	0:01:50	3:22:52 PM	22.00		54.4	275422.87			57.5						54.4	275422.87	54.4	275422.87
	0:02:00	0:02:00	3:23:02 PM	23.00		60.0	1000000.00	54.4	277162.01	62.0	62.0					60.0	1000000.00	60.0	1000000.00
	0:02:10	0:02:10	3:23:12 PM	23.00		58.5	707945.78			61.9						58.5	707945.78	58.5	707945.78
	0:02:20	0:02:20	3:23:22 PM	23.00		70.8	12022644.35			79.2						70.8	12022644.35	70.8	12022644.35
	0:02:30	0:02:30	3:23:32 PM	23.00		78.5	70794578.44			80.9						78.5	70794578.44	78.5	70794578.44
	0:02:40	0:02:40	3:23:42 PM	23.00		61.4	1380384.26			69.0						61.4	1380384.26	61.4	1380384.26
	0:02:50	0:02:50	3:23:52 PM	23.00		55.7	371535.23			56.9						55.7	371535.23	55.7	371535.23
	0:03:00	0:03:00	3:24:02 PM	24.00		55.2	331131.12	71.5	14268036.53	56.0	80.9					55.2	331131.12	55.2	331131.12
	0:03:10	0:03:10	3:24:12 PM	24.00		53.1	204173.79			55.5						53.1	204173.79	53.1	204173.79
	0:03:20	0:03:20	3:24:22 PM	24.00		48.4	69183.10			50.9						48.4	69183.10	48.4	69183.10
	0:03:30	0:03:30	3:24:32 PM	24.00		46.9	48977.88			49.5						46.9	48977.88	46.9	48977.88
	0:03:40	0:03:40	3:24:42 PM	24.00		45.9	38904.51			48.4						45.9	38904.51	45.9	38904.51
	0:03:50	0:03:50	3:24:52 PM	24.00		38.7	7413.10			39.9						38.7	7413.10	38.7	7413.10
	0:04:00	0:04:00	3:25:02 PM	25.00		39.1	8128.31	48.0	62796.78	40.3	55.5					39.1	8128.31	39.1	8128.31
	0:04:10	0:04:10	3:25:12 PM	25.00		49.8	95499.26			53.1						49.8	95499.26	49.8	95499.26
	0:04:20	0:04:20	3:25:22 PM	25.00		47.5	56234.13			50.2						47.5	56234.13	47.5	56234.13
	0:04:30	0:04:30	3:25:32 PM	25.00		42.3	16982.44			46.5						42.3	16982.44	42.3	16982.44
	0:04:40	0:04:40	3:25:42 PM	25.00		47.6	57543.99			51.0						47.6	57543.99	47.6	57543.99
	0:04:50	0:04:50	3:25:52 PM	25.00		47.0	50118.72			50.9						47.0	50118.72	47.0	50118.72
	0:05:00	0:05:00	3:26:02 PM	26.00		45.4	34673.69	47.1	51842.04	49.1	53.1					45.4	34673.69	45.4	34673.69
	0:05:10	0:05:10	3:26:12 PM	26.00		47.4	54954.09			52.6						47.4	54954.09	47.4	54954.09
	0:05:20	0:05:20	3:26:22 PM	26.00		47.2	52480.75			52.4						47.2	52480.75	47.2	52480.75
	0:05:30	0:05:30	3:26:32 PM	26.00		38.6	7244.36			39.9						38.6	7244.36	38.6	7244.36
	0:05:40	0:05:40	3:26:42 PM	26.00		41.8	15135.61			43.2						41.8	15135.61	41.8	15135.61
	0:05:50	0:05:50	3:26:52 PM	26.00		44.0	25118.86			45.1						44.0	25118.86	44.0	25118.86
	0:06:00	0:06:00	3:27:02 PM	27.00		48.4	69183.10	45.7	37352.79	53.4	53.4					48.4	69183.10	48.4	69183.10
	0:06:10	0:06:10	3:27:12 PM	27.00		65.9	3890451.45			72.2						65.9	3890451.45	65.9	3890451.45
	0:06:20	0:06:20	3:27:22 PM	27.00		54.4	275422.87			60.5						54.4	275422.87	54.4	275422.87
	0:06:30	0:06:30	3:27:32 PM	27.00		46.3	42657.95			49.5						46.3	42657.95	46.3	42657.95
	0:06:40	0:06:40	3:27:42 PM	27.00		47.9	61659.50			49.5						47.9	61659.50	47.9	61659.50
	0:06:50	0:06:50	3:27:52 PM	27.00		54.2	263026.80			59.7						54.2	263026.80	54.2	263026.80
	0:07:00	0:07:00	3:28:02 PM	28.00		61.9	1548816.62	60.1	1013672.53	65.7	72.2					61.9	1548816.62	61.9	1548816.62
	0:07:10	0:07:10	3:28:12 PM	28.00		56.2	416869.38			58.3						56.2	416869.38	56.2	416869.38
	0:07:20	0:07:20	3:28:22 PM	28.00		52.0	158489.32			55.7						52.0	158489.32	52.0	158489.32
	0:07:30	0:07:30	3:28:32 PM	28.00		51.6	144543.98			58.3						51.6	144543.98	51.6	144543.98
	0:07:40	0:07:40	3:28:42 PM	28.00		59.4	870963.59			63.4						59.4	870963.59	59.4	870963.59
	0:07:50	0:07:50	3:28:52 PM	28.00		44.8	30199.52			49.0						44.8	30199.52	44.8	30199.52
	0:08:00	0:08:00	3:29:02 PM	29.00		45.5	35481.34	54.4	276091.19	47.6	63.4					45.5	35481.34	45.5	35481.34
	0:08:10	0:08:10	3:29:12 PM	29.00		46.1	40738.03			48.5						46.1	40738.03	46.1	40738.03
	0:08:20	0:08:20	3:29:22 PM	29.00		48.1	64565.42			50.0						48.1	64565.42	48.1	64565.42
	0:08:30	0:08:30	3:29:32 PM	29.00		52.9	194984.46			58.0						52.9	194984.46	52.9	194984.46
	0:08:40	0:08:40	3:29:42 PM	29.00		46.9	48977.88			53.4						46.9	48977.88	46.9	48977.88
	0:08:50	0:08:50	3:29:52 PM	29.00		43.1	20417.38			45.6						43.1	20417.38	43.1	20417.38
	0:09:00	0:09:00	3:30:02 PM	30.00		40.2	10471.29	48.0	63359.08	42.4	58.0					40.2	10471.29	40.2	10471.29
	0:09:10	0:09:10	3:30:12 PM	30.00		38.9	7762.47			40.4						38.9	7762.47	38.9	7762.47
	0:09:20	0:09:20	3:30:22 PM	30.00		40.7	11748.98			45.1						40.7	11748.98	40.7	11748.98
	0:09:30	0:09:30	3:30:32 PM	30.00		40.6	11481.54			44.0						40.6	11481.54	40.6	11481.54
	0:09:40	0:09:40	3:30:42 PM	30.00		45.7	37153.52			48.7						45.7	37153.52	45.7	37153.52
	0:09:50	0:09:50	3:30:52 PM	30.00		41.4	13803.84			43.8						41.4	13803.84	41.4	13803.84
	0:10:00	0:10:00	3:31:02 PM	31.00		45.2	33113.11	42.8	19177.24	51.4	51.4					45.2	33113.11	45.2	33113.11
	0:10:10	0:10:10	3:31:12 PM	31.00		51.7	147910.84			54.1						51.7	147910.84	51.7	147910.84
	0:10:20	0:10:20	3:31:22 PM	31.00		48.3	67608.30			51.6						48.3	67608.30	48.3	67608.30
	0:10:30	0:10:30	3:31:32 PM	31.00		38.9	7762.47			41.5						38.9	7762.47	38.9	7762.47
	0:10:40	0:10:40	3:31:42 PM	31.00		38.0	6309.57			39.4						38.0	6309.57	38.0	6309.57
	0:10:50	0:10:50	3:31:52 PM	31.00		47.4	54954.09			51.1						47.4	54954.09	47.4	54954.09
	0:11:00	0:11:00	3:32:02 PM	32.00		47.8	60255.96	47.6	57466.87	50.9	54.1					47.8	60255.96	47.8	60255.96
	0:11:10	0:11:10	3:32:12 PM	32.00		47.8	60255.96			51.8						47.8	60255.96	47.8	60255.96
	0:11:20	0:11:20	3:32:22 PM	32.00		50.1	102329.30			52.7						50.1	102329.30	50.1	102329.30
	0:11:30	0:11:30	3:32:32 PM	32.00		47.3	53703.18			50.3						47.3	53703.18	47.3	53703.18
	0:11:40	0:11:40	3:32:42 PM	32.00		49.0	79432.82			51.0						49.0	79432.82	49.0	79432.82
	0:11:50	0:11:50	3:32:52 PM	32.00		50.0	100000.00			51.7						50.0	100000.00	50.0	100000.00
	0:12:00	0:12:00	3:33:02 PM	33.00		48.3	67608.30	48.9	77221.59	51.8	52.7					48.3	67608.30	48.3	67608.30
	0:12:10	0:12:10	3:33:12 PM	33.00		49.5	89125.09			52.8						49.5	89125.09	49.5	89125.09
	0:12:20	0:12:20	3:33:22 PM	33.00		52.2	165958.69			53.8						52.2	165958.69	52.2	165958.69
	0:12:30	0:12:30	3:33:32 PM	33.00		48.0	63095.73			52.7						48.0	63095.73	48.0	63095.73
	0:12:40	0:12:40	3:33:42 PM	33.00		51.9	154881.66			55.2						51.9	154881.66	51.9	154881.66
	0:12:50	0:12:50	3:33:52 PM	33.00		50.2	104712.85			50.9						50.2	104712.85	50.2	104712.85
	0:13:00	0:13:00	3:34:02 PM	34.00		47.1	51286.14	50.2	104843.36	51.0	55.2					47.1	51286.14	47.1	51286.14
	0:13:10	0:13:10	3:34:12 PM	34.00		51.6	144543.98			54.0						51.6	144543.98	51.6	144543.98
	0:13:20	0:13:20	3:34:22 PM	34.00		50.1	102329.30			52.9						50.1	102329.30	50.1	102329.30
	0:13:30	0:13:30	3:34:32 PM	34.00		38.3	6760.83			40.3						38.3	6760.83	38.3	6760.83
	0:13:40	0:13:40	3:34:42 PM	34.00		40.6	11481.54			43.1						40.6	11481.54	40.6	11481.54
	0:13:50	0:13:50	3:34:52 PM	34.00		53.6	229086.77			59.5						53.6	229086.77	53.6	229086.77
	0:14:00	0:14:00	3:35:02 PM	35.00		48.8	75857.76	49.8	95010.03	55.9	59.5					48.8	75857.76	48.8	75857.76
	0:14:10	0:14:10	3:35:12 PM	35.00		54.2	263026.80			57.8						54.2	263026.80	54.2	263026.80
	0:14:20	0:14:20	3:35:22 PM	35.00		51.5	141253.75			55.9						51.5	141253.75	51.5	141253.75
	0:14:30	0:14:30	3:35:32 PM	35.00		48.9	77624.71			53.6						48.9	77624.71	48.9	77624.71
	0:14:40	0:14:40	3:35:42 PM	35.00		48.9	77624.71			50.9						48.9	77624.71	48.9	77624.71
	0:14:50	0:14:50	3:35:52 PM	35.00		48.0	63095.73			51.0						48.0	63095.73	48.0	63095.73

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:15:00	0:15:00	3:36:02 PM	36.00		49.8	95499.26	50.8	119687.50	55.9	57.8	48.4	52.2	60.0	70.8	49.8	95499.26	49.8	95499.26
Study #3	0:00:10	0:15:10	3:58:15 PM	58.00		56.5	446683.59			60.6						56.5	446683.59	56.5	446683.59
Receptor 2	0:00:20	0:15:20	3:58:25 PM	58.00		64.5	2818382.93			69.4						64.5	2818382.93	64.5	2818382.93
	0:00:30	0:15:30	3:58:35 PM	58.00		57.1	512861.38			65.4						57.1	512861.38	57.1	512861.38
	0:00:40	0:15:40	3:58:45 PM	58.00		62.5	1778279.41			69.2						62.5	1778279.41	62.5	1778279.41
	0:00:50	0:15:50	3:58:55 PM	58.00		63.2	2089296.13			67.9						63.2	2089296.13	63.2	2089296.13
	0:01:00	0:16:00	3:59:05 PM	59.00		50.0	100000.00	61.1	1290917.24	52.7	69.4					50.0	100000.00	50.0	100000.00
	0:01:10	0:16:10	3:59:15 PM	59.00		50.2	104712.85			50.9						50.2	104712.85	50.2	104712.85
	0:01:20	0:16:20	3:59:25 PM	59.00		53.9	245470.89			56.8						53.9	245470.89	53.9	245470.89
	0:01:30	0:16:30	3:59:35 PM	59.00		60.3	1071519.31			62.4						60.3	1071519.31	60.3	1071519.31
	0:01:40	0:16:40	3:59:45 PM	59.00		63.9	2454708.92			67.7						63.9	2454708.92	63.9	2454708.92
	0:01:50	0:16:50	3:59:55 PM	59.00		59.3	851138.04			61.2						59.3	851138.04	59.3	851138.04
	0:02:00	0:17:00	4:00:05 PM	0.00		65.0	3162277.66	61.2	1314971.28	67.6	67.7					65.0	3162277.66	65.0	3162277.66
	0:02:10	0:17:10	4:00:15 PM	0.00		67.2	5248074.60			70.1						67.2	5248074.60	67.2	5248074.60
	0:02:20	0:17:20	4:00:25 PM	0.00		74.7	29512092.27			77.7						74.7	29512092.27	74.7	29512092.27
	0:02:30	0:17:30	4:00:35 PM	0.00		83.4	218776162.39			86.2						83.4	218776162.39	83.4	218776162.39
	0:02:40	0:17:40	4:00:45 PM	0.00		85.5	354813389.23			87.0						85.5	354813389.23	85.5	354813389.23
	0:02:50	0:17:50	4:00:55 PM	0.00		78.1	64565422.90			82.0						78.1	64565422.90	78.1	64565422.90
	0:03:00	0:18:00	4:01:05 PM	1.00		70.0	10000000.00	80.6	113819190.23	73.2	87.0					70.0	10000000.00	70.0	10000000.00
	0:03:10	0:18:10	4:01:15 PM	1.00		65.3	3388441.56			66.9						65.3	3388441.56	65.3	3388441.56
	0:03:20	0:18:20	4:01:25 PM	1.00		65.7	3715352.29			67.9						65.7	3715352.29	65.7	3715352.29
	0:03:30	0:18:30	4:01:35 PM	1.00		62.8	1905460.72			64.0						62.8	1905460.72	62.8	1905460.72
	0:03:40	0:18:40	4:01:45 PM	1.00		65.2	3311311.21			66.7						65.2	3311311.21	65.2	3311311.21
	0:03:50	0:18:50	4:01:55 PM	1.00		69.1	8128305.16			71.9						69.1	8128305.16	69.1	8128305.16
	0:04:00	0:19:00	4:02:05 PM	2.00		72.9	19498446.00	68.2	6657886.16	75.3	75.3					72.9	19498446.00	72.9	19498446.00
	0:04:10	0:19:10	4:02:15 PM	2.00		68.3	6760829.75			71.5						68.3	6760829.75	68.3	6760829.75
	0:04:20	0:19:20	4:02:25 PM	2.00		66.5	4466835.92			67.4						66.5	4466835.92	66.5	4466835.92
	0:04:30	0:19:30	4:02:35 PM	2.00		64.4	2754228.70			65.1						64.4	2754228.70	64.4	2754228.70
	0:04:40	0:19:40	4:02:45 PM	2.00		65.8	3801893.96			68.1						65.8	3801893.96	65.8	3801893.96
	0:04:50	0:19:50	4:02:55 PM	2.00		68.3	6760829.75			69.8						68.3	6760829.75	68.3	6760829.75
	0:05:00	0:20:00	4:03:05 PM	3.00		67.6	5754399.37	67.0	5049836.24	68.5	71.5					67.6	5754399.37	67.6	5754399.37
	0:05:10	0:20:10	4:03:15 PM	3.00		68.1	6456542.29			71.7						68.1	6456542.29	68.1	6456542.29
	0:05:20	0:20:20	4:03:25 PM	3.00		68.9	7762471.17			70.8						68.9	7762471.17	68.9	7762471.17
	0:05:30	0:20:30	4:03:35 PM	3.00		65.7	3715352.29			66.9						65.7	3715352.29	65.7	3715352.29
	0:05:40	0:20:40	4:03:45 PM	3.00		66.1	4073802.78			67.9						66.1	4073802.78	66.1	4073802.78
	0:05:50	0:20:50	4:03:55 PM	3.00		64.3	2691534.80			66.7						64.3	2691534.80	64.3	2691534.80
	0:06:00	0:21:00	4:04:05 PM	4.00		66.7	4677351.41	66.9	4896175.79	70.8	71.7					66.7	4677351.41	66.7	4677351.41
	0:06:10	0:21:10	4:04:15 PM	4.00		76.2	41686938.35			78.2						76.2	41686938.35	76.2	41686938.35
	0:06:20	0:21:20	4:04:25 PM	4.00		75.8	38018939.63			78.5						75.8	38018939.63	75.8	38018939.63
	0:06:30	0:21:30	4:04:35 PM	4.00		65.9	3890451.45			69.7						65.9	3890451.45	65.9	3890451.45
	0:06:40	0:21:40	4:04:45 PM	4.00		62.1	1621810.10			64.5						62.1	1621810.10	62.1	1621810.10
	0:06:50	0:21:50	4:04:55 PM	4.00		63.4	2187761.62			68.2						63.4	2187761.62	63.4	2187761.62
	0:07:00	0:22:00	4:05:05 PM	5.00		60.7	1174897.55	71.7	14763466.45	63.9	78.5					60.7	1174897.55	60.7	1174897.55
	0:07:10	0:22:10	4:05:15 PM	5.00		50.6	114815.36			53.0						50.6	114815.36	50.6	114815.36
	0:07:20	0:22:20	4:05:25 PM	5.00		66.3	4265795.19			69.0						66.3	4265795.19	66.3	4265795.19
	0:07:30	0:22:30	4:05:35 PM	5.00		54.8	301995.17			62.2						54.8	301995.17	54.8	301995.17
	0:07:40	0:22:40	4:05:45 PM	5.00		59.0	794328.23			64.0						59.0	794328.23	59.0	794328.23
	0:07:50	0:22:50	4:05:55 PM	5.00		54.1	257039.58			62.4						54.1	257039.58	54.1	257039.58
	0:08:00	0:23:00	4:06:05 PM	6.00		51.9	154881.66	59.9	981475.87	58.3	69.0					51.9	154881.66	51.9	154881.66
	0:08:10	0:23:10	4:06:15 PM	6.00		63.1	2041737.94			68.0						63.1	2041737.94	63.1	2041737.94
	0:08:20	0:23:20	4:06:25 PM	6.00		47.2	52480.75			49.1						47.2	52480.75	47.2	52480.75
	0:08:30	0:23:30	4:06:35 PM	6.00		62.4	1737800.83			66.7						62.4	1737800.83	62.4	1737800.83
	0:08:40	0:23:40	4:06:45 PM	6.00		54.5	281838.29			61.3						54.5	281838.29	54.5	281838.29
	0:08:50	0:23:50	4:06:55 PM	6.00		62.4	1737800.83			67.0						62.4	1737800.83	62.4	1737800.83
	0:09:00	0:24:00	4:07:05 PM	7.00		45.0	31622.78	59.9	980546.90	48.2	68.0					45.0	31622.78	45.0	31622.78
	0:09:10	0:24:10	4:07:15 PM	7.00		45.1	32359.37			46.0						45.1	32359.37	45.1	32359.37
	0:09:20	0:24:20	4:07:25 PM	7.00		52.8	190546.07			58.6						52.8	190546.07	52.8	190546.07
	0:09:30	0:24:30	4:07:35 PM	7.00		67.3	5370317.96			70.4						67.3	5370317.96	67.3	5370317.96
	0:09:40	0:24:40	4:07:45 PM	7.00		60.4	1096478.20			66.5						60.4	1096478.20	60.4	1096478.20
	0:09:50	0:24:50	4:07:55 PM	7.00		64.1	2570395.78			68.0						64.1	2570395.78	64.1	2570395.78
	0:10:00	0:25:00	4:08:05 PM	8.00		61.6	1445439.77	62.5	1784256.19	68.2	70.4					61.6	1445439.77	61.6	1445439.77
	0:10:10	0:25:10	4:08:15 PM	8.00		64.5	2818382.93			66.8						64.5	2818382.93	64.5	2818382.93
	0:10:20	0:25:20	4:08:25 PM	8.00		63.0	1995262.31			67.8						63.0	1995262.31	63.0	1995262.31
	0:10:30	0:25:30	4:08:35 PM	8.00		57.8	602559.59			61.3						57.8	602559.59	57.8	602559.59
	0:10:40	0:25:40	4:08:45 PM	8.00		51.5	141253.75			59.4						51.5	141253.75	51.5	141253.75
	0:10:50	0:25:50	4:08:55 PM	8.00		45.3	33884.42			46.6						45.3	33884.42	45.3	33884.42
	0:11:00	0:26:00	4:09:05 PM	9.00		45.1	32359.37	59.7	937283.73	46.5	67.8					45.1	32359.37	45.1	32359.37
	0:11:10	0:26:10	4:09:15 PM	9.00		55.7	371535.23			62.8						55.7	371535.23	55.7	371535.23
	0:11:20	0:26:20	4:09:25 PM	9.00		59.7	933254.30			64.1						59.7	933254.30	59.7	933254.30
	0:11:30	0:26:30	4:09:35 PM	9.00		61.0	1258925.41			66.0						61.0	1258925.41	61.0	1258925.41
	0:11:40	0:26:40	4:09:45 PM	9.00		56.8	478630.09			61.5						56.8	478630.09	56.8	478630.09
	0:11:50	0:26:50	4:09:55 PM	9.00		61.2	1318256.74			64.9						61.2	1318256.74	61.2	1318256.74
	0:12:00	0:27:00	4:10:05 PM	10.00		64.1	2570395.78	60.6	1155166.26	70.0	70.0					64.1	2570395.78	64.1	2570395.78
	0:12:10	0:27:10	4:10:15 PM	10.00		62.6	1819700.86			69.5						62.6	1819700.86	62.6	1819700.86
	0:12:20	0:27:20	4:10:25 PM	10.00		50.9	123026.88			60.6						50.9	123026.88	50.9	123026.88
	0:12:30	0:27:30	4:10:35 PM	10.00		63.5	2238721.14			69.2						63.5	2238721.14	63.5	2238721.14
	0:12:40	0:27:40	4:10:45 PM	10.00		56.7	467735.14			68.8						56.7	467735.14	56.7	467735.14
	0:12:50	0:27:50	4:10:55 PM	10.00		63.4	2187761.62			69.2						63.4	2187761.62	63.4	2187761.62
	0:13:00	0:28:00	4:11:05 PM	11.00		64.2	2630267.99	62.0	1577868.94	67.8	69.5					64.2	2630267.99	64.2	2630267.99
	0:13:10	0:28:10	4:11:15 PM	11.00		49.2	83176.38			55.6						49.2	83176.38	49.2	83176.38
	0:13:20	0:28:20	4:11:25 PM	11.00		44.2	26302.68			44.7						44.2	26302.68	44.2	26302.68
	0:13:30	0:28:30	4:11:35 PM	11.00		43.0	19952.62			43.8						43.0	19952.62	43.0	19952.62
	0:13:40	0:28:40	4:11:45 PM	11.00		44.4	27542.29			48.5						44.4	27542.29	44.4	27542.29
	0:13:50	0:28:50	4:11:55 PM	11.00		60.7	1174897.55			65.5						60.7	1174897.55	60.7	1174897.55
	0:14:00	0:29:00	4:12:05 PM	12.00		59.1	812830.52	55.5	357450.34	61.6	65.5					59.1	812830.52	59.1	812830.52
	0:14:10	0:29:10	4:12:15 PM	12.00		59.1	812830.52			62.9						59.1	812830.52	59.1	812830.52
	0:14:20	0:29:20	4:12:25 PM	12.00		57.3	537031.80			64.5						57.3	537031.80	57.3	537031.80
	0:14:30	0:29:30	4:12:35 PM	12.00		62.6	1819700.86			66.9						62.6	1819700.86	62.6	1819700.86
	0:14:40	0:29:40	4:12:45 PM	12.00		51.6	144543.98			56.9						51.6	144543.98	51.6	144543.98

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:50	0:29:50	4:12:55 PM	12.00		58.6	724435.96			63.9						58.6	724435.96	58.6	724435.96
	0:15:00	0:30:00	4:13:05 PM	13.00		59.9	977237.22	59.2	835963.39	64.9	66.9	62.5	65.7	70.0	83.4	59.9	977237.22	59.9	977237.22
Study #4	0:00:10	0:30:10	4:17:34 PM	17.00		53.8	239883.29			55.3						53.8	239883.29	53.8	239883.29
Receptor 3	0:00:20	0:30:20	4:17:44 PM	17.00		52.2	165958.69			53.9						52.2	165958.69	52.2	165958.69
	0:00:30	0:30:30	4:17:54 PM	17.00		51.7	147910.84			54.9						51.7	147910.84	51.7	147910.84
	0:00:40	0:30:40	4:18:04 PM	18.00		55.4	346736.85			57.7						55.4	346736.85	55.4	346736.85
	0:00:50	0:30:50	4:18:14 PM	18.00		51.6	144543.98			53.8						51.6	144543.98	51.6	144543.98
	0:01:00	0:31:00	4:18:24 PM	18.00		52.7	186208.71	53.1	205207.06	55.5	57.7					52.7	186208.71	52.7	186208.71
	0:01:10	0:31:10	4:18:34 PM	18.00		48.9	77624.71			50.8						48.9	77624.71	48.9	77624.71
	0:01:20	0:31:20	4:18:44 PM	18.00		50.6	114815.36			51.9						50.6	114815.36	50.6	114815.36
	0:01:30	0:31:30	4:18:54 PM	18.00		48.5	70794.58			50.0						48.5	70794.58	48.5	70794.58
	0:01:40	0:31:40	4:19:04 PM	19.00		50.1	102329.30			51.7						50.1	102329.30	50.1	102329.30
	0:01:50	0:31:50	4:19:14 PM	19.00		51.6	144543.98			55.0						51.6	144543.98	51.6	144543.98
	0:02:00	0:32:00	4:19:24 PM	19.00		56.0	398107.17	51.8	151369.18	57.5	57.5					56.0	398107.17	56.0	398107.17
	0:02:10	0:32:10	4:19:34 PM	19.00		54.4	275422.87			55.7						54.4	275422.87	54.4	275422.87
	0:02:20	0:32:20	4:19:44 PM	19.00		55.8	380189.40			56.8						55.8	380189.40	55.8	380189.40
	0:02:30	0:32:30	4:19:54 PM	19.00		56.8	478630.09			57.6						56.8	478630.09	56.8	478630.09
	0:02:40	0:32:40	4:20:04 PM	20.00		56.2	416869.38			57.1						56.2	416869.38	56.2	416869.38
	0:02:50	0:32:50	4:20:14 PM	20.00		57.9	616595.00			59.7						57.9	616595.00	57.9	616595.00
	0:03:00	0:33:00	4:20:24 PM	20.00		55.9	389045.14	56.3	426125.31	56.8	59.7					55.9	389045.14	55.9	389045.14
	0:03:10	0:33:10	4:20:34 PM	20.00		56.5	446683.59			57.2						56.5	446683.59	56.5	446683.59
	0:03:20	0:33:20	4:20:44 PM	20.00		55.5	354813.39			55.9						55.5	354813.39	55.5	354813.39
	0:03:30	0:33:30	4:20:54 PM	20.00		55.0	316227.77			57.4						55.0	316227.77	55.0	316227.77
	0:03:40	0:33:40	4:21:04 PM	21.00		56.2	416869.38			57.4						56.2	416869.38	56.2	416869.38
	0:03:50	0:33:50	4:21:14 PM	21.00		54.9	309029.54			56.4						54.9	309029.54	54.9	309029.54
	0:04:00	0:34:00	4:21:24 PM	21.00		54.3	269153.48	55.5	352129.53	54.8	57.4					54.3	269153.48	54.3	269153.48
	0:04:10	0:34:10	4:21:34 PM	21.00		55.5	354813.39			56.2						55.5	354813.39	55.5	354813.39
	0:04:20	0:34:20	4:21:44 PM	21.00		55.7	371535.23			57.1						55.7	371535.23	55.7	371535.23
	0:04:30	0:34:30	4:21:54 PM	21.00		55.1	323593.66			56.4						55.1	323593.66	55.1	323593.66
	0:04:40	0:34:40	4:22:04 PM	22.00		56.0	398107.17			56.8						56.0	398107.17	56.0	398107.17
	0:04:50	0:34:50	4:22:14 PM	22.00		55.9	389045.14			57.0						55.9	389045.14	55.9	389045.14
	0:05:00	0:35:00	4:22:24 PM	22.00		58.1	645654.23	56.2	413791.47	59.3	59.3					58.1	645654.23	58.1	645654.23
	0:05:10	0:35:10	4:22:34 PM	22.00		58.5	707945.78			60.6						58.5	707945.78	58.5	707945.78
	0:05:20	0:35:20	4:22:44 PM	22.00		56.6	457088.19			58.0						56.6	457088.19	56.6	457088.19
	0:05:30	0:35:30	4:22:54 PM	22.00		57.2	524807.46			58.9						57.2	524807.46	57.2	524807.46
	0:05:40	0:35:40	4:23:04 PM	23.00		58.0	630957.34			59.2						58.0	630957.34	58.0	630957.34
	0:05:50	0:35:50	4:23:14 PM	23.00		57.4	549540.87			59.2						57.4	549540.87	57.4	549540.87
	0:06:00	0:36:00	4:23:24 PM	23.00		59.1	812830.52	57.9	613861.69	59.7	60.6					59.1	812830.52	59.1	812830.52
	0:06:10	0:36:10	4:23:34 PM	23.00		58.7	741310.24			59.2						58.7	741310.24	58.7	741310.24
	0:06:20	0:36:20	4:23:44 PM	23.00		57.3	537031.80			57.7						57.3	537031.80	57.3	537031.80
	0:06:30	0:36:30	4:23:54 PM	23.00		56.8	478630.09			57.9						56.8	478630.09	56.8	478630.09
	0:06:40	0:36:40	4:24:04 PM	24.00		57.1	512861.38			57.7						57.1	512861.38	57.1	512861.38
	0:06:50	0:36:50	4:24:14 PM	24.00		56.6	457088.19			57.6						56.6	457088.19	56.6	457088.19
	0:07:00	0:37:00	4:24:24 PM	24.00		58.4	691830.97	57.6	569792.11	59.3	59.3					58.4	691830.97	58.4	691830.97
	0:07:10	0:37:10	4:24:34 PM	24.00		56.9	489778.82			57.9						56.9	489778.82	56.9	489778.82
	0:07:20	0:37:20	4:24:44 PM	24.00		54.7	295120.92			55.9						54.7	295120.92	54.7	295120.92
	0:07:30	0:37:30	4:24:54 PM	24.00		54.5	281838.29			55.1						54.5	281838.29	54.5	281838.29
	0:07:40	0:37:40	4:25:04 PM	25.00		54.3	269153.48			55.7						54.3	269153.48	54.3	269153.48
	0:07:50	0:37:50	4:25:14 PM	25.00		56.8	478630.09			59.3						56.8	478630.09	56.8	478630.09
	0:08:00	0:38:00	4:25:24 PM	25.00		54.2	263026.80	55.4	346258.07	56.2	59.3					54.2	263026.80	54.2	263026.80
	0:08:10	0:38:10	4:25:34 PM	25.00		57.5	562341.33			59.0						57.5	562341.33	57.5	562341.33
	0:08:20	0:38:20	4:25:44 PM	25.00		57.3	537031.80			59.1						57.3	537031.80	57.3	537031.80
	0:08:30	0:38:30	4:25:54 PM	25.00		56.2	416869.38			59.2						56.2	416869.38	56.2	416869.38
	0:08:40	0:38:40	4:26:04 PM	26.00		52.1	162181.01			53.3						52.1	162181.01	52.1	162181.01
	0:08:50	0:38:50	4:26:14 PM	26.00		53.8	239883.29			55.7						53.8	239883.29	53.8	239883.29
	0:09:00	0:39:00	4:26:24 PM	26.00		53.5	223872.11	55.5	357029.82	54.8	59.2					53.5	223872.11	53.5	223872.11
	0:09:10	0:39:10	4:26:34 PM	26.00		55.1	323593.66			56.2						55.1	323593.66	55.1	323593.66
	0:09:20	0:39:20	4:26:44 PM	26.00		55.2	331131.12			56.7						55.2	331131.12	55.2	331131.12
	0:09:30	0:39:30	4:26:54 PM	26.00		53.3	213796.21			55.6						53.3	213796.21	53.3	213796.21
	0:09:40	0:39:40	4:27:04 PM	27.00		52.5	177827.94			54.5						52.5	177827.94	52.5	177827.94
	0:09:50	0:39:50	4:27:14 PM	27.00		52.2	165958.69			54.6						52.2	165958.69	52.2	165958.69
	0:10:00	0:40:00	4:27:24 PM	27.00		54.2	263026.80	53.9	245889.07	55.6	56.7					54.2	263026.80	54.2	263026.80
	0:10:10	0:40:10	4:27:34 PM	27.00		56.0	398107.17			58.0						56.0	398107.17	56.0	398107.17
	0:10:20	0:40:20	4:27:44 PM	27.00		52.3	169824.37			54.1						52.3	169824.37	52.3	169824.37
	0:10:30	0:40:30	4:27:54 PM	27.00		51.9	154881.66			52.6						51.9	154881.66	51.9	154881.66
	0:10:40	0:40:40	4:28:04 PM	28.00		52.3	169824.37			54.5						52.3	169824.37	52.3	169824.37
	0:10:50	0:40:50	4:28:14 PM	28.00		56.3	426579.52			60.4						56.3	426579.52	56.3	426579.52
	0:11:00	0:41:00	4:28:24 PM	28.00		57.6	575439.94	55.0	315776.17	59.9	60.4					57.6	575439.94	57.6	575439.94
	0:11:10	0:41:10	4:28:34 PM	28.00		54.1	257039.58			55.1						54.1	257039.58	54.1	257039.58
	0:11:20	0:41:20	4:28:44 PM	28.00		54.4	275422.87			55.7						54.4	275422.87	54.4	275422.87
	0:11:30	0:41:30	4:28:54 PM	28.00		57.4	549540.87			59.8						57.4	549540.87	57.4	549540.87
	0:11:40	0:41:40	4:29:04 PM	29.00		56.3	426579.52			59.1						56.3	426579.52	56.3	426579.52
	0:11:50	0:41:50	4:29:14 PM	29.00		53.3	213796.21			55.6						53.3	213796.21	53.3	213796.21
	0:12:00	0:42:00	4:29:24 PM	29.00		54.5	281838.29	55.2	334036.22	55.5	59.8					54.5	281838.29	54.5	281838.29
	0:12:10	0:42:10	4:29:34 PM	29.00		54.8	301995.17			59.2						54.8	301995.17	54.8	301995.17
	0:12:20	0:42:20	4:29:44 PM	29.00		54.3	269153.48			58.0						54.3	269153.48	54.3	269153.48
	0:12:30	0:42:30	4:29:54 PM	29.00		54.3	269153.48			56.1						54.3	269153.48	54.3	269153.48
	0:12:40	0:42:40	4:30:04 PM	30.00		52.9	194984.46			54.9						52.9	194984.46	52.9	194984.46
	0:12:50	0:42:50	4:30:14 PM	30.00		55.2	331131.12			55.9						55.2	331131.12	55.2	331131.12
	0:13:00	0:43:00	4:30:24 PM	30.00		55.9	389045.14	54.7	292577.14	57.4	59.2					55.9	389045.14	55.9	389045.14
	0:13:10	0:43:10	4:30:34 PM	30.00		54.9	309029.54			57.4						54.9	309029.54	54.9	309029.54
	0:13:20	0:43:20	4:30:44 PM	30.00		53.5	223872.11			54.7						53.5	223872.11	53.5	223872.11
	0:13:30	0:43:30	4:30:54 PM	30.00		52.5	177827.94			54.8						52.5	177827.94	52.5	177827.94
	0:13:40	0:43:40	4:31:04 PM	31.00		57.4	549540.87			60.8						57.4	549540.87	57.4	549540.87
	0:13:50	0:43:50	4:31:14 PM	31.00		55.6	363078.05			57.2						55.6	363078.05	55.6	363078.05
	0:14:00	0:44:00	4:31:24 PM	31.00		55.3	338844.16	55.1	327032.11	57.0	60.8					55.3	338844.16	55.3	338844.16
	0:14:10	0:44:10	4:31:34 PM	31.00		55.0	316227.77			55.5						55.0	316227.77	55.0	316227.77
	0:14:20	0:44:20	4:31:44 PM	31.00		54.8	301995.17			55.6						54.8	301995.17	54.8	301995.17
	0:14:30	0:44:30	4:31:54 PM	31.00		53.3	213796.21			54.4						53.3	213796.21	53.3	213796.21

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:40	0:44:40	4:32:04 PM	32.00		54.6	288403.15			57.1						54.6	288403.15	54.6	288403.15
	0:14:50	0:44:50	4:32:14 PM	32.00		55.9	389045.14			58.2						55.9	389045.14	55.9	389045.14
	0:15:00	0:45:00	4:32:24 PM	32.00		53.8	239883.29	54.6	291558.46	54.7	58.2	55.1	56.5	57.6	58.7	53.8	239883.29	53.8	239883.29
Study #5	0:00:10	0:45:10	4:37:47 PM	37.00		50.8	120226.44			51.9						50.8	120226.44	50.8	120226.44
N/A	0:00:20	0:45:20	4:37:57 PM	37.00		50.0	100000.00			50.9						50.0	100000.00	50.0	100000.00
	0:00:30	0:45:30	4:38:07 PM	38.00		50.1	102329.30			51.5						50.1	102329.30	50.1	102329.30
	0:00:40	0:45:40	4:38:17 PM	38.00		52.5	177827.94			53.7						52.5	177827.94	52.5	177827.94
	0:00:50	0:45:50	4:38:27 PM	38.00		52.8	190546.07			53.7						52.8	190546.07	52.8	190546.07
	0:01:00	0:46:00	4:38:37 PM	38.00		53.6	229086.77	51.9	153336.09	54.6	54.6					53.6	229086.77	53.6	229086.77
	0:01:10	0:46:10	4:38:47 PM	38.00		52.7	186208.71			53.3						52.7	186208.71	52.7	186208.71
	0:01:20	0:46:20	4:38:57 PM	38.00		52.3	169824.37			53.6						52.3	169824.37	52.3	169824.37
	0:01:30	0:46:30	4:39:07 PM	39.00		51.9	154881.66			52.9						51.9	154881.66	51.9	154881.66
	0:01:40	0:46:40	4:39:17 PM	39.00		51.7	147910.84			52.4						51.7	147910.84	51.7	147910.84
	0:01:50	0:46:50	4:39:27 PM	39.00		51.3	134896.29			52.5						51.3	134896.29	51.3	134896.29
	0:02:00	0:47:00	4:39:37 PM	39.00		49.2	83176.38	51.6	146149.71	50.3	53.6					49.2	83176.38	49.2	83176.38
	0:02:10	0:47:10	4:39:47 PM	39.00		47.9	61659.50			49.2						47.9	61659.50	47.9	61659.50
	0:02:20	0:47:20	4:39:57 PM	39.00		46.0	39810.72			46.5						46.0	39810.72	46.0	39810.72
	0:02:30	0:47:30	4:40:07 PM	40.00		48.1	64565.42			49.8						48.1	64565.42	48.1	64565.42
	0:02:40	0:47:40	4:40:17 PM	40.00		49.8	95499.26			50.5						49.8	95499.26	49.8	95499.26
	0:02:50	0:47:50	4:40:27 PM	40.00		49.4	87096.36			50.2						49.4	87096.36	49.4	87096.36
	0:03:00	0:48:00	4:40:37 PM	40.00		50.3	107151.93	48.8	75963.86	51.6	51.6					50.3	107151.93	50.3	107151.93
	0:03:10	0:48:10	4:40:47 PM	40.00		52.1	162181.01			52.9						52.1	162181.01	52.1	162181.01
	0:03:20	0:48:20	4:40:57 PM	40.00		51.6	144543.98			52.6						51.6	144543.98	51.6	144543.98
	0:03:30	0:48:30	4:41:07 PM	41.00		48.0	63095.73			50.5						48.0	63095.73	48.0	63095.73
	0:03:40	0:48:40	4:41:17 PM	41.00		44.9	30902.95			47.3						44.9	30902.95	44.9	30902.95
	0:03:50	0:48:50	4:41:27 PM	41.00		44.9	30902.95			47.0						44.9	30902.95	44.9	30902.95
	0:04:00	0:49:00	4:41:37 PM	41.00		43.4	21877.62	48.8	75584.04	45.1	52.9					43.4	21877.62	43.4	21877.62
	0:04:10	0:49:10	4:41:47 PM	41.00		47.6	57543.99			50.4						47.6	57543.99	47.6	57543.99
	0:04:20	0:49:20	4:41:57 PM	41.00		48.0	63095.73			49.3						48.0	63095.73	48.0	63095.73
	0:04:30	0:49:30	4:42:07 PM	42.00		47.8	60255.96			49.2						47.8	60255.96	47.8	60255.96
	0:04:40	0:49:40	4:42:17 PM	42.00		46.4	43651.58			47.0						46.4	43651.58	46.4	43651.58
	0:04:50	0:49:50	4:42:27 PM	42.00		46.6	45708.82			47.9						46.6	45708.82	46.6	45708.82
	0:05:00	0:50:00	4:42:37 PM	42.00		45.1	32359.37	47.0	50435.91	46.1	50.4					45.1	32359.37	45.1	32359.37
	0:05:10	0:50:10	4:42:47 PM	42.00		43.6	22908.68			44.6						43.6	22908.68	43.6	22908.68
	0:05:20	0:50:20	4:42:57 PM	42.00		43.2	20892.96			44.6						43.2	20892.96	43.2	20892.96
	0:05:30	0:50:30	4:43:07 PM	43.00		43.6	22908.68			45.1						43.6	22908.68	43.6	22908.68
	0:05:40	0:50:40	4:43:17 PM	43.00		43.7	23442.29			45.6						43.7	23442.29	43.7	23442.29
	0:05:50	0:50:50	4:43:27 PM	43.00		45.9	38904.51			47.4						45.9	38904.51	45.9	38904.51
	0:06:00	0:51:00	4:43:37 PM	43.00		43.5	22387.21	44.0	25240.72	46.1	47.4					43.5	22387.21	43.5	22387.21
	0:06:10	0:51:10	4:43:47 PM	43.00		45.0	31622.78			48.2						45.0	31622.78	45.0	31622.78
	0:06:20	0:51:20	4:43:57 PM	43.00		45.8	38018.94			47.9						45.8	38018.94	45.8	38018.94
	0:06:30	0:51:30	4:44:07 PM	44.00		46.1	40738.03			46.6						46.1	40738.03	46.1	40738.03
	0:06:40	0:51:40	4:44:17 PM	44.00		43.3	21379.62			45.0						43.3	21379.62	43.3	21379.62
	0:06:50	0:51:50	4:44:27 PM	44.00		46.2	41686.94			47.9						46.2	41686.94	46.2	41686.94
	0:07:00	0:52:00	4:44:37 PM	44.00		45.6	36307.81	45.4	34959.02	47.0	48.2					45.6	36307.81	45.6	36307.81
	0:07:10	0:52:10	4:44:47 PM	44.00		43.6	22908.68			44.4						43.6	22908.68	43.6	22908.68
	0:07:20	0:52:20	4:44:57 PM	44.00		45.2	33113.11			48.1						45.2	33113.11	45.2	33113.11
	0:07:30	0:52:30	4:45:07 PM	45.00		43.8	23988.33			44.8						43.8	23988.33	43.8	23988.33
	0:07:40	0:52:40	4:45:17 PM	45.00		45.5	35481.34			47.9						45.5	35481.34	45.5	35481.34
	0:07:50	0:52:50	4:45:27 PM	45.00		46.5	44668.36			47.9						46.5	44668.36	46.5	44668.36
	0:08:00	0:53:00	4:45:37 PM	45.00		46.9	48977.88	45.4	34856.28	47.9	48.1					46.9	48977.88	46.9	48977.88
	0:08:10	0:53:10	4:45:47 PM	45.00		47.9	61659.50			51.0						47.9	61659.50	47.9	61659.50
	0:08:20	0:53:20	4:45:57 PM	45.00		47.1	51286.14			50.0						47.1	51286.14	47.1	51286.14
	0:08:30	0:53:30	4:46:07 PM	46.00		45.7	37153.52			46.2						45.7	37153.52	45.7	37153.52
	0:08:40	0:53:40	4:46:17 PM	46.00		46.5	44668.36			47.9						46.5	44668.36	46.5	44668.36
	0:08:50	0:53:50	4:46:27 PM	46.00		46.0	39810.72			46.8						46.0	39810.72	46.0	39810.72
	0:09:00	0:54:00	4:46:37 PM	46.00		46.8	47863.01	46.7	47073.54	48.9	51.0					46.8	47863.01	46.8	47863.01
	0:09:10	0:54:10	4:46:47 PM	46.00		45.7	37153.52			46.4						45.7	37153.52	45.7	37153.52
	0:09:20	0:54:20	4:46:57 PM	46.00		47.9	61659.50			50.7						47.9	61659.50	47.9	61659.50
	0:09:30	0:54:30	4:47:07 PM	47.00		45.9	38904.51			47.1						45.9	38904.51	45.9	38904.51
	0:09:40	0:54:40	4:47:17 PM	47.00		46.7	46773.51			47.3						46.7	46773.51	46.7	46773.51
	0:09:50	0:54:50	4:47:27 PM	47.00		49.5	89125.09			51.7						49.5	89125.09	49.5	89125.09
	0:10:00	0:55:00	4:47:37 PM	47.00		47.0	50118.72	47.3	53955.81	48.6	51.7					47.0	50118.72	47.0	50118.72
	0:10:10	0:55:10	4:47:47 PM	47.00		46.7	46773.51			47.9						46.7	46773.51	46.7	46773.51
	0:10:20	0:55:20	4:47:57 PM	47.00		46.3	42657.95			48.2						46.3	42657.95	46.3	42657.95
	0:10:30	0:55:30	4:48:07 PM	48.00		45.7	37153.52			48.8						45.7	37153.52	45.7	37153.52
	0:10:40	0:55:40	4:48:17 PM	48.00		49.6	91201.08			51.9						49.6	91201.08	49.6	91201.08
	0:10:50	0:55:50	4:48:27 PM	48.00		45.3	33884.42			47.8						45.3	33884.42	45.3	33884.42
	0:11:00	0:56:00	4:48:37 PM	48.00		46.0	39810.72	46.9	48580.20	47.1	51.9					46.0	39810.72	46.0	39810.72
	0:11:10	0:56:10	4:48:47 PM	48.00		48.5	70794.58			51.5						48.5	70794.58	48.5	70794.58
	0:11:20	0:56:20	4:48:57 PM	48.00		49.2	83176.38			51.4						49.2	83176.38	49.2	83176.38
	0:11:30	0:56:30	4:49:07 PM	49.00		51.7	147910.84			53.4						51.7	147910.84	51.7	147910.84
	0:11:40	0:56:40	4:49:17 PM	49.00		52.4	173780.08			53.4						52.4	173780.08	52.4	173780.08
	0:11:50	0:56:50	4:49:27 PM	49.00		54.5	281838.29			56.0						54.5	281838.29	54.5	281838.29
	0:12:00	0:57:00	4:49:37 PM	49.00		56.5	446683.59	53.0	200697.29	57.3	57.3					56.5	446683.59	56.5	446683.59
	0:12:10	0:57:10	4:49:47 PM	49.00		57.4	549540.87			58.2						57.4	549540.87	57.4	549540.87
	0:12:20	0:57:20	4:49:57 PM	49.00		56.8	478630.09			57.4						56.8	478630.09	56.8	478630.09
	0:12:30	0:57:30	4:50:07 PM	50.00		56.3	426579.52			56.9						56.3	426579.52	56.3	426579.52
	0:12:40	0:57:40	4:50:17 PM	50.00		56.3	426579.52			57.0						56.3	426579.52	56.3	426579.52
	0:12:50	0:57:50	4:50:27 PM	50.00		57.5	562341.33			58.0						57.5	562341.33	57.5	562341.33
	0:13:00	0:58:00	4:50:37 PM	50.00		56.9	489778.82	56.9	488908.36	57.7	58.2					56.9	489778.82	56.9	489778.82
	0:13:10	0:58:10	4:50:47 PM	50.00		56.4	436515.83			56.9						56.4	436515.83	56.4	436515.83
	0:13:20	0:58:20	4:50:57 PM	50.00		55.8	380189.40			56.5						55.8	380189.40	55.8	380189.40
	0:13:30	0:58:30	4:51:07 PM	51.00		55.8	380189.40			56.5						55.8	380189.40	55.8	380189.40
	0:13:40	0:58:40	4:51:17 PM	51.00		55.3	338844.16			56.6						55.3	338844.16	55.3	338844.16
	0:13:50	0:58:50	4:51:27 PM	51.00		55.6	363078.05			56.3						55.6	363078.05	55.6	363078.05
	0:14:00	0:59:00	4:51:37 PM	51.00		56.2	416869.38	55.9	385947.70	56.7	56.9					56.2	416869.38	56.2	416869.38
	0:14:10	0:59:10	4:51:47 PM	51.00		57.6	575439.94			58.4						57.6	575439.94	57.6	575439.94
	0:14:20	0:59:20	4:51:57 PM	51.00		58.7	741310.24			59.5						58.7	741310.24	58.7	741310.24

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:30	0:59:30	4:52:07 PM	52.00		58.1	645654.23			59.1						58.1	645654.23	58.1	645654.23
	0:14:40	0:59:40	4:52:17 PM	52.00		58.0	630957.34			58.5						58.0	630957.34	58.0	630957.34
	0:14:50	0:59:50	4:52:27 PM	52.00		58.9	776247.12			60.2						58.9	776247.12	58.9	776247.12
	0:15:00	1:00:00	4:52:37 PM	52.00		59.0	794328.23	58.4	693989.52	60.4	60.4	48.0	52.7	57.4	58.9	59.0	794328.23	59.0	794328.23
Study #6	0:00:10	0:00:10	5:36:24 PM	36.00		52.2	165958.69			53.0						52.2	165958.69	52.2	165958.69
Receptor 4	0:00:20	0:00:20	5:36:34 PM	36.00		53.2	208929.61			55.3						53.2	208929.61	53.2	208929.61
	0:00:30	0:00:30	5:36:44 PM	36.00		54.6	288403.15			56.7						54.6	288403.15	54.6	288403.15
	0:00:40	0:00:40	5:36:54 PM	36.00		54.8	301995.17			57.6						54.8	301995.17	54.8	301995.17
	0:00:50	0:00:50	5:37:04 PM	37.00		53.6	229086.77			56.1						53.6	229086.77	53.6	229086.77
	0:01:00	0:01:00	5:37:14 PM	37.00		54.6	288403.15	53.9	247129.42	56.9	57.6					54.6	288403.15	54.6	288403.15
	0:01:10	0:01:10	5:37:24 PM	37.00		52.5	177827.94			53.1						52.5	177827.94	52.5	177827.94
	0:01:20	0:01:20	5:37:34 PM	37.00		52.7	186208.71			54.9						52.7	186208.71	52.7	186208.71
	0:01:30	0:01:30	5:37:44 PM	37.00		51.4	138038.43			52.0						51.4	138038.43	51.4	138038.43
	0:01:40	0:01:40	5:37:54 PM	37.00		51.6	144543.98			52.2						51.6	144543.98	51.6	144543.98
	0:01:50	0:01:50	5:38:04 PM	38.00		52.4	173780.08			53.6						52.4	173780.08	52.4	173780.08
	0:02:00	0:02:00	5:38:14 PM	38.00		51.4	138038.43	52.0	159739.59	51.8	54.9					51.4	138038.43	51.4	138038.43
	0:02:10	0:02:10	5:38:24 PM	38.00		51.7	147910.84			52.8						51.7	147910.84	51.7	147910.84
	0:02:20	0:02:20	5:38:34 PM	38.00		53.4	218776.16			55.1						53.4	218776.16	53.4	218776.16
	0:02:30	0:02:30	5:38:44 PM	38.00		50.8	120226.44			51.4						50.8	120226.44	50.8	120226.44
	0:02:40	0:02:40	5:38:54 PM	38.00		50.7	117489.76			51.5						50.7	117489.76	50.7	117489.76
	0:02:50	0:02:50	5:39:04 PM	39.00		52.2	165958.69			54.4						52.2	165958.69	52.2	165958.69
	0:03:00	0:03:00	5:39:14 PM	39.00		51.0	125892.54	51.7	149375.74	51.9	55.1					51.0	125892.54	51.0	125892.54
	0:03:10	0:03:10	5:39:24 PM	39.00		51.9	154881.66			52.4						51.9	154881.66	51.9	154881.66
	0:03:20	0:03:20	5:39:34 PM	39.00		51.7	147910.84			52.6						51.7	147910.84	51.7	147910.84
	0:03:30	0:03:30	5:39:44 PM	39.00		50.2	104712.85			51.1						50.2	104712.85	50.2	104712.85
	0:03:40	0:03:40	5:39:54 PM	39.00		50.5	112201.85			51.4						50.5	112201.85	50.5	112201.85
	0:03:50	0:03:50	5:40:04 PM	40.00		50.9	123026.88			52.6						50.9	123026.88	50.9	123026.88
	0:04:00	0:04:00	5:40:14 PM	40.00		53.9	245470.89	51.7	148034.16	55.6	55.6					53.9	245470.89	53.9	245470.89
	0:04:10	0:04:10	5:40:24 PM	40.00		51.6	144543.98			54.2						51.6	144543.98	51.6	144543.98
	0:04:20	0:04:20	5:40:34 PM	40.00		50.9	123026.88			51.4						50.9	123026.88	50.9	123026.88
	0:04:30	0:04:30	5:40:44 PM	40.00		51.8	151356.12			52.4						51.8	151356.12	51.8	151356.12
	0:04:40	0:04:40	5:40:54 PM	40.00		51.4	138038.43			51.9						51.4	138038.43	51.4	138038.43
	0:04:50	0:04:50	5:41:04 PM	41.00		51.7	147910.84			52.4						51.7	147910.84	51.7	147910.84
	0:05:00	0:05:00	5:41:14 PM	41.00		53.3	213796.21	51.9	153112.08	54.2	54.2					53.3	213796.21	53.3	213796.21
	0:05:10	0:05:10	5:41:24 PM	41.00		52.0	158489.32			53.0						52.0	158489.32	52.0	158489.32
	0:05:20	0:05:20	5:41:34 PM	41.00		52.0	158489.32			53.0						52.0	158489.32	52.0	158489.32
	0:05:30	0:05:30	5:41:44 PM	41.00		52.4	173780.08			53.4						52.4	173780.08	52.4	173780.08
	0:05:40	0:05:40	5:41:54 PM	41.00		51.5	141253.75			52.2						51.5	141253.75	51.5	141253.75
	0:05:50	0:05:50	5:42:04 PM	42.00		51.4	138038.43			52.0						51.4	138038.43	51.4	138038.43
	0:06:00	0:06:00	5:42:14 PM	42.00		51.1	128824.96	51.8	149812.64	51.9	53.4					51.1	128824.96	51.1	128824.96
	0:06:10	0:06:10	5:42:24 PM	42.00		51.4	138038.43			51.9						51.4	138038.43	51.4	138038.43
	0:06:20	0:06:20	5:42:34 PM	42.00		51.4	138038.43			52.5						51.4	138038.43	51.4	138038.43
	0:06:30	0:06:30	5:42:44 PM	42.00		51.4	138038.43			52.0						51.4	138038.43	51.4	138038.43
	0:06:40	0:06:40	5:42:54 PM	42.00		51.3	134896.29			52.9						51.3	134896.29	51.3	134896.29
	0:06:50	0:06:50	5:43:04 PM	43.00		52.8	190546.07			53.8						52.8	190546.07	52.8	190546.07
	0:07:00	0:07:00	5:43:14 PM	43.00		52.5	177827.94	51.8	152897.60	53.0	53.8					52.5	177827.94	52.5	177827.94
	0:07:10	0:07:10	5:43:24 PM	43.00		52.6	181970.09			53.8						52.6	181970.09	52.6	181970.09
	0:07:20	0:07:20	5:43:34 PM	43.00		54.4	275422.87			55.7						54.4	275422.87	54.4	275422.87
	0:07:30	0:07:30	5:43:44 PM	43.00		52.0	158489.32			52.4						52.0	158489.32	52.0	158489.32
	0:07:40	0:07:40	5:43:54 PM	43.00		53.9	245470.89			56.2						53.9	245470.89	53.9	245470.89
	0:07:50	0:07:50	5:44:04 PM	44.00		52.3	169824.37			54.5						52.3	169824.37	52.3	169824.37
	0:08:00	0:08:00	5:44:14 PM	44.00		50.7	117489.76	52.8	191444.55	51.5	56.2					50.7	117489.76	50.7	117489.76
	0:08:10	0:08:10	5:44:24 PM	44.00		51.5	141253.75			52.2						51.5	141253.75	51.5	141253.75
	0:08:20	0:08:20	5:44:34 PM	44.00		52.9	194984.46			54.5						52.9	194984.46	52.9	194984.46
	0:08:30	0:08:30	5:44:44 PM	44.00		52.1	162181.01			54.2						52.1	162181.01	52.1	162181.01
	0:08:40	0:08:40	5:44:54 PM	44.00		51.2	131825.67			52.1						51.2	131825.67	51.2	131825.67
	0:08:50	0:08:50	5:45:04 PM	45.00		51.2	131825.67			52.2						51.2	131825.67	51.2	131825.67
	0:09:00	0:09:00	5:45:14 PM	45.00		51.5	141253.75	51.8	150554.05	52.4	54.5					51.5	141253.75	51.5	141253.75
	0:09:10	0:09:10	5:45:24 PM	45.00		51.9	154881.66			52.7						51.9	154881.66	51.9	154881.66
	0:09:20	0:09:20	5:45:34 PM	45.00		50.6	114815.36			51.4						50.6	114815.36	50.6	114815.36
	0:09:30	0:09:30	5:45:44 PM	45.00		50.3	107151.93			50.7						50.3	107151.93	50.3	107151.93
	0:09:40	0:09:40	5:45:54 PM	45.00		50.5	112201.85			51.5						50.5	112201.85	50.5	112201.85
	0:09:50	0:09:50	5:46:04 PM	46.00		50.4	109647.82			51.1						50.4	109647.82	50.4	109647.82
	0:10:00	0:10:00	5:46:14 PM	46.00		50.7	117489.76	50.8	119364.73	52.1	52.7					50.7	117489.76	50.7	117489.76
	0:10:10	0:10:10	5:46:24 PM	46.00		51.9	154881.66			53.4						51.9	154881.66	51.9	154881.66
	0:10:20	0:10:20	5:46:34 PM	46.00		51.4	138038.43			52.1						51.4	138038.43	51.4	138038.43
	0:10:30	0:10:30	5:46:44 PM	46.00		52.1	162181.01			53.4						52.1	162181.01	52.1	162181.01
	0:10:40	0:10:40	5:46:54 PM	46.00		50.7	117489.76			51.1						50.7	117489.76	50.7	117489.76
	0:10:50	0:10:50	5:47:04 PM	47.00		52.4	173780.08			55.0						52.4	173780.08	52.4	173780.08
	0:11:00	0:11:00	5:47:14 PM	47.00		52.1	162181.01	51.8	151425.32	54.5	55.0					52.1	162181.01	52.1	162181.01
	0:11:10	0:11:10	5:47:24 PM	47.00		51.7	147910.84			53.4						51.7	147910.84	51.7	147910.84
	0:11:20	0:11:20	5:47:34 PM	47.00		52.6	181970.09			54.4						52.6	181970.09	52.6	181970.09
	0:11:30	0:11:30	5:47:44 PM	47.00		52.0	158489.32			53.5						52.0	158489.32	52.0	158489.32
	0:11:40	0:11:40	5:47:54 PM	47.00		51.0	125892.54			52.0						51.0	125892.54	51.0	125892.54
	0:11:50	0:11:50	5:48:04 PM	48.00		50.0	100000.00			51.8						50.0	100000.00	50.0	100000.00
	0:12:00	0:12:00	5:48:14 PM	48.00		50.5	112201.85	51.4	137744.11	52.4	54.4					50.5	112201.85	50.5	112201.85
	0:12:10	0:12:10	5:48:24 PM	48.00		51.5	141253.75			53.1						51.5	141253.75	51.5	141253.75
	0:12:20	0:12:20	5:48:34 PM	48.00		53.6	229086.77			54.5						53.6	229086.77	53.6	229086.77
	0:12:30	0:12:30	5:48:44 PM	48.00		53.9	245470.89			55.2						53.9	245470.89	53.9	245470.89
	0:12:40	0:12:40	5:48:54 PM	48.00		53.4	218776.16			54.7						53.4	218776.16	53.4	218776.16
	0:12:50	0:12:50	5:49:04 PM	49.00		51.2	131825.67			52.8						51.2	131825.67	51.2	131825.67
	0:13:00	0:13:00	5:49:14 PM	49.00		50.9	123026.88	52.6	181573.35	52.2	55.2					50.9	123026.88	50.9	123026.88
	0:13:10	0:13:10	5:49:24 PM	49.00		49.8	95499.26			50.2						49.8	95499.26	49.8	95499.26
	0:13:20	0:13:20	5:49:34 PM	49.00		50.6	114815.36			51.2						50.6	114815.36	50.6	114815.36
	0:13:30	0:13:30	5:49:44 PM	49.00		51.5	141253.75			52.1						51.5	141253.75	51.5	141253.75
	0:13:40	0:13:40	5:49:54 PM	49.00		51.7	147910.84			52.6						51.7	147910.84	51.7	147910.84
	0:13:50	0:13:50	5:50:04 PM	50.00		52.9	194984.46			53.7						52.9	194984.46	52.9	194984.46
	0:14:00	0:14:00	5:50:14 PM	50.00		52.2	165958.69	51.6	143403.73	52.6	53.7					52.2	165958.69	52.2	165958.69
	0:14:10	0:14:10	5:50:24 PM	50.00		52.0	158489.32			52.7						52.0	158489.32	52.0	158489.32

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:20	0:14:20	5:50:34 PM	50.00		52.5	177827.94			53.1						52.5	177827.94	52.5	177827.94
	0:14:30	0:14:30	5:50:44 PM	50.00		51.8	151356.12			53.0						51.8	151356.12	51.8	151356.12
	0:14:40	0:14:40	5:50:54 PM	50.00		50.5	112201.85			50.9						50.5	112201.85	50.5	112201.85
	0:14:50	0:14:50	5:51:04 PM	51.00		51.0	125892.54			51.6						51.0	125892.54	51.0	125892.54
	0:15:00	0:15:00	5:51:14 PM	51.00		52.1	162181.01	51.7	147991.46	54.7	54.7	51.7	52.4	53.6	54.6	52.1	162181.01	52.1	162181.01
Study #7	0:00:10	0:15:10	5:56:25 PM	56.00		54.3	269153.48			55.3						54.3	269153.48	54.3	269153.48
Receptor 5	0:00:20	0:15:20	5:56:35 PM	56.00		55.5	354813.39			57.1						55.5	354813.39	55.5	354813.39
	0:00:30	0:15:30	5:56:45 PM	56.00		56.1	407380.28			57.0						56.1	407380.28	56.1	407380.28
	0:00:40	0:15:40	5:56:55 PM	56.00		57.1	512861.38			57.7						57.1	512861.38	57.1	512861.38
	0:00:50	0:15:50	5:57:05 PM	57.00		56.7	467735.14			57.7						56.7	467735.14	56.7	467735.14
	0:01:00	0:16:00	5:57:15 PM	57.00		57.4	549540.87	56.3	426914.09	58.7	58.7					57.4	549540.87	57.4	549540.87
	0:01:10	0:16:10	5:57:25 PM	57.00		57.6	575439.94			58.4						57.6	575439.94	57.6	575439.94
	0:01:20	0:16:20	5:57:35 PM	57.00		61.8	1513561.25			66.2						61.8	1513561.25	61.8	1513561.25
	0:01:30	0:16:30	5:57:45 PM	57.00		67.8	6025595.86			68.9						67.8	6025595.86	67.8	6025595.86
	0:01:40	0:16:40	5:57:55 PM	57.00		65.6	3630780.55			67.3						65.6	3630780.55	65.6	3630780.55
	0:01:50	0:16:50	5:58:05 PM	58.00		63.5	2238721.14			64.6						63.5	2238721.14	63.5	2238721.14
	0:02:00	0:17:00	5:58:15 PM	58.00		63.2	2089296.13	64.3	2678899.14	64.4	68.9					63.2	2089296.13	63.2	2089296.13
	0:02:10	0:17:10	5:58:25 PM	58.00		60.9	1230268.77			62.0						60.9	1230268.77	60.9	1230268.77
	0:02:20	0:17:20	5:58:35 PM	58.00		60.7	1174897.55			62.6						60.7	1174897.55	60.7	1174897.55
	0:02:30	0:17:30	5:58:45 PM	58.00		62.1	1621810.10			63.1						62.1	1621810.10	62.1	1621810.10
	0:02:40	0:17:40	5:58:55 PM	58.00		59.3	851138.04			62.1						59.3	851138.04	59.3	851138.04
	0:02:50	0:17:50	5:59:05 PM	59.00		59.1	812830.52			60.2						59.1	812830.52	59.1	812830.52
	0:03:00	0:18:00	5:59:15 PM	59.00		62.0	1584893.19	60.8	1212639.69	66.8	66.8					62.0	1584893.19	62.0	1584893.19
	0:03:10	0:18:10	5:59:25 PM	59.00		63.2	2089296.13			67.1						63.2	2089296.13	63.2	2089296.13
	0:03:20	0:18:20	5:59:35 PM	59.00		57.7	588843.66			58.6						57.7	588843.66	57.7	588843.66
	0:03:30	0:18:30	5:59:45 PM	59.00		56.2	416869.38			56.8						56.2	416869.38	56.2	416869.38
	0:03:40	0:18:40	5:59:55 PM	59.00		56.8	478630.09			58.2						56.8	478630.09	56.8	478630.09
	0:03:50	0:18:50	6:00:05 PM	0.00		54.7	295120.92			55.2						54.7	295120.92	54.7	295120.92
	0:04:00	0:19:00	6:00:15 PM	0.00		54.1	257039.58	58.4	687633.29	54.7	67.1					54.1	257039.58	54.1	257039.58
	0:04:10	0:19:10	6:00:25 PM	0.00		55.3	338844.16			55.8						55.3	338844.16	55.3	338844.16
	0:04:20	0:19:20	6:00:35 PM	0.00		55.4	346736.85			55.9						55.4	346736.85	55.4	346736.85
	0:04:30	0:19:30	6:00:45 PM	0.00		54.5	281838.29			55.0						54.5	281838.29	54.5	281838.29
	0:04:40	0:19:40	6:00:55 PM	0.00		54.9	309029.54			55.4						54.9	309029.54	54.9	309029.54
	0:04:50	0:19:50	6:01:05 PM	1.00		58.1	645654.23			60.1						58.1	645654.23	58.1	645654.23
	0:05:00	0:20:00	6:01:15 PM	1.00		57.7	588843.66	56.2	418491.12	59.0	60.1					57.7	588843.66	57.7	588843.66
	0:05:10	0:20:10	6:01:25 PM	1.00		56.3	426579.52			57.0						56.3	426579.52	56.3	426579.52
	0:05:20	0:20:20	6:01:35 PM	1.00		55.7	371535.23			56.2						55.7	371535.23	55.7	371535.23
	0:05:30	0:20:30	6:01:45 PM	1.00		55.3	338844.16			55.9						55.3	338844.16	55.3	338844.16
	0:05:40	0:20:40	6:01:55 PM	1.00		56.0	398107.17			56.6						56.0	398107.17	56.0	398107.17
	0:05:50	0:20:50	6:02:05 PM	2.00		55.9	389045.14			56.4						55.9	389045.14	55.9	389045.14
	0:06:00	0:21:00	6:02:15 PM	2.00		57.0	501187.23	56.1	404216.41	58.0	58.0					57.0	501187.23	57.0	501187.23
	0:06:10	0:21:10	6:02:25 PM	2.00		59.5	891250.94			61.3						59.5	891250.94	59.5	891250.94
	0:06:20	0:21:20	6:02:35 PM	2.00		61.1	1288249.55			61.9						61.1	1288249.55	61.1	1288249.55
	0:06:30	0:21:30	6:02:45 PM	2.00		63.4	2187761.62			64.3						63.4	2187761.62	63.4	2187761.62
	0:06:40	0:21:40	6:02:55 PM	2.00		62.1	1621810.10			62.7						62.1	1621810.10	62.1	1621810.10
	0:06:50	0:21:50	6:03:05 PM	3.00		60.7	1174897.55			62.0						60.7	1174897.55	60.7	1174897.55
	0:07:00	0:22:00	6:03:15 PM	3.00		59.4	870963.59	61.3	1339155.56	60.4	64.3					59.4	870963.59	59.4	870963.59
	0:07:10	0:22:10	6:03:25 PM	3.00		56.8	478630.09			58.1						56.8	478630.09	56.8	478630.09
	0:07:20	0:22:20	6:03:35 PM	3.00		55.1	323593.66			56.1						55.1	323593.66	55.1	323593.66
	0:07:30	0:22:30	6:03:45 PM	3.00		54.3	269153.48			54.7						54.3	269153.48	54.3	269153.48
	0:07:40	0:22:40	6:03:55 PM	3.00		52.7	186208.71			53.5						52.7	186208.71	52.7	186208.71
	0:07:50	0:22:50	6:04:05 PM	4.00		53.0	199526.23			53.6						53.0	199526.23	53.0	199526.23
	0:08:00	0:23:00	6:04:15 PM	4.00		54.3	269153.48	54.6	287710.94	55.4	58.1					54.3	269153.48	54.3	269153.48
	0:08:10	0:23:10	6:04:25 PM	4.00		56.8	478630.09			57.9						56.8	478630.09	56.8	478630.09
	0:08:20	0:23:20	6:04:35 PM	4.00		54.6	288403.15			56.5						54.6	288403.15	54.6	288403.15
	0:08:30	0:23:30	6:04:45 PM	4.00		52.9	194984.46			54.2						52.9	194984.46	52.9	194984.46
	0:08:40	0:23:40	6:04:55 PM	4.00		51.4	138038.43			53.3						51.4	138038.43	51.4	138038.43
	0:08:50	0:23:50	6:05:05 PM	5.00		50.1	102329.30			50.9						50.1	102329.30	50.1	102329.30
	0:09:00	0:24:00	6:05:15 PM	5.00		50.0	100000.00	53.4	217064.24	51.0	57.9					50.0	100000.00	50.0	100000.00
	0:09:10	0:24:10	6:05:25 PM	5.00		49.5	89125.09			50.7						49.5	89125.09	49.5	89125.09
	0:09:20	0:24:20	6:05:35 PM	5.00		48.6	72443.60			49.4						48.6	72443.60	48.6	72443.60
	0:09:30	0:24:30	6:05:45 PM	5.00		49.1	81283.05			49.5						49.1	81283.05	49.1	81283.05
	0:09:40	0:24:40	6:05:55 PM	5.00		49.0	79432.82			50.4						49.0	79432.82	49.0	79432.82
	0:09:50	0:24:50	6:06:05 PM	6.00		49.4	87096.36			50.2						49.4	87096.36	49.4	87096.36
	0:10:00	0:25:00	6:06:15 PM	6.00		50.8	120226.44	49.5	88267.89	51.7	51.7					50.8	120226.44	50.8	120226.44
	0:10:10	0:25:10	6:06:25 PM	6.00		53.0	199526.23			55.9						53.0	199526.23	53.0	199526.23
	0:10:20	0:25:20	6:06:35 PM	6.00		52.6	181970.09			54.4						52.6	181970.09	52.6	181970.09
	0:10:30	0:25:30	6:06:45 PM	6.00		54.6	288403.15			57.4						54.6	288403.15	54.6	288403.15
	0:10:40	0:25:40	6:06:55 PM	6.00		53.4	218776.16			56.6						53.4	218776.16	53.4	218776.16
	0:10:50	0:25:50	6:07:05 PM	7.00		51.7	147910.84			52.9						51.7	147910.84	51.7	147910.84
	0:11:00	0:26:00	6:07:15 PM	7.00		51.0	125892.54	52.9	193746.50	51.4	57.4					51.0	125892.54	51.0	125892.54
	0:11:10	0:26:10	6:07:25 PM	7.00		52.3	169824.37			53.5						52.3	169824.37	52.3	169824.37
	0:11:20	0:26:20	6:07:35 PM	7.00		52.0	158489.32			52.9						52.0	158489.32	52.0	158489.32
	0:11:30	0:26:30	6:07:45 PM	7.00		51.2	131825.67			52.0						51.2	131825.67	51.2	131825.67
	0:11:40	0:26:40	6:07:55 PM	7.00		51.1	128824.96			53.7						51.1	128824.96	51.1	128824.96
	0:11:50	0:26:50	6:08:05 PM	8.00		50.7	117489.76			52.0						50.7	117489.76	50.7	117489.76
	0:12:00	0:27:00	6:08:15 PM	8.00		51.6	144543.98	51.5	141833.01	52.1	53.7					51.6	144543.98	51.6	144543.98
	0:12:10	0:27:10	6:08:25 PM	8.00		51.5	141253.75			52.1						51.5	141253.75	51.5	141253.75
	0:12:20	0:27:20	6:08:35 PM	8.00		51.8	151356.12			52.3						51.8	151356.12	51.8	151356.12
	0:12:30	0:27:30	6:08:45 PM	8.00		51.3	134896.29			52.3						51.3	134896.29	51.3	134896.29
	0:12:40	0:27:40	6:08:55 PM	8.00		50.7	117489.76			51.0						50.7	117489.76	50.7	117489.76
	0:12:50	0:27:50	6:09:05 PM	9.00		50.4	109647.82			50.9						50.4	109647.82	50.4	109647.82
	0:13:00	0:28:00	6:09:15 PM	9.00		50.1	102329.30	51.0	126162.17	50.8	52.3					50.1	102329.30	50.1	102329.30
	0:13:10	0:28:10	6:09:25 PM	9.00		50.7	117489.76			52.9						50.7	117489.76	50.7	117489.76
	0:13:20	0:28:20	6:09:35 PM	9.00		50.5	112201.85			51.5						50.5	112201.85	50.5	112201.85
	0:13:30	0:28:30	6:09:45 PM	9.00		50.7	117489.76			51.1						50.7	117489.76	50.7	117489.76
	0:13:40	0:28:40	6:09:55 PM	9.00		50.8	120226.44			51.4						50.8	120226.44	50.8	120226.44
	0:13:50	0:28:50	6:10:05 PM	10.00		51.7	147910.84			57.8						51.7	147910.84	51.7	147910.84
	0:14:00	0:29:00	6:10:15 PM	10.00		54.2	263026.80	51.7	146390.91	58.7	58.7					54.2	263026.80	54.2	263026.80

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:10	0:29:10	6:10:25 PM	10.00		51.2	131825.67			51.8						51.2	131825.67	51.2	131825.67
	0:14:20	0:29:20	6:10:35 PM	10.00		51.9	154881.66			53.3						51.9	154881.66	51.9	154881.66
	0:14:30	0:29:30	6:10:45 PM	10.00		53.4	218776.16			57.3						53.4	218776.16	53.4	218776.16
	0:14:40	0:29:40	6:10:55 PM	10.00		49.3	85113.80			50.1						49.3	85113.80	49.3	85113.80
	0:14:50	0:29:50	6:11:05 PM	11.00		49.4	87096.36			50.4						49.4	87096.36	49.4	87096.36
	0:15:00	0:30:00	6:11:15 PM	11.00		50.2	104712.85	51.2	130401.09	50.6	57.3	54.5	57.4	62.1	65.6	50.2	104712.85	50.2	104712.85
Study #8	0:00:10	0:30:10	6:14:09 PM	14.00		53.7	234422.88			55.2						53.7	234422.88	53.7	234422.88
Receptor 6	0:00:20	0:30:20	6:14:19 PM	14.00		51.3	134896.29			53.1						51.3	134896.29	51.3	134896.29
	0:00:30	0:30:30	6:14:29 PM	14.00		49.7	93325.43			51.4						49.7	93325.43	49.7	93325.43
	0:00:40	0:30:40	6:14:39 PM	14.00		49.2	83176.38			49.8						49.2	83176.38	49.2	83176.38
	0:00:50	0:30:50	6:14:49 PM	14.00		48.4	69183.10			49.1						48.4	69183.10	48.4	69183.10
	0:01:00	0:31:00	6:14:59 PM	14.00		48.5	70794.58	50.6	114299.78	49.0	55.2					48.5	70794.58	48.5	70794.58
	0:01:10	0:31:10	6:15:09 PM	15.00		48.2	66069.34			48.6						48.2	66069.34	48.2	66069.34
	0:01:20	0:31:20	6:15:19 PM	15.00		49.4	87096.36			50.6						49.4	87096.36	49.4	87096.36
	0:01:30	0:31:30	6:15:29 PM	15.00		49.9	97723.72			50.4						49.9	97723.72	49.9	97723.72
	0:01:40	0:31:40	6:15:39 PM	15.00		51.0	125892.54			53.3						51.0	125892.54	51.0	125892.54
	0:01:50	0:31:50	6:15:49 PM	15.00		51.7	147910.84			53.6						51.7	147910.84	51.7	147910.84
	0:02:00	0:32:00	6:15:59 PM	15.00		52.5	177827.94	50.7	117086.79	53.6	53.6					52.5	177827.94	52.5	177827.94
	0:02:10	0:32:10	6:16:09 PM	16.00		53.1	204173.79			54.0						53.1	204173.79	53.1	204173.79
	0:02:20	0:32:20	6:16:19 PM	16.00		52.3	169824.37			52.8						52.3	169824.37	52.3	169824.37
	0:02:30	0:32:30	6:16:29 PM	16.00		50.2	104712.85			51.2						50.2	104712.85	50.2	104712.85
	0:02:40	0:32:40	6:16:39 PM	16.00		49.9	97723.72			50.4						49.9	97723.72	49.9	97723.72
	0:02:50	0:32:50	6:16:49 PM	16.00		48.9	77624.71			50.4						48.9	77624.71	48.9	77624.71
	0:03:00	0:33:00	6:16:59 PM	16.00		48.5	70794.58	50.8	120809.00	50.4	54.0					48.5	70794.58	48.5	70794.58
	0:03:10	0:33:10	6:17:09 PM	17.00		48.3	67608.30			50.0						48.3	67608.30	48.3	67608.30
	0:03:20	0:33:20	6:17:19 PM	17.00		48.5	70794.58			49.2						48.5	70794.58	48.5	70794.58
	0:03:30	0:33:30	6:17:29 PM	17.00		48.6	72443.60			49.3						48.6	72443.60	48.6	72443.60
	0:03:40	0:33:40	6:17:39 PM	17.00		48.2	66069.34			49.1						48.2	66069.34	48.2	66069.34
	0:03:50	0:33:50	6:17:49 PM	17.00		49.1	81283.05			49.7						49.1	81283.05	49.1	81283.05
	0:04:00	0:34:00	6:17:59 PM	17.00		49.9	97723.72	48.8	75987.10	50.4	50.4					49.9	97723.72	49.9	97723.72
	0:04:10	0:34:10	6:18:09 PM	18.00		50.5	112201.85			51.2						50.5	112201.85	50.5	112201.85
	0:04:20	0:34:20	6:18:19 PM	18.00		50.8	120226.44			51.5						50.8	120226.44	50.8	120226.44
	0:04:30	0:34:30	6:18:29 PM	18.00		51.0	125892.54			51.7						51.0	125892.54	51.0	125892.54
	0:04:40	0:34:40	6:18:39 PM	18.00		50.7	117489.76			52.8						50.7	117489.76	50.7	117489.76
	0:04:50	0:34:50	6:18:49 PM	18.00		51.8	151356.12			53.2						51.8	151356.12	51.8	151356.12
	0:05:00	0:35:00	6:18:59 PM	18.00		50.0	100000.00	50.8	121194.45	50.8	53.2					50.0	100000.00	50.0	100000.00
	0:05:10	0:35:10	6:19:09 PM	19.00		49.2	83176.38			49.6						49.2	83176.38	49.2	83176.38
	0:05:20	0:35:20	6:19:19 PM	19.00		48.8	75857.76			49.6						48.8	75857.76	48.8	75857.76
	0:05:30	0:35:30	6:19:29 PM	19.00		48.9	77624.71			50.3						48.9	77624.71	48.9	77624.71
	0:05:40	0:35:40	6:19:39 PM	19.00		49.3	85113.80			50.1						49.3	85113.80	49.3	85113.80
	0:05:50	0:35:50	6:19:49 PM	19.00		48.4	69183.10			49.2						48.4	69183.10	48.4	69183.10
	0:06:00	0:36:00	6:19:59 PM	19.00		48.7	74131.02	48.9	77514.46	49.2	50.3					48.7	74131.02	48.7	74131.02
	0:06:10	0:36:10	6:20:09 PM	20.00		48.7	74131.02			49.8						48.7	74131.02	48.7	74131.02
	0:06:20	0:36:20	6:20:19 PM	20.00		49.2	83176.38			50.1						49.2	83176.38	49.2	83176.38
	0:06:30	0:36:30	6:20:29 PM	20.00		49.4	87096.36			50.1						49.4	87096.36	49.4	87096.36
	0:06:40	0:36:40	6:20:39 PM	20.00		50.2	104712.85			51.0						50.2	104712.85	50.2	104712.85
	0:06:50	0:36:50	6:20:49 PM	20.00		51.2	131825.67			51.9						51.2	131825.67	51.2	131825.67
	0:07:00	0:37:00	6:20:59 PM	20.00		51.8	151356.12	50.2	105383.07	52.7	52.7					51.8	151356.12	51.8	151356.12
	0:07:10	0:37:10	6:21:09 PM	21.00		53.9	245470.89			55.2						53.9	245470.89	53.9	245470.89
	0:07:20	0:37:20	6:21:19 PM	21.00		54.1	257039.58			55.0						54.1	257039.58	54.1	257039.58
	0:07:30	0:37:30	6:21:29 PM	21.00		53.1	204173.79			53.8						53.1	204173.79	53.1	204173.79
	0:07:40	0:37:40	6:21:39 PM	21.00		55.2	331131.12			57.4						55.2	331131.12	55.2	331131.12
	0:07:50	0:37:50	6:21:49 PM	21.00		58.0	630957.34			59.5						58.0	630957.34	58.0	630957.34
	0:08:00	0:38:00	6:21:59 PM	21.00		60.2	1047128.55	56.6	452650.21	61.6	61.6					60.2	1047128.55	60.2	1047128.55
	0:08:10	0:38:10	6:22:09 PM	22.00		58.8	758577.58			59.9						58.8	758577.58	58.8	758577.58
	0:08:20	0:38:20	6:22:19 PM	22.00		56.4	436515.83			56.8						56.4	436515.83	56.4	436515.83
	0:08:30	0:38:30	6:22:29 PM	22.00		56.0	398107.17			56.7						56.0	398107.17	56.0	398107.17
	0:08:40	0:38:40	6:22:39 PM	22.00		53.6	229086.77			55.4						53.6	229086.77	53.6	229086.77
	0:08:50	0:38:50	6:22:49 PM	22.00		52.0	158489.32			52.8						52.0	158489.32	52.0	158489.32
	0:09:00	0:39:00	6:22:59 PM	22.00		51.9	154881.66	55.5	355943.05	52.7	59.9					51.9	154881.66	51.9	154881.66
	0:09:10	0:39:10	6:23:09 PM	23.00		52.5	177827.94			54.8						52.5	177827.94	52.5	177827.94
	0:09:20	0:39:20	6:23:19 PM	23.00		55.8	380189.40			56.9						55.8	380189.40	55.8	380189.40
	0:09:30	0:39:30	6:23:29 PM	23.00		55.7	371535.23			56.3						55.7	371535.23	55.7	371535.23
	0:09:40	0:39:40	6:23:39 PM	23.00		53.0	199526.23			54.2						53.0	199526.23	53.0	199526.23
	0:09:50	0:39:50	6:23:49 PM	23.00		54.1	257039.58			55.1						54.1	257039.58	54.1	257039.58
	0:10:00	0:40:00	6:23:59 PM	23.00		51.0	125892.54	54.0	252001.82	52.7	56.9					51.0	125892.54	51.0	125892.54
	0:10:10	0:40:10	6:24:09 PM	24.00		50.2	104712.85			50.7						50.2	104712.85	50.2	104712.85
	0:10:20	0:40:20	6:24:19 PM	24.00		50.0	100000.00			50.7						50.0	100000.00	50.0	100000.00
	0:10:30	0:40:30	6:24:29 PM	24.00		49.7	93325.43			50.1						49.7	93325.43	49.7	93325.43
	0:10:40	0:40:40	6:24:39 PM	24.00		48.9	77624.71			49.4						48.9	77624.71	48.9	77624.71
	0:10:50	0:40:50	6:24:49 PM	24.00		49.5	89125.09			50.2						49.5	89125.09	49.5	89125.09
	0:11:00	0:41:00	6:24:59 PM	24.00		49.1	81283.05	49.6	91011.86	49.5	50.7					49.1	81283.05	49.1	81283.05
	0:11:10	0:41:10	6:25:09 PM	25.00		49.7	93325.43			50.8						49.7	93325.43	49.7	93325.43
	0:11:20	0:41:20	6:25:19 PM	25.00		50.1	102329.30			50.8						50.1	102329.30	50.1	102329.30
	0:11:30	0:41:30	6:25:29 PM	25.00		51.7	147910.84			53.0						51.7	147910.84	51.7	147910.84
	0:11:40	0:41:40	6:25:39 PM	25.00		53.0	199526.23			53.6						53.0	199526.23	53.0	199526.23
	0:11:50	0:41:50	6:25:49 PM	25.00		53.4	218776.16			53.9						53.4	218776.16	53.4	218776.16
	0:12:00	0:42:00	6:25:59 PM	25.00		52.5	177827.94	51.9	156615.98	53.8	53.9					52.5	177827.94	52.5	177827.94
	0:12:10	0:42:10	6:26:09 PM	26.00		51.6	144543.98			52.0						51.6	144543.98	51.6	144543.98
	0:12:20	0:42:20	6:26:19 PM	26.00		52.5	177827.94			53.9						52.5	177827.94	52.5	177827.94
	0:12:30	0:42:30	6:26:29 PM	26.00		52.9	194984.46			54.0						52.9	194984.46	52.9	194984.46
	0:12:40	0:42:40	6:26:39 PM	26.00		52.4	173780.08			53.7						52.4	173780.08	52.4	173780.08
	0:12:50	0:42:50	6:26:49 PM	26.00		51.4	138038.43			52.0						51.4	138038.43	51.4	138038.43
	0:13:00	0:43:00	6:26:59 PM	26.00		50.9	123026.88	52.0	158700.29	52.0	54.0					50.9	123026.88	50.9	123026.88
	0:13:10	0:43:10	6:27:09 PM	27.00		50.9	123026.88			51.6						50.9	123026.88	50.9	123026.88
	0:13:20	0:43:20	6:27:19 PM	27.00		52.4	173780.08			53.6						52.4	173780.08	52.4	173780.08
	0:13:30	0:43:30	6:27:29 PM	27.00		54.0	251188.64			54.7						54.0	251188.64	54.0	251188.64
	0:13:40	0:43:40	6:27:39 PM	27.00		56.5	446683.59			59.1						56.5	446683.59	56.5	446683.59
	0:13:50	0:43:50	6:27:49 PM	27.00		60.6	1148153.62			61.7						60.6	1148153.62	60.6	1148153.62

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:14:00	0:44:00	6:27:59 PM	27.00		62.0	1584893.19	57.9	621287.67	63.6	63.6					62.0	1584893.19	62.0	1584893.19
	0:14:10	0:44:10	6:28:09 PM	28.00		62.1	1621810.10			64.0						62.1	1621810.10	62.1	1621810.10
	0:14:20	0:44:20	6:28:19 PM	28.00		57.0	501187.23			59.1						57.0	501187.23	57.0	501187.23
	0:14:30	0:44:30	6:28:29 PM	28.00		56.4	436515.83			57.1						56.4	436515.83	56.4	436515.83
	0:14:40	0:44:40	6:28:39 PM	28.00		56.3	426579.52			56.7						56.3	426579.52	56.3	426579.52
	0:14:50	0:44:50	6:28:49 PM	28.00		56.3	426579.52			56.9						56.3	426579.52	56.3	426579.52
	0:15:00	0:45:00	6:28:59 PM	28.00		56.2	416869.38	58.0	638256.93	57.0	64.0	51.3	53.6	56.5	62.0	56.2	416869.38	56.2	416869.38
Study #9	0:00:10	0:45:10	6:32:09 PM	32.00		60.1	1023292.99			61.2						60.1	1023292.99	60.1	1023292.99
Receptor 7	0:00:20	0:45:20	6:32:19 PM	32.00		59.2	831763.77			59.7						59.2	831763.77	59.2	831763.77
	0:00:30	0:45:30	6:32:29 PM	32.00		58.5	707945.78			59.1						58.5	707945.78	58.5	707945.78
	0:00:40	0:45:40	6:32:39 PM	32.00		58.6	724435.96			60.0						58.6	724435.96	58.6	724435.96
	0:00:50	0:45:50	6:32:49 PM	32.00		57.8	602559.59			59.5						57.8	602559.59	57.8	602559.59
	0:01:00	0:46:00	6:32:59 PM	32.00		55.4	346736.85	58.5	706122.49	56.6	61.2					55.4	346736.85	55.4	346736.85
	0:01:10	0:46:10	6:33:09 PM	33.00		54.4	275422.87			55.9						54.4	275422.87	54.4	275422.87
	0:01:20	0:46:20	6:33:19 PM	33.00		54.7	295120.92			55.5						54.7	295120.92	54.7	295120.92
	0:01:30	0:46:30	6:33:29 PM	33.00		53.4	218776.16			54.1						53.4	218776.16	53.4	218776.16
	0:01:40	0:46:40	6:33:39 PM	33.00		52.9	194984.46			53.7						52.9	194984.46	52.9	194984.46
	0:01:50	0:46:50	6:33:49 PM	33.00		52.5	177827.94			53.2						52.5	177827.94	52.5	177827.94
	0:02:00	0:47:00	6:33:59 PM	33.00		53.3	213796.21	53.6	229321.43	53.9	55.9					53.3	213796.21	53.3	213796.21
	0:02:10	0:47:10	6:34:09 PM	34.00		53.8	239883.29			55.7						53.8	239883.29	53.8	239883.29
	0:02:20	0:47:20	6:34:19 PM	34.00		53.3	213796.21			54.1						53.3	213796.21	53.3	213796.21
	0:02:30	0:47:30	6:34:29 PM	34.00		52.0	158489.32			53.0						52.0	158489.32	52.0	158489.32
	0:02:40	0:47:40	6:34:39 PM	34.00		53.5	223872.11			55.2						53.5	223872.11	53.5	223872.11
	0:02:50	0:47:50	6:34:49 PM	34.00		53.9	245470.89			58.1						53.9	245470.89	53.9	245470.89
	0:03:00	0:48:00	6:34:59 PM	34.00		51.9	154881.66	53.1	206065.58	57.1	58.1					51.9	154881.66	51.9	154881.66
	0:03:10	0:48:10	6:35:09 PM	35.00		46.4	43651.58			47.1						46.4	43651.58	46.4	43651.58
	0:03:20	0:48:20	6:35:19 PM	35.00		46.2	41686.94			47.1						46.2	41686.94	46.2	41686.94
	0:03:30	0:48:30	6:35:29 PM	35.00		45.9	38904.51			46.5						45.9	38904.51	45.9	38904.51
	0:03:40	0:48:40	6:35:39 PM	35.00		46.4	43651.58			47.3						46.4	43651.58	46.4	43651.58
	0:03:50	0:48:50	6:35:49 PM	35.00		47.1	51286.14			48.5						47.1	51286.14	47.1	51286.14
	0:04:00	0:49:00	6:35:59 PM	35.00		46.0	39810.72	46.4	43165.25	46.8	48.5					46.0	39810.72	46.0	39810.72
	0:04:10	0:49:10	6:36:09 PM	36.00		46.1	40738.03			47.4						46.1	40738.03	46.1	40738.03
	0:04:20	0:49:20	6:36:19 PM	36.00		47.1	51286.14			47.9						47.1	51286.14	47.1	51286.14
	0:04:30	0:49:30	6:36:29 PM	36.00		46.4	43651.58			47.4						46.4	43651.58	46.4	43651.58
	0:04:40	0:49:40	6:36:39 PM	36.00		47.2	52480.75			47.8						47.2	52480.75	47.2	52480.75
	0:04:50	0:49:50	6:36:49 PM	36.00		46.0	39810.72			47.0						46.0	39810.72	46.0	39810.72
	0:05:00	0:50:00	6:36:59 PM	36.00		47.1	51286.14	46.7	46542.23	47.9	47.9					47.1	51286.14	47.1	51286.14
	0:05:10	0:50:10	6:37:09 PM	37.00		45.5	35481.34			46.1						45.5	35481.34	45.5	35481.34
	0:05:20	0:50:20	6:37:19 PM	37.00		45.5	35481.34			46.1						45.5	35481.34	45.5	35481.34
	0:05:30	0:50:30	6:37:29 PM	37.00		45.4	34673.69			45.8						45.4	34673.69	45.4	34673.69
	0:05:40	0:50:40	6:37:39 PM	37.00		45.4	34673.69			45.8						45.4	34673.69	45.4	34673.69
	0:05:50	0:50:50	6:37:49 PM	37.00		45.7	37153.52			46.3						45.7	37153.52	45.7	37153.52
	0:06:00	0:51:00	6:37:59 PM	37.00		46.0	39810.72	45.6	36212.38	46.4	46.4					46.0	39810.72	46.0	39810.72
	0:06:10	0:51:10	6:38:09 PM	38.00		46.1	40738.03			46.9						46.1	40738.03	46.1	40738.03
	0:06:20	0:51:20	6:38:19 PM	38.00		46.1	40738.03			46.9						46.1	40738.03	46.1	40738.03
	0:06:30	0:51:30	6:38:29 PM	38.00		44.7	29512.09			45.6						44.7	29512.09	44.7	29512.09
	0:06:40	0:51:40	6:38:39 PM	38.00		45.8	38018.94			46.5						45.8	38018.94	45.8	38018.94
	0:06:50	0:51:50	6:38:49 PM	38.00		45.2	33113.11			45.6						45.2	33113.11	45.2	33113.11
	0:07:00	0:52:00	6:38:59 PM	38.00		44.6	28840.32	45.5	35160.09	45.4	46.9					44.6	28840.32	44.6	28840.32
	0:07:10	0:52:10	6:39:09 PM	39.00		45.6	36307.81			46.5						45.6	36307.81	45.6	36307.81
	0:07:20	0:52:20	6:39:19 PM	39.00		46.3	42657.95			46.9						46.3	42657.95	46.3	42657.95
	0:07:30	0:52:30	6:39:29 PM	39.00		46.8	47863.01			47.6						46.8	47863.01	46.8	47863.01
	0:07:40	0:52:40	6:39:39 PM	39.00		47.6	57543.99			48.4						47.6	57543.99	47.6	57543.99
	0:07:50	0:52:50	6:39:49 PM	39.00		47.7	58884.37			48.5						47.7	58884.37	47.7	58884.37
	0:08:00	0:53:00	6:39:59 PM	39.00		48.1	64565.42	47.1	51303.76	48.7	48.7					48.1	64565.42	48.1	64565.42
	0:08:10	0:53:10	6:40:09 PM	40.00		48.2	66069.34			48.6						48.2	66069.34	48.2	66069.34
	0:08:20	0:53:20	6:40:19 PM	40.00		48.0	63095.73			50.7						48.0	63095.73	48.0	63095.73
	0:08:30	0:53:30	6:40:29 PM	40.00		46.7	46773.51			48.9						46.7	46773.51	46.7	46773.51
	0:08:40	0:53:40	6:40:39 PM	40.00		46.5	44668.36			48.4						46.5	44668.36	46.5	44668.36
	0:08:50	0:53:50	6:40:49 PM	40.00		46.4	43651.58			47.1						46.4	43651.58	46.4	43651.58
	0:09:00	0:54:00	6:40:59 PM	40.00		47.0	50118.72	47.2	52396.21	47.6	50.7					47.0	50118.72	47.0	50118.72
	0:09:10	0:54:10	6:41:09 PM	41.00		47.3	53703.18			48.0						47.3	53703.18	47.3	53703.18
	0:09:20	0:54:20	6:41:19 PM	41.00		47.8	60255.96			48.6						47.8	60255.96	47.8	60255.96
	0:09:30	0:54:30	6:41:29 PM	41.00		48.6	72443.60			50.6						48.6	72443.60	48.6	72443.60
	0:09:40	0:54:40	6:41:39 PM	41.00		50.6	114815.36			51.3						50.6	114815.36	50.6	114815.36
	0:09:50	0:54:50	6:41:49 PM	41.00		48.9	77624.71			50.1						48.9	77624.71	48.9	77624.71
	0:10:00	0:55:00	6:41:59 PM	41.00		50.1	102329.30	49.0	80195.35	51.6	51.6					50.1	102329.30	50.1	102329.30
	0:10:10	0:55:10	6:42:09 PM	42.00		48.2	66069.34			49.3						48.2	66069.34	48.2	66069.34
	0:10:20	0:55:20	6:42:19 PM	42.00		50.0	100000.00			50.8						50.0	100000.00	50.0	100000.00
	0:10:30	0:55:30	6:42:29 PM	42.00		49.6	91201.08			50.3						49.6	91201.08	49.6	91201.08
	0:10:40	0:55:40	6:42:39 PM	42.00		48.2	66069.34			48.8						48.2	66069.34	48.2	66069.34
	0:10:50	0:55:50	6:42:49 PM	42.00		50.0	100000.00			51.2						50.0	100000.00	50.0	100000.00
	0:11:00	0:56:00	6:42:59 PM	42.00		51.2	131825.67	49.7	92527.57	52.2	52.2					51.2	131825.67	51.2	131825.67
	0:11:10	0:56:10	6:43:09 PM	43.00		52.5	177827.94			53.4						52.5	177827.94	52.5	177827.94
	0:11:20	0:56:20	6:43:19 PM	43.00		51.0	125892.54			52.3						51.0	125892.54	51.0	125892.54
	0:11:30	0:56:30	6:43:29 PM	43.00		51.3	134896.29			52.1						51.3	134896.29	51.3	134896.29
	0:11:40	0:56:40	6:43:39 PM	43.00		49.0	79432.82			53.0						49.0	79432.82	49.0	79432.82
	0:11:50	0:56:50	6:43:49 PM	43.00		48.4	69183.10			52.5						48.4	69183.10	48.4	69183.10
	0:12:00	0:57:00	6:43:59 PM	43.00		46.7	46773.51	50.2	105667.70	47.0	53.4					46.7	46773.51	46.7	46773.51
	0:12:10	0:57:10	6:44:09 PM	44.00		46.5	44668.36			46.9						46.5	44668.36	46.5	44668.36
	0:12:20	0:57:20	6:44:19 PM	44.00		46.9	48977.88			47.2						46.9	48977.88	46.9	48977.88
	0:12:30	0:57:30	6:44:29 PM	44.00		46.6	45708.82			47.3						46.6	45708.82	46.6	45708.82
	0:12:40	0:57:40	6:44:39 PM	44.00		45.8	38018.94			46.6						45.8	38018.94	45.8	38018.94
	0:12:50	0:57:50	6:44:49 PM	44.00		47.2	52480.75			49.6						47.2	52480.75	47.2	52480.75
	0:13:00	0:58:00	6:44:59 PM	44.00		45.9	38904.51	46.5	44793.21	47.3	49.6					45.9	38904.51	45.9	38904.51
	0:13:10	0:58:10	6:45:09 PM	45.00		47.4	54954.09			49.3						47.4	54954.09	47.4	54954.09
	0:13:20	0:58:20	6:45:19 PM	45.00		46.5	44668.36			48.2						46.5	44668.36	46.5	44668.36
	0:13:30	0:58:30	6:45:29 PM	45.00		46.1	40738.03			48.0						46.1	40738.03	46.1	40738.03
	0:13:40	0:58:40	6:45:39 PM	45.00		44.8	30199.52			46.5						44.8	30199.52	44.8	30199.52

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:50	0:58:50	6:45:49 PM	45.00		43.4	21877.62			44.1						43.4	21877.62	43.4	21877.62
	0:14:00	0:59:00	6:45:59 PM	45.00		43.8	23988.33	45.6	36070.99	44.8	49.3					43.8	23988.33	43.8	23988.33
	0:14:10	0:59:10	6:46:09 PM	46.00		43.2	20892.96			43.5						43.2	20892.96	43.2	20892.96
	0:14:20	0:59:20	6:46:19 PM	46.00		42.8	19054.61			43.3						42.8	19054.61	42.8	19054.61
	0:14:30	0:59:30	6:46:29 PM	46.00		42.4	17378.01			43.0						42.4	17378.01	42.4	17378.01
	0:14:40	0:59:40	6:46:39 PM	46.00		42.3	16982.44			43.1						42.3	16982.44	42.3	16982.44
	0:14:50	0:59:50	6:46:49 PM	46.00		42.9	19498.45			44.2						42.9	19498.45	42.9	19498.45
	0:15:00	1:00:00	6:46:59 PM	46.00		43.5	22387.21	42.9	19365.61	44.7	44.7	47.1	50.6	54.4	59.2	43.5	22387.21	43.5	22387.21
Study #10	0:00:10	1:00:10	7:09:40 PM	9.00		64.1	2570395.78			68.6						64.1	2570395.78	69.1	8128305.16
Receptor 9	0:00:20	1:00:20	7:09:50 PM	9.00		65.8	3801893.96			70.0						65.8	3801893.96	70.8	12022644.35
	0:00:30	1:00:30	7:10:00 PM	10.00		61.7	1479108.39			64.9						61.7	1479108.39	66.7	4677351.41
	0:00:40	1:00:40	7:10:10 PM	10.00		61.6	1445439.77			65.9						61.6	1445439.77	66.6	4570881.90
	0:00:50	1:00:50	7:10:20 PM	10.00		61.3	1348962.88			65.9						61.3	1348962.88	66.3	4265795.19
	0:01:00	1:01:00	7:10:30 PM	10.00		49.2	83176.38	62.5	1788162.86	52.9	70.0					49.2	83176.38	54.2	263026.80
	0:01:10	1:01:10	7:10:40 PM	10.00		53.6	229086.77			57.1						53.6	229086.77	58.6	724435.96
	0:01:20	1:01:20	7:10:50 PM	10.00		56.4	436515.83			58.0						56.4	436515.83	61.4	1380384.26
	0:01:30	1:01:30	7:11:00 PM	11.00		57.0	501187.23			59.5						57.0	501187.23	62.0	1584893.19
	0:01:40	1:01:40	7:11:10 PM	11.00		56.7	467735.14			59.4						56.7	467735.14	61.7	1479108.39
	0:01:50	1:01:50	7:11:20 PM	11.00		53.7	234422.88			58.1						53.7	234422.88	58.7	741310.24
	0:02:00	1:02:00	7:11:30 PM	11.00		54.3	269153.48	55.5	356350.22	59.4	59.5					54.3	269153.48	59.3	851138.04
	0:02:10	1:02:10	7:11:40 PM	11.00		50.0	100000.00			56.6						50.0	100000.00	55.0	316227.77
	0:02:20	1:02:20	7:11:50 PM	11.00		52.2	165958.69			57.4						52.2	165958.69	57.2	524807.46
	0:02:30	1:02:30	7:12:00 PM	12.00		55.8	380189.40			59.1						55.8	380189.40	60.8	1202264.43
	0:02:40	1:02:40	7:12:10 PM	12.00		55.6	363078.05			60.4						55.6	363078.05	60.6	1148153.62
	0:02:50	1:02:50	7:12:20 PM	12.00		53.4	218776.16			59.1						53.4	218776.16	58.4	691830.97
	0:03:00	1:03:00	7:12:30 PM	12.00		56.9	489778.82	54.6	286296.85	60.3	60.4					56.9	489778.82	61.9	1548816.62
	0:03:10	1:03:10	7:12:40 PM	12.00		58.1	645654.23			61.4						58.1	645654.23	63.1	2041737.94
	0:03:20	1:03:20	7:12:50 PM	12.00		52.3	169824.37			58.0						52.3	169824.37	57.3	537031.80
	0:03:30	1:03:30	7:13:00 PM	13.00		52.3	169824.37			54.7						52.3	169824.37	57.3	537031.80
	0:03:40	1:03:40	7:13:10 PM	13.00		53.1	204173.79			57.5						53.1	204173.79	58.1	645654.23
	0:03:50	1:03:50	7:13:20 PM	13.00		55.0	316227.77			57.7						55.0	316227.77	60.0	1000000.00
	0:04:00	1:04:00	7:13:30 PM	13.00		54.7	295120.92	54.8	300137.57	58.5	61.4					54.7	295120.92	59.7	933254.30
	0:04:10	1:04:10	7:13:40 PM	13.00		52.6	181970.09			55.1						52.6	181970.09	57.6	575439.94
	0:04:20	1:04:20	7:13:50 PM	13.00		50.8	120226.44			55.2						50.8	120226.44	55.8	380189.40
	0:04:30	1:04:30	7:14:00 PM	14.00		49.4	87096.36			50.7						49.4	87096.36	54.4	275422.87
	0:04:40	1:04:40	7:14:10 PM	14.00		48.3	67608.30			50.5						48.3	67608.30	53.3	213796.21
	0:04:50	1:04:50	7:14:20 PM	14.00		51.8	151356.12			54.3						51.8	151356.12	56.8	478630.09
	0:05:00	1:05:00	7:14:30 PM	14.00		56.7	467735.14	52.5	179332.08	58.2	58.2					56.7	467735.14	61.7	1479108.39
	0:05:10	1:05:10	7:14:40 PM	14.00		50.9	123026.88			56.3						50.9	123026.88	55.9	389045.14
	0:05:20	1:05:20	7:14:50 PM	14.00		46.4	43651.58			48.0						46.4	43651.58	51.4	138038.43
	0:05:30	1:05:30	7:15:00 PM	15.00		47.2	52480.75			48.5						47.2	52480.75	52.2	165958.69
	0:05:40	1:05:40	7:15:10 PM	15.00		48.7	74131.02			50.0						48.7	74131.02	53.7	234422.88
	0:05:50	1:05:50	7:15:20 PM	15.00		50.6	114815.36			52.0						50.6	114815.36	55.6	363078.05
	0:06:00	1:06:00	7:15:30 PM	15.00		49.8	95499.26	49.2	83934.14	51.5	56.3					49.8	95499.26	54.8	301995.17
	0:06:10	1:06:10	7:15:40 PM	15.00		49.5	89125.09			51.8						49.5	89125.09	54.5	281838.29
	0:06:20	1:06:20	7:15:50 PM	15.00		47.2	52480.75			48.4						47.2	52480.75	52.2	165958.69
	0:06:30	1:06:30	7:16:00 PM	16.00		47.9	61659.50			49.2						47.9	61659.50	52.9	194984.46
	0:06:40	1:06:40	7:16:10 PM	16.00		49.4	87096.36			52.5						49.4	87096.36	54.4	275422.87
	0:06:50	1:06:50	7:16:20 PM	16.00		50.6	114815.36			52.8						50.6	114815.36	55.6	363078.05
	0:07:00	1:07:00	7:16:30 PM	16.00		50.6	114815.36	49.4	86665.40	53.6	53.6					50.6	114815.36	55.6	363078.05
	0:07:10	1:07:10	7:16:40 PM	16.00		46.2	41686.94			47.6						46.2	41686.94	51.2	131825.67
	0:07:20	1:07:20	7:16:50 PM	16.00		45.1	32359.37			46.6						45.1	32359.37	50.1	102329.30
	0:07:30	1:07:30	7:17:00 PM	17.00		44.8	30199.52			45.7						44.8	30199.52	49.8	95499.26
	0:07:40	1:07:40	7:17:10 PM	17.00		46.7	46773.51			47.6						46.7	46773.51	51.7	147910.84
	0:07:50	1:07:50	7:17:20 PM	17.00		45.6	36307.81			46.8						45.6	36307.81	50.6	114815.36
	0:08:00	1:08:00	7:17:30 PM	17.00		46.2	41686.94	45.8	38169.01	46.9	47.6					46.2	41686.94	51.2	131825.67
	0:08:10	1:08:10	7:17:40 PM	17.00		46.9	48977.88			47.3						46.9	48977.88	51.9	154881.66
	0:08:20	1:08:20	7:17:50 PM	17.00		48.1	64565.42			50.7						48.1	64565.42	53.1	204173.79
	0:08:30	1:08:30	7:18:00 PM	18.00		53.6	229086.77			62.2						53.6	229086.77	58.6	724435.96
	0:08:40	1:08:40	7:18:10 PM	18.00		46.5	44668.36			47.4						46.5	44668.36	51.5	141253.75
	0:08:50	1:08:50	7:18:20 PM	18.00		46.5	44668.36			47.2						46.5	44668.36	51.5	141253.75
	0:09:00	1:09:00	7:18:30 PM	18.00		46.0	39810.72	49.0	78629.58	47.0	62.2					46.0	39810.72	51.0	125892.54
	0:09:10	1:09:10	7:18:40 PM	18.00		45.9	38904.51			47.1						45.9	38904.51	50.9	123026.88
	0:09:20	1:09:20	7:18:50 PM	18.00		45.1	32359.37			45.8						45.1	32359.37	50.1	102329.30
	0:09:30	1:09:30	7:19:00 PM	19.00		45.5	35481.34			46.0						45.5	35481.34	50.5	112201.85
	0:09:40	1:09:40	7:19:10 PM	19.00		46.3	42657.95			47.1						46.3	42657.95	51.3	134896.29
	0:09:50	1:09:50	7:19:20 PM	19.00		46.7	46773.51			47.4						46.7	46773.51	51.7	147910.84
	0:10:00	1:10:00	7:19:30 PM	19.00		47.3	53703.18	46.2	41646.64	48.3	48.3					47.3	53703.18	52.3	169824.37
	0:10:10	1:10:10	7:19:40 PM	19.00		49.6	91201.08			50.3						49.6	91201.08	54.6	288403.15
	0:10:20	1:10:20	7:19:50 PM	19.00		50.0	100000.00			51.0						50.0	100000.00	55.0	316227.77
	0:10:30	1:10:30	7:20:00 PM	20.00		50.2	104712.85			50.8						50.2	104712.85	55.2	331131.12
	0:10:40	1:10:40	7:20:10 PM	20.00		51.5	141253.75			52.5						51.5	141253.75	56.5	446683.59
	0:10:50	1:10:50	7:20:20 PM	20.00		52.6	181970.09			53.9						52.6	181970.09	57.6	575439.94
	0:11:00	1:11:00	7:20:30 PM	20.00		53.1	204173.79	51.4	137218.60	55.4	55.4					53.1	204173.79	58.1	645654.23
	0:11:10	1:11:10	7:20:40 PM	20.00		56.3	426579.52			57.3						56.3	426579.52	61.3	1348962.88
	0:11:20	1:11:20	7:20:50 PM	20.00		55.5	354813.39			56.2						55.5	354813.39	60.5	1122018.45
	0:11:30	1:11:30	7:21:00 PM	21.00		53.7	234422.88			55.4						53.7	234422.88	58.7	741310.24
	0:11:40	1:11:40	7:21:10 PM	21.00		53.1	204173.79			54.5						53.1	204173.79	58.1	645654.23
	0:11:50	1:11:50	7:21:20 PM	21.00		52.3	169824.37			55.7						52.3	169824.37	57.3	537031.80
	0:12:00	1:12:00	7:21:30 PM	21.00		59.1	812830.52	55.6	367107.41	61.8	61.8					59.1	812830.52	64.1	2570395.78
	0:12:10	1:12:10	7:21:40 PM	21.00		56.7	467735.14			62.2						56.7	467735.14	61.7	1479108.39
	0:12:20	1:12:20	7:21:50 PM	21.00		50.8	120226.44			51.7						50.8	120226.44	55.8	380189.40
	0:12:30	1:12:30	7:22:00 PM	22.00		50.7	117489.76			53.8						50.7	117489.76	55.7	371535.23
	0:12:40	1:12:40	7:22:10 PM	22.00		51.4	138038.43			53.6						51.4	138038.43	56.4	436515.83
	0:12:50	1:12:50	7:22:20 PM	22.00		50.2	104712.85			51.8						50.2	104712.85	55.2	331131.12
	0:13:00	1:13:00	7:22:30 PM	22.00		48.3	67608.30	52.3	169301.82	49.5	62.2					48.3	67608.30	53.3	213796.21
	0:13:10	1:13:10	7:22:40 PM	22.00		49.5	89125.09			51.1						49.5	89125.09	54.5	281838.29
	0:13:20	1:13:20	7:22:50 PM	22.00		51.7	147910.84			54.6						51.7	147910.84	56.7	467735.14
	0:13:30	1:13:30	7:23:00 PM	23.00		56.5	446683.59			60.4						56.5	446683.59	61.5	1412537.54

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:40	1:13:40	7:23:10 PM	23.00		56.1	407380.28			60.7						56.1	407380.28	61.1	1288249.55
	0:13:50	1:13:50	7:23:20 PM	23.00		51.8	151356.12			52.3						51.8	151356.12	56.8	478630.09
	0:14:00	1:14:00	7:23:30 PM	23.00		48.7	74131.02	53.4	219431.16	50.8	60.7					48.7	74131.02	53.7	234422.88
	0:14:10	1:14:10	7:23:40 PM	23.00		50.0	100000.00			55.5						50.0	100000.00	55.0	316227.77
	0:14:20	1:14:20	7:23:50 PM	23.00		49.0	79432.82			52.0						49.0	79432.82	54.0	251188.64
	0:14:30	1:14:30	7:24:00 PM	24.00		48.0	63095.73			49.3						48.0	63095.73	53.0	199526.23
	0:14:40	1:14:40	7:24:10 PM	24.00		50.1	102329.30			53.1						50.1	102329.30	55.1	323593.66
	0:14:50	1:14:50	7:24:20 PM	24.00		55.4	346736.85			56.6						55.4	346736.85	60.4	1096478.20
	0:15:00	1:15:00	7:24:30 PM	24.00		54.7	295120.92	52.2	164452.61	56.2	56.6	50.8	54.7	57.0	64.1	54.7	295120.92	59.7	933254.30
Study #11	0:00:10	1:15:10	7:36:50 PM	36.00		50.1	102329.30			60.2						50.1	102329.30	55.1	323593.66
Receptor 10	0:00:20	1:15:20	7:37:00 PM	37.00		54.1	257039.58			59.7						54.1	257039.58	59.1	812830.52
	0:00:30	1:15:30	7:37:10 PM	37.00		51.8	151356.12			56.1						51.8	151356.12	56.8	478630.09
	0:00:40	1:15:40	7:37:20 PM	37.00		49.8	95499.26			51.7						49.8	95499.26	54.8	301995.17
	0:00:50	1:15:50	7:37:30 PM	37.00		45.9	38904.51			49.2						45.9	38904.51	50.9	123026.88
	0:01:00	1:16:00	7:37:40 PM	37.00		44.0	25118.86	50.5	111707.94	46.1	60.2					44.0	25118.86	49.0	79432.82
	0:01:10	1:16:10	7:37:50 PM	37.00		41.4	13803.84			42.3						41.4	13803.84	46.4	43651.58
	0:01:20	1:16:20	7:38:00 PM	38.00		40.9	12302.69			41.6						40.9	12302.69	45.9	38904.51
	0:01:30	1:16:30	7:38:10 PM	38.00		41.2	13182.57			42.7						41.2	13182.57	46.2	41686.94
	0:01:40	1:16:40	7:38:20 PM	38.00		41.3	13489.63			43.1						41.3	13489.63	46.3	42657.95
	0:01:50	1:16:50	7:38:30 PM	38.00		41.7	14791.08			44.1						41.7	14791.08	46.7	46773.51
	0:02:00	1:17:00	7:38:40 PM	38.00		42.4	17378.01	41.5	14157.97	44.3	44.3					42.4	17378.01	47.4	54954.09
	0:02:10	1:17:10	7:38:50 PM	38.00		41.5	14125.38			42.3						41.5	14125.38	46.5	44668.36
	0:02:20	1:17:20	7:39:00 PM	39.00		40.4	10964.78			41.1						40.4	10964.78	45.4	34673.69
	0:02:30	1:17:30	7:39:10 PM	39.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:02:40	1:17:40	7:39:20 PM	39.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:02:50	1:17:50	7:39:30 PM	39.00		40.3	10715.19			41.7						40.3	10715.19	45.3	33884.42
	0:03:00	1:18:00	7:39:40 PM	39.00		40.8	12022.64	40.6	11382.31	42.9	42.9					40.8	12022.64	45.8	38018.94
	0:03:10	1:18:10	7:39:50 PM	39.00		40.8	12022.64			42.2						40.8	12022.64	45.8	38018.94
	0:03:20	1:18:20	7:40:00 PM	40.00		40.5	11220.18			41.3						40.5	11220.18	45.5	35481.34
	0:03:30	1:18:30	7:40:10 PM	40.00		40.8	12022.64			42.4						40.8	12022.64	45.8	38018.94
	0:03:40	1:18:40	7:40:20 PM	40.00		40.3	10715.19			41.6						40.3	10715.19	45.3	33884.42
	0:03:50	1:18:50	7:40:30 PM	40.00		40.0	10000.00			40.1						40.0	10000.00	45.0	31622.78
	0:04:00	1:19:00	7:40:40 PM	40.00		40.0	10000.00	40.4	10996.78	40.1	42.4					40.0	10000.00	45.0	31622.78
	0:04:10	1:19:10	7:40:50 PM	40.00		39.9	9772.37			40.2						39.9	9772.37	44.9	30902.95
	0:04:20	1:19:20	7:41:00 PM	41.00		40.1	10232.93			41.0						40.1	10232.93	45.1	32359.37
	0:04:30	1:19:30	7:41:10 PM	41.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:04:40	1:19:40	7:41:20 PM	41.00		40.1	10232.93			40.3						40.1	10232.93	45.1	32359.37
	0:04:50	1:19:50	7:41:30 PM	41.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:05:00	1:20:00	7:41:40 PM	41.00		40.1	10232.93	40.1	10156.17	40.7	41.0					40.1	10232.93	45.1	32359.37
	0:05:10	1:20:10	7:41:50 PM	41.00		40.0	10000.00			40.3						40.0	10000.00	45.0	31622.78
	0:05:20	1:20:20	7:42:00 PM	42.00		39.3	8511.38			40.2						39.3	8511.38	44.3	26915.35
	0:05:30	1:20:30	7:42:10 PM	42.00		40.1	10232.93			40.3						40.1	10232.93	45.1	32359.37
	0:05:40	1:20:40	7:42:20 PM	42.00		39.4	8709.64			40.1						39.4	8709.64	44.4	27542.29
	0:05:50	1:20:50	7:42:30 PM	42.00		39.5	8912.51			40.1						39.5	8912.51	44.5	28183.83
	0:06:00	1:21:00	7:42:40 PM	42.00		39.8	9549.93	39.7	9319.40	40.3	40.3					39.8	9549.93	44.8	30199.52
	0:06:10	1:21:10	7:42:50 PM	42.00		40.5	11220.18			41.6						40.5	11220.18	45.5	35481.34
	0:06:20	1:21:20	7:43:00 PM	43.00		40.2	10471.29			40.8						40.2	10471.29	45.2	33113.11
	0:06:30	1:21:30	7:43:10 PM	43.00		40.1	10232.93			40.3						40.1	10232.93	45.1	32359.37
	0:06:40	1:21:40	7:43:20 PM	43.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:06:50	1:21:50	7:43:30 PM	43.00		40.1	10232.93			40.7						40.1	10232.93	45.1	32359.37
	0:07:00	1:22:00	7:43:40 PM	43.00		40.1	10232.93	40.2	10437.20	40.6	41.6					40.1	10232.93	45.1	32359.37
	0:07:10	1:22:10	7:43:50 PM	43.00		41.2	13182.57			42.6						41.2	13182.57	46.2	41686.94
	0:07:20	1:22:20	7:44:00 PM	44.00		53.3	213796.21			62.0						53.3	213796.21	58.3	676082.98
	0:07:30	1:22:30	7:44:10 PM	44.00		40.8	12022.64			44.8						40.8	12022.64	45.8	38018.94
	0:07:40	1:22:40	7:44:20 PM	44.00		40.6	11481.54			42.5						40.6	11481.54	45.6	36307.81
	0:07:50	1:22:50	7:44:30 PM	44.00		42.4	17378.01			44.8						42.4	17378.01	47.4	54954.09
	0:08:00	1:23:00	7:44:40 PM	44.00		41.6	14454.40	46.7	47052.56	43.5	62.0					41.6	14454.40	46.6	45708.82
	0:08:10	1:23:10	7:44:50 PM	44.00		41.0	12589.25			46.1						41.0	12589.25	46.0	39810.72
	0:08:20	1:23:20	7:45:00 PM	45.00		40.8	12022.64			44.8						40.8	12022.64	45.8	38018.94
	0:08:30	1:23:30	7:45:10 PM	45.00		40.2	10471.29			40.5						40.2	10471.29	45.2	33113.11
	0:08:40	1:23:40	7:45:20 PM	45.00		40.2	10471.29			40.6						40.2	10471.29	45.2	33113.11
	0:08:50	1:23:50	7:45:30 PM	45.00		40.1	10232.93			40.5						40.1	10232.93	45.1	32359.37
	0:09:00	1:24:00	7:45:40 PM	45.00		41.1	12882.50	40.6	11444.98	42.1	46.1					41.1	12882.50	46.1	40738.03
	0:09:10	1:24:10	7:45:50 PM	45.00		40.7	11748.98			41.4						40.7	11748.98	45.7	37153.52
	0:09:20	1:24:20	7:46:00 PM	46.00		41.2	13182.57			41.9						41.2	13182.57	46.2	41686.94
	0:09:30	1:24:30	7:46:10 PM	46.00		40.6	11481.54			41.4						40.6	11481.54	45.6	36307.81
	0:09:40	1:24:40	7:46:20 PM	46.00		40.4	10964.78			41.4						40.4	10964.78	45.4	34673.69
	0:09:50	1:24:50	7:46:30 PM	46.00		40.2	10471.29			40.5						40.2	10471.29	45.2	33113.11
	0:10:00	1:25:00	7:46:40 PM	46.00		40.1	10232.93	40.5	11347.01	40.2	41.9					40.1	10232.93	45.1	32359.37
	0:10:10	1:25:10	7:46:50 PM	46.00		40.1	10232.93			40.4						40.1	10232.93	45.1	32359.37
	0:10:20	1:25:20	7:47:00 PM	47.00		40.6	11481.54			42.5						40.6	11481.54	45.6	36307.81
	0:10:30	1:25:30	7:47:10 PM	47.00		41.8	15135.61			43.2						41.8	15135.61	46.8	47863.01
	0:10:40	1:25:40	7:47:20 PM	47.00		40.4	10964.78			41.2						40.4	10964.78	45.4	34673.69
	0:10:50	1:25:50	7:47:30 PM	47.00		40.4	10964.78			41.5						40.4	10964.78	45.4	34673.69
	0:11:00	1:26:00	7:47:40 PM	47.00		40.1	10232.93	40.6	11502.10	40.7	43.2					40.1	10232.93	45.1	32359.37
	0:11:10	1:26:10	7:47:50 PM	47.00		40.2	10471.29			40.8						40.2	10471.29	45.2	33113.11
	0:11:20	1:26:20	7:48:00 PM	48.00		40.1	10232.93			40.3						40.1	10232.93	45.1	32359.37
	0:11:30	1:26:30	7:48:10 PM	48.00		40.3	10715.19			41.1						40.3	10715.19	45.3	33884.42
	0:11:40	1:26:40	7:48:20 PM	48.00		40.1	10232.93			40.4						40.1	10232.93	45.1	32359.37
	0:11:50	1:26:50	7:48:30 PM	48.00		40.7	11748.98			41.4						40.7	11748.98	45.7	37153.52
	0:12:00	1:27:00	7:48:40 PM	48.00		40.1	10232.93	40.3	10605.71	40.6	41.4					40.1	10232.93	45.1	32359.37
	0:12:10	1:27:10	7:48:50 PM	48.00		40.1	10232.93			40.6						40.1	10232.93	45.1	32359.37
	0:12:20	1:27:20	7:49:00 PM	49.00		40.1	10232.93			40.3						40.1	10232.93	45.1	32359.37
	0:12:30	1:27:30	7:49:10 PM	49.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:12:40	1:27:40	7:49:20 PM	49.00		40.1	10232.93			40.4						40.1	10232.93	45.1	32359.37
	0:12:50	1:27:50	7:49:30 PM	49.00		40.1	10232.93			40.5						40.1	10232.93	45.1	32359.37
	0:13:00	1:28:00	7:49:40 PM	49.00		40.5	11220.18	40.2	10397.47	41.4	41.4					40.5	11220.18	45.5	35481.34
	0:13:10	1:28:10	7:49:50 PM	49.00		40.3	10715.19			41.0						40.3	10715.19	45.3	33884.42
	0:13:20	1:28:20	7:50:00 PM	50.00		40.2	10471.29			40.9						40.2	10471.29	45.2	33113.11

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:30	1:28:30	7:50:10 PM	50.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:13:40	1:28:40	7:50:20 PM	50.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:13:50	1:28:50	7:50:30 PM	50.00		39.5	8912.51			40.1						39.5	8912.51	44.5	28183.83
	0:14:00	1:29:00	7:50:40 PM	50.00		40.1	10232.93	40.1	10132.96	40.9	41.0					40.1	10232.93	45.1	32359.37
	0:14:10	1:29:10	7:50:50 PM	50.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:14:20	1:29:20	7:51:00 PM	51.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:14:30	1:29:30	7:51:10 PM	51.00		40.1	10232.93			40.2						40.1	10232.93	45.1	32359.37
	0:14:40	1:29:40	7:51:20 PM	51.00		40.4	10964.78			41.4						40.4	10964.78	45.4	34673.69
	0:14:50	1:29:50	7:51:30 PM	51.00		41.7	14791.08			43.0						41.7	14791.08	46.7	46773.51
	0:15:00	1:30:00	7:51:40 PM	51.00		43.0	19952.62	41.0	12734.55	45.0	45.0	40.3	40.9	43.0	53.3	43.0	19952.62	48.0	63095.73
Study #12	0:00:10	1:30:10	7:54:17 PM	54.00		47.4	54954.09			54.9						47.4	54954.09	52.4	173780.08
Receptor 12	0:00:20	1:30:20	7:54:27 PM	54.00		41.7	14791.08			44.7						41.7	14791.08	46.7	46773.51
	0:00:30	1:30:30	7:54:37 PM	54.00		40.6	11481.54			42.9						40.6	11481.54	45.6	36307.81
	0:00:40	1:30:40	7:54:47 PM	54.00		41.4	13803.84			42.2						41.4	13803.84	46.4	43651.58
	0:00:50	1:30:50	7:54:57 PM	54.00		41.2	13182.57			41.8						41.2	13182.57	46.2	41686.94
	0:01:00	1:31:00	7:55:07 PM	55.00		41.4	13803.84	43.1	20336.16	42.5	54.9					41.4	13803.84	46.4	43651.58
	0:01:10	1:31:10	7:55:17 PM	55.00		41.9	15488.17			43.1						41.9	15488.17	46.9	48977.88
	0:01:20	1:31:20	7:55:27 PM	55.00		40.6	11481.54			41.4						40.6	11481.54	45.6	36307.81
	0:01:30	1:31:30	7:55:37 PM	55.00		39.8	9549.93			40.4						39.8	9549.93	44.8	30199.52
	0:01:40	1:31:40	7:55:47 PM	55.00		40.3	10715.19			41.5						40.3	10715.19	45.3	33884.42
	0:01:50	1:31:50	7:55:57 PM	55.00		38.9	7762.47			40.1						38.9	7762.47	43.9	24547.09
	0:02:00	1:32:00	7:56:07 PM	56.00		40.1	10232.93	40.4	10871.70	40.8	43.1					40.1	10232.93	45.1	32359.37
	0:02:10	1:32:10	7:56:17 PM	56.00		40.8	12022.64			42.0						40.8	12022.64	45.8	38018.94
	0:02:20	1:32:20	7:56:27 PM	56.00		40.9	12302.69			41.8						40.9	12302.69	45.9	38904.51
	0:02:30	1:32:30	7:56:37 PM	56.00		41.7	14791.08			42.5						41.7	14791.08	46.7	46773.51
	0:02:40	1:32:40	7:56:47 PM	56.00		42.1	16218.10			42.7						42.1	16218.10	47.1	51286.14
	0:02:50	1:32:50	7:56:57 PM	56.00		43.7	23442.29			44.8						43.7	23442.29	48.7	74131.02
	0:03:00	1:33:00	7:57:07 PM	57.00		43.8	23988.33	42.3	17127.52	44.2	44.8					43.8	23988.33	48.8	75857.76
	0:03:10	1:33:10	7:57:17 PM	57.00		43.5	22387.21			44.0						43.5	22387.21	48.5	70794.58
	0:03:20	1:33:20	7:57:27 PM	57.00		43.9	24547.09			44.5						43.9	24547.09	48.9	77624.71
	0:03:30	1:33:30	7:57:37 PM	57.00		45.2	33113.11			46.7						45.2	33113.11	50.2	104712.85
	0:03:40	1:33:40	7:57:47 PM	57.00		47.4	54954.09			48.6						47.4	54954.09	52.4	173780.08
	0:03:50	1:33:50	7:57:57 PM	57.00		47.0	50118.72			48.2						47.0	50118.72	52.0	158489.32
	0:04:00	1:34:00	7:58:07 PM	58.00		44.7	29512.09	45.5	35772.05	46.4	48.6					44.7	29512.09	49.7	93325.43
	0:04:10	1:34:10	7:58:17 PM	58.00		43.8	23988.33			44.1						43.8	23988.33	48.8	75857.76
	0:04:20	1:34:20	7:58:27 PM	58.00		44.9	30902.95			46.5						44.9	30902.95	49.9	97723.72
	0:04:30	1:34:30	7:58:37 PM	58.00		44.6	28840.32			45.8						44.6	28840.32	49.6	91201.08
	0:04:40	1:34:40	7:58:47 PM	58.00		44.5	28183.83			45.5						44.5	28183.83	49.5	89125.09
	0:04:50	1:34:50	7:58:57 PM	58.00		47.9	61659.50			51.4						47.9	61659.50	52.9	194984.46
	0:05:00	1:35:00	7:59:07 PM	59.00		45.0	31622.78	45.3	34199.62	46.7	51.4					45.0	31622.78	50.0	100000.00
	0:05:10	1:35:10	7:59:17 PM	59.00		43.9	24547.09			44.8						43.9	24547.09	48.9	77624.71
	0:05:20	1:35:20	7:59:27 PM	59.00		46.1	40738.03			54.6						46.1	40738.03	51.1	128824.96
	0:05:30	1:35:30	7:59:37 PM	59.00		44.4	27542.29			49.4						44.4	27542.29	49.4	87096.36
	0:05:40	1:35:40	7:59:47 PM	59.00		42.0	15848.93			45.3						42.0	15848.93	47.0	50118.72
	0:05:50	1:35:50	7:59:57 PM	59.00		41.0	12589.25			42.3						41.0	12589.25	46.0	39810.72
	0:06:00	1:36:00	8:00:07 PM	0.00		42.6	18197.01	43.7	23243.77	43.2	54.6					42.6	18197.01	47.6	57543.99
	0:06:10	1:36:10	8:00:17 PM	0.00		43.6	22908.68			44.3						43.6	22908.68	48.6	72443.60
	0:06:20	1:36:20	8:00:27 PM	0.00		42.7	18620.87			43.3						42.7	18620.87	47.7	58884.37
	0:06:30	1:36:30	8:00:37 PM	0.00		42.7	18620.87			43.2						42.7	18620.87	47.7	58884.37
	0:06:40	1:36:40	8:00:47 PM	0.00		43.4	21877.62			44.4						43.4	21877.62	48.4	69183.10
	0:06:50	1:36:50	8:00:57 PM	0.00		44.0	25118.86			44.9						44.0	25118.86	49.0	79432.82
	0:07:00	1:37:00	8:01:07 PM	1.00		44.4	27542.29	43.5	22448.20	45.5	45.5					44.4	27542.29	49.4	87096.36
	0:07:10	1:37:10	8:01:17 PM	1.00		45.0	31622.78			46.0						45.0	31622.78	50.0	100000.00
	0:07:20	1:37:20	8:01:27 PM	1.00		45.5	35481.34			46.8						45.5	35481.34	50.5	112201.85
	0:07:30	1:37:30	8:01:37 PM	1.00		43.6	22908.68			44.9						43.6	22908.68	48.6	72443.60
	0:07:40	1:37:40	8:01:47 PM	1.00		42.9	19498.45			43.8						42.9	19498.45	47.9	61659.50
	0:07:50	1:37:50	8:01:57 PM	1.00		41.3	13489.63			41.6						41.3	13489.63	46.3	42657.95
	0:08:00	1:38:00	8:02:07 PM	2.00		42.3	16982.44	43.7	23330.55	43.4	46.8					42.3	16982.44	47.3	53703.18
	0:08:10	1:38:10	8:02:17 PM	2.00		42.8	19054.61			43.2						42.8	19054.61	47.8	60255.96
	0:08:20	1:38:20	8:02:27 PM	2.00		43.0	19952.62			43.8						43.0	19952.62	48.0	63095.73
	0:08:30	1:38:30	8:02:37 PM	2.00		42.3	16982.44			42.9						42.3	16982.44	47.3	53703.18
	0:08:40	1:38:40	8:02:47 PM	2.00		42.9	19498.45			43.9						42.9	19498.45	47.9	61659.50
	0:08:50	1:38:50	8:02:57 PM	2.00		41.4	13803.84			42.3						41.4	13803.84	46.4	43651.58
	0:09:00	1:39:00	8:03:07 PM	3.00		43.2	20892.96	42.6	18364.15	44.9	44.9					43.2	20892.96	48.2	66069.34
	0:09:10	1:39:10	8:03:17 PM	3.00		42.3	16982.44			42.8						42.3	16982.44	47.3	53703.18
	0:09:20	1:39:20	8:03:27 PM	3.00		43.2	20892.96			44.6						43.2	20892.96	48.2	66069.34
	0:09:30	1:39:30	8:03:37 PM	3.00		44.3	26915.35			44.9						44.3	26915.35	49.3	85113.80
	0:09:40	1:39:40	8:03:47 PM	3.00		43.8	23988.33			45.0						43.8	23988.33	48.8	75857.76
	0:09:50	1:39:50	8:03:57 PM	3.00		43.6	22908.68			45.6						43.6	22908.68	48.6	72443.60
	0:10:00	1:40:00	8:04:07 PM	4.00		44.8	30199.52	43.7	23647.88	45.8	45.8					44.8	30199.52	49.8	95499.26
	0:10:10	1:40:10	8:04:17 PM	4.00		42.8	19054.61			43.5						42.8	19054.61	47.8	60255.96
	0:10:20	1:40:20	8:04:27 PM	4.00		42.3	16982.44			42.8						42.3	16982.44	47.3	53703.18
	0:10:30	1:40:30	8:04:37 PM	4.00		41.0	12589.25			41.7						41.0	12589.25	46.0	39810.72
	0:10:40	1:40:40	8:04:47 PM	4.00		40.4	10964.78			41.3						40.4	10964.78	45.4	34673.69
	0:10:50	1:40:50	8:04:57 PM	4.00		41.5	14125.38			42.4						41.5	14125.38	46.5	44668.36
	0:11:00	1:41:00	8:05:07 PM	5.00		40.8	12022.64	41.6	14289.85	41.4	43.5					40.8	12022.64	45.8	38018.94
	0:11:10	1:41:10	8:05:17 PM	5.00		41.6	14454.40			42.4						41.6	14454.40	46.6	45708.82
	0:11:20	1:41:20	8:05:27 PM	5.00		40.5	11220.18			41.4						40.5	11220.18	45.5	35481.34
	0:11:30	1:41:30	8:05:37 PM	5.00		40.5	11220.18			41.5						40.5	11220.18	45.5	35481.34
	0:11:40	1:41:40	8:05:47 PM	5.00		41.2	13182.57			41.5						41.2	13182.57	46.2	41686.94
	0:11:50	1:41:50	8:05:57 PM	5.00		40.6	11481.54			41.7						40.6	11481.54	45.6	36307.81
	0:12:00	1:42:00	8:06:07 PM	6.00		41.1	12882.50	40.9	12406.89	41.5	42.4					41.1	12882.50	46.1	40738.03
	0:12:10	1:42:10	8:06:17 PM	6.00		40.4	10964.78			41.4						40.4	10964.78	45.4	34673.69
	0:12:20	1:42:20	8:06:27 PM	6.00		40.3	10715.19			41.2						40.3	10715.19	45.3	33884.42
	0:12:30	1:42:30	8:06:37 PM	6.00		40.7	11748.98			42.5						40.7	11748.98	45.7	37153.52
	0:12:40	1:42:40	8:06:47 PM	6.00		41.4	13803.84			42.5						41.4	13803.84	46.4	43651.58
	0:12:50	1:42:50	8:06:57 PM	6.00		42.0	15848.93			42.9						42.0	15848.93	47.0	50118.72
	0:13:00	1:43:00	8:07:07 PM	7.00		42.0	15848.93	41.2	13155.11	43.3	43.3					42.0	15848.93	47.0	50118.72
	0:13:10	1:43:10	8:07:17 PM	7.00		41.3	13489.63			42.5						41.3	13489.63	46.3	42657.95

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:20	1:43:20	8:07:27 PM	7.00		40.4	10964.78			41.0						40.4	10964.78	45.4	34673.69
	0:13:30	1:43:30	8:07:37 PM	7.00		41.4	13803.84			41.7						41.4	13803.84	46.4	43651.58
	0:13:40	1:43:40	8:07:47 PM	7.00		41.5	14125.38			43.4						41.5	14125.38	46.5	44668.36
	0:13:50	1:43:50	8:07:57 PM	7.00		41.8	15135.61			42.5						41.8	15135.61	46.8	47863.01
	0:14:00	1:44:00	8:08:07 PM	8.00		41.4	13803.84	41.3	13553.85	41.7	43.4					41.4	13803.84	46.4	43651.58
	0:14:10	1:44:10	8:08:17 PM	8.00		41.5	14125.38			42.4						41.5	14125.38	46.5	44668.36
	0:14:20	1:44:20	8:08:27 PM	8.00		42.1	16218.10			42.5						42.1	16218.10	47.1	51286.14
	0:14:30	1:44:30	8:08:37 PM	8.00		42.8	19054.61			44.3						42.8	19054.61	47.8	60255.96
	0:14:40	1:44:40	8:08:47 PM	8.00		45.1	32359.37			45.9						45.1	32359.37	50.1	102329.30
	0:14:50	1:44:50	8:08:57 PM	8.00		46.7	46773.51			48.3						46.7	46773.51	51.7	147910.84
	0:15:00	1:45:00	8:09:07 PM	9.00		45.0	31622.78	44.3	26692.29	46.2	48.3	42.3	43.9	45.2	47.4	45.0	31622.78	50.0	100000.00
Study #13	0:00:10	0:00:10	6:02:36 AM	2.00		53.0	199526.23			57.4						63.0	1995262.31	63.0	1995262.31
Receptor 4	0:00:20	0:00:20	6:02:46 AM	2.00		50.2	104712.85			51.0						60.2	1047128.55	60.2	1047128.55
	0:00:30	0:00:30	6:02:56 AM	2.00		50.4	109647.82			50.9						60.4	1096478.20	60.4	1096478.20
	0:00:40	0:00:40	6:03:06 AM	3.00		50.6	114815.36			51.4						60.6	1148153.62	60.6	1148153.62
	0:00:50	0:00:50	6:03:16 AM	3.00		49.3	85113.80			50.6						59.3	851138.04	59.3	851138.04
	0:01:00	0:01:00	6:03:26 AM	3.00		49.8	95499.26	50.7	118219.22	50.4	57.4					59.8	954992.59	59.8	954992.59
	0:01:10	0:01:10	6:03:36 AM	3.00		50.5	112201.85			52.0						60.5	1122018.45	60.5	1122018.45
	0:01:20	0:01:20	6:03:46 AM	3.00		51.0	125892.54			52.0						61.0	1258925.41	61.0	1258925.41
	0:01:30	0:01:30	6:03:56 AM	3.00		51.1	128824.96			54.2						61.1	1288249.55	61.1	1288249.55
	0:01:40	0:01:40	6:04:06 AM	4.00		54.5	281838.29			57.5						64.5	2818382.93	64.5	2818382.93
	0:01:50	0:01:50	6:04:16 AM	4.00		53.6	229086.77			56.1						63.6	2290867.65	63.6	2290867.65
	0:02:00	0:02:00	6:04:26 AM	4.00		51.0	125892.54	52.2	167289.49	51.9	57.5					61.0	1258925.41	61.0	1258925.41
	0:02:10	0:02:10	6:04:36 AM	4.00		51.4	138038.43			53.6						61.4	1380384.26	61.4	1380384.26
	0:02:20	0:02:20	6:04:46 AM	4.00		51.1	128824.96			52.9						61.1	1288249.55	61.1	1288249.55
	0:02:30	0:02:30	6:04:56 AM	4.00		51.5	141253.75			54.0						61.5	1412537.54	61.5	1412537.54
	0:02:40	0:02:40	6:05:06 AM	5.00		51.2	131825.67			52.2						61.2	1318256.74	61.2	1318256.74
	0:02:50	0:02:50	6:05:16 AM	5.00		51.7	147910.84			53.5						61.7	1479108.39	61.7	1479108.39
	0:03:00	0:03:00	6:05:26 AM	5.00		52.6	181970.09	51.6	144970.62	54.4	54.4					62.6	1819700.86	62.6	1819700.86
	0:03:10	0:03:10	6:05:36 AM	5.00		51.8	151356.12			53.7						61.8	1513561.25	61.8	1513561.25
	0:03:20	0:03:20	6:05:46 AM	5.00		51.6	144543.98			53.0						61.6	1445439.77	61.6	1445439.77
	0:03:30	0:03:30	6:05:56 AM	5.00		49.8	95499.26			52.3						59.8	954992.59	59.8	954992.59
	0:03:40	0:03:40	6:06:06 AM	6.00		50.0	100000.00			50.9						60.0	1000000.00	60.0	1000000.00
	0:03:50	0:03:50	6:06:16 AM	6.00		50.0	100000.00			50.8						60.0	1000000.00	60.0	1000000.00
	0:04:00	0:04:00	6:06:26 AM	6.00		50.3	107151.93	50.7	116425.22	51.1	53.7					60.3	1071519.31	60.3	1071519.31
	0:04:10	0:04:10	6:06:36 AM	6.00		50.8	120226.44			53.0						60.8	1202264.43	60.8	1202264.43
	0:04:20	0:04:20	6:06:46 AM	6.00		50.5	112201.85			51.1						60.5	1122018.45	60.5	1122018.45
	0:04:30	0:04:30	6:06:56 AM	6.00		50.3	107151.93			51.4						60.3	1071519.31	60.3	1071519.31
	0:04:40	0:04:40	6:07:06 AM	7.00		49.7	93325.43			50.3						59.7	933254.30	59.7	933254.30
	0:04:50	0:04:50	6:07:16 AM	7.00		50.0	100000.00			53.4						60.0	1000000.00	60.0	1000000.00
	0:05:00	0:05:00	6:07:26 AM	7.00		50.7	117489.76	50.4	108399.23	52.9	53.4					60.7	1174897.55	60.7	1174897.55
	0:05:10	0:05:10	6:07:36 AM	7.00		50.2	104712.85			51.6						60.2	1047128.55	60.2	1047128.55
	0:05:20	0:05:20	6:07:46 AM	7.00		52.1	162181.01			53.4						62.1	1621810.10	62.1	1621810.10
	0:05:30	0:05:30	6:07:56 AM	7.00		57.0	501187.23			60.9						67.0	5011872.34	67.0	5011872.34
	0:05:40	0:05:40	6:08:06 AM	8.00		52.6	181970.09			56.8						62.6	1819700.86	62.6	1819700.86
	0:05:50	0:05:50	6:08:16 AM	8.00		51.9	154881.66			53.4						61.9	1548816.62	61.9	1548816.62
	0:06:00	0:06:00	6:08:26 AM	8.00		53.5	223872.11	53.5	221467.49	55.0	60.9					63.5	2238721.14	63.5	2238721.14
	0:06:10	0:06:10	6:08:36 AM	8.00		52.5	177827.94			54.7						62.5	1778279.41	62.5	1778279.41
	0:06:20	0:06:20	6:08:46 AM	8.00		51.8	151356.12			54.1						61.8	1513561.25	61.8	1513561.25
	0:06:30	0:06:30	6:08:56 AM	8.00		53.3	213796.21			55.1						63.3	2137962.09	63.3	2137962.09
	0:06:40	0:06:40	6:09:06 AM	9.00		51.4	138038.43			52.2						61.4	1380384.26	61.4	1380384.26
	0:06:50	0:06:50	6:09:16 AM	9.00		51.3	134896.29			52.6						61.3	1348962.88	61.3	1348962.88
	0:07:00	0:07:00	6:09:26 AM	9.00		51.0	125892.54	52.0	156967.92	52.3	55.1					61.0	1258925.41	61.0	1258925.41
	0:07:10	0:07:10	6:09:36 AM	9.00		52.6	181970.09			54.2						62.6	1819700.86	62.6	1819700.86
	0:07:20	0:07:20	6:09:46 AM	9.00		50.4	109647.82			51.1						60.4	1096478.20	60.4	1096478.20
	0:07:30	0:07:30	6:09:56 AM	9.00		50.7	117489.76			52.4						60.7	1174897.55	60.7	1174897.55
	0:07:40	0:07:40	6:10:06 AM	10.00		52.8	190546.07			55.9						62.8	1905460.72	62.8	1905460.72
	0:07:50	0:07:50	6:10:16 AM	10.00		53.0	199526.23			54.8						63.0	1995262.31	63.0	1995262.31
	0:08:00	0:08:00	6:10:26 AM	10.00		51.4	138038.43	51.9	156203.07	52.8	55.9					61.4	1380384.26	61.4	1380384.26
	0:08:10	0:08:10	6:10:36 AM	10.00		52.3	169824.37			54.5						62.3	1698243.65	62.3	1698243.65
	0:08:20	0:08:20	6:10:46 AM	10.00		52.7	186208.71			55.4						62.7	1862087.14	62.7	1862087.14
	0:08:30	0:08:30	6:10:56 AM	10.00		53.9	245470.89			55.9						63.9	2454708.92	63.9	2454708.92
	0:08:40	0:08:40	6:11:06 AM	11.00		53.2	208929.61			55.4						63.2	2089296.13	63.2	2089296.13
	0:08:50	0:08:50	6:11:16 AM	11.00		53.6	229086.77			55.3						63.6	2290867.65	63.6	2290867.65
	0:09:00	0:09:00	6:11:26 AM	11.00		57.6	575439.94	54.3	269160.05	59.8	59.8					67.6	5754399.37	67.6	5754399.37
	0:09:10	0:09:10	6:11:36 AM	11.00		70.4	10964781.96			76.0						80.4	109647819.61	80.4	109647819.61
	0:09:20	0:09:20	6:11:46 AM	11.00		75.6	36307805.48			76.8						85.6	363078054.77	85.6	363078054.77
	0:09:30	0:09:30	6:11:56 AM	11.00		70.8	12022644.35			73.3						80.8	120226443.46	80.8	120226443.46
	0:09:40	0:09:40	6:12:06 AM	12.00		66.5	4466835.92			69.0						76.5	44668359.22	76.5	44668359.22
	0:09:50	0:09:50	6:12:16 AM	12.00		62.9	1949844.60			64.7						72.9	19498446.00	72.9	19498446.00
	0:10:00	0:10:00	6:12:26 AM	12.00		62.5	1778279.41	70.5	11248365.29	64.2	76.8					72.5	17782794.10	72.5	17782794.10
	0:10:10	0:10:10	6:12:36 AM	12.00		60.4	1096478.20			61.5						70.4	10964781.96	70.4	10964781.96
	0:10:20	0:10:20	6:12:46 AM	12.00		58.1	645654.23			58.6						68.1	6456542.29	68.1	6456542.29
	0:10:30	0:10:30	6:12:56 AM	12.00		58.1	645654.23			59.1						68.1	6456542.29	68.1	6456542.29
	0:10:40	0:10:40	6:13:06 AM	13.00		58.3	676082.98			59.4						68.3	6760829.75	68.3	6760829.75
	0:10:50	0:10:50	6:13:16 AM	13.00		57.2	524807.46			57.7						67.2	5248074.60	67.2	5248074.60
	0:11:00	0:11:00	6:13:26 AM	13.00		57.0	501187.23	58.3	681644.05	57.5	61.5					67.0	5011872.34	67.0	5011872.34
	0:11:10	0:11:10	6:13:36 AM	13.00		56.7	467735.14			57.4						66.7	4677351.41	66.7	4677351.41
	0:11:20	0:11:20	6:13:46 AM	13.00		56.7	467735.14			58.7						66.7	4677351.41	66.7	4677351.41
	0:11:30	0:11:30	6:13:56 AM	13.00		52.8	190546.07			54.4						62.8	1905460.72	62.8	1905460.72
	0:11:40	0:11:40	6:14:06 AM	14.00		52.0	158489.32			53.2						62.0	1584893.19	62.0	1584893.19
	0:11:50	0:11:50	6:14:16 AM	14.00		50.1	102329.30			50.8						60.1	1023292.99	60.1	1023292.99
	0:12:00	0:12:00	6:14:26 AM	14.00		50.9	123026.88	54.0	251643.64	52.0	58.7					60.9	1230268.77	60.9	1230268.77
	0:12:10	0:12:10	6:14:36 AM	14.00		50.5	112201.85			51.7						60.5	1122018.45	60.5	1122018.45
	0:12:20	0:12:20	6:14:46 AM	14.00		50.2	104712.85			51.5						60.2	1047128.55	60.2	1047128.55
	0:12:30	0:12:30	6:14:56 AM	14.00		50.1	102329.30			51.0						60.1	1023292.99	60.1	1023292.99
	0:12:40	0:12:40	6:15:06 AM	15.00		50.4	109647.82			51.5						60.4	1096478.20	60.4	1096478.20
	0:12:50	0:12:50	6:15:16 AM	15.00		50.7	117489.76			51.5						60.7	1174897.55	60.7	1174897.55
	0:13:00	0:13:00	6:15:26 AM	15.00		50.7	117489.76	50.4	110645.22	51.4	51.7					60.7	1174897.55	60.7	1174897.55

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:10	0:13:10	6:15:36 AM	15.00		50.9	123026.88			51.8						60.9	1230268.77	60.9	1230268.77
	0:13:20	0:13:20	6:15:46 AM	15.00		51.4	138038.43			52.1						61.4	1380384.26	61.4	1380384.26
	0:13:30	0:13:30	6:15:56 AM	15.00		51.1	128824.96			51.7						61.1	1288249.55	61.1	1288249.55
	0:13:40	0:13:40	6:16:06 AM	16.00		53.1	204173.79			54.5						63.1	2041737.94	63.1	2041737.94
	0:13:50	0:13:50	6:16:16 AM	16.00		53.1	204173.79			55.0						63.1	2041737.94	63.1	2041737.94
	0:14:00	0:14:00	6:16:26 AM	16.00		50.8	120226.44	51.8	153077.38	51.8	55.0					60.8	1202264.43	60.8	1202264.43
	0:14:10	0:14:10	6:16:36 AM	16.00		52.1	162181.01			53.3						62.1	1621810.10	62.1	1621810.10
	0:14:20	0:14:20	6:16:46 AM	16.00		50.8	120226.44			51.9						60.8	1202264.43	60.8	1202264.43
	0:14:30	0:14:30	6:16:56 AM	16.00		51.1	128824.96			53.4						61.1	1288249.55	61.1	1288249.55
	0:14:40	0:14:40	6:17:06 AM	17.00		51.7	147910.84			56.6						61.7	1479108.39	61.7	1479108.39
	0:14:50	0:14:50	6:17:16 AM	17.00		51.7	147910.84			53.6						61.7	1479108.39	61.7	1479108.39
	0:15:00	0:15:00	6:17:26 AM	17.00		52.3	169824.37	51.6	146146.41	60.7	60.7	51.7	53.2	58.3	70.8	62.3	1698243.65	62.3	1698243.65
Study #14	0:00:10	0:15:10	6:21:18 AM	21.00		51.6	144543.98			53.6						61.6	1445439.77	61.6	1445439.77
Receptor 5	0:00:20	0:15:20	6:21:28 AM	21.00		51.0	125892.54			51.8						61.0	1258925.41	61.0	1258925.41
	0:00:30	0:15:30	6:21:38 AM	21.00		50.8	120226.44			51.4						60.8	1202264.43	60.8	1202264.43
	0:00:40	0:15:40	6:21:48 AM	21.00		50.7	117489.76			51.0						60.7	1174897.55	60.7	1174897.55
	0:00:50	0:15:50	6:21:58 AM	21.00		50.2	104712.85			51.1						60.2	1047128.55	60.2	1047128.55
	0:01:00	0:16:00	6:22:08 AM	22.00		50.9	123026.88	50.9	122648.74	51.8	53.6					60.9	1230268.77	60.9	1230268.77
	0:01:10	0:16:10	6:22:18 AM	22.00		52.4	173780.08			53.2						62.4	1737800.83	62.4	1737800.83
	0:01:20	0:16:20	6:22:28 AM	22.00		52.1	162181.01			54.0						62.1	1621810.10	62.1	1621810.10
	0:01:30	0:16:30	6:22:38 AM	22.00		53.1	204173.79			54.1						63.1	2041737.94	63.1	2041737.94
	0:01:40	0:16:40	6:22:48 AM	22.00		52.0	158489.32			52.6						62.0	1584893.19	62.0	1584893.19
	0:01:50	0:16:50	6:22:58 AM	22.00		52.7	186208.71			53.4						62.7	1862087.14	62.7	1862087.14
	0:02:00	0:17:00	6:23:08 AM	23.00		53.6	229086.77	52.7	185653.28	56.1	56.1					63.6	2290867.65	63.6	2290867.65
	0:02:10	0:17:10	6:23:18 AM	23.00		54.4	275422.87			57.2						64.4	2754228.70	64.4	2754228.70
	0:02:20	0:17:20	6:23:28 AM	23.00		50.3	107151.93			51.6						60.3	1071519.31	60.3	1071519.31
	0:02:30	0:17:30	6:23:38 AM	23.00		49.6	91201.08			50.3						59.6	912010.84	59.6	912010.84
	0:02:40	0:17:40	6:23:48 AM	23.00		49.9	97723.72			50.4						59.9	977237.22	59.9	977237.22
	0:02:50	0:17:50	6:23:58 AM	23.00		49.8	95499.26			50.7						59.8	954992.59	59.8	954992.59
	0:03:00	0:18:00	6:24:08 AM	24.00		49.4	87096.36	51.0	125682.54	50.0	57.2					59.4	870963.59	59.4	870963.59
	0:03:10	0:18:10	6:24:18 AM	24.00		51.0	125892.54			52.4						61.0	1258925.41	61.0	1258925.41
	0:03:20	0:18:20	6:24:28 AM	24.00		52.3	169824.37			53.6						62.3	1698243.65	62.3	1698243.65
	0:03:30	0:18:30	6:24:38 AM	24.00		53.0	199526.23			53.7						63.0	1995262.31	63.0	1995262.31
	0:03:40	0:18:40	6:24:48 AM	24.00		54.0	251188.64			55.3						64.0	2511886.43	64.0	2511886.43
	0:03:50	0:18:50	6:24:58 AM	24.00		56.9	489778.82			58.7						66.9	4897788.19	66.9	4897788.19
	0:04:00	0:19:00	6:25:08 AM	25.00		57.6	575439.94	54.8	301941.76	58.8	58.8					67.6	5754399.37	67.6	5754399.37
	0:04:10	0:19:10	6:25:18 AM	25.00		53.3	213796.21			54.6						63.3	2137962.09	63.3	2137962.09
	0:04:20	0:19:20	6:25:28 AM	25.00		53.5	223872.11			54.5						63.5	2238721.14	63.5	2238721.14
	0:04:30	0:19:30	6:25:38 AM	25.00		54.6	288403.15			55.1						64.6	2884031.50	64.6	2884031.50
	0:04:40	0:19:40	6:25:48 AM	25.00		54.8	301995.17			55.4						64.8	3019951.72	64.8	3019951.72
	0:04:50	0:19:50	6:25:58 AM	25.00		55.4	346736.85			56.8						65.4	3467368.50	65.4	3467368.50
	0:05:00	0:20:00	6:26:08 AM	26.00		56.4	436515.83	54.8	301886.55	56.9	56.9					66.4	4365158.32	66.4	4365158.32
	0:05:10	0:20:10	6:26:18 AM	26.00		55.7	371535.23			56.7						65.7	3715352.29	65.7	3715352.29
	0:05:20	0:20:20	6:26:28 AM	26.00		54.6	288403.15			55.9						64.6	2884031.50	64.6	2884031.50
	0:05:30	0:20:30	6:26:38 AM	26.00		55.6	363078.05			57.1						65.6	3630780.55	65.6	3630780.55
	0:05:40	0:20:40	6:26:48 AM	26.00		54.9	309029.54			55.4						64.9	3090295.43	64.9	3090295.43
	0:05:50	0:20:50	6:26:58 AM	26.00		54.3	269153.48			55.1						64.3	2691534.80	64.3	2691534.80
	0:06:00	0:21:00	6:27:08 AM	27.00		54.7	295120.92	55.0	316053.40	55.3	57.1					64.7	2951209.23	64.7	2951209.23
	0:06:10	0:21:10	6:27:18 AM	27.00		55.3	338844.16			56.2						65.3	3388441.56	65.3	3388441.56
	0:06:20	0:21:20	6:27:28 AM	27.00		58.2	660693.45			60.5						68.2	6606934.48	68.2	6606934.48
	0:06:30	0:21:30	6:27:38 AM	27.00		57.3	537031.80			60.3						67.3	5370317.96	67.3	5370317.96
	0:06:40	0:21:40	6:27:48 AM	27.00		56.6	457088.19			57.6						66.6	4570881.90	66.6	4570881.90
	0:06:50	0:21:50	6:27:58 AM	27.00		58.0	630957.34			61.5						68.0	6309573.44	68.0	6309573.44
	0:07:00	0:22:00	6:28:08 AM	28.00		53.3	213796.21	56.7	473068.52	54.5	61.5					63.3	2137962.09	63.3	2137962.09
	0:07:10	0:22:10	6:28:18 AM	28.00		52.2	165958.69			52.7						62.2	1659586.91	62.2	1659586.91
	0:07:20	0:22:20	6:28:28 AM	28.00		52.0	158489.32			52.9						62.0	1584893.19	62.0	1584893.19
	0:07:30	0:22:30	6:28:38 AM	28.00		51.5	141253.75			52.2						61.5	1412537.54	61.5	1412537.54
	0:07:40	0:22:40	6:28:48 AM	28.00		51.2	131825.67			51.5						61.2	1318256.74	61.2	1318256.74
	0:07:50	0:22:50	6:28:58 AM	28.00		50.9	123026.88			51.5						60.9	1230268.77	60.9	1230268.77
	0:08:00	0:23:00	6:29:08 AM	29.00		51.7	147910.84	51.6	144744.19	52.4	52.9					61.7	1479108.39	61.7	1479108.39
	0:08:10	0:23:10	6:29:18 AM	29.00		51.6	144543.98			52.4						61.6	1445439.77	61.6	1445439.77
	0:08:20	0:23:20	6:29:28 AM	29.00		51.8	151356.12			52.6						61.8	1513561.25	61.8	1513561.25
	0:08:30	0:23:30	6:29:38 AM	29.00		51.6	144543.98			52.4						61.6	1445439.77	61.6	1445439.77
	0:08:40	0:23:40	6:29:48 AM	29.00		51.6	144543.98			52.1						61.6	1445439.77	61.6	1445439.77
	0:08:50	0:23:50	6:29:58 AM	29.00		51.4	138038.43			52.1						61.4	1380384.26	61.4	1380384.26
	0:09:00	0:24:00	6:30:08 AM	30.00		51.5	141253.75	51.6	144046.71	52.1	52.6					61.5	1412537.54	61.5	1412537.54
	0:09:10	0:24:10	6:30:18 AM	30.00		51.8	151356.12			52.6						61.8	1513561.25	61.8	1513561.25
	0:09:20	0:24:20	6:30:28 AM	30.00		52.0	158489.32			52.7						62.0	1584893.19	62.0	1584893.19
	0:09:30	0:24:30	6:30:38 AM	30.00		51.6	144543.98			53.1						61.6	1445439.77	61.6	1445439.77
	0:09:40	0:24:40	6:30:48 AM	30.00		52.3	169824.37			53.4						62.3	1698243.65	62.3	1698243.65
	0:09:50	0:24:50	6:30:58 AM	30.00		50.7	117489.76			52.6						60.7	1174897.55	60.7	1174897.55
	0:10:00	0:25:00	6:31:08 AM	31.00		49.7	93325.43	51.4	139171.50	50.6	53.4					59.7	933254.30	59.7	933254.30
	0:10:10	0:25:10	6:31:18 AM	31.00		50.9	123026.88			53.0						60.9	1230268.77	60.9	1230268.77
	0:10:20	0:25:20	6:31:28 AM	31.00		49.5	89125.09			50.0						59.5	891250.94	59.5	891250.94
	0:10:30	0:25:30	6:31:38 AM	31.00		50.3	107151.93			51.5						60.3	1071519.31	60.3	1071519.31
	0:10:40	0:25:40	6:31:48 AM	31.00		51.7	147910.84			53.5						61.7	1479108.39	61.7	1479108.39
	0:10:50	0:25:50	6:31:58 AM	31.00		52.4	173780.08			56.1						62.4	1737800.83	62.4	1737800.83
	0:11:00	0:26:00	6:32:08 AM	32.00		53.1	204173.79	51.5	140861.44	55.6	56.1					63.1	2041737.94	63.1	2041737.94
	0:11:10	0:26:10	6:32:18 AM	32.00		50.2	104712.85			51.8						60.2	1047128.55	60.2	1047128.55
	0:11:20	0:26:20	6:32:28 AM	32.00		47.5	56234.13			49.1						57.5	562341.33	57.5	562341.33
	0:11:30	0:26:30	6:32:38 AM	32.00		46.7	46773.51			47.3						56.7	467735.14	56.7	467735.14
	0:11:40	0:26:40	6:32:48 AM	32.00		46.6	45708.82			47.2						56.6	457088.19	56.6	457088.19
	0:11:50	0:26:50	6:32:58 AM	32.00		46.0	39810.72			46.5						56.0	398107.17	56.0	398107.17
	0:12:00	0:27:00	6:33:08 AM	33.00		46.9	48977.88	47.6	57036.32	47.8	51.8					56.9	489778.82	56.9	489778.82
	0:12:10	0:27:10	6:33:18 AM	33.00		48.7	74131.02			51.4						58.7	741310.24	58.7	741310.24
	0:12:20	0:27:20	6:33:28 AM	33.00		47.8	60255.96			51.1						57.8	602559.59	57.8	602559.59
	0:12:30	0:27:30	6:33:38 AM	33.00		46.5	44668.36			46.9						56.5	446683.59	56.5	446683.59
	0:12:40	0:27:40	6:33:48 AM	33.00		46.0	39810.72			46.5						56.0	398107.17	56.0	398107.17
	0:12:50	0:27:50	6:33:58 AM	33.00		46.3	42657.95			46.7						56.3	426579.52	56.3	426579.52

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:13:00	0:28:00	6:34:08 AM	34.00		46.0	39810.72	47.0	50222.45	46.5	51.4					56.0	398107.17	56.0	398107.17
	0:13:10	0:28:10	6:34:18 AM	34.00		45.9	38904.51			46.6						55.9	389045.14	55.9	389045.14
	0:13:20	0:28:20	6:34:28 AM	34.00		46.0	39810.72			46.6						56.0	398107.17	56.0	398107.17
	0:13:30	0:28:30	6:34:38 AM	34.00		46.3	42657.95			46.9						56.3	426579.52	56.3	426579.52
	0:13:40	0:28:40	6:34:48 AM	34.00		46.6	45708.82			47.1						56.6	457088.19	56.6	457088.19
	0:13:50	0:28:50	6:34:58 AM	34.00		46.5	44668.36			46.9						56.5	446683.59	56.5	446683.59
	0:14:00	0:29:00	6:35:08 AM	35.00		46.5	44668.36	46.3	42736.45	46.9	47.1					56.5	446683.59	56.5	446683.59
	0:14:10	0:29:10	6:35:18 AM	35.00		46.2	41686.94			46.6						56.2	416869.38	56.2	416869.38
	0:14:20	0:29:20	6:35:28 AM	35.00		46.8	47863.01			48.2						56.8	478630.09	56.8	478630.09
	0:14:30	0:29:30	6:35:38 AM	35.00		46.7	46773.51			47.0						56.7	467735.14	56.7	467735.14
	0:14:40	0:29:40	6:35:48 AM	35.00		47.2	52480.75			47.5						57.2	524807.46	57.2	524807.46
	0:14:50	0:29:50	6:35:58 AM	35.00		47.3	53703.18			47.8						57.3	537031.80	57.3	537031.80
	0:15:00	0:30:00	6:36:08 AM	36.00		47.6	57543.99	47.0	50008.56	48.3	48.3	51.6	53.3	55.7	58.0	57.6	575439.94	57.6	575439.94
Study #15	0:00:10	0:30:10	6:39:04 AM	39.00		50.8	120226.44			53.4						60.8	1202264.43	60.8	1202264.43
Receptor 6	0:00:20	0:30:20	6:39:14 AM	39.00		48.1	64565.42			48.6						58.1	645654.23	58.1	645654.23
	0:00:30	0:30:30	6:39:24 AM	39.00		47.9	61659.50			48.4						57.9	616595.00	57.9	616595.00
	0:00:40	0:30:40	6:39:34 AM	39.00		47.4	54954.09			47.8						57.4	549540.87	57.4	549540.87
	0:00:50	0:30:50	6:39:44 AM	39.00		46.7	46773.51			47.1						56.7	467735.14	56.7	467735.14
	0:01:00	0:31:00	6:39:54 AM	39.00		47.1	51286.14	48.2	66577.52	47.7	53.4					57.1	512861.38	57.1	512861.38
	0:01:10	0:31:10	6:40:04 AM	40.00		46.9	48977.88			47.8						56.9	489778.82	56.9	489778.82
	0:01:20	0:31:20	6:40:14 AM	40.00		47.6	57543.99			49.6						57.6	575439.94	57.6	575439.94
	0:01:30	0:31:30	6:40:24 AM	40.00		46.7	46773.51			48.8						56.7	467735.14	56.7	467735.14
	0:01:40	0:31:40	6:40:34 AM	40.00		46.5	44668.36			48.8						56.5	446683.59	56.5	446683.59
	0:01:50	0:31:50	6:40:44 AM	40.00		46.0	39810.72			47.7						56.0	398107.17	56.0	398107.17
	0:02:00	0:32:00	6:40:54 AM	40.00		46.4	43651.58	46.7	46904.34	48.0	49.6					56.4	436515.83	56.4	436515.83
	0:02:10	0:32:10	6:41:04 AM	41.00		45.4	34673.69			46.1						55.4	346736.85	55.4	346736.85
	0:02:20	0:32:20	6:41:14 AM	41.00		46.4	43651.58			47.1						56.4	436515.83	56.4	436515.83
	0:02:30	0:32:30	6:41:24 AM	41.00		46.3	42657.95			47.0						56.3	426579.52	56.3	426579.52
	0:02:40	0:32:40	6:41:34 AM	41.00		46.3	42657.95			46.9						56.3	426579.52	56.3	426579.52
	0:02:50	0:32:50	6:41:44 AM	41.00		47.2	52480.75			47.5						57.2	524807.46	57.2	524807.46
	0:03:00	0:33:00	6:41:54 AM	41.00		50.0	100000.00	47.2	52686.99	52.3	52.3					60.0	1000000.00	60.0	1000000.00
	0:03:10	0:33:10	6:42:04 AM	42.00		49.6	91201.08			52.1						59.6	912010.84	59.6	912010.84
	0:03:20	0:33:20	6:42:14 AM	42.00		46.0	39810.72			48.1						56.0	398107.17	56.0	398107.17
	0:03:30	0:33:30	6:42:24 AM	42.00		46.3	42657.95			48.1						56.3	426579.52	56.3	426579.52
	0:03:40	0:33:40	6:42:34 AM	42.00		45.7	37153.52			46.7						55.7	371535.23	55.7	371535.23
	0:03:50	0:33:50	6:42:44 AM	42.00		45.7	37153.52			46.3						55.7	371535.23	55.7	371535.23
	0:04:00	0:34:00	6:42:54 AM	42.00		45.6	36307.81	46.8	47380.77	46.2	52.1					55.6	363078.05	55.6	363078.05
	0:04:10	0:34:10	6:43:04 AM	43.00		46.5	44668.36			47.8						56.5	446683.59	56.5	446683.59
	0:04:20	0:34:20	6:43:14 AM	43.00		46.4	43651.58			47.6						56.4	436515.83	56.4	436515.83
	0:04:30	0:34:30	6:43:24 AM	43.00		46.2	41686.94			47.8						56.2	416869.38	56.2	416869.38
	0:04:40	0:34:40	6:43:34 AM	43.00		46.6	45708.82			47.4						56.6	457088.19	56.6	457088.19
	0:04:50	0:34:50	6:43:44 AM	43.00		46.3	42657.95			47.0						56.3	426579.52	56.3	426579.52
	0:05:00	0:35:00	6:43:54 AM	43.00		46.3	42657.95	46.4	43505.27	46.9	47.8					56.3	426579.52	56.3	426579.52
	0:05:10	0:35:10	6:44:04 AM	44.00		46.3	42657.95			46.9						56.3	426579.52	56.3	426579.52
	0:05:20	0:35:20	6:44:14 AM	44.00		47.6	57543.99			49.2						57.6	575439.94	57.6	575439.94
	0:05:30	0:35:30	6:44:24 AM	44.00		46.5	44668.36			47.5						56.5	446683.59	56.5	446683.59
	0:05:40	0:35:40	6:44:34 AM	44.00		45.7	37153.52			46.2						55.7	371535.23	55.7	371535.23
	0:05:50	0:35:50	6:44:44 AM	44.00		45.0	31622.78			46.0						55.0	316227.77	55.0	316227.77
	0:06:00	0:36:00	6:44:54 AM	44.00		45.7	37153.52	46.2	41800.02	46.1	49.2					55.7	371535.23	55.7	371535.23
	0:06:10	0:36:10	6:45:04 AM	45.00		46.4	43651.58			47.3						56.4	436515.83	56.4	436515.83
	0:06:20	0:36:20	6:45:14 AM	45.00		47.3	53703.18			48.5						57.3	537031.80	57.3	537031.80
	0:06:30	0:36:30	6:45:24 AM	45.00		47.4	54954.09			48.5						57.4	549540.87	57.4	549540.87
	0:06:40	0:36:40	6:45:34 AM	45.00		49.2	83176.38			50.3						59.2	831763.77	59.2	831763.77
	0:06:50	0:36:50	6:45:44 AM	45.00		48.8	75857.76			49.3						58.8	758577.58	58.8	758577.58
	0:07:00	0:37:00	6:45:54 AM	45.00		49.0	79432.82	48.1	65129.30	49.3	50.3					59.0	794328.23	59.0	794328.23
	0:07:10	0:37:10	6:46:04 AM	46.00		48.7	74131.02			49.0						58.7	741310.24	58.7	741310.24
	0:07:20	0:37:20	6:46:14 AM	46.00		49.6	91201.08			51.2						59.6	912010.84	59.6	912010.84
	0:07:30	0:37:30	6:46:24 AM	46.00		51.8	151356.12			53.2						61.8	1513561.25	61.8	1513561.25
	0:07:40	0:37:40	6:46:34 AM	46.00		53.5	223872.11			54.5						63.5	2238721.14	63.5	2238721.14
	0:07:50	0:37:50	6:46:44 AM	46.00		55.3	338844.16			57.4						65.3	3388441.56	65.3	3388441.56
	0:08:00	0:38:00	6:46:54 AM	46.00		54.4	275422.87	52.8	192471.23	56.5	57.4					64.4	2754228.70	64.4	2754228.70
	0:08:10	0:38:10	6:47:04 AM	47.00		52.6	181970.09			53.4						62.6	1819700.86	62.6	1819700.86
	0:08:20	0:38:20	6:47:14 AM	47.00		52.7	186208.71			53.5						62.7	1862087.14	62.7	1862087.14
	0:08:30	0:38:30	6:47:24 AM	47.00		52.5	177827.94			53.3						62.5	1778279.41	62.5	1778279.41
	0:08:40	0:38:40	6:47:34 AM	47.00		52.7	186208.71			53.2						62.7	1862087.14	62.7	1862087.14
	0:08:50	0:38:50	6:47:44 AM	47.00		53.1	204173.79			53.8						63.1	2041737.94	63.1	2041737.94
	0:09:00	0:39:00	6:47:54 AM	47.00		54.0	251188.64	53.0	197929.65	54.7	54.7					64.0	2511886.43	64.0	2511886.43
	0:09:10	0:39:10	6:48:04 AM	48.00		53.4	218776.16			54.3						63.4	2187761.62	63.4	2187761.62
	0:09:20	0:39:20	6:48:14 AM	48.00		52.3	169824.37			53.0						62.3	1698243.65	62.3	1698243.65
	0:09:30	0:39:30	6:48:24 AM	48.00		53.6	229086.77			54.5						63.6	2290867.65	63.6	2290867.65
	0:09:40	0:39:40	6:48:34 AM	48.00		51.9	154881.66			52.7						61.9	1548816.62	61.9	1548816.62
	0:09:50	0:39:50	6:48:44 AM	48.00		51.3	134896.29			51.7						61.3	1348962.88	61.3	1348962.88
	0:10:00	0:40:00	6:48:54 AM	48.00		50.8	120226.44	52.3	171281.95	51.6	54.5					60.8	1202264.43	60.8	1202264.43
	0:10:10	0:40:10	6:49:04 AM	49.00		50.2	104712.85			50.6						60.2	1047128.55	60.2	1047128.55
	0:10:20	0:40:20	6:49:14 AM	49.00		50.6	114815.36			51.4						60.6	1148153.62	60.6	1148153.62
	0:10:30	0:40:30	6:49:24 AM	49.00		51.0	125892.54			51.5						61.0	1258925.41	61.0	1258925.41
	0:10:40	0:40:40	6:49:34 AM	49.00		51.2	131825.67			51.9						61.2	1318256.74	61.2	1318256.74
	0:10:50	0:40:50	6:49:44 AM	49.00		51.5	141253.75			52.1						61.5	1412537.54	61.5	1412537.54
	0:11:00	0:41:00	6:49:54 AM	49.00		52.0	158489.32	51.1	129498.25	52.8	52.8					62.0	1584893.19	62.0	1584893.19
	0:11:10	0:41:10	6:50:04 AM	50.00		52.4	173780.08			52.9						62.4	1737800.83	62.4	1737800.83
	0:11:20	0:41:20	6:50:14 AM	50.00		52.1	162181.01			52.9						62.1	1621810.10	62.1	1621810.10
	0:11:30	0:41:30	6:50:24 AM	50.00		52.9	194984.46			54.1						62.9	1949844.60	62.9	1949844.60
	0:11:40	0:41:40	6:50:34 AM	50.00		52.5	177827.94			53.5						62.5	1778279.41	62.5	1778279.41
	0:11:50	0:41:50	6:50:44 AM	50.00		51.8	151356.12			53.1						61.8	1513561.25	61.8	1513561.25
	0:12:00	0:42:00	6:50:54 AM	50.00		50.9	123026.88	52.1	163859.42	52.2	54.1					60.9	1230268.77	60.9	1230268.77
	0:12:10	0:42:10	6:51:04 AM	51.00		50.6	114815.36			51.5						60.6	1148153.62	60.6	1148153.62
	0:12:20	0:42:20	6:51:14 AM	51.00		50.8	120226.44			51.8						60.8	1202264.43	60.8	1202264.43
	0:12:30	0:42:30	6:51:24 AM	51.00		51.4	138038.43			52.3						61.4	1380384.26	61.4	1380384.26
	0:12:40	0:42:40	6:51:34 AM	51.00		50.9	123026.88			51.3						60.9	1230268.77	60.9	1230268.77

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:50	0:42:50	6:51:44 AM	51.00		51.3	134896.29			52.1						61.3	1348962.88	61.3	1348962.88
	0:13:00	0:43:00	6:51:54 AM	51.00		54.2	263026.80	51.7	149005.03	57.8	57.8					64.2	2630267.99	64.2	2630267.99
	0:13:10	0:43:10	6:52:04 AM	52.00		53.0	199526.23			56.0						63.0	1995262.31	63.0	1995262.31
	0:13:20	0:43:20	6:52:14 AM	52.00		54.1	257039.58			58.7						64.1	2570395.78	64.1	2570395.78
	0:13:30	0:43:30	6:52:24 AM	52.00		50.8	120226.44			54.8						60.8	1202264.43	60.8	1202264.43
	0:13:40	0:43:40	6:52:34 AM	52.00		51.7	147910.84			55.2						61.7	1479108.39	61.7	1479108.39
	0:13:50	0:43:50	6:52:44 AM	52.00		50.7	117489.76			52.1						60.7	1174897.55	60.7	1174897.55
	0:14:00	0:44:00	6:52:54 AM	52.00		49.6	91201.08	51.9	155565.66	51.4	58.7					59.6	912010.84	59.6	912010.84
	0:14:10	0:44:10	6:53:04 AM	53.00		48.0	63095.73			49.3						58.0	630957.34	58.0	630957.34
	0:14:20	0:44:20	6:53:14 AM	53.00		47.9	61659.50			48.4						57.9	616595.00	57.9	616595.00
	0:14:30	0:44:30	6:53:24 AM	53.00		47.6	57543.99			48.2						57.6	575439.94	57.6	575439.94
	0:14:40	0:44:40	6:53:34 AM	53.00		47.9	61659.50			48.4						57.9	616595.00	57.9	616595.00
	0:14:50	0:44:50	6:53:44 AM	53.00		48.1	64565.42			49.5						58.1	645654.23	58.1	645654.23
	0:15:00	0:45:00	6:53:54 AM	53.00		50.4	109647.82	48.4	69695.33	62.2	62.2	49.6	51.8	53.4	54.4	60.4	1096478.20	60.4	1096478.20
Study #16	0:00:10	0:45:10	6:57:08 AM	57.00		52.6	181970.09			59.6						62.6	1819700.86	62.6	1819700.86
Receptor 7	0:00:20	0:45:20	6:57:18 AM	57.00		47.9	61659.50			51.0						57.9	616595.00	57.9	616595.00
	0:00:30	0:45:30	6:57:28 AM	57.00		45.4	34673.69			46.1						55.4	346736.85	55.4	346736.85
	0:00:40	0:45:40	6:57:38 AM	57.00		45.5	35481.34			47.1						55.5	354813.39	55.5	354813.39
	0:00:50	0:45:50	6:57:48 AM	57.00		47.7	58884.37			48.9						57.7	588843.66	57.7	588843.66
	0:01:00	0:46:00	6:57:58 AM	57.00		47.4	54954.09	48.5	71270.51	48.1	59.6					57.4	549540.87	57.4	549540.87
	0:01:10	0:46:10	6:58:08 AM	58.00		46.9	48977.88			47.7						56.9	489778.82	56.9	489778.82
	0:01:20	0:46:20	6:58:18 AM	58.00		45.8	38018.94			47.2						55.8	380189.40	55.8	380189.40
	0:01:30	0:46:30	6:58:28 AM	58.00		47.5	56234.13			49.4						57.5	562341.33	57.5	562341.33
	0:01:40	0:46:40	6:58:38 AM	58.00		48.6	72443.60			49.8						58.6	724435.96	58.6	724435.96
	0:01:50	0:46:50	6:58:48 AM	58.00		48.3	67608.30			49.5						58.3	676082.98	58.3	676082.98
	0:02:00	0:47:00	6:58:58 AM	58.00		49.1	81283.05	47.8	60760.98	50.5	50.5					59.1	812830.52	59.1	812830.52
	0:02:10	0:47:10	6:59:08 AM	59.00		47.5	56234.13			48.3						57.5	562341.33	57.5	562341.33
	0:02:20	0:47:20	6:59:18 AM	59.00		45.9	38904.51			47.6						55.9	389045.14	55.9	389045.14
	0:02:30	0:47:30	6:59:28 AM	59.00		45.5	35481.34			45.8						55.5	354813.39	55.5	354813.39
	0:02:40	0:47:40	6:59:38 AM	59.00		46.9	48977.88			49.8						56.9	489778.82	56.9	489778.82
	0:02:50	0:47:50	6:59:48 AM	59.00		47.2	52480.75			48.5						57.2	524807.46	57.2	524807.46
	0:03:00	0:48:00	6:59:58 AM	59.00		46.9	48977.88	46.7	46842.75	48.0	49.8					56.9	489778.82	56.9	489778.82
	0:03:10	0:48:10	7:00:08 AM	0.00		46.5	44668.36			47.4						46.5	44668.36	46.5	44668.36
	0:03:20	0:48:20	7:00:18 AM	0.00		46.7	46773.51			47.4						46.7	46773.51	46.7	46773.51
	0:03:30	0:48:30	7:00:28 AM	0.00		46.7	46773.51			47.1						46.7	46773.51	46.7	46773.51
	0:03:40	0:48:40	7:00:38 AM	0.00		46.3	42657.95			47.4						46.3	42657.95	46.3	42657.95
	0:03:50	0:48:50	7:00:48 AM	0.00		46.6	45708.82			48.1						46.6	45708.82	46.6	45708.82
	0:04:00	0:49:00	7:00:58 AM	0.00		46.4	43651.58	46.5	45038.96	47.1	48.1					46.4	43651.58	46.4	43651.58
	0:04:10	0:49:10	7:01:08 AM	1.00		48.3	67608.30			50.5						48.3	67608.30	48.3	67608.30
	0:04:20	0:49:20	7:01:18 AM	1.00		48.4	69183.10			50.9						48.4	69183.10	48.4	69183.10
	0:04:30	0:49:30	7:01:28 AM	1.00		47.5	56234.13			49.3						47.5	56234.13	47.5	56234.13
	0:04:40	0:49:40	7:01:38 AM	1.00		47.7	58884.37			48.4						47.7	58884.37	47.7	58884.37
	0:04:50	0:49:50	7:01:48 AM	1.00		47.7	58884.37			48.6						47.7	58884.37	47.7	58884.37
	0:05:00	0:50:00	7:01:58 AM	1.00		47.6	57543.99	47.9	61389.71	48.5	50.9					47.6	57543.99	47.6	57543.99
	0:05:10	0:50:10	7:02:08 AM	2.00		46.8	47863.01			47.9						46.8	47863.01	46.8	47863.01
	0:05:20	0:50:20	7:02:18 AM	2.00		46.9	48977.88			48.1						46.9	48977.88	46.9	48977.88
	0:05:30	0:50:30	7:02:28 AM	2.00		46.9	48977.88			47.8						46.9	48977.88	46.9	48977.88
	0:05:40	0:50:40	7:02:38 AM	2.00		46.4	43651.58			47.0						46.4	43651.58	46.4	43651.58
	0:05:50	0:50:50	7:02:48 AM	2.00		46.7	46773.51			47.4						46.7	46773.51	46.7	46773.51
	0:06:00	0:51:00	7:02:58 AM	2.00		46.7	46773.51	46.7	47169.56	48.9	48.9					46.7	46773.51	46.7	46773.51
	0:06:10	0:51:10	7:03:08 AM	3.00		46.7	46773.51			47.7						46.7	46773.51	46.7	46773.51
	0:06:20	0:51:20	7:03:18 AM	3.00		45.8	38018.94			48.0						45.8	38018.94	45.8	38018.94
	0:06:30	0:51:30	7:03:28 AM	3.00		48.1	64565.42			49.8						48.1	64565.42	48.1	64565.42
	0:06:40	0:51:40	7:03:38 AM	3.00		48.7	74131.02			49.7						48.7	74131.02	48.7	74131.02
	0:06:50	0:51:50	7:03:48 AM	3.00		48.1	64565.42			49.0						48.1	64565.42	48.1	64565.42
	0:07:00	0:52:00	7:03:58 AM	3.00		47.7	58884.37	47.6	57823.11	48.5	49.8					47.7	58884.37	47.7	58884.37
	0:07:10	0:52:10	7:04:08 AM	4.00		49.1	81283.05			49.6						49.1	81283.05	49.1	81283.05
	0:07:20	0:52:20	7:04:18 AM	4.00		50.7	117489.76			52.1						50.7	117489.76	50.7	117489.76
	0:07:30	0:52:30	7:04:28 AM	4.00		49.7	93325.43			51.1						49.7	93325.43	49.7	93325.43
	0:07:40	0:52:40	7:04:38 AM	4.00		49.0	79432.82			50.3						49.0	79432.82	49.0	79432.82
	0:07:50	0:52:50	7:04:48 AM	4.00		47.2	52480.75			48.4						47.2	52480.75	47.2	52480.75
	0:08:00	0:53:00	7:04:58 AM	4.00		47.4	54954.09	49.0	79827.65	47.9	52.1					47.4	54954.09	47.4	54954.09
	0:08:10	0:53:10	7:05:08 AM	5.00		48.1	64565.42			49.7						48.1	64565.42	48.1	64565.42
	0:08:20	0:53:20	7:05:18 AM	5.00		48.4	69183.10			49.7						48.4	69183.10	48.4	69183.10
	0:08:30	0:53:30	7:05:28 AM	5.00		48.1	64565.42			48.8						48.1	64565.42	48.1	64565.42
	0:08:40	0:53:40	7:05:38 AM	5.00		48.1	64565.42			48.8						48.1	64565.42	48.1	64565.42
	0:08:50	0:53:50	7:05:48 AM	5.00		48.9	77624.71			50.0						48.9	77624.71	48.9	77624.71
	0:09:00	0:54:00	7:05:58 AM	5.00		49.9	97723.72	48.6	73037.97	50.5	50.5					49.9	97723.72	49.9	97723.72
	0:09:10	0:54:10	7:06:08 AM	6.00		49.8	95499.26			50.8						49.8	95499.26	49.8	95499.26
	0:09:20	0:54:20	7:06:18 AM	6.00		48.6	72443.60			50.0						48.6	72443.60	48.6	72443.60
	0:09:30	0:54:30	7:06:28 AM	6.00		48.9	77624.71			50.8						48.9	77624.71	48.9	77624.71
	0:09:40	0:54:40	7:06:38 AM	6.00		49.5	89125.09			51.5						49.5	89125.09	49.5	89125.09
	0:09:50	0:54:50	7:06:48 AM	6.00		49.4	87096.36			50.6						49.4	87096.36	49.4	87096.36
	0:10:00	0:55:00	7:06:58 AM	6.00		47.6	57543.99	49.0	79888.84	48.5	51.5					47.6	57543.99	47.6	57543.99
	0:10:10	0:55:10	7:07:08 AM	7.00		47.5	56234.13			48.5						47.5	56234.13	47.5	56234.13
	0:10:20	0:55:20	7:07:18 AM	7.00		47.8	60255.96			48.7						47.8	60255.96	47.8	60255.96
	0:10:30	0:55:30	7:07:28 AM	7.00		47.1	51286.14			48.0						47.1	51286.14	47.1	51286.14
	0:10:40	0:55:40	7:07:38 AM	7.00		47.4	54954.09			48.5						47.4	54954.09	47.4	54954.09
	0:10:50	0:55:50	7:07:48 AM	7.00		47.6	57543.99			48.5						47.6	57543.99	47.6	57543.99
	0:11:00	0:56:00	7:07:58 AM	7.00		47.8	60255.96	47.5	56755.04	48.3	48.7					47.8	60255.96	47.8	60255.96
	0:11:10	0:56:10	7:08:08 AM	8.00		48.5	70794.58			49.0						48.5	70794.58	48.5	70794.58
	0:11:20	0:56:20	7:08:18 AM	8.00		48.2	66069.34			49.1						48.2	66069.34	48.2	66069.34
	0:11:30	0:56:30	7:08:28 AM	8.00		47.8	60255.96			48.6						47.8	60255.96	47.8	60255.96
	0:11:40	0:56:40	7:08:38 AM	8.00		49.1	81283.05			51.1						49.1	81283.05	49.1	81283.05
	0:11:50	0:56:50	7:08:48 AM	8.00		48.6	72443.60			49.1						48.6	72443.60	48.6	72443.60
	0:12:00	0:57:00	7:08:58 AM	8.00		48.7	74131.02	48.5	70829.59	50.1	51.1					48.7	74131.02	48.7	74131.02
	0:12:10	0:57:10	7:09:08 AM	9.00		49.1	81283.05			50.5						49.1	81283.05	49.1	81283.05
	0:12:20	0:57:20	7:09:18 AM	9.00		47.6	57543.99			48.6						47.6	57543.99	47.6	57543.99
	0:12:30	0:57:30	7:09:28 AM	9.00		47.0	50118.72			48.4						47.0	50118.72	47.0	50118.72

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:40	0:57:40	7:09:38 AM	9.00		46.8	47863.01			48.2						46.8	47863.01	46.8	47863.01
	0:12:50	0:57:50	7:09:48 AM	9.00		46.4	43651.58			47.2						46.4	43651.58	46.4	43651.58
	0:13:00	0:58:00	7:09:58 AM	9.00		46.4	43651.58	47.3	54018.66	47.0	50.5					46.4	43651.58	46.4	43651.58
	0:13:10	0:58:10	7:10:08 AM	10.00		47.2	52480.75			47.9						47.2	52480.75	47.2	52480.75
	0:13:20	0:58:20	7:10:18 AM	10.00		47.6	57543.99			48.6						47.6	57543.99	47.6	57543.99
	0:13:30	0:58:30	7:10:28 AM	10.00		48.6	72443.60			50.5						48.6	72443.60	48.6	72443.60
	0:13:40	0:58:40	7:10:38 AM	10.00		49.7	93325.43			50.4						49.7	93325.43	49.7	93325.43
	0:13:50	0:58:50	7:10:48 AM	10.00		48.6	72443.60			49.8						48.6	72443.60	48.6	72443.60
	0:14:00	0:59:00	7:10:58 AM	10.00		48.0	63095.73	48.4	68555.52	48.7	50.5					48.0	63095.73	48.0	63095.73
	0:14:10	0:59:10	7:11:08 AM	11.00		48.6	72443.60			49.1						48.6	72443.60	48.6	72443.60
	0:14:20	0:59:20	7:11:18 AM	11.00		48.8	75857.76			49.8						48.8	75857.76	48.8	75857.76
	0:14:30	0:59:30	7:11:28 AM	11.00		48.7	74131.02			49.2						48.7	74131.02	48.7	74131.02
	0:14:40	0:59:40	7:11:38 AM	11.00		48.3	67608.30			48.8						48.3	67608.30	48.3	67608.30
	0:14:50	0:59:50	7:11:48 AM	11.00		48.1	64565.42			49.2						48.1	64565.42	48.1	64565.42
	0:15:00	1:00:00	7:11:58 AM	11.00		47.4	54954.09	48.3	68260.03	48.3	49.8	47.7	48.6	49.4	50.7	47.4	54954.09	47.4	54954.09
Study #17	0:00:10	1:00:10	7:15:39 AM	15.00		49.7	93325.43			51.5						49.7	93325.43	49.7	93325.43
Receptor 8	0:00:20	1:00:20	7:15:49 AM	15.00		51.0	125892.54			52.2						51.0	125892.54	51.0	125892.54
	0:00:30	1:00:30	7:15:59 AM	15.00		50.5	112201.85			51.9						50.5	112201.85	50.5	112201.85
	0:00:40	1:00:40	7:16:09 AM	16.00		48.6	72443.60			49.5						48.6	72443.60	48.6	72443.60
	0:00:50	1:00:50	7:16:19 AM	16.00		48.8	75857.76			49.4						48.8	75857.76	48.8	75857.76
	0:01:00	1:01:00	7:16:29 AM	16.00		48.5	70794.58	49.6	91752.62	49.6	52.2					48.5	70794.58	48.5	70794.58
	0:01:10	1:01:10	7:16:39 AM	16.00		49.0	79432.82			49.4						49.0	79432.82	49.0	79432.82
	0:01:20	1:01:20	7:16:49 AM	16.00		48.0	63095.73			49.4						48.0	63095.73	48.0	63095.73
	0:01:30	1:01:30	7:16:59 AM	16.00		48.0	63095.73			48.9						48.0	63095.73	48.0	63095.73
	0:01:40	1:01:40	7:17:09 AM	17.00		48.1	64565.42			48.9						48.1	64565.42	48.1	64565.42
	0:01:50	1:01:50	7:17:19 AM	17.00		49.1	81283.05			49.9						49.1	81283.05	49.1	81283.05
	0:02:00	1:02:00	7:17:29 AM	17.00		47.4	54954.09	48.3	67737.81	48.6	49.9					47.4	54954.09	47.4	54954.09
	0:02:10	1:02:10	7:17:39 AM	17.00		46.9	48977.88			47.6						46.9	48977.88	46.9	48977.88
	0:02:20	1:02:20	7:17:49 AM	17.00		47.5	56234.13			48.6						47.5	56234.13	47.5	56234.13
	0:02:30	1:02:30	7:17:59 AM	17.00		47.8	60255.96			48.6						47.8	60255.96	47.8	60255.96
	0:02:40	1:02:40	7:18:09 AM	18.00		48.2	66069.34			48.9						48.2	66069.34	48.2	66069.34
	0:02:50	1:02:50	7:18:19 AM	18.00		48.5	70794.58			49.5						48.5	70794.58	48.5	70794.58
	0:03:00	1:03:00	7:18:29 AM	18.00		48.9	77624.71	48.0	63326.10	49.6	49.6					48.9	77624.71	48.9	77624.71
	0:03:10	1:03:10	7:18:39 AM	18.00		48.6	72443.60			49.0						48.6	72443.60	48.6	72443.60
	0:03:20	1:03:20	7:18:49 AM	18.00		51.1	128824.96			53.1						51.1	128824.96	51.1	128824.96
	0:03:30	1:03:30	7:18:59 AM	18.00		54.0	251188.64			55.0						54.0	251188.64	54.0	251188.64
	0:03:40	1:03:40	7:19:09 AM	19.00		57.3	537031.80			60.5						57.3	537031.80	57.3	537031.80
	0:03:50	1:03:50	7:19:19 AM	19.00		60.8	1202264.43			62.3						60.8	1202264.43	60.8	1202264.43
	0:04:00	1:04:00	7:19:29 AM	19.00		59.5	891250.94	57.1	513834.06	60.4	62.3					59.5	891250.94	59.5	891250.94
	0:04:10	1:04:10	7:19:39 AM	19.00		58.3	676082.98			59.4						58.3	676082.98	58.3	676082.98
	0:04:20	1:04:20	7:19:49 AM	19.00		54.2	263026.80			55.8						54.2	263026.80	54.2	263026.80
	0:04:30	1:04:30	7:19:59 AM	19.00		53.6	229086.77			54.1						53.6	229086.77	53.6	229086.77
	0:04:40	1:04:40	7:20:09 AM	20.00		53.9	245470.89			54.7						53.9	245470.89	53.9	245470.89
	0:04:50	1:04:50	7:20:19 AM	20.00		54.1	257039.58			55.6						54.1	257039.58	54.1	257039.58
	0:05:00	1:05:00	7:20:29 AM	20.00		54.2	263026.80	55.1	322288.97	55.1	59.4					54.2	263026.80	54.2	263026.80
	0:05:10	1:05:10	7:20:39 AM	20.00		54.3	269153.48			55.4						54.3	269153.48	54.3	269153.48
	0:05:20	1:05:20	7:20:49 AM	20.00		55.3	338844.16			56.9						55.3	338844.16	55.3	338844.16
	0:05:30	1:05:30	7:20:59 AM	20.00		56.4	436515.83			57.1						56.4	436515.83	56.4	436515.83
	0:05:40	1:05:40	7:21:09 AM	21.00		55.4	346736.85			56.7						55.4	346736.85	55.4	346736.85
	0:05:50	1:05:50	7:21:19 AM	21.00		51.9	154881.66			55.0						51.9	154881.66	51.9	154881.66
	0:06:00	1:06:00	7:21:29 AM	21.00		51.0	125892.54	54.5	278670.75	51.4	57.1					51.0	125892.54	51.0	125892.54
	0:06:10	1:06:10	7:21:39 AM	21.00		49.8	95499.26			50.6						49.8	95499.26	49.8	95499.26
	0:06:20	1:06:20	7:21:49 AM	21.00		51.3	134896.29			52.3						51.3	134896.29	51.3	134896.29
	0:06:30	1:06:30	7:21:59 AM	21.00		50.9	123026.88			52.6						50.9	123026.88	50.9	123026.88
	0:06:40	1:06:40	7:22:09 AM	22.00		53.5	223872.11			55.8						53.5	223872.11	53.5	223872.11
	0:06:50	1:06:50	7:22:19 AM	22.00		51.2	131825.67			52.6						51.2	131825.67	51.2	131825.67
	0:07:00	1:07:00	7:22:29 AM	22.00		52.6	181970.09	51.7	148515.05	54.2	55.8					52.6	181970.09	52.6	181970.09
	0:07:10	1:07:10	7:22:39 AM	22.00		49.3	85113.80			50.3						49.3	85113.80	49.3	85113.80
	0:07:20	1:07:20	7:22:49 AM	22.00		49.3	85113.80			50.3						49.3	85113.80	49.3	85113.80
	0:07:30	1:07:30	7:22:59 AM	22.00		49.2	83176.38			50.6						49.2	83176.38	49.2	83176.38
	0:07:40	1:07:40	7:23:09 AM	23.00		50.8	120226.44			51.7						50.8	120226.44	50.8	120226.44
	0:07:50	1:07:50	7:23:19 AM	23.00		50.1	102329.30			53.5						50.1	102329.30	50.1	102329.30
	0:08:00	1:08:00	7:23:29 AM	23.00		50.7	117489.76	50.0	98908.25	53.6	53.6					50.7	117489.76	50.7	117489.76
	0:08:10	1:08:10	7:23:39 AM	23.00		47.2	52480.75			48.1						47.2	52480.75	47.2	52480.75
	0:08:20	1:08:20	7:23:49 AM	23.00		49.3	85113.80			50.7						49.3	85113.80	49.3	85113.80
	0:08:30	1:08:30	7:23:59 AM	23.00		48.0	63095.73			48.6						48.0	63095.73	48.0	63095.73
	0:08:40	1:08:40	7:24:09 AM	24.00		48.0	63095.73			48.2						48.0	63095.73	48.0	63095.73
	0:08:50	1:08:50	7:24:19 AM	24.00		47.3	53703.18			48.1						47.3	53703.18	47.3	53703.18
	0:09:00	1:09:00	7:24:29 AM	24.00		47.3	53703.18	47.9	61865.40	47.9	50.7					47.3	53703.18	47.3	53703.18
	0:09:10	1:09:10	7:24:39 AM	24.00		46.8	47863.01			47.7						46.8	47863.01	46.8	47863.01
	0:09:20	1:09:20	7:24:49 AM	24.00		46.1	40738.03			47.1						46.1	40738.03	46.1	40738.03
	0:09:30	1:09:30	7:24:59 AM	24.00		46.1	40738.03			46.8						46.1	40738.03	46.1	40738.03
	0:09:40	1:09:40	7:25:09 AM	25.00		45.9	38904.51			46.2						45.9	38904.51	45.9	38904.51
	0:09:50	1:09:50	7:25:19 AM	25.00		47.2	52480.75			48.1						47.2	52480.75	47.2	52480.75
	0:10:00	1:10:00	7:25:29 AM	25.00		46.9	48977.88	46.5	44950.37	50.5	50.5					46.9	48977.88	46.9	48977.88
	0:10:10	1:10:10	7:25:39 AM	25.00		47.4	54954.09			49.6						47.4	54954.09	47.4	54954.09
	0:10:20	1:10:20	7:25:49 AM	25.00		49.3	85113.80			53.7						49.3	85113.80	49.3	85113.80
	0:10:30	1:10:30	7:25:59 AM	25.00		49.2	83176.38			52.1						49.2	83176.38	49.2	83176.38
	0:10:40	1:10:40	7:26:09 AM	26.00		48.9	77624.71			51.6						48.9	77624.71	48.9	77624.71
	0:10:50	1:10:50	7:26:19 AM	26.00		49.0	79432.82			50.8						49.0	79432.82	49.0	79432.82
	0:11:00	1:11:00	7:26:29 AM	26.00		48.5	70794.58	48.8	75182.73	50.3	53.7					48.5	70794.58	48.5	70794.58
	0:11:10	1:11:10	7:26:39 AM	26.00		50.0	100000.00			54.5						50.0	100000.00	50.0	100000.00
	0:11:20	1:11:20	7:26:49 AM	26.00		46.6	45708.82			50.4						46.6	45708.82	46.6	45708.82
	0:11:30	1:11:30	7:26:59 AM	26.00		48.2	66069.34			52.4						48.2	66069.34	48.2	66069.34
	0:11:40	1:11:40	7:27:09 AM	27.00		47.4	54954.09			50.0						47.4	54954.09	47.4	54954.09
	0:11:50	1:11:50	7:27:19 AM	27.00		46.1	40738.03			48.6						46.1	40738.03	46.1	40738.03
	0:12:00	1:12:00	7:27:29 AM	27.00		44.6	28840.32	47.5	56051.77	45.5	54.5					44.6	28840.32	44.6	28840.32
	0:12:10	1:12:10	7:27:39 AM	27.00		48.2	66069.34			52.9						48.2	66069.34	48.2	66069.34
	0:12:20	1:12:20	7:27:49 AM	27.00		49.2	83176.38			53.4						49.2	83176.38	49.2	83176.38

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:30	1:12:30	7:27:59 AM	27.00		47.2	52480.75			50.4						47.2	52480.75	47.2	52480.75
	0:12:40	1:12:40	7:28:09 AM	28.00		45.5	35481.34			46.4						45.5	35481.34	45.5	35481.34
	0:12:50	1:12:50	7:28:19 AM	28.00		45.6	36307.81			46.7						45.6	36307.81	45.6	36307.81
	0:13:00	1:13:00	7:28:29 AM	28.00		47.8	60255.96	47.5	55628.60	49.5	53.4					47.8	60255.96	47.8	60255.96
	0:13:10	1:13:10	7:28:39 AM	28.00		48.6	72443.60			50.5						48.6	72443.60	48.6	72443.60
	0:13:20	1:13:20	7:28:49 AM	28.00		46.0	39810.72			47.1						46.0	39810.72	46.0	39810.72
	0:13:30	1:13:30	7:28:59 AM	28.00		46.9	48977.88			49.3						46.9	48977.88	46.9	48977.88
	0:13:40	1:13:40	7:29:09 AM	29.00		47.1	51286.14			48.8						47.1	51286.14	47.1	51286.14
	0:13:50	1:13:50	7:29:19 AM	29.00		48.8	75857.76			50.9						48.8	75857.76	48.8	75857.76
	0:14:00	1:14:00	7:29:29 AM	29.00		46.6	45708.82	47.5	55680.82	48.9	50.9					46.6	45708.82	46.6	45708.82
	0:14:10	1:14:10	7:29:39 AM	29.00		45.4	34673.69			48.5						45.4	34673.69	45.4	34673.69
	0:14:20	1:14:20	7:29:49 AM	29.00		45.2	33113.11			48.1						45.2	33113.11	45.2	33113.11
	0:14:30	1:14:30	7:29:59 AM	29.00		45.0	31622.78			46.7						45.0	31622.78	45.0	31622.78
	0:14:40	1:14:40	7:30:09 AM	30.00		47.3	53703.18			49.5						47.3	53703.18	47.3	53703.18
	0:14:50	1:14:50	7:30:19 AM	30.00		44.2	26302.68			47.9						44.2	26302.68	44.2	26302.68
	0:15:00	1:15:00	7:30:29 AM	30.00		44.4	27542.29	45.4	34492.95	48.7	49.5	48.6	50.9	54.3	59.5	44.4	27542.29	44.4	27542.29
Study #18	0:00:10	1:15:10	7:42:11 AM	42.00		58.5	707945.78			60.4						58.5	707945.78	58.5	707945.78
Receptor 4	0:00:20	1:15:20	7:42:21 AM	42.00		59.5	891250.94			60.8						59.5	891250.94	59.5	891250.94
	0:00:30	1:15:30	7:42:31 AM	42.00		57.5	562341.33			59.0						57.5	562341.33	57.5	562341.33
	0:00:40	1:15:40	7:42:41 AM	42.00		59.4	870963.59			62.5						59.4	870963.59	59.4	870963.59
	0:00:50	1:15:50	7:42:51 AM	42.00		56.9	489778.82			58.4						56.9	489778.82	56.9	489778.82
	0:01:00	1:16:00	7:43:01 AM	43.00		58.4	691830.97	58.5	702351.90	59.4	62.5					58.4	691830.97	58.4	691830.97
	0:01:10	1:16:10	7:43:11 AM	43.00		56.5	446683.59			58.4						56.5	446683.59	56.5	446683.59
	0:01:20	1:16:20	7:43:21 AM	43.00		58.2	660693.45			61.0						58.2	660693.45	58.2	660693.45
	0:01:30	1:16:30	7:43:31 AM	43.00		56.8	478630.09			60.7						56.8	478630.09	56.8	478630.09
	0:01:40	1:16:40	7:43:41 AM	43.00		59.9	977237.22			63.2						59.9	977237.22	59.9	977237.22
	0:01:50	1:16:50	7:43:51 AM	43.00		57.3	537031.80			60.0						57.3	537031.80	57.3	537031.80
	0:02:00	1:17:00	7:44:01 AM	44.00		58.6	724435.96	58.0	637452.02	59.8	63.2					58.6	724435.96	58.6	724435.96
	0:02:10	1:17:10	7:44:11 AM	44.00		59.5	891250.94			61.5						59.5	891250.94	59.5	891250.94
	0:02:20	1:17:20	7:44:21 AM	44.00		58.8	758577.58			61.1						58.8	758577.58	58.8	758577.58
	0:02:30	1:17:30	7:44:31 AM	44.00		57.0	501187.23			58.5						57.0	501187.23	57.0	501187.23
	0:02:40	1:17:40	7:44:41 AM	44.00		57.5	562341.33			58.5						57.5	562341.33	57.5	562341.33
	0:02:50	1:17:50	7:44:51 AM	44.00		56.8	478630.09			57.5						56.8	478630.09	56.8	478630.09
	0:03:00	1:18:00	7:45:01 AM	45.00		59.7	933254.30	58.4	687540.24	62.0	62.0					59.7	933254.30	59.7	933254.30
	0:03:10	1:18:10	7:45:11 AM	45.00		63.4	2187761.62			67.0						63.4	2187761.62	63.4	2187761.62
	0:03:20	1:18:20	7:45:21 AM	45.00		61.0	1258925.41			66.1						61.0	1258925.41	61.0	1258925.41
	0:03:30	1:18:30	7:45:31 AM	45.00		54.8	301995.17			56.8						54.8	301995.17	54.8	301995.17
	0:03:40	1:18:40	7:45:41 AM	45.00		53.6	229086.77			53.9						53.6	229086.77	53.6	229086.77
	0:03:50	1:18:50	7:45:51 AM	45.00		53.8	239883.29			54.2						53.8	239883.29	53.8	239883.29
	0:04:00	1:19:00	7:46:01 AM	46.00		54.7	295120.92	58.8	752128.86	55.6	67.0					54.7	295120.92	54.7	295120.92
	0:04:10	1:19:10	7:46:11 AM	46.00		56.1	407380.28			57.8						56.1	407380.28	56.1	407380.28
	0:04:20	1:19:20	7:46:21 AM	46.00		57.3	537031.80			58.1						57.3	537031.80	57.3	537031.80
	0:04:30	1:19:30	7:46:31 AM	46.00		55.7	371535.23			57.1						55.7	371535.23	55.7	371535.23
	0:04:40	1:19:40	7:46:41 AM	46.00		54.3	269153.48			54.9						54.3	269153.48	54.3	269153.48
	0:04:50	1:19:50	7:46:51 AM	46.00		54.2	263026.80			54.8						54.2	263026.80	54.2	263026.80
	0:05:00	1:20:00	7:47:01 AM	47.00		53.7	234422.88	55.4	347091.74	54.3	58.1					53.7	234422.88	53.7	234422.88
	0:05:10	1:20:10	7:47:11 AM	47.00		53.4	218776.16			54.1						53.4	218776.16	53.4	218776.16
	0:05:20	1:20:20	7:47:21 AM	47.00		54.0	251188.64			54.4						54.0	251188.64	54.0	251188.64
	0:05:30	1:20:30	7:47:31 AM	47.00		54.5	281838.29			54.9						54.5	281838.29	54.5	281838.29
	0:05:40	1:20:40	7:47:41 AM	47.00		55.4	346736.85			56.6						55.4	346736.85	55.4	346736.85
	0:05:50	1:20:50	7:47:51 AM	47.00		56.7	467735.14			58.1						56.7	467735.14	56.7	467735.14
	0:06:00	1:21:00	7:48:01 AM	48.00		57.3	537031.80	55.4	350551.15	59.0	59.0					57.3	537031.80	57.3	537031.80
	0:06:10	1:21:10	7:48:11 AM	48.00		57.4	549540.87			59.9						57.4	549540.87	57.4	549540.87
	0:06:20	1:21:20	7:48:21 AM	48.00		57.3	537031.80			58.8						57.3	537031.80	57.3	537031.80
	0:06:30	1:21:30	7:48:31 AM	48.00		54.6	288403.15			55.3						54.6	288403.15	54.6	288403.15
	0:06:40	1:21:40	7:48:41 AM	48.00		54.5	281838.29			55.0						54.5	281838.29	54.5	281838.29
	0:06:50	1:21:50	7:48:51 AM	48.00		56.3	426579.52			57.4						56.3	426579.52	56.3	426579.52
	0:07:00	1:22:00	7:49:01 AM	49.00		55.3	338844.16	56.1	403706.30	56.5	59.9					55.3	338844.16	55.3	338844.16
	0:07:10	1:22:10	7:49:11 AM	49.00		57.0	501187.23			58.0						57.0	501187.23	57.0	501187.23
	0:07:20	1:22:20	7:49:21 AM	49.00		59.2	831763.77			61.7						59.2	831763.77	59.2	831763.77
	0:07:30	1:22:30	7:49:31 AM	49.00		57.9	616595.00			58.8						57.9	616595.00	57.9	616595.00
	0:07:40	1:22:40	7:49:41 AM	49.00		58.9	776247.12			59.8						58.9	776247.12	58.9	776247.12
	0:07:50	1:22:50	7:49:51 AM	49.00		59.5	891250.94			60.4						59.5	891250.94	59.5	891250.94
	0:08:00	1:23:00	7:50:01 AM	50.00		63.6	2290867.65	59.9	984651.95	65.8	65.8					63.6	2290867.65	63.6	2290867.65
	0:08:10	1:23:10	7:50:11 AM	50.00		63.6	2290867.65			64.9						63.6	2290867.65	63.6	2290867.65
	0:08:20	1:23:20	7:50:21 AM	50.00		63.6	2290867.65			65.3						63.6	2290867.65	63.6	2290867.65
	0:08:30	1:23:30	7:50:31 AM	50.00		64.8	3019951.72			66.0						64.8	3019951.72	64.8	3019951.72
	0:08:40	1:23:40	7:50:41 AM	50.00		63.9	2454708.92			65.1						63.9	2454708.92	63.9	2454708.92
	0:08:50	1:23:50	7:50:51 AM	50.00		62.2	1659586.91			63.6						62.2	1659586.91	62.2	1659586.91
	0:09:00	1:24:00	7:51:01 AM	51.00		62.5	1778279.41	63.5	2249043.71	63.8	66.0					62.5	1778279.41	62.5	1778279.41
	0:09:10	1:24:10	7:51:11 AM	51.00		62.0	1584893.19			63.6						62.0	1584893.19	62.0	1584893.19
	0:09:20	1:24:20	7:51:21 AM	51.00		57.6	575439.94			59.9						57.6	575439.94	57.6	575439.94
	0:09:30	1:24:30	7:51:31 AM	51.00		57.8	602559.59			59.2						57.8	602559.59	57.8	602559.59
	0:09:40	1:24:40	7:51:41 AM	51.00		57.4	549540.87			58.7						57.4	549540.87	57.4	549540.87
	0:09:50	1:24:50	7:51:51 AM	51.00		56.2	416869.38			57.5						56.2	416869.38	56.2	416869.38
	0:10:00	1:25:00	7:52:01 AM	52.00		55.6	363078.05	58.3	682063.50	57.1	63.6					55.6	363078.05	55.6	363078.05
	0:10:10	1:25:10	7:52:11 AM	52.00		54.3	269153.48			55.0						54.3	269153.48	54.3	269153.48
	0:10:20	1:25:20	7:52:21 AM	52.00		54.4	275422.87			55.4						54.4	275422.87	54.4	275422.87
	0:10:30	1:25:30	7:52:31 AM	52.00		56.2	416869.38			58.1						56.2	416869.38	56.2	416869.38
	0:10:40	1:25:40	7:52:41 AM	52.00		56.0	398107.17			58.2						56.0	398107.17	56.0	398107.17
	0:10:50	1:25:50	7:52:51 AM	52.00		57.6	575439.94			59.7						57.6	575439.94	57.6	575439.94
	0:11:00	1:26:00	7:53:01 AM	53.00		57.7	588843.66	56.2	420639.42	59.4	59.7					57.7	588843.66	57.7	588843.66
	0:11:10	1:26:10	7:53:11 AM	53.00		55.6	363078.05			56.9						55.6	363078.05	55.6	363078.05
	0:11:20	1:26:20	7:53:21 AM	53.00		56.6	457088.19			58.2						56.6	457088.19	56.6	457088.19
	0:11:30	1:26:30	7:53:31 AM	53.00		54.1	257039.58			54.9						54.1	257039.58	54.1	257039.58
	0:11:40	1:26:40	7:53:41 AM	53.00		53.7	234422.88			54.2						53.7	234422.88	53.7	234422.88
	0:11:50	1:26:50	7:53:51 AM	53.00		56.0	398107.17			57.3						56.0	398107.17	56.0	398107.17
	0:12:00	1:27:00	7:54:01 AM	54.00		55.1	323593.66	55.3	338888.26	58.2	58.2					55.1	323593.66	55.1	323593.66
	0:12:10	1:27:10	7:54:11 AM	54.00		56.4	436515.83			59.6						56.4	436515.83	56.4	436515.83

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:20	1:27:20	7:54:21 AM	54.00		56.5	446683.59			57.5						56.5	446683.59	56.5	446683.59
	0:12:30	1:27:30	7:54:31 AM	54.00		54.3	269153.48			56.0						54.3	269153.48	54.3	269153.48
	0:12:40	1:27:40	7:54:41 AM	54.00		54.4	275422.87			55.2						54.4	275422.87	54.4	275422.87
	0:12:50	1:27:50	7:54:51 AM	54.00		54.7	295120.92			55.5						54.7	295120.92	54.7	295120.92
	0:13:00	1:28:00	7:55:01 AM	55.00		54.3	269153.48	55.2	332008.36	55.4	59.6					54.3	269153.48	54.3	269153.48
	0:13:10	1:28:10	7:55:11 AM	55.00		57.6	575439.94			59.7						57.6	575439.94	57.6	575439.94
	0:13:20	1:28:20	7:55:21 AM	55.00		55.1	323593.66			56.9						55.1	323593.66	55.1	323593.66
	0:13:30	1:28:30	7:55:31 AM	55.00		55.9	389045.14			57.2						55.9	389045.14	55.9	389045.14
	0:13:40	1:28:40	7:55:41 AM	55.00		55.6	363078.05			56.7						55.6	363078.05	55.6	363078.05
	0:13:50	1:28:50	7:55:51 AM	55.00		56.4	436515.83			60.2						56.4	436515.83	56.4	436515.83
	0:14:00	1:29:00	7:56:01 AM	56.00		56.0	398107.17	56.2	414296.63	57.2	60.2					56.0	398107.17	56.0	398107.17
	0:14:10	1:29:10	7:56:11 AM	56.00		55.6	363078.05			56.5						55.6	363078.05	55.6	363078.05
	0:14:20	1:29:20	7:56:21 AM	56.00		54.2	263026.80			55.3						54.2	263026.80	54.2	263026.80
	0:14:30	1:29:30	7:56:31 AM	56.00		54.9	309029.54			55.9						54.9	309029.54	54.9	309029.54
	0:14:40	1:29:40	7:56:41 AM	56.00		54.7	295120.92			55.5						54.7	295120.92	54.7	295120.92
	0:14:50	1:29:50	7:56:51 AM	56.00		54.7	295120.92			55.8						54.7	295120.92	54.7	295120.92
	0:15:00	1:30:00	7:57:01 AM	57.00		54.9	309029.54	54.9	305734.30	55.8	56.5	56.5	58.2	62.2	63.9	54.9	309029.54	54.9	309029.54
Study #19	0:00:10	0:00:10	8:10:05 AM	10.00		50.0	100000.00			50.8						50.0	100000.00	50.0	100000.00
Receptor 9	0:00:20	0:00:20	8:10:15 AM	10.00		52.0	158489.32			53.3						52.0	158489.32	52.0	158489.32
	0:00:30	0:00:30	8:10:25 AM	10.00		57.1	512861.38			59.8						57.1	512861.38	57.1	512861.38
	0:00:40	0:00:40	8:10:35 AM	10.00		51.4	138038.43			55.2						51.4	138038.43	51.4	138038.43
	0:00:50	0:00:50	8:10:45 AM	10.00		50.0	100000.00			50.4						50.0	100000.00	50.0	100000.00
	0:01:00	0:01:00	8:10:55 AM	10.00		51.4	138038.43	52.8	191237.93	53.1	59.8					51.4	138038.43	51.4	138038.43
	0:01:10	0:01:10	8:11:05 AM	11.00		52.4	173780.08			55.2						52.4	173780.08	52.4	173780.08
	0:01:20	0:01:20	8:11:15 AM	11.00		59.2	831763.77			61.6						59.2	831763.77	59.2	831763.77
	0:01:30	0:01:30	8:11:25 AM	11.00		56.7	467735.14			57.3						56.7	467735.14	56.7	467735.14
	0:01:40	0:01:40	8:11:35 AM	11.00		55.1	323593.66			57.0						55.1	323593.66	55.1	323593.66
	0:01:50	0:01:50	8:11:45 AM	11.00		52.0	158489.32			53.0						52.0	158489.32	52.0	158489.32
	0:02:00	0:02:00	8:11:55 AM	11.00		51.7	147910.84	55.4	350545.47	52.9	61.6					51.7	147910.84	51.7	147910.84
	0:02:10	0:02:10	8:12:05 AM	12.00		52.8	190546.07			53.5						52.8	190546.07	52.8	190546.07
	0:02:20	0:02:20	8:12:15 AM	12.00		51.6	144543.98			52.6						51.6	144543.98	51.6	144543.98
	0:02:30	0:02:30	8:12:25 AM	12.00		51.0	125892.54			51.7						51.0	125892.54	51.0	125892.54
	0:02:40	0:02:40	8:12:35 AM	12.00		52.0	158489.32			53.4						52.0	158489.32	52.0	158489.32
	0:02:50	0:02:50	8:12:45 AM	12.00		54.1	257039.58			55.2						54.1	257039.58	54.1	257039.58
	0:03:00	0:03:00	8:12:55 AM	12.00		55.2	331131.12	53.0	201273.77	56.3	56.3					55.2	331131.12	55.2	331131.12
	0:03:10	0:03:10	8:13:05 AM	13.00		53.3	213796.21			54.6						53.3	213796.21	53.3	213796.21
	0:03:20	0:03:20	8:13:15 AM	13.00		51.7	147910.84			53.6						51.7	147910.84	51.7	147910.84
	0:03:30	0:03:30	8:13:25 AM	13.00		51.3	134896.29			51.8						51.3	134896.29	51.3	134896.29
	0:03:40	0:03:40	8:13:35 AM	13.00		51.0	125892.54			51.4						51.0	125892.54	51.0	125892.54
	0:03:50	0:03:50	8:13:45 AM	13.00		51.5	141253.75			52.2						51.5	141253.75	51.5	141253.75
	0:04:00	0:04:00	8:13:55 AM	13.00		51.2	131825.67	51.7	149262.55	53.1	54.6					51.2	131825.67	51.2	131825.67
	0:04:10	0:04:10	8:14:05 AM	14.00		56.2	416869.38			63.5						56.2	416869.38	56.2	416869.38
	0:04:20	0:04:20	8:14:15 AM	14.00		62.6	1819700.86			65.5						62.6	1819700.86	62.6	1819700.86
	0:04:30	0:04:30	8:14:25 AM	14.00		56.4	436515.83			58.5						56.4	436515.83	56.4	436515.83
	0:04:40	0:04:40	8:14:35 AM	14.00		52.1	162181.01			52.8						52.1	162181.01	52.1	162181.01
	0:04:50	0:04:50	8:14:45 AM	14.00		52.1	162181.01			53.1						52.1	162181.01	52.1	162181.01
	0:05:00	0:05:00	8:14:55 AM	14.00		52.6	181970.09	57.2	529903.03	53.3	65.5					52.6	181970.09	52.6	181970.09
	0:05:10	0:05:10	8:15:05 AM	15.00		55.3	338844.16			57.6						55.3	338844.16	55.3	338844.16
	0:05:20	0:05:20	8:15:15 AM	15.00		53.1	204173.79			55.1						53.1	204173.79	53.1	204173.79
	0:05:30	0:05:30	8:15:25 AM	15.00		51.6	144543.98			52.8						51.6	144543.98	51.6	144543.98
	0:05:40	0:05:40	8:15:35 AM	15.00		49.5	89125.09			50.9						49.5	89125.09	49.5	89125.09
	0:05:50	0:05:50	8:15:45 AM	15.00		49.7	93325.43			50.6						49.7	93325.43	49.7	93325.43
	0:06:00	0:06:00	8:15:55 AM	15.00		49.8	95499.26	52.1	160918.62	52.0	57.6					49.8	95499.26	49.8	95499.26
	0:06:10	0:06:10	8:16:05 AM	16.00		48.4	69183.10			49.8						48.4	69183.10	48.4	69183.10
	0:06:20	0:06:20	8:16:15 AM	16.00		48.9	77624.71			50.5						48.9	77624.71	48.9	77624.71
	0:06:30	0:06:30	8:16:25 AM	16.00		48.8	75857.76			50.0						48.8	75857.76	48.8	75857.76
	0:06:40	0:06:40	8:16:35 AM	16.00		48.2	66069.34			49.3						48.2	66069.34	48.2	66069.34
	0:06:50	0:06:50	8:16:45 AM	16.00		47.6	57543.99			47.9						47.6	57543.99	47.6	57543.99
	0:07:00	0:07:00	8:16:55 AM	16.00		47.9	61659.50	48.3	67989.73	48.2	50.5					47.9	61659.50	47.9	61659.50
	0:07:10	0:07:10	8:17:05 AM	17.00		48.6	72443.60			49.1						48.6	72443.60	48.6	72443.60
	0:07:20	0:07:20	8:17:15 AM	17.00		49.1	81283.05			51.1						49.1	81283.05	49.1	81283.05
	0:07:30	0:07:30	8:17:25 AM	17.00		47.7	58884.37			48.1						47.7	58884.37	47.7	58884.37
	0:07:40	0:07:40	8:17:35 AM	17.00		47.8	60255.96			48.4						47.8	60255.96	47.8	60255.96
	0:07:50	0:07:50	8:17:45 AM	17.00		52.3	169824.37			55.9						52.3	169824.37	52.3	169824.37
	0:08:00	0:08:00	8:17:55 AM	17.00		53.1	204173.79	50.3	107810.86	55.9	55.9					53.1	204173.79	53.1	204173.79
	0:08:10	0:08:10	8:18:05 AM	18.00		50.5	112201.85			51.8						50.5	112201.85	50.5	112201.85
	0:08:20	0:08:20	8:18:15 AM	18.00		50.9	123026.88			52.3						50.9	123026.88	50.9	123026.88
	0:08:30	0:08:30	8:18:25 AM	18.00		51.8	151356.12			52.3						51.8	151356.12	51.8	151356.12
	0:08:40	0:08:40	8:18:35 AM	18.00		50.2	104712.85			52.5						50.2	104712.85	50.2	104712.85
	0:08:50	0:08:50	8:18:45 AM	18.00		50.6	114815.36			53.2						50.6	114815.36	50.6	114815.36
	0:09:00	0:09:00	8:18:55 AM	18.00		50.3	107151.93	50.8	118877.50	51.7	53.2					50.3	107151.93	50.3	107151.93
	0:09:10	0:09:10	8:19:05 AM	19.00		50.9	123026.88			53.6						50.9	123026.88	50.9	123026.88
	0:09:20	0:09:20	8:19:15 AM	19.00		57.7	588843.66			59.5						57.7	588843.66	57.7	588843.66
	0:09:30	0:09:30	8:19:25 AM	19.00		56.1	407380.28			57.9						56.1	407380.28	56.1	407380.28
	0:09:40	0:09:40	8:19:35 AM	19.00		58.1	645654.23			59.7						58.1	645654.23	58.1	645654.23
	0:09:50	0:09:50	8:19:45 AM	19.00		59.3	851138.04			61.0						59.3	851138.04	59.3	851138.04
	0:10:00	0:10:00	8:19:55 AM	19.00		56.4	436515.83	57.1	508759.82	58.0	61.0					56.4	436515.83	56.4	436515.83
	0:10:10	0:10:10	8:20:05 AM	20.00		53.8	239883.29			56.1						53.8	239883.29	53.8	239883.29
	0:10:20	0:10:20	8:20:15 AM	20.00		51.0	125892.54			51.8						51.0	125892.54	51.0	125892.54
	0:10:30	0:10:30	8:20:25 AM	20.00		50.8	120226.44			51.8						50.8	120226.44	50.8	120226.44
	0:10:40	0:10:40	8:20:35 AM	20.00		49.1	81283.05			50.4						49.1	81283.05	49.1	81283.05
	0:10:50	0:10:50	8:20:45 AM	20.00		48.6	72443.60			49.4						48.6	72443.60	48.6	72443.60
	0:11:00	0:11:00	8:20:55 AM	20.00		48.8	75857.76	50.8	119264.45	50.6	56.1					48.8	75857.76	48.8	75857.76
	0:11:10	0:11:10	8:21:05 AM	21.00		51.8	151356.12			53.3						51.8	151356.12	51.8	151356.12
	0:11:20	0:11:20	8:21:15 AM	21.00		49.2	83176.38			51.1						49.2	83176.38	49.2	83176.38
	0:11:30	0:11:30	8:21:25 AM	21.00		49.3	85113.80			51.8						49.3	85113.80	49.3	85113.80
	0:11:40	0:11:40	8:21:35 AM	21.00		48.5	70794.58			49.2						48.5	70794.58	48.5	70794.58
	0:11:50	0:11:50	8:21:45 AM	21.00		48.1	64565.42			49.4						48.1	64565.42	48.1	64565.42
	0:12:00	0:12:00	8:21:55 AM	21.00		47.6	57543.99	49.3	85425.05	48.1	53.3					47.6	57543.99	47.6	57543.99

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:10	0:12:10	8:22:05 AM	22.00		48.4	69183.10			50.6						48.4	69183.10	48.4	69183.10
	0:12:20	0:12:20	8:22:15 AM	22.00		48.7	74131.02			50.5						48.7	74131.02	48.7	74131.02
	0:12:30	0:12:30	8:22:25 AM	22.00		48.6	72443.60			49.9						48.6	72443.60	48.6	72443.60
	0:12:40	0:12:40	8:22:35 AM	22.00		50.3	107151.93			52.2						50.3	107151.93	50.3	107151.93
	0:12:50	0:12:50	8:22:45 AM	22.00		53.5	223872.11			54.5						53.5	223872.11	53.5	223872.11
	0:13:00	0:13:00	8:22:55 AM	22.00		52.8	190546.07	50.9	122887.97	53.8	54.5					52.8	190546.07	52.8	190546.07
	0:13:10	0:13:10	8:23:05 AM	23.00		51.9	154881.66			53.2						51.9	154881.66	51.9	154881.66
	0:13:20	0:13:20	8:23:15 AM	23.00		52.4	173780.08			53.4						52.4	173780.08	52.4	173780.08
	0:13:30	0:13:30	8:23:25 AM	23.00		55.1	323593.66			56.7						55.1	323593.66	55.1	323593.66
	0:13:40	0:13:40	8:23:35 AM	23.00		56.7	467735.14			58.1						56.7	467735.14	56.7	467735.14
	0:13:50	0:13:50	8:23:45 AM	23.00		55.3	338844.16			56.2						55.3	338844.16	55.3	338844.16
	0:14:00	0:14:00	8:23:55 AM	23.00		52.1	162181.01	54.3	270169.28	54.2	58.1					52.1	162181.01	52.1	162181.01
	0:14:10	0:14:10	8:24:05 AM	24.00		52.2	165958.69			53.2						52.2	165958.69	52.2	165958.69
	0:14:20	0:14:20	8:24:15 AM	24.00		52.2	165958.69			53.0						52.2	165958.69	52.2	165958.69
	0:14:30	0:14:30	8:24:25 AM	24.00		51.5	141253.75			51.8						51.5	141253.75	51.5	141253.75
	0:14:40	0:14:40	8:24:35 AM	24.00		53.4	218776.16			54.6						53.4	218776.16	53.4	218776.16
	0:14:50	0:14:50	8:24:45 AM	24.00		53.3	213796.21			54.0						53.3	213796.21	53.3	213796.21
	0:15:00	0:15:00	8:24:55 AM	24.00		51.3	134896.29	52.4	173439.97	52.8	54.6	51.6	53.3	56.7	59.3	51.3	134896.29	51.3	134896.29
Study #20	0:00:10	0:15:10	8:28:00 AM	28.00		62.2	1659586.91			69.6						62.2	1659586.91	62.2	1659586.91
Receptor 10	0:00:20	0:15:20	8:28:10 AM	28.00		66.2	4168693.83			69.8						66.2	4168693.83	66.2	4168693.83
	0:00:30	0:15:30	8:28:20 AM	28.00		66.9	4897788.19			71.9						66.9	4897788.19	66.9	4897788.19
	0:00:40	0:15:40	8:28:30 AM	28.00		66.3	4265795.19			70.6						66.3	4265795.19	66.3	4265795.19
	0:00:50	0:15:50	8:28:40 AM	28.00		65.9	3890451.45			70.7						65.9	3890451.45	65.9	3890451.45
	0:01:00	0:16:00	8:28:50 AM	28.00		64.3	2691534.80	65.6	3595641.73	69.3	71.9					64.3	2691534.80	64.3	2691534.80
	0:01:10	0:16:10	8:29:00 AM	29.00	Overload	85.8	380189396.32			96.0						85.8	380189396.32	85.8	380189396.32
	0:01:20	0:16:20	8:29:10 AM	29.00		76.1	40738027.78			86.0						76.1	40738027.78	76.1	40738027.78
	0:01:30	0:16:30	8:29:20 AM	29.00		50.6	114815.36			53.9						50.6	114815.36	50.6	114815.36
	0:01:40	0:16:40	8:29:30 AM	29.00		50.7	117489.76			53.8						50.7	117489.76	50.7	117489.76
	0:01:50	0:16:50	8:29:40 AM	29.00		49.5	89125.09			52.6						49.5	89125.09	49.5	89125.09
	0:02:00	0:17:00	8:29:50 AM	29.00		47.4	54954.09	78.5	70217301.40	49.6	96.0					47.4	54954.09	47.4	54954.09
	0:02:10	0:17:10	8:30:00 AM	30.00		49.3	85113.80			50.9						49.3	85113.80	49.3	85113.80
	0:02:20	0:17:20	8:30:10 AM	30.00		47.2	52480.75			49.2						47.2	52480.75	47.2	52480.75
	0:02:30	0:17:30	8:30:20 AM	30.00		46.4	43651.58			47.4						46.4	43651.58	46.4	43651.58
	0:02:40	0:17:40	8:30:30 AM	30.00		45.6	36307.81			46.2						45.6	36307.81	45.6	36307.81
	0:02:50	0:17:50	8:30:40 AM	30.00		45.2	33113.11			45.9						45.2	33113.11	45.2	33113.11
	0:03:00	0:18:00	8:30:50 AM	30.00		46.0	39810.72	46.8	48412.96	47.2	50.9					46.0	39810.72	46.0	39810.72
	0:03:10	0:18:10	8:31:00 AM	31.00		45.4	34673.69			45.9						45.4	34673.69	45.4	34673.69
	0:03:20	0:18:20	8:31:10 AM	31.00		45.1	32359.37			45.4						45.1	32359.37	45.1	32359.37
	0:03:30	0:18:30	8:31:20 AM	31.00		44.8	30199.52			45.2						44.8	30199.52	44.8	30199.52
	0:03:40	0:18:40	8:31:30 AM	31.00		44.9	30902.95			46.0						44.9	30902.95	44.9	30902.95
	0:03:50	0:18:50	8:31:40 AM	31.00		44.6	28840.32			46.4						44.6	28840.32	44.6	28840.32
	0:04:00	0:19:00	8:31:50 AM	31.00		44.5	28183.83	44.9	30859.94	44.8	46.4					44.5	28183.83	44.5	28183.83
	0:04:10	0:19:10	8:32:00 AM	32.00		44.7	29512.09			45.4						44.7	29512.09	44.7	29512.09
	0:04:20	0:19:20	8:32:10 AM	32.00		44.8	30199.52			45.2						44.8	30199.52	44.8	30199.52
	0:04:30	0:19:30	8:32:20 AM	32.00		44.7	29512.09			45.8						44.7	29512.09	44.7	29512.09
	0:04:40	0:19:40	8:32:30 AM	32.00		45.5	35481.34			46.7						45.5	35481.34	45.5	35481.34
	0:04:50	0:19:50	8:32:40 AM	32.00		45.1	32359.37			45.6						45.1	32359.37	45.1	32359.37
	0:05:00	0:20:00	8:32:50 AM	32.00		44.8	30199.52	44.9	31210.65	45.4	46.7					44.8	30199.52	44.8	30199.52
	0:05:10	0:20:10	8:33:00 AM	33.00		44.3	26915.35			44.9						44.3	26915.35	44.3	26915.35
	0:05:20	0:20:20	8:33:10 AM	33.00		45.0	31622.78			46.4						45.0	31622.78	45.0	31622.78
	0:05:30	0:20:30	8:33:20 AM	33.00		44.7	29512.09			45.5						44.7	29512.09	44.7	29512.09
	0:05:40	0:20:40	8:33:30 AM	33.00		45.3	33884.42			46.6						45.3	33884.42	45.3	33884.42
	0:05:50	0:20:50	8:33:40 AM	33.00		45.7	37153.52			46.2						45.7	37153.52	45.7	37153.52
	0:06:00	0:21:00	8:33:50 AM	33.00		45.9	38904.51	45.2	32998.78	46.8	46.8					45.9	38904.51	45.9	38904.51
	0:06:10	0:21:10	8:34:00 AM	34.00		47.1	51286.14			48.7						47.1	51286.14	47.1	51286.14
	0:06:20	0:21:20	8:34:10 AM	34.00		48.6	72443.60			50.8						48.6	72443.60	48.6	72443.60
	0:06:30	0:21:30	8:34:20 AM	34.00		46.4	43651.58			48.4						46.4	43651.58	46.4	43651.58
	0:06:40	0:21:40	8:34:30 AM	34.00		45.4	34673.69			46.0						45.4	34673.69	45.4	34673.69
	0:06:50	0:21:50	8:34:40 AM	34.00		45.0	31622.78			45.4						45.0	31622.78	45.0	31622.78
	0:07:00	0:22:00	8:34:50 AM	34.00		45.3	33884.42	46.5	44593.70	45.8	50.8					45.3	33884.42	45.3	33884.42
	0:07:10	0:22:10	8:35:00 AM	35.00		45.5	35481.34			45.9						45.5	35481.34	45.5	35481.34
	0:07:20	0:22:20	8:35:10 AM	35.00		46.1	40738.03			46.5						46.1	40738.03	46.1	40738.03
	0:07:30	0:22:30	8:35:20 AM	35.00		46.1	40738.03			46.6						46.1	40738.03	46.1	40738.03
	0:07:40	0:22:40	8:35:30 AM	35.00		47.2	52480.75			48.9						47.2	52480.75	47.2	52480.75
	0:07:50	0:22:50	8:35:40 AM	35.00		51.1	128824.96			54.2						51.1	128824.96	51.1	128824.96
	0:08:00	0:23:00	8:35:50 AM	35.00		58.2	660693.45	52.0	159826.09	59.9	59.9					58.2	660693.45	58.2	660693.45
	0:08:10	0:23:10	8:36:00 AM	36.00		57.0	501187.23			59.6						57.0	501187.23	57.0	501187.23
	0:08:20	0:23:20	8:36:10 AM	36.00		52.3	169824.37			53.4						52.3	169824.37	52.3	169824.37
	0:08:30	0:23:30	8:36:20 AM	36.00		51.6	144543.98			53.5						51.6	144543.98	51.6	144543.98
	0:08:40	0:23:40	8:36:30 AM	36.00		48.7	74131.02			49.8						48.7	74131.02	48.7	74131.02
	0:08:50	0:23:50	8:36:40 AM	36.00		49.8	95499.26			50.9						49.8	95499.26	49.8	95499.26
	0:09:00	0:24:00	8:36:50 AM	36.00		47.8	60255.96	52.4	174240.30	49.3	59.6					47.8	60255.96	47.8	60255.96
	0:09:10	0:24:10	8:37:00 AM	37.00		46.1	40738.03			47.5						46.1	40738.03	46.1	40738.03
	0:09:20	0:24:20	8:37:10 AM	37.00		45.1	32359.37			45.7						45.1	32359.37	45.1	32359.37
	0:09:30	0:24:30	8:37:20 AM	37.00		45.0	31622.78			45.7						45.0	31622.78	45.0	31622.78
	0:09:40	0:24:40	8:37:30 AM	37.00		44.8	30199.52			45.1						44.8	30199.52	44.8	30199.52
	0:09:50	0:24:50	8:37:40 AM	37.00		44.5	28183.83			44.9						44.5	28183.83	44.5	28183.83
	0:10:00	0:25:00	8:37:50 AM	37.00		44.8	30199.52	45.1	32217.17	45.9	47.5					44.8	30199.52	44.8	30199.52
	0:10:10	0:25:10	8:38:00 AM	38.00		45.5	35481.34			46.5						45.5	35481.34	45.5	35481.34
	0:10:20	0:25:20	8:38:10 AM	38.00		44.6	28840.32			44.9						44.6	28840.32	44.6	28840.32
	0:10:30	0:25:30	8:38:20 AM	38.00		44.6	28840.32			45.4						44.6	28840.32	44.6	28840.32
	0:10:40	0:25:40	8:38:30 AM	38.00		44.0	25118.86			45.0						44.0	25118.86	44.0	25118.86
	0:10:50	0:25:50	8:38:40 AM	38.00		44.2	26302.68			45.2						44.2	26302.68	44.2	26302.68
	0:11:00	0:26:00	8:38:50 AM	38.00		44.7	29512.09	44.6	29015.93	47.7	47.7					44.7	29512.09	44.7	29512.09
	0:11:10	0:26:10	8:39:00 AM	39.00		44.3	26915.35			45.0						44.3	26915.35	44.3	26915.35
	0:11:20	0:26:20	8:39:10 AM	39.00		50.0	100000.00			58.3						50.0	100000.00	50.0	100000.00
	0:11:30	0:26:30	8:39:20 AM	39.00		43.4	21877.62			43.8						43.4	21877.62	43.4	21877.62
	0:11:40	0:26:40	8:39:30 AM	39.00		47.3	53703.18			54.4						47.3	53703.18	47.3	53703.18
	0:11:50	0:26:50	8:39:40 AM	39.00		44.4	27542.29			44.9						44.4	27542.29	44.4	27542.29

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:12:00	0:27:00	8:39:50 AM	39.00		45.1	32359.37	46.4	43732.97	46.6	58.3					45.1	32359.37	45.1	32359.37
	0:12:10	0:27:10	8:40:00 AM	40.00		45.4	34673.69			47.6						45.4	34673.69	45.4	34673.69
	0:12:20	0:27:20	8:40:10 AM	40.00		50.5	112201.85			52.8						50.5	112201.85	50.5	112201.85
	0:12:30	0:27:30	8:40:20 AM	40.00		49.7	93325.43			51.4						49.7	93325.43	49.7	93325.43
	0:12:40	0:27:40	8:40:30 AM	40.00		54.0	251188.64			56.5						54.0	251188.64	54.0	251188.64
	0:12:50	0:27:50	8:40:40 AM	40.00		58.7	741310.24			61.0						58.7	741310.24	58.7	741310.24
	0:13:00	0:28:00	8:40:50 AM	40.00		61.5	1412537.54	56.4	440872.90	62.4	62.4					61.5	1412537.54	61.5	1412537.54
	0:13:10	0:28:10	8:41:00 AM	41.00		59.9	977237.22			60.7						59.9	977237.22	59.9	977237.22
	0:13:20	0:28:20	8:41:10 AM	41.00		60.5	1122018.45			61.0						60.5	1122018.45	60.5	1122018.45
	0:13:30	0:28:30	8:41:20 AM	41.00		59.9	977237.22			60.7						59.9	977237.22	59.9	977237.22
	0:13:40	0:28:40	8:41:30 AM	41.00		59.2	831763.77			59.8						59.2	831763.77	59.2	831763.77
	0:13:50	0:28:50	8:41:40 AM	41.00		59.3	851138.04			59.7						59.3	851138.04	59.3	851138.04
	0:14:00	0:29:00	8:41:50 AM	41.00		59.3	851138.04	59.7	935088.79	59.7	61.0					59.3	851138.04	59.3	851138.04
	0:14:10	0:29:10	8:42:00 AM	42.00		59.6	912010.84			60.8						59.6	912010.84	59.6	912010.84
	0:14:20	0:29:20	8:42:10 AM	42.00		61.1	1288249.55			63.4						61.1	1288249.55	61.1	1288249.55
	0:14:30	0:29:30	8:42:20 AM	42.00		61.1	1288249.55			61.5						61.1	1288249.55	61.1	1288249.55
	0:14:40	0:29:40	8:42:30 AM	42.00		61.3	1348962.88			61.7						61.3	1348962.88	61.3	1348962.88
	0:14:50	0:29:50	8:42:40 AM	42.00		61.1	1288249.55			61.8						61.1	1288249.55	61.1	1288249.55
	0:15:00	0:30:00	8:42:50 AM	42.00		59.9	977237.22	60.7	1183826.60	61.0	63.4	46.4	58.2	62.2	76.1	59.9	977237.22	59.9	977237.22
Study #21	0:00:10	0:30:10	8:45:16 AM	45.00		49.0	79432.82			54.5						49.0	79432.82	49.0	79432.82
Receptor 11	0:00:20	0:30:20	8:45:26 AM	45.00		42.4	17378.01			43.3						42.4	17378.01	42.4	17378.01
	0:00:30	0:30:30	8:45:36 AM	45.00		43.3	21379.62			48.5						43.3	21379.62	43.3	21379.62
	0:00:40	0:30:40	8:45:46 AM	45.00		52.8	190546.07			56.4						52.8	190546.07	52.8	190546.07
	0:00:50	0:30:50	8:45:56 AM	45.00		51.4	138038.43			53.2						51.4	138038.43	51.4	138038.43
	0:01:00	0:31:00	8:46:06 AM	46.00		53.5	223872.11	50.5	111774.51	55.6	56.4					53.5	223872.11	53.5	223872.11
	0:01:10	0:31:10	8:46:16 AM	46.00		47.0	50118.72			51.7						47.0	50118.72	47.0	50118.72
	0:01:20	0:31:20	8:46:26 AM	46.00		43.4	21877.62			45.9						43.4	21877.62	43.4	21877.62
	0:01:30	0:31:30	8:46:36 AM	46.00		43.0	19952.62			44.5						43.0	19952.62	43.0	19952.62
	0:01:40	0:31:40	8:46:46 AM	46.00		42.3	16982.44			44.5						42.3	16982.44	42.3	16982.44
	0:01:50	0:31:50	8:46:56 AM	46.00		41.7	14791.08			43.4						41.7	14791.08	41.7	14791.08
	0:02:00	0:32:00	8:47:06 AM	47.00		42.0	15848.93	43.7	23261.90	43.7	51.7					42.0	15848.93	42.0	15848.93
	0:02:10	0:32:10	8:47:16 AM	47.00		40.8	12022.64			42.1						40.8	12022.64	40.8	12022.64
	0:02:20	0:32:20	8:47:26 AM	47.00		41.3	13489.63			42.6						41.3	13489.63	41.3	13489.63
	0:02:30	0:32:30	8:47:36 AM	47.00		41.6	14454.40			42.4						41.6	14454.40	41.6	14454.40
	0:02:40	0:32:40	8:47:46 AM	47.00		42.0	15848.93			43.5						42.0	15848.93	42.0	15848.93
	0:02:50	0:32:50	8:47:56 AM	47.00		42.2	16595.87			43.3						42.2	16595.87	42.2	16595.87
	0:03:00	0:33:00	8:48:06 AM	48.00		41.9	15488.17	41.7	14649.94	42.9	43.5					41.9	15488.17	41.9	15488.17
	0:03:10	0:33:10	8:48:16 AM	48.00		42.2	16595.87			42.6						42.2	16595.87	42.2	16595.87
	0:03:20	0:33:20	8:48:26 AM	48.00		41.9	15488.17			42.5						41.9	15488.17	41.9	15488.17
	0:03:30	0:33:30	8:48:36 AM	48.00		41.4	13803.84			41.8						41.4	13803.84	41.4	13803.84
	0:03:40	0:33:40	8:48:46 AM	48.00		41.4	13803.84			41.6						41.4	13803.84	41.4	13803.84
	0:03:50	0:33:50	8:48:56 AM	48.00		41.6	14454.40			42.4						41.6	14454.40	41.6	14454.40
	0:04:00	0:34:00	8:49:06 AM	49.00		42.0	15848.93	41.8	14999.18	42.8	42.8					42.0	15848.93	42.0	15848.93
	0:04:10	0:34:10	8:49:16 AM	49.00		43.4	21877.62			44.2						43.4	21877.62	43.4	21877.62
	0:04:20	0:34:20	8:49:26 AM	49.00		44.8	30199.52			47.9						44.8	30199.52	44.8	30199.52
	0:04:30	0:34:30	8:49:36 AM	49.00		45.4	34673.69			46.7						45.4	34673.69	45.4	34673.69
	0:04:40	0:34:40	8:49:46 AM	49.00		46.6	45708.82			48.6						46.6	45708.82	46.6	45708.82
	0:04:50	0:34:50	8:49:56 AM	49.00		48.2	66069.34			51.4						48.2	66069.34	48.2	66069.34
	0:05:00	0:35:00	8:50:06 AM	50.00		43.2	20892.96	45.6	36570.32	44.0	51.4					43.2	20892.96	43.2	20892.96
	0:05:10	0:35:10	8:50:16 AM	50.00		42.6	18197.01			43.2						42.6	18197.01	42.6	18197.01
	0:05:20	0:35:20	8:50:26 AM	50.00		42.5	17782.79			42.9						42.5	17782.79	42.5	17782.79
	0:05:30	0:35:30	8:50:36 AM	50.00		44.2	26302.68			45.7						44.2	26302.68	44.2	26302.68
	0:05:40	0:35:40	8:50:46 AM	50.00		47.5	56234.13			51.7						47.5	56234.13	47.5	56234.13
	0:05:50	0:35:50	8:50:56 AM	50.00		46.0	39810.72			50.1						46.0	39810.72	46.0	39810.72
	0:06:00	0:36:00	8:51:06 AM	51.00		44.6	28840.32	44.9	31194.61	48.8	51.7					44.6	28840.32	44.6	28840.32
	0:06:10	0:36:10	8:51:16 AM	51.00		41.8	15135.61			42.4						41.8	15135.61	41.8	15135.61
	0:06:20	0:36:20	8:51:26 AM	51.00		41.4	13803.84			41.6						41.4	13803.84	41.4	13803.84
	0:06:30	0:36:30	8:51:36 AM	51.00		41.2	13182.57			41.6						41.2	13182.57	41.2	13182.57
	0:06:40	0:36:40	8:51:46 AM	51.00		41.0	12589.25			41.7						41.0	12589.25	41.0	12589.25
	0:06:50	0:36:50	8:51:56 AM	51.00		42.2	16595.87			43.0						42.2	16595.87	42.2	16595.87
	0:07:00	0:37:00	8:52:06 AM	52.00		43.2	20892.96	41.9	15366.68	44.0	44.0					43.2	20892.96	43.2	20892.96
	0:07:10	0:37:10	8:52:16 AM	52.00		42.2	16595.87			42.8						42.2	16595.87	42.2	16595.87
	0:07:20	0:37:20	8:52:26 AM	52.00		42.0	15848.93			42.5						42.0	15848.93	42.0	15848.93
	0:07:30	0:37:30	8:52:36 AM	52.00		42.6	18197.01			43.1						42.6	18197.01	42.6	18197.01
	0:07:40	0:37:40	8:52:46 AM	52.00		42.4	17378.01			42.8						42.4	17378.01	42.4	17378.01
	0:07:50	0:37:50	8:52:56 AM	52.00		42.6	18197.01			43.3						42.6	18197.01	42.6	18197.01
	0:08:00	0:38:00	8:53:06 AM	53.00		43.9	24547.09	42.7	18460.65	45.6	45.6					43.9	24547.09	43.9	24547.09
	0:08:10	0:38:10	8:53:16 AM	53.00		45.7	37153.52			48.1						45.7	37153.52	45.7	37153.52
	0:08:20	0:38:20	8:53:26 AM	53.00		48.7	74131.02			50.2						48.7	74131.02	48.7	74131.02
	0:08:30	0:38:30	8:53:36 AM	53.00		47.8	60255.96			48.9						47.8	60255.96	47.8	60255.96
	0:08:40	0:38:40	8:53:46 AM	53.00		44.6	28840.32			46.7						44.6	28840.32	44.6	28840.32
	0:08:50	0:38:50	8:53:56 AM	53.00		43.4	21877.62			45.2						43.4	21877.62	43.4	21877.62
	0:09:00	0:39:00	8:54:06 AM	54.00		42.8	19054.61	46.0	40218.84	43.8	50.2					42.8	19054.61	42.8	19054.61
	0:09:10	0:39:10	8:54:16 AM	54.00		42.7	18620.87			43.8						42.7	18620.87	42.7	18620.87
	0:09:20	0:39:20	8:54:26 AM	54.00		43.0	19952.62			43.5						43.0	19952.62	43.0	19952.62
	0:09:30	0:39:30	8:54:36 AM	54.00		42.5	17782.79			43.2						42.5	17782.79	42.5	17782.79
	0:09:40	0:39:40	8:54:46 AM	54.00		42.2	16595.87			42.6						42.2	16595.87	42.2	16595.87
	0:09:50	0:39:50	8:54:56 AM	54.00		42.1	16218.10			42.5						42.1	16218.10	42.1	16218.10
	0:10:00	0:40:00	8:55:06 AM	55.00		42.1	16218.10	42.4	17564.73	42.6	43.8					42.1	16218.10	42.1	16218.10
	0:10:10	0:40:10	8:55:16 AM	55.00		42.2	16595.87			42.5						42.2	16595.87	42.2	16595.87
	0:10:20	0:40:20	8:55:26 AM	55.00		42.8	19054.61			43.5						42.8	19054.61	42.8	19054.61
	0:10:30	0:40:30	8:55:36 AM	55.00		42.4	17378.01			43.1						42.4	17378.01	42.4	17378.01
	0:10:40	0:40:40	8:55:46 AM	55.00		43.2	20892.96			45.3						43.2	20892.96	43.2	20892.96
	0:10:50	0:40:50	8:55:56 AM	55.00		41.8	15135.61			42.7						41.8	15135.61	41.8	15135.61
	0:11:00	0:41:00	8:56:06 AM	56.00		43.3	21379.62	42.6	18406.11	46.4	46.4					43.3	21379.62	43.3	21379.62
	0:11:10	0:41:10	8:56:16 AM	56.00		44.4	27542.29			47.1						44.4	27542.29	44.4	27542.29
	0:11:20	0:41:20	8:56:26 AM	56.00		42.3	16982.44			43.0						42.3	16982.44	42.3	16982.44
	0:11:30	0:41:30	8:56:36 AM	56.00		42.3	16982.44			42.7						42.3	16982.44	42.3	16982.44
	0:11:40	0:41:40	8:56:46 AM	56.00		42.0	15848.93			42.5						42.0	15848.93	42.0	15848.93

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:11:50	0:41:50	8:56:56 AM	56.00		41.4	13803.84			42.2						41.4	13803.84	41.4	13803.84
	0:12:00	0:42:00	8:57:06 AM	57.00		41.4	13803.84	42.4	17493.96	41.9	47.1					41.4	13803.84	41.4	13803.84
	0:12:10	0:42:10	8:57:16 AM	57.00		41.6	14454.40			42.1						41.6	14454.40	41.6	14454.40
	0:12:20	0:42:20	8:57:26 AM	57.00		41.9	15488.17			42.6						41.9	15488.17	41.9	15488.17
	0:12:30	0:42:30	8:57:36 AM	57.00		42.6	18197.01			45.0						42.6	18197.01	42.6	18197.01
	0:12:40	0:42:40	8:57:46 AM	57.00		41.8	15135.61			43.3						41.8	15135.61	41.8	15135.61
	0:12:50	0:42:50	8:57:56 AM	57.00		44.4	27542.29			48.1						44.4	27542.29	44.4	27542.29
	0:13:00	0:43:00	8:58:06 AM	58.00		41.0	12589.25	42.4	17234.45	41.4	48.1					41.0	12589.25	41.0	12589.25
	0:13:10	0:43:10	8:58:16 AM	58.00		41.3	13489.63			41.6						41.3	13489.63	41.3	13489.63
	0:13:20	0:43:20	8:58:26 AM	58.00		41.3	13489.63			41.6						41.3	13489.63	41.3	13489.63
	0:13:30	0:43:30	8:58:36 AM	58.00		42.8	19054.61			47.0						42.8	19054.61	42.8	19054.61
	0:13:40	0:43:40	8:58:46 AM	58.00		42.5	17782.79			44.3						42.5	17782.79	42.5	17782.79
	0:13:50	0:43:50	8:58:56 AM	58.00		44.0	25118.86			46.4						44.0	25118.86	44.0	25118.86
	0:14:00	0:44:00	8:59:06 AM	59.00		41.4	13803.84	42.3	17123.23	41.8	47.0					41.4	13803.84	41.4	13803.84
	0:14:10	0:44:10	8:59:16 AM	59.00		41.9	15488.17			42.4						41.9	15488.17	41.9	15488.17
	0:14:20	0:44:20	8:59:26 AM	59.00		41.9	15488.17			42.4						41.9	15488.17	41.9	15488.17
	0:14:30	0:44:30	8:59:36 AM	59.00		42.1	16218.10			42.5						42.1	16218.10	42.1	16218.10
	0:14:40	0:44:40	8:59:46 AM	59.00		42.5	17782.79			43.1						42.5	17782.79	42.5	17782.79
	0:14:50	0:44:50	8:59:56 AM	59.00		44.4	27542.29			45.5						44.4	27542.29	44.4	27542.29
	0:15:00	0:45:00	9:00:06 AM	0.00		46.0	39810.72	43.4	22055.04	46.7	46.7	42.5	43.9	47.5	52.8	46.0	39810.72	46.0	39810.72
Study #22	0:00:10	0:00:10	9:12:31 AM	12.00		45.8	38018.94			51.1						45.8	38018.94	45.8	38018.94
Receptor 12	0:00:20	0:00:20	9:12:41 AM	12.00		41.8	15135.61			42.8						41.8	15135.61	41.8	15135.61
	0:00:30	0:00:30	9:12:51 AM	12.00		43.6	22908.68			48.3						43.6	22908.68	43.6	22908.68
	0:00:40	0:00:40	9:13:01 AM	13.00		43.6	22908.68			44.8						43.6	22908.68	43.6	22908.68
	0:00:50	0:00:50	9:13:11 AM	13.00		44.4	27542.29			46.0						44.4	27542.29	44.4	27542.29
	0:01:00	0:01:00	9:13:21 AM	13.00		44.7	29512.09	44.2	26004.38	45.7	51.1					44.7	29512.09	44.7	29512.09
	0:01:10	0:01:10	9:13:31 AM	13.00		43.0	19952.62			43.9						43.0	19952.62	43.0	19952.62
	0:01:20	0:01:20	9:13:41 AM	13.00		42.8	19054.61			43.3						42.8	19054.61	42.8	19054.61
	0:01:30	0:01:30	9:13:51 AM	13.00		42.0	15848.93			43.2						42.0	15848.93	42.0	15848.93
	0:01:40	0:01:40	9:14:01 AM	14.00		43.3	21379.62			44.9						43.3	21379.62	43.3	21379.62
	0:01:50	0:01:50	9:14:11 AM	14.00		42.4	17378.01			43.1						42.4	17378.01	42.4	17378.01
	0:02:00	0:02:00	9:14:21 AM	14.00		42.6	18197.01	42.7	18635.13	43.9	44.9					42.6	18197.01	42.6	18197.01
	0:02:10	0:02:10	9:14:31 AM	14.00		42.7	18620.87			43.2						42.7	18620.87	42.7	18620.87
	0:02:20	0:02:20	9:14:41 AM	14.00		42.3	16982.44			42.9						42.3	16982.44	42.3	16982.44
	0:02:30	0:02:30	9:14:51 AM	14.00		42.4	17378.01			43.1						42.4	17378.01	42.4	17378.01
	0:02:40	0:02:40	9:15:01 AM	15.00		44.8	30199.52			46.5						44.8	30199.52	44.8	30199.52
	0:02:50	0:02:50	9:15:11 AM	15.00		44.3	26915.35			46.7						44.3	26915.35	44.3	26915.35
	0:03:00	0:03:00	9:15:21 AM	15.00		43.2	20892.96	43.4	21831.52	46.3	46.7					43.2	20892.96	43.2	20892.96
	0:03:10	0:03:10	9:15:31 AM	15.00		43.0	19952.62			44.5						43.0	19952.62	43.0	19952.62
	0:03:20	0:03:20	9:15:41 AM	15.00		43.6	22908.68			46.0						43.6	22908.68	43.6	22908.68
	0:03:30	0:03:30	9:15:51 AM	15.00		42.3	16982.44			45.0						42.3	16982.44	42.3	16982.44
	0:03:40	0:03:40	9:16:01 AM	16.00		42.4	17378.01			45.4						42.4	17378.01	42.4	17378.01
	0:03:50	0:03:50	9:16:11 AM	16.00		41.7	14791.08			43.5						41.7	14791.08	41.7	14791.08
	0:04:00	0:04:00	9:16:21 AM	16.00		42.1	16218.10	42.6	18038.49	44.9	46.0					42.1	16218.10	42.1	16218.10
	0:04:10	0:04:10	9:16:31 AM	16.00		41.6	14454.40			43.9						41.6	14454.40	41.6	14454.40
	0:04:20	0:04:20	9:16:41 AM	16.00		42.0	15848.93			42.9						42.0	15848.93	42.0	15848.93
	0:04:30	0:04:30	9:16:51 AM	16.00		44.8	30199.52			47.9						44.8	30199.52	44.8	30199.52
	0:04:40	0:04:40	9:17:01 AM	17.00		44.9	30902.95			48.2						44.9	30902.95	44.9	30902.95
	0:04:50	0:04:50	9:17:11 AM	17.00		45.4	34673.69			48.7						45.4	34673.69	45.4	34673.69
	0:05:00	0:05:00	9:17:21 AM	17.00		45.7	37153.52	44.3	27205.50	48.2	48.7					45.7	37153.52	45.7	37153.52
	0:05:10	0:05:10	9:17:31 AM	17.00		45.8	38018.94			48.0						45.8	38018.94	45.8	38018.94
	0:05:20	0:05:20	9:17:41 AM	17.00		47.2	52480.75			49.0						47.2	52480.75	47.2	52480.75
	0:05:30	0:05:30	9:17:51 AM	17.00		49.8	95499.26			54.0						49.8	95499.26	49.8	95499.26
	0:05:40	0:05:40	9:18:01 AM	18.00		54.7	295120.92			58.2						54.7	295120.92	54.7	295120.92
	0:05:50	0:05:50	9:18:11 AM	18.00		54.6	288403.15			56.2						54.6	288403.15	54.6	288403.15
	0:06:00	0:06:00	9:18:21 AM	18.00		53.1	204173.79	52.1	162282.80	54.7	58.2					53.1	204173.79	53.1	204173.79
	0:06:10	0:06:10	9:18:31 AM	18.00		51.1	128824.96			52.4						51.1	128824.96	51.1	128824.96
	0:06:20	0:06:20	9:18:41 AM	18.00		48.2	66069.34			49.5						48.2	66069.34	48.2	66069.34
	0:06:30	0:06:30	9:18:51 AM	18.00		48.7	74131.02			52.7						48.7	74131.02	48.7	74131.02
	0:06:40	0:06:40	9:19:01 AM	19.00		46.3	42657.95			48.2						46.3	42657.95	46.3	42657.95
	0:06:50	0:06:50	9:19:11 AM	19.00		45.3	33884.42			47.5						45.3	33884.42	45.3	33884.42
	0:07:00	0:07:00	9:19:21 AM	19.00		45.2	33113.11	48.0	63113.47	46.2	52.7					45.2	33113.11	45.2	33113.11
	0:07:10	0:07:10	9:19:31 AM	19.00		44.3	26915.35			45.4						44.3	26915.35	44.3	26915.35
	0:07:20	0:07:20	9:19:41 AM	19.00		49.3	85113.80			54.1						49.3	85113.80	49.3	85113.80
	0:07:30	0:07:30	9:19:51 AM	19.00		44.9	30902.95			49.4						44.9	30902.95	44.9	30902.95
	0:07:40	0:07:40	9:20:01 AM	20.00		42.5	17782.79			43.1						42.5	17782.79	42.5	17782.79
	0:07:50	0:07:50	9:20:11 AM	20.00		42.4	17378.01			43.4						42.4	17378.01	42.4	17378.01
	0:08:00	0:08:00	9:20:21 AM	20.00		43.7	23442.29	45.3	33589.20	45.0	54.1					43.7	23442.29	43.7	23442.29
	0:08:10	0:08:10	9:20:31 AM	20.00		44.2	26302.68			45.5						44.2	26302.68	44.2	26302.68
	0:08:20	0:08:20	9:20:41 AM	20.00		43.2	20892.96			44.4						43.2	20892.96	43.2	20892.96
	0:08:30	0:08:30	9:20:51 AM	20.00		42.9	19498.45			44.1						42.9	19498.45	42.9	19498.45
	0:08:40	0:08:40	9:21:01 AM	21.00		42.5	17782.79			43.8						42.5	17782.79	42.5	17782.79
	0:08:50	0:08:50	9:21:11 AM	21.00		45.2	33113.11			49.0						45.2	33113.11	45.2	33113.11
	0:09:00	0:09:00	9:21:21 AM	21.00		41.9	15488.17	43.5	22179.69	44.4	49.0					41.9	15488.17	41.9	15488.17
	0:09:10	0:09:10	9:21:31 AM	21.00		41.5	14125.38			42.1						41.5	14125.38	41.5	14125.38
	0:09:20	0:09:20	9:21:41 AM	21.00		42.7	18620.87			44.0						42.7	18620.87	42.7	18620.87
	0:09:30	0:09:30	9:21:51 AM	21.00		43.4	21877.62			45.2						43.4	21877.62	43.4	21877.62
	0:09:40	0:09:40	9:22:01 AM	22.00		42.9	19498.45			43.8						42.9	19498.45	42.9	19498.45
	0:09:50	0:09:50	9:22:11 AM	22.00		42.2	16595.87			44.4						42.2	16595.87	42.2	16595.87
	0:10:00	0:10:00	9:22:21 AM	22.00		45.6	36307.81	43.3	21171.00	49.1	49.1					45.6	36307.81	45.6	36307.81
	0:10:10	0:10:10	9:22:31 AM	22.00		47.6	57543.99			50.0						47.6	57543.99	47.6	57543.99
	0:10:20	0:10:20	9:22:41 AM	22.00		50.9	123026.88			53.1						50.9	123026.88	50.9	123026.88
	0:10:30	0:10:30	9:22:51 AM	22.00		51.8	151356.12			54.7						51.8	151356.12	51.8	151356.12
	0:10:40	0:10:40	9:23:01 AM	23.00		54.7	295120.92			59.9						54.7	295120.92	54.7	295120.92
	0:10:50	0:10:50	9:23:11 AM	23.00		55.7	371535.23			58.9						55.7	371535.23	55.7	371535.23
	0:11:00	0:11:00	9:23:21 AM	23.00		54.3	269153.48	53.2	211289.44	55.7	59.9					54.3	269153.48	54.3	269153.48
	0:11:10	0:11:10	9:23:31 AM	23.00		51.6	144543.98			54.4						51.6	144543.98	51.6	144543.98
	0:11:20	0:11:20	9:23:41 AM	23.00		50.0	100000.00			52.4						50.0	100000.00	50.0	100000.00
	0:11:30	0:11:30	9:23:51 AM	23.00		49.9	97723.72			51.5						49.9	97723.72	49.9	97723.72

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:11:40	0:11:40	9:24:01 AM	24.00		47.5	56234.13			49.2						47.5	56234.13	47.5	56234.13
	0:11:50	0:11:50	9:24:11 AM	24.00		47.5	56234.13			49.0						47.5	56234.13	47.5	56234.13
	0:12:00	0:12:00	9:24:21 AM	24.00		45.1	32359.37	49.1	81182.55	46.6	54.4					45.1	32359.37	45.1	32359.37
	0:12:10	0:12:10	9:24:31 AM	24.00		47.4	54954.09			50.5						47.4	54954.09	47.4	54954.09
	0:12:20	0:12:20	9:24:41 AM	24.00		54.5	281838.29			58.6						54.5	281838.29	54.5	281838.29
	0:12:30	0:12:30	9:24:51 AM	24.00		59.6	912010.84			62.4						59.6	912010.84	59.6	912010.84
	0:12:40	0:12:40	9:25:01 AM	25.00		61.8	1513561.25			63.2						61.8	1513561.25	61.8	1513561.25
	0:12:50	0:12:50	9:25:11 AM	25.00		64.0	2511886.43			66.0						64.0	2511886.43	64.0	2511886.43
	0:13:00	0:13:00	9:25:21 AM	25.00		60.1	1023292.99	60.2	1049590.65	63.7	66.0					60.1	1023292.99	60.1	1023292.99
	0:13:10	0:13:10	9:25:31 AM	25.00		52.2	165958.69			55.5						52.2	165958.69	52.2	165958.69
	0:13:20	0:13:20	9:25:41 AM	25.00		45.9	38904.51			48.6						45.9	38904.51	45.9	38904.51
	0:13:30	0:13:30	9:25:51 AM	25.00		44.9	30902.95			47.3						44.9	30902.95	44.9	30902.95
	0:13:40	0:13:40	9:26:01 AM	26.00		44.2	26302.68			45.3						44.2	26302.68	44.2	26302.68
	0:13:50	0:13:50	9:26:11 AM	26.00		43.3	21379.62			45.3						43.3	21379.62	43.3	21379.62
	0:14:00	0:14:00	9:26:21 AM	26.00		42.3	16982.44	47.0	50071.82	44.0	55.5					42.3	16982.44	42.3	16982.44
	0:14:10	0:14:10	9:26:31 AM	26.00		42.0	15848.93			44.3						42.0	15848.93	42.0	15848.93
	0:14:20	0:14:20	9:26:41 AM	26.00		41.1	12882.50			42.4						41.1	12882.50	41.1	12882.50
	0:14:30	0:14:30	9:26:51 AM	26.00		41.5	14125.38			42.7						41.5	14125.38	41.5	14125.38
	0:14:40	0:14:40	9:27:01 AM	27.00		42.0	15848.93			43.7						42.0	15848.93	42.0	15848.93
	0:14:50	0:14:50	9:27:11 AM	27.00		43.2	20892.96			45.3						43.2	20892.96	43.2	20892.96
	0:15:00	0:15:00	9:27:21 AM	27.00		43.0	19952.62	42.2	16591.89	44.8	45.3	44.4	47.6	54.6	61.8	43.0	19952.62	43.0	19952.62
Study #23	0:00:10	0:15:10	9:28:36 AM	28.00		45.3	33884.42			49.8						45.3	33884.42	45.3	33884.42
Receptor 12	0:00:20	0:15:20	9:28:46 AM	28.00		43.1	20417.38			44.2						43.1	20417.38	43.1	20417.38
	0:00:30	0:15:30	9:28:56 AM	28.00		42.9	19498.45			45.0						42.9	19498.45	42.9	19498.45
	0:00:40	0:15:40	9:29:06 AM	29.00		43.1	20417.38			44.6						43.1	20417.38	43.1	20417.38
	0:00:50	0:15:50	9:29:16 AM	29.00		43.1	20417.38			45.0						43.1	20417.38	43.1	20417.38
	0:01:00	0:16:00	9:29:26 AM	29.00		43.8	23988.33	43.6	23103.89	46.4	49.8					43.8	23988.33	43.8	23988.33
	0:01:10	0:16:10	9:29:36 AM	29.00		41.9	15488.17			42.8						41.9	15488.17	41.9	15488.17
	0:01:20	0:16:20	9:29:46 AM	29.00		44.1	25703.96			47.6						44.1	25703.96	44.1	25703.96
	0:01:30	0:16:30	9:29:56 AM	29.00		41.9	15488.17			43.8						41.9	15488.17	41.9	15488.17
	0:01:40	0:16:40	9:30:06 AM	30.00		44.8	30199.52			48.0						44.8	30199.52	44.8	30199.52
	0:01:50	0:16:50	9:30:16 AM	30.00		48.5	70794.58			52.8						48.5	70794.58	48.5	70794.58
	0:02:00	0:17:00	9:30:26 AM	30.00		48.2	66069.34	45.7	37290.62	50.4	52.8					48.2	66069.34	48.2	66069.34
	0:02:10	0:17:10	9:30:36 AM	30.00		45.7	37153.52			48.9						45.7	37153.52	45.7	37153.52
	0:02:20	0:17:20	9:30:46 AM	30.00		43.0	19952.62			44.1						43.0	19952.62	43.0	19952.62
	0:02:30	0:17:30	9:30:56 AM	30.00		42.4	17378.01			43.5						42.4	17378.01	42.4	17378.01
	0:02:40	0:17:40	9:31:06 AM	31.00		41.0	12589.25			42.3						41.0	12589.25	41.0	12589.25
	0:02:50	0:17:50	9:31:16 AM	31.00		40.3	10715.19			41.6						40.3	10715.19	40.3	10715.19
	0:03:00	0:18:00	9:31:26 AM	31.00		41.2	13182.57	42.7	18495.19	42.3	48.9					41.2	13182.57	41.2	13182.57
	0:03:10	0:18:10	9:31:36 AM	31.00		40.1	10232.93			40.5						40.1	10232.93	40.1	10232.93
	0:03:20	0:18:20	9:31:46 AM	31.00		40.2	10471.29			40.5						40.2	10471.29	40.2	10471.29
	0:03:30	0:18:30	9:31:56 AM	31.00		40.1	10232.93			40.2						40.1	10232.93	40.1	10232.93
	0:03:40	0:18:40	9:32:06 AM	32.00		40.2	10471.29			40.8						40.2	10471.29	40.2	10471.29
	0:03:50	0:18:50	9:32:16 AM	32.00		40.7	11748.98			41.4						40.7	11748.98	40.7	11748.98
	0:04:00	0:19:00	9:32:26 AM	32.00		40.6	11481.54	40.3	10773.16	41.4	41.4					40.6	11481.54	40.6	11481.54
	0:04:10	0:19:10	9:32:36 AM	32.00		41.2	13182.57			42.2						41.2	13182.57	41.2	13182.57
	0:04:20	0:19:20	9:32:46 AM	32.00		41.5	14125.38			42.4						41.5	14125.38	41.5	14125.38
	0:04:30	0:19:30	9:32:56 AM	32.00		41.0	12589.25			41.6						41.0	12589.25	41.0	12589.25
	0:04:40	0:19:40	9:33:06 AM	33.00		41.5	14125.38			42.4						41.5	14125.38	41.5	14125.38
	0:04:50	0:19:50	9:33:16 AM	33.00		40.9	12302.69			41.6						40.9	12302.69	40.9	12302.69
	0:05:00	0:20:00	9:33:26 AM	33.00		40.5	11220.18	41.1	12924.24	41.4	42.4					40.5	11220.18	40.5	11220.18
	0:05:10	0:20:10	9:33:36 AM	33.00		40.3	10715.19			41.1						40.3	10715.19	40.3	10715.19
	0:05:20	0:20:20	9:33:46 AM	33.00		41.3	13489.63			42.9						41.3	13489.63	41.3	13489.63
	0:05:30	0:20:30	9:33:56 AM	33.00		40.6	11481.54			41.5						40.6	11481.54	40.6	11481.54
	0:05:40	0:20:40	9:34:06 AM	34.00		40.4	10964.78			41.9						40.4	10964.78	40.4	10964.78
	0:05:50	0:20:50	9:34:16 AM	34.00		40.3	10715.19			41.0						40.3	10715.19	40.3	10715.19
	0:06:00	0:21:00	9:34:26 AM	34.00		40.2	10471.29	40.5	11306.27	40.7	42.9					40.2	10471.29	40.2	10471.29
	0:06:10	0:21:10	9:34:36 AM	34.00		40.7	11748.98			41.4						40.7	11748.98	40.7	11748.98
	0:06:20	0:21:20	9:34:46 AM	34.00		41.6	14454.40			42.3						41.6	14454.40	41.6	14454.40
	0:06:30	0:21:30	9:34:56 AM	34.00		41.3	13489.63			41.9						41.3	13489.63	41.3	13489.63
	0:06:40	0:21:40	9:35:06 AM	35.00		41.1	12882.50			41.8						41.1	12882.50	41.1	12882.50
	0:06:50	0:21:50	9:35:16 AM	35.00		40.1	10232.93			40.8						40.1	10232.93	40.1	10232.93
	0:07:00	0:22:00	9:35:26 AM	35.00		40.5	11220.18	40.9	12338.10	41.6	42.3					40.5	11220.18	40.5	11220.18
	0:07:10	0:22:10	9:35:36 AM	35.00		40.5	11220.18			41.3						40.5	11220.18	40.5	11220.18
	0:07:20	0:22:20	9:35:46 AM	35.00		40.1	10232.93			40.3						40.1	10232.93	40.1	10232.93
	0:07:30	0:22:30	9:35:56 AM	35.00		40.1	10232.93			40.4						40.1	10232.93	40.1	10232.93
	0:07:40	0:22:40	9:36:06 AM	36.00		40.1	10232.93			40.1						40.1	10232.93	40.1	10232.93
	0:07:50	0:22:50	9:36:16 AM	36.00		40.2	10471.29			40.7						40.2	10471.29	40.2	10471.29
	0:08:00	0:23:00	9:36:26 AM	36.00		40.1	10232.93	40.2	10437.20	40.3	41.3					40.1	10232.93	40.1	10232.93
	0:08:10	0:23:10	9:36:36 AM	36.00		40.3	10715.19			41.1						40.3	10715.19	40.3	10715.19
	0:08:20	0:23:20	9:36:46 AM	36.00		40.2	10471.29			41.2						40.2	10471.29	40.2	10471.29
	0:08:30	0:23:30	9:36:56 AM	36.00		40.3	10715.19			41.4						40.3	10715.19	40.3	10715.19
	0:08:40	0:23:40	9:37:06 AM	37.00		40.5	11220.18			41.8						40.5	11220.18	40.5	11220.18
	0:08:50	0:23:50	9:37:16 AM	37.00		40.2	10471.29			40.8						40.2	10471.29	40.2	10471.29
	0:09:00	0:24:00	9:37:26 AM	37.00		40.2	10471.29	40.3	10677.40	41.4	41.8					40.2	10471.29	40.2	10471.29
	0:09:10	0:24:10	9:37:36 AM	37.00		40.1	10232.93			41.4						40.1	10232.93	40.1	10232.93
	0:09:20	0:24:20	9:37:46 AM	37.00		40.2	10471.29			41.0						40.2	10471.29	40.2	10471.29
	0:09:30	0:24:30	9:37:56 AM	37.00		39.8	9549.93			40.1						39.8	9549.93	39.8	9549.93
	0:09:40	0:24:40	9:38:06 AM	38.00		40.1	10232.93			40.4						40.1	10232.93	40.1	10232.93
	0:09:50	0:24:50	9:38:16 AM	38.00		40.1	10232.93			40.5						40.1	10232.93	40.1	10232.93
	0:10:00	0:25:00	9:38:26 AM	38.00		41.2	13182.57	40.3	10650.43	42.7	42.7					41.2	13182.57	41.2	13182.57
	0:10:10	0:25:10	9:38:36 AM	38.00		40.1	10232.93			41.1						40.1	10232.93	40.1	10232.93
	0:10:20	0:25:20	9:38:46 AM	38.00		40.7	11748.98			41.5						40.7	11748.98	40.7	11748.98
	0:10:30	0:25:30	9:38:56 AM	38.00		40.1	10232.93			40.4						40.1	10232.93	40.1	10232.93
	0:10:40	0:25:40	9:39:06 AM	39.00		40.1	10232.93			40.4						40.1	10232.93	40.1	10232.93
	0:10:50	0:25:50	9:39:16 AM	39.00		40.1	10232.93			40.2						40.1	10232.93	40.1	10232.93
	0:11:00	0:26:00	9:39:26 AM	39.00		41.0	12589.25	40.4	10878.32	42.4	42.4					41.0	12589.25	41.0	12589.25
	0:11:10	0:26:10	9:39:36 AM	39.00		40.2	10471.29			41.1						40.2	10471.29	40.2	10471.29
	0:11:20	0:26:20	9:39:46 AM	39.00		40.2	10471.29			40.7						40.2	10471.29	40.2	10471.29

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:11:30	0:26:30	9:39:56 AM	39.00		40.5	11220.18			41.4						40.5	11220.18	40.5	11220.18
	0:11:40	0:26:40	9:40:06 AM	40.00		41.3	13489.63			41.6						41.3	13489.63	41.3	13489.63
	0:11:50	0:26:50	9:40:16 AM	40.00		41.5	14125.38			42.1						41.5	14125.38	41.5	14125.38
	0:12:00	0:27:00	9:40:26 AM	40.00		41.0	12589.25	40.8	12061.17	42.0	42.1					41.0	12589.25	41.0	12589.25
	0:12:10	0:27:10	9:40:36 AM	40.00		43.0	19952.62			44.0						43.0	19952.62	43.0	19952.62
	0:12:20	0:27:20	9:40:46 AM	40.00		43.1	20417.38			43.8						43.1	20417.38	43.1	20417.38
	0:12:30	0:27:30	9:40:56 AM	40.00		42.7	18620.87			44.0						42.7	18620.87	42.7	18620.87
	0:12:40	0:27:40	9:41:06 AM	41.00		42.5	17782.79			43.8						42.5	17782.79	42.5	17782.79
	0:12:50	0:27:50	9:41:16 AM	41.00		42.8	19054.61			43.8						42.8	19054.61	42.8	19054.61
	0:13:00	0:28:00	9:41:26 AM	41.00		42.8	19054.61	42.8	19147.15	44.4	44.4					42.8	19054.61	42.8	19054.61
	0:13:10	0:28:10	9:41:36 AM	41.00		42.5	17782.79			44.0						42.5	17782.79	42.5	17782.79
	0:13:20	0:28:20	9:41:46 AM	41.00		47.8	60255.96			51.9						47.8	60255.96	47.8	60255.96
	0:13:30	0:28:30	9:41:56 AM	41.00		47.6	57543.99			49.8						47.6	57543.99	47.6	57543.99
	0:13:40	0:28:40	9:42:06 AM	42.00		50.1	102329.30			52.9						50.1	102329.30	50.1	102329.30
	0:13:50	0:28:50	9:42:16 AM	42.00		49.2	83176.38			52.0						49.2	83176.38	49.2	83176.38
	0:14:00	0:29:00	9:42:26 AM	42.00		45.9	38904.51	47.8	59998.82	46.5	52.9					45.9	38904.51	45.9	38904.51
	0:14:10	0:29:10	9:42:36 AM	42.00		45.9	38904.51			46.7						45.9	38904.51	45.9	38904.51
	0:14:20	0:29:20	9:42:46 AM	42.00		51.1	128824.96			55.9						51.1	128824.96	51.1	128824.96
	0:14:30	0:29:30	9:42:56 AM	42.00		44.5	28183.83			48.1						44.5	28183.83	44.5	28183.83
	0:14:40	0:29:40	9:43:06 AM	43.00		42.7	18620.87			45.1						42.7	18620.87	42.7	18620.87
	0:14:50	0:29:50	9:43:16 AM	43.00		41.7	14791.08			42.9						41.7	14791.08	41.7	14791.08
	0:15:00	0:30:00	9:43:26 AM	43.00		40.7	11748.98	46.0	40179.04	41.7	55.9	41.0	42.8	45.9	50.1	40.7	11748.98	40.7	11748.98
Study #24	0:00:10	0:30:10	10:10:54 AM	10.00		43.2	20892.96			44.1						43.2	20892.96	43.2	20892.96
N/A	0:00:20	0:30:20	10:11:04 AM	11.00		46.6	45708.82			48.4						46.6	45708.82	46.6	45708.82
	0:00:30	0:30:30	10:11:14 AM	11.00		48.0	63095.73			50.3						48.0	63095.73	48.0	63095.73
	0:00:40	0:30:40	10:11:24 AM	11.00		49.7	93325.43			52.2						49.7	93325.43	49.7	93325.43
	0:00:50	0:30:50	10:11:34 AM	11.00		49.7	93325.43			51.2						49.7	93325.43	49.7	93325.43
	0:01:00	0:31:00	10:11:44 AM	11.00		51.5	141253.75	48.8	76267.02	53.5	53.5					51.5	141253.75	51.5	141253.75
	0:01:10	0:31:10	10:11:54 AM	11.00		54.6	288403.15			55.3						54.6	288403.15	54.6	288403.15
	0:01:20	0:31:20	10:12:04 AM	12.00		54.9	309029.54			55.9						54.9	309029.54	54.9	309029.54
	0:01:30	0:31:30	10:12:14 AM	12.00		56.5	446683.59			57.5						56.5	446683.59	56.5	446683.59
	0:01:40	0:31:40	10:12:24 AM	12.00		55.3	338844.16			56.7						55.3	338844.16	55.3	338844.16
	0:01:50	0:31:50	10:12:34 AM	12.00		54.5	281838.29			55.4						54.5	281838.29	54.5	281838.29
	0:02:00	0:32:00	10:12:44 AM	12.00		53.4	218776.16	55.0	313929.15	53.9	57.5					53.4	218776.16	53.4	218776.16
	0:02:10	0:32:10	10:12:54 AM	12.00		53.7	234422.88			55.3						53.7	234422.88	53.7	234422.88
	0:02:20	0:32:20	10:13:04 AM	13.00		56.1	407380.28			58.5						56.1	407380.28	56.1	407380.28
	0:02:30	0:32:30	10:13:14 AM	13.00		63.6	2290867.65			66.4						63.6	2290867.65	63.6	2290867.65
	0:02:40	0:32:40	10:13:24 AM	13.00		66.7	4677351.41			68.3						66.7	4677351.41	66.7	4677351.41
	0:02:50	0:32:50	10:13:34 AM	13.00		60.7	1174897.55			65.9						60.7	1174897.55	60.7	1174897.55
	0:03:00	0:33:00	10:13:44 AM	13.00		54.7	295120.92	61.8	1513340.12	57.2	68.3					54.7	295120.92	54.7	295120.92
	0:03:10	0:33:10	10:13:54 AM	13.00		51.0	125892.54			53.7						51.0	125892.54	51.0	125892.54
	0:03:20	0:33:20	10:14:04 AM	14.00		48.6	72443.60			50.6						48.6	72443.60	48.6	72443.60
	0:03:30	0:33:30	10:14:14 AM	14.00		46.5	44668.36			47.3						46.5	44668.36	46.5	44668.36
	0:03:40	0:33:40	10:14:24 AM	14.00		45.3	33884.42			46.3						45.3	33884.42	45.3	33884.42
	0:03:50	0:33:50	10:14:34 AM	14.00		44.2	26302.68			45.1						44.2	26302.68	44.2	26302.68
	0:04:00	0:34:00	10:14:44 AM	14.00		43.9	24547.09	47.4	54623.11	45.7	53.7					43.9	24547.09	43.9	24547.09
	0:04:10	0:34:10	10:14:54 AM	14.00		43.9	24547.09			45.3						43.9	24547.09	43.9	24547.09
	0:04:20	0:34:20	10:15:04 AM	15.00		43.6	22908.68			44.2						43.6	22908.68	43.6	22908.68
	0:04:30	0:34:30	10:15:14 AM	15.00		42.1	16218.10			43.0						42.1	16218.10	42.1	16218.10
	0:04:40	0:34:40	10:15:24 AM	15.00		41.1	12882.50			42.5						41.1	12882.50	41.1	12882.50
	0:04:50	0:34:50	10:15:34 AM	15.00		42.5	17782.79			44.0						42.5	17782.79	42.5	17782.79
	0:05:00	0:35:00	10:15:44 AM	15.00		41.9	15488.17	42.6	18304.55	44.0	45.3					41.9	15488.17	41.9	15488.17
	0:05:10	0:35:10	10:15:54 AM	15.00		42.3	16982.44			43.4						42.3	16982.44	42.3	16982.44
	0:05:20	0:35:20	10:16:04 AM	16.00		40.7	11748.98			41.5						40.7	11748.98	40.7	11748.98
	0:05:30	0:35:30	10:16:14 AM	16.00		42.7	18620.87			43.8						42.7	18620.87	42.7	18620.87
	0:05:40	0:35:40	10:16:24 AM	16.00		49.2	83176.38			52.6						49.2	83176.38	49.2	83176.38
	0:05:50	0:35:50	10:16:34 AM	16.00		51.7	147910.84			55.0						51.7	147910.84	51.7	147910.84
	0:06:00	0:36:00	10:16:44 AM	16.00		54.7	295120.92	49.8	95593.40	57.6	57.6					54.7	295120.92	54.7	295120.92
	0:06:10	0:36:10	10:16:54 AM	16.00		56.3	426579.52			57.9						56.3	426579.52	56.3	426579.52
	0:06:20	0:36:20	10:17:04 AM	17.00		54.6	288403.15			57.4						54.6	288403.15	54.6	288403.15
	0:06:30	0:36:30	10:17:14 AM	17.00		53.5	223872.11			56.0						53.5	223872.11	53.5	223872.11
	0:06:40	0:36:40	10:17:24 AM	17.00		50.0	100000.00			51.2						50.0	100000.00	50.0	100000.00
	0:06:50	0:36:50	10:17:34 AM	17.00		52.0	158489.32			53.8						52.0	158489.32	52.0	158489.32
	0:07:00	0:37:00	10:17:44 AM	17.00		49.4	87096.36	53.3	214073.41	51.4	57.9					49.4	87096.36	49.4	87096.36
	0:07:10	0:37:10	10:17:54 AM	17.00		47.9	61659.50			51.1						47.9	61659.50	47.9	61659.50
	0:07:20	0:37:20	10:18:04 AM	18.00		51.7	147910.84			52.4						51.7	147910.84	51.7	147910.84
	0:07:30	0:37:30	10:18:14 AM	18.00		49.0	79432.82			51.5						49.0	79432.82	49.0	79432.82
	0:07:40	0:37:40	10:18:24 AM	18.00		47.8	60255.96			49.0						47.8	60255.96	47.8	60255.96
	0:07:50	0:37:50	10:18:34 AM	18.00		45.4	34673.69			46.9						45.4	34673.69	45.4	34673.69
	0:08:00	0:38:00	10:18:44 AM	18.00		43.5	22387.21	48.3	67720.00	45.1	52.4					43.5	22387.21	43.5	22387.21
	0:08:10	0:38:10	10:18:54 AM	18.00		42.6	18197.01			43.8						42.6	18197.01	42.6	18197.01
	0:08:20	0:38:20	10:19:04 AM	19.00		41.0	12589.25			41.5						41.0	12589.25	41.0	12589.25
	0:08:30	0:38:30	10:19:14 AM	19.00		40.7	11748.98			41.4						40.7	11748.98	40.7	11748.98
	0:08:40	0:38:40	10:19:24 AM	19.00		41.2	13182.57			42.0						41.2	13182.57	41.2	13182.57
	0:08:50	0:38:50	10:19:34 AM	19.00		45.5	35481.34			53.1						45.5	35481.34	45.5	35481.34
	0:09:00	0:39:00	10:19:44 AM	19.00		40.1	10232.93	42.3	16905.35	40.7	53.1					40.1	10232.93	40.1	10232.93
	0:09:10	0:39:10	10:19:54 AM	19.00		40.1	10232.93			42.6						40.1	10232.93	40.1	10232.93
	0:09:20	0:39:20	10:20:04 AM	20.00		46.1	40738.03			54.9						46.1	40738.03	46.1	40738.03
	0:09:30	0:39:30	10:20:14 AM	20.00		45.0	31622.78			53.3						45.0	31622.78	45.0	31622.78
	0:09:40	0:39:40	10:20:24 AM	20.00		40.1	10232.93			41.1						40.1	10232.93	40.1	10232.93
	0:09:50	0:39:50	10:20:34 AM	20.00		39.4	8709.64			40.3						39.4	8709.64	39.4	8709.64
	0:10:00	0:40:00	10:20:44 AM	20.00		40.0	10000.00	42.7	18589.38	40.5	54.9					40.0	10000.00	40.0	10000.00
	0:10:10	0:40:10	10:20:54 AM	20.00		40.9	12302.69			43.5						40.9	12302.69	40.9	12302.69
	0:10:20	0:40:20	10:21:04 AM	21.00		46.7	46773.51			49.8						46.7	46773.51	46.7	46773.51
	0:10:30	0:40:30	10:21:14 AM	21.00		51.8	151356.12			55.5						51.8	151356.12	51.8	151356.12
	0:10:40	0:40:40	10:21:24 AM	21.00		57.1	512861.38			61.8						57.1	512861.38	57.1	512861.38
	0:10:50	0:40:50	10:21:34 AM	21.00		63.8	2398832.92			67.4						63.8	2398832.92	63.8	2398832.92
	0:11:00	0:41:00	10:21:44 AM	21.00		62.1	1621810.10	59.0	790656.12	66.6	67.4					62.1	1621810.10	62.1	1621810.10
	0:11:10	0:41:10	10:21:54 AM	21.00		55.8	380189.40			60.0						55.8	380189.40	55.8	380189.40

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:11:20	0:41:20	10:22:04 AM	22.00		45.0	31622.78			48.3						45.0	31622.78	45.0	31622.78
	0:11:30	0:41:30	10:22:14 AM	22.00		40.9	12302.69			42.4						40.9	12302.69	40.9	12302.69
	0:11:40	0:41:40	10:22:24 AM	22.00		38.9	7762.47			41.3						38.9	7762.47	38.9	7762.47
	0:11:50	0:41:50	10:22:34 AM	22.00		37.1	5128.61			38.4						37.1	5128.61	37.1	5128.61
	0:12:00	0:42:00	10:22:44 AM	22.00		35.4	3467.37	48.7	73412.22	35.7	60.0					35.4	3467.37	35.4	3467.37
	0:12:10	0:42:10	10:22:54 AM	22.00		36.2	4168.69			37.5						36.2	4168.69	36.2	4168.69
	0:12:20	0:42:20	10:23:04 AM	23.00		35.7	3715.35			37.3						35.7	3715.35	35.7	3715.35
	0:12:30	0:42:30	10:23:14 AM	23.00		35.4	3467.37			35.8						35.4	3467.37	35.4	3467.37
	0:12:40	0:42:40	10:23:24 AM	23.00		37.7	5888.44			41.2						37.7	5888.44	37.7	5888.44
	0:12:50	0:42:50	10:23:34 AM	23.00		39.6	9120.11			41.1						39.6	9120.11	39.6	9120.11
	0:13:00	0:43:00	10:23:44 AM	23.00		38.3	6760.83	37.4	5520.13	40.2	41.2					38.3	6760.83	38.3	6760.83
	0:13:10	0:43:10	10:23:54 AM	23.00		37.3	5370.32			38.8						37.3	5370.32	37.3	5370.32
	0:13:20	0:43:20	10:24:04 AM	24.00		43.9	24547.09			52.4						43.9	24547.09	43.9	24547.09
	0:13:30	0:43:30	10:24:14 AM	24.00		39.7	9332.54			42.6						39.7	9332.54	39.7	9332.54
	0:13:40	0:43:40	10:24:24 AM	24.00		42.7	18620.87			44.9						42.7	18620.87	42.7	18620.87
	0:13:50	0:43:50	10:24:34 AM	24.00		41.7	14791.08			45.0						41.7	14791.08	41.7	14791.08
	0:14:00	0:44:00	10:24:44 AM	24.00		47.4	54954.09	43.3	21269.33	51.9	52.4					47.4	54954.09	47.4	54954.09
	0:14:10	0:44:10	10:24:54 AM	24.00		48.0	63095.73			50.0						48.0	63095.73	48.0	63095.73
	0:14:20	0:44:20	10:25:04 AM	25.00		52.2	165958.69			54.7						52.2	165958.69	52.2	165958.69
	0:14:30	0:44:30	10:25:14 AM	25.00		52.1	162181.01			54.7						52.1	162181.01	52.1	162181.01
	0:14:40	0:44:40	10:25:24 AM	25.00		49.8	95499.26			52.8						49.8	95499.26	49.8	95499.26
	0:14:50	0:44:50	10:25:34 AM	25.00		45.0	31622.78			48.3						45.0	31622.78	45.0	31622.78
	0:15:00	0:45:00	10:25:44 AM	25.00		41.6	14454.40	49.5	88801.98	43.2	54.7	46.1	52.0	56.3	63.8	41.6	14454.40	41.6	14454.40
Study #25	0:00:10	0:45:10	10:30:06 AM	30.00		48.7	74131.02			54.6						48.7	74131.02	48.7	74131.02
N/A	0:00:20	0:45:20	10:30:16 AM	30.00		46.8	47863.01			47.7						46.8	47863.01	46.8	47863.01
	0:00:30	0:45:30	10:30:26 AM	30.00		48.1	64565.42			50.3						48.1	64565.42	48.1	64565.42
	0:00:40	0:45:40	10:30:36 AM	30.00		47.8	60255.96			48.6						47.8	60255.96	47.8	60255.96
	0:00:50	0:45:50	10:30:46 AM	30.00		48.7	74131.02			49.4						48.7	74131.02	48.7	74131.02
	0:01:00	0:46:00	10:30:56 AM	30.00		48.7	74131.02	48.2	65846.24	49.5	54.6					48.7	74131.02	48.7	74131.02
	0:01:10	0:46:10	10:31:06 AM	31.00		48.2	66069.34			48.6						48.2	66069.34	48.2	66069.34
	0:01:20	0:46:20	10:31:16 AM	31.00		48.6	72443.60			49.3						48.6	72443.60	48.6	72443.60
	0:01:30	0:46:30	10:31:26 AM	31.00		49.4	87096.36			50.0						49.4	87096.36	49.4	87096.36
	0:01:40	0:46:40	10:31:36 AM	31.00		50.7	117489.76			52.8						50.7	117489.76	50.7	117489.76
	0:01:50	0:46:50	10:31:46 AM	31.00		51.4	138038.43			52.8						51.4	138038.43	51.4	138038.43
	0:02:00	0:47:00	10:31:56 AM	31.00		51.0	125892.54	50.1	101171.67	51.5	52.8					51.0	125892.54	51.0	125892.54
	0:02:10	0:47:10	10:32:06 AM	32.00		50.6	114815.36			50.9						50.6	114815.36	50.6	114815.36
	0:02:20	0:47:20	10:32:16 AM	32.00		50.2	104712.85			50.7						50.2	104712.85	50.2	104712.85
	0:02:30	0:47:30	10:32:26 AM	32.00		50.0	100000.00			50.5						50.0	100000.00	50.0	100000.00
	0:02:40	0:47:40	10:32:36 AM	32.00		49.8	95499.26			50.2						49.8	95499.26	49.8	95499.26
	0:02:50	0:47:50	10:32:46 AM	32.00		49.1	81283.05			49.7						49.1	81283.05	49.1	81283.05
	0:03:00	0:48:00	10:32:56 AM	32.00		47.1	51286.14	49.6	91266.11	47.9	50.9					47.1	51286.14	47.1	51286.14
	0:03:10	0:48:10	10:33:06 AM	33.00		46.5	44668.36			47.2						46.5	44668.36	46.5	44668.36
	0:03:20	0:48:20	10:33:16 AM	33.00		46.3	42657.95			47.5						46.3	42657.95	46.3	42657.95
	0:03:30	0:48:30	10:33:26 AM	33.00		46.9	48977.88			47.7						46.9	48977.88	46.9	48977.88
	0:03:40	0:48:40	10:33:36 AM	33.00		45.3	33884.42			46.3						45.3	33884.42	45.3	33884.42
	0:03:50	0:48:50	10:33:46 AM	33.00		44.3	26915.35			45.4						44.3	26915.35	44.3	26915.35
	0:04:00	0:49:00	10:33:56 AM	33.00		43.8	23988.33	45.7	36848.71	44.4	47.7					43.8	23988.33	43.8	23988.33
	0:04:10	0:49:10	10:34:06 AM	34.00		43.0	19952.62			44.0						43.0	19952.62	43.0	19952.62
	0:04:20	0:49:20	10:34:16 AM	34.00		42.8	19054.61			43.8						42.8	19054.61	42.8	19054.61
	0:04:30	0:49:30	10:34:26 AM	34.00		41.3	13489.63			42.3						41.3	13489.63	41.3	13489.63
	0:04:40	0:49:40	10:34:36 AM	34.00		40.5	11220.18			41.4						40.5	11220.18	40.5	11220.18
	0:04:50	0:49:50	10:34:46 AM	34.00		40.2	10471.29			42.0						40.2	10471.29	40.2	10471.29
	0:05:00	0:50:00	10:34:56 AM	34.00		40.2	10471.29	41.5	14109.94	40.7	44.0					40.2	10471.29	40.2	10471.29
	0:05:10	0:50:10	10:35:06 AM	35.00		41.3	13489.63			43.7						41.3	13489.63	41.3	13489.63
	0:05:20	0:50:20	10:35:16 AM	35.00		43.0	19952.62			45.0						43.0	19952.62	43.0	19952.62
	0:05:30	0:50:30	10:35:26 AM	35.00		41.4	13803.84			43.7						41.4	13803.84	41.4	13803.84
	0:05:40	0:50:40	10:35:36 AM	35.00		42.2	16595.87			45.0						42.2	16595.87	42.2	16595.87
	0:05:50	0:50:50	10:35:46 AM	35.00		40.5	11220.18			43.5						40.5	11220.18	40.5	11220.18
	0:06:00	0:51:00	10:35:56 AM	35.00		39.6	9120.11	41.5	14030.38	40.2	45.0					39.6	9120.11	39.6	9120.11
	0:06:10	0:51:10	10:36:06 AM	36.00		38.3	6760.83			38.5						38.3	6760.83	38.3	6760.83
	0:06:20	0:51:20	10:36:16 AM	36.00		38.3	6760.83			38.4						38.3	6760.83	38.3	6760.83
	0:06:30	0:51:30	10:36:26 AM	36.00		38.1	6456.54			38.4						38.1	6456.54	38.1	6456.54
	0:06:40	0:51:40	10:36:36 AM	36.00		37.7	5888.44			38.4						37.7	5888.44	37.7	5888.44
	0:06:50	0:51:50	10:36:46 AM	36.00		38.4	6918.31			39.0						38.4	6918.31	38.4	6918.31
	0:07:00	0:52:00	10:36:56 AM	36.00		38.3	6760.83	38.2	6590.96	38.4	39.0					38.3	6760.83	38.3	6760.83
	0:07:10	0:52:10	10:37:06 AM	37.00		38.3	6760.83			38.4						38.3	6760.83	38.3	6760.83
	0:07:20	0:52:20	10:37:16 AM	37.00		38.3	6760.83			38.4						38.3	6760.83	38.3	6760.83
	0:07:30	0:52:30	10:37:26 AM	37.00		38.3	6760.83			38.5						38.3	6760.83	38.3	6760.83
	0:07:40	0:52:40	10:37:36 AM	37.00		38.3	6760.83			38.4						38.3	6760.83	38.3	6760.83
	0:07:50	0:52:50	10:37:46 AM	37.00		38.3	6760.83			38.4						38.3	6760.83	38.3	6760.83
	0:08:00	0:53:00	10:37:56 AM	37.00		38.3	6760.83	38.3	6760.83	38.5	38.5					38.3	6760.83	38.3	6760.83
	0:08:10	0:53:10	10:38:06 AM	38.00		39.4	8709.64			40.2						39.4	8709.64	39.4	8709.64
	0:08:20	0:53:20	10:38:16 AM	38.00		40.2	10471.29			40.6						40.2	10471.29	40.2	10471.29
	0:08:30	0:53:30	10:38:26 AM	38.00		41.9	15488.17			43.1						41.9	15488.17	41.9	15488.17
	0:08:40	0:53:40	10:38:36 AM	38.00		44.0	25118.86			45.2						44.0	25118.86	44.0	25118.86
	0:08:50	0:53:50	10:38:46 AM	38.00		44.8	30199.52			45.1						44.8	30199.52	44.8	30199.52
	0:09:00	0:54:00	10:38:56 AM	38.00		44.1	25703.96	42.9	19281.90	44.8	45.2					44.1	25703.96	44.1	25703.96
	0:09:10	0:54:10	10:39:06 AM	39.00		44.2	26302.68			45.0						44.2	26302.68	44.2	26302.68
	0:09:20	0:54:20	10:39:16 AM	39.00		44.2	26302.68			45.1						44.2	26302.68	44.2	26302.68
	0:09:30	0:54:30	10:39:26 AM	39.00		43.6	22908.68			44.3						43.6	22908.68	43.6	22908.68
	0:09:40	0:54:40	10:39:36 AM	39.00		42.6	18197.01			43.2						42.6	18197.01	42.6	18197.01
	0:09:50	0:54:50	10:39:46 AM	39.00		41.8	15135.61			42.4						41.8	15135.61	41.8	15135.61
	0:10:00	0:55:00	10:39:56 AM	39.00		41.4	13803.84	43.1	20441.75	41.8	45.1					41.4	13803.84	41.4	13803.84
	0:10:10	0:55:10	10:40:06 AM	40.00		41.6	14454.40			42.1						41.6	14454.40	41.6	14454.40
	0:10:20	0:55:20	10:40:16 AM	40.00		41.8	15135.61			42.8						41.8	15135.61	41.8	15135.61
	0:10:30	0:55:30	10:40:26 AM	40.00		42.3	16982.44			42.8						42.3	16982.44	42.3	16982.44
	0:10:40	0:55:40	10:40:36 AM	40.00		42.9	19498.45			43.7						42.9	19498.45	42.9	19498.45
	0:10:50	0:55:50	10:40:46 AM	40.00		43.5	22387.21			44.3						43.5	22387.21	43.5	22387.21
	0:11:00	0:56:00	10:40:56 AM	40.00		43.7	23442.29	42.7	18650.07	44.2	44.3					43.7	23442.29	43.7	23442.29

Short-Duration (Studies #2 through #25)

Receptors R1 - R12

Study (15-Min)	Study Time	Session Time	Time of Day	Minute	OL Status	L_{avg}	$10^{(Leq/10)}$	1-Min Time L_{avg}	1-Min $10^{(Leq/10)}$	L_{max}	1-Min Time L_{max}	Max L_{50}	Max L_{25}	Max $L_{8.3}$	Max $L_{1.7}$	L_{dn}	L_{dn} $10^{(Leq/10)}$	CNEL	CNEL $10^{(Leq/10)}$
	0:11:10	0:56:10	10:41:06 AM	41.00		44.0	25118.86			44.9						44.0	25118.86	44.0	25118.86
	0:11:20	0:56:20	10:41:16 AM	41.00		45.4	34673.69			46.1						45.4	34673.69	45.4	34673.69
	0:11:30	0:56:30	10:41:26 AM	41.00		46.3	42657.95			48.1						46.3	42657.95	46.3	42657.95
	0:11:40	0:56:40	10:41:36 AM	41.00		46.8	47863.01			47.5						46.8	47863.01	46.8	47863.01
	0:11:50	0:56:50	10:41:46 AM	41.00		46.9	48977.88			47.7						46.9	48977.88	46.9	48977.88
	0:12:00	0:57:00	10:41:56 AM	41.00		46.6	45708.82	46.1	40833.37	47.3	48.1					46.6	45708.82	46.6	45708.82
	0:12:10	0:57:10	10:42:06 AM	42.00		46.4	43651.58			47.2						46.4	43651.58	46.4	43651.58
	0:12:20	0:57:20	10:42:16 AM	42.00		46.5	44668.36			47.3						46.5	44668.36	46.5	44668.36
	0:12:30	0:57:30	10:42:26 AM	42.00		45.8	38018.94			46.5						45.8	38018.94	45.8	38018.94
	0:12:40	0:57:40	10:42:36 AM	42.00		45.0	31622.78			45.9						45.0	31622.78	45.0	31622.78
	0:12:50	0:57:50	10:42:46 AM	42.00		44.3	26915.35			44.9						44.3	26915.35	44.3	26915.35
	0:13:00	0:58:00	10:42:56 AM	42.00		43.6	22908.68	45.4	34630.95	44.5	47.3					43.6	22908.68	43.6	22908.68
	0:13:10	0:58:10	10:43:06 AM	43.00		43.7	23442.29			45.3						43.7	23442.29	43.7	23442.29
	0:13:20	0:58:20	10:43:16 AM	43.00		41.4	13803.84			42.5						41.4	13803.84	41.4	13803.84
	0:13:30	0:58:30	10:43:26 AM	43.00		42.4	17378.01			46.8						42.4	17378.01	42.4	17378.01
	0:13:40	0:58:40	10:43:36 AM	43.00		38.7	7413.10			39.4						38.7	7413.10	38.7	7413.10
	0:13:50	0:58:50	10:43:46 AM	43.00		38.5	7079.46			39.3						38.5	7079.46	38.5	7079.46
	0:14:00	0:59:00	10:43:56 AM	43.00		38.5	7079.46	41.0	12699.36	39.2	46.8					38.5	7079.46	38.5	7079.46
	0:14:10	0:59:10	10:44:06 AM	44.00		39.1	8128.31			40.9						39.1	8128.31	39.1	8128.31
	0:14:20	0:59:20	10:44:16 AM	44.00		41.7	14791.08			44.2						41.7	14791.08	41.7	14791.08
	0:14:30	0:59:30	10:44:26 AM	44.00		42.6	18197.01			44.6						42.6	18197.01	42.6	18197.01
	0:14:40	0:59:40	10:44:36 AM	44.00		42.3	16982.44			46.2						42.3	16982.44	42.3	16982.44
	0:14:50	0:59:50	10:44:46 AM	44.00		40.5	11220.18			42.1						40.5	11220.18	40.5	11220.18
	0:15:00	1:00:00	10:44:56 AM	44.00		43.2	20892.96	41.8	15035.33	45.6	46.2	43.5	46.5	49.4	51.0	43.2	20892.96	43.2	20892.96

15-Minute Noise Data (dBA)									
Study #	Hour of Day	Time of Day	L_{eq}	L_{50}	L_{25}	$L_{8.3}$	$L_{1.7}$	L_{max}	CNEL
#2	3 p.m.	Day	60.7	48.4	52.2	60.0	70.8	80.9	60.7
#3	3/4 p.m.	Day	70.2	62.5	65.7	70.0	83.4	87.0	70.2
#4	4 p.m.	Day	55.4	55.1	56.5	57.6	58.7	60.8	55.4
#5	4 p.m.	Day	52.2	48.0	52.7	57.4	58.9	60.4	52.2
#6	5 p.m.	Day	52.0	51.7	52.4	53.6	54.6	57.6	52.0
#7	5/6 p.m.	Day	57.5	54.5	57.4	62.1	65.6	68.9	57.5
#8	6 p.m.	Day	53.6	51.3	53.6	56.5	62.0	64.0	53.6
#9	6 p.m.	Day	50.8	47.1	50.6	54.4	59.2	61.2	50.8
#10	7 p.m.	Day	54.6	50.8	54.7	57.0	64.1	70.0	59.6
#11	7 p.m.	Day	43.1	40.3	40.9	43.0	53.3	62.0	48.1
#12	7/8 p.m.	Day	43.1	42.3	43.9	45.2	47.4	54.9	48.1
#13	6 a.m.	Night	59.7	51.7	53.2	58.3	70.8	76.8	69.7
#14	6 a.m.	Night	52.4	51.6	53.3	55.7	58.0	61.5	62.4
#15	6 a.m.	Night	50.3	49.6	51.8	53.4	54.4	62.2	60.3
#16	6/7 a.m.	Night/Day	48.0	47.7	48.6	49.4	50.7	59.6	52.3
#17	7 a.m.	Day	51.2	48.6	50.9	54.3	59.5	62.3	51.2
#18	7 a.m.	Day	58.1	56.5	58.2	62.2	63.9	67.0	58.1
#19	8 a.m.	Day	53.2	51.6	53.3	56.7	59.3	65.5	53.2
#20	8 a.m.	Day	67.1	46.4	58.2	62.2	76.1	96.0	67.1
#21	8 a.m.	Day	44.4	42.5	43.9	47.5	52.8	56.4	44.4
#22	9 a.m.	Day	50.8	44.4	47.6	54.6	61.8	66.0	50.8
#23	9 a.m.	Day	43.0	41.0	42.8	45.9	50.1	55.9	43.0
#24	10 a.m.	Day	53.5	46.1	52.0	56.3	63.8	68.3	53.5
#25	10 a.m.	Day	45.2	43.5	46.5	49.4	51.0	54.6	45.2

ATTACHMENT C

Project Source Noise & Vibration Levels at Receptors

Initial Site Preparation/Berm Construction - Noise Levels @ Receptors

Initial Site Preparation/Berm Construction

Initial Site Preparation/Berm Construction - Source Noise Data						
Equipment	Make	L_{max} @ 50-feet[A]	Usage Factor (%)[A]	Reference Distance (ft.)[A]	L_{eq} @ 50-feet[B]	Arithmetic SPL ($10^{(Lavg/10)}$)
Dozer/Scraper	D9N Dozer	82.0	40%	50	78.0	63395727.7
Dozer/Scraper	D9T Dozer	82.0	40%	50	78.0	63395727.7
	Total L_{max} @ 50-feet[A]:	85.0	dBA		Total L_{eq} @ 50-feet:	81.0 dBA

Source: Federal Highway Administration's *Roadway Construction Noise Model* (FHWA, 2006).

Predicted Noise Impacts @ Receptor Locations (Initial Site Preparation/Berm Construction)					
Receptor	Distance Source to Receptor (ft.)[C]	Exterior Noise Levels @ Receptor Locations		Interior Noise Levels @ Receptor Locations[E]	
		L_{eq} (dBA)[D]	L_{max} (dBA)[D]	L_{eq} (dBA)	L_{max} (dBA)
R1	7,135	37.9	41.9	17.9	21.9
R2	2,505	47.0	51.0	27.0	31.0
R3	1,365	52.3	56.3	32.3	36.3
R4	430	62.3	66.3	42.3	46.3
R5	380	63.4	67.4	43.4	47.4
R6	380	63.4	67.4	43.4	47.4
R7	380	63.4	67.4	43.4	47.4
R8	370	63.6	67.6	43.6	47.6
R9	275	66.2	70.2	46.2	50.2
R10	339	64.4	68.4	44.4	48.4
R11	534	60.5	64.4	40.5	44.4
R12	665	58.6	62.5	38.6	42.5

FOOTNOTES:

A - Default equipment noise data (L_{max}, Usage Factor %, Reference Distance) for dozers was taken from Federal Highway Administration's (FHWA) *Roadway Construction Noise Model* .

B - $L_{eq}(h) = L_{max}$ @ 50-feet - 20log(D/50) + 10log(UF). D = distance of interest (50-feet). UF = usage factor. Source is Caltrans *Technical Noise Supplement* (2013).

C - Distance estimated using Google Earth. Represents distance between active equipment area and receptor. Please note, a 50-foot setback from the Area Q property boundary and the active equipment/mining area was included. No excavation of material, topsoil or overburden will take place within 100-feet of any adjacent public right-of-ways (e.g., SPRR tracks, Cajon Boulevard, etc.) or within 50-feet from other property lines. See Figures 2, 4, and 5 in Attachment A for more detail.

D - $L_{eq}/L_{max} = L_{eq}/L_{max}$ @ 50-feet - 20*log(D/50). D = distance to receptor (feet)

E - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of -20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). This is a conservatively low estimate of noise attenuation as residences are expected to generally keep windows closed, especially those facing sources of noise. The -20 dBA attenuation is applied to the daytime L_{eq} and L_{max} values.

Initial Site Preparation/Berm Construction - Day-Night Impacts @ Receptors

Initial Site Preparation/Berm Construction

Calculated Receptor Noise Levels L_{eq} - Initial Site Preparation/Berm Construction (see previous spreadsheet)												
Noise Parameter	Receptor Project Noise Levels (dBA)											
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
Exterior L_{eq}	37.9	47.0	52.3	62.3	63.4	63.4	63.4	63.6	66.2	64.4	60.5	58.6

Initial Site Clearing/Ground Preparation Noise Level - Receptor R1 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	37.9	6,226.47	720	27,240.82	28,923.74	44.4	44.6	24.4	24.6
Evening	42.9	19,689.83	180						
Nighttime	47.9	62,264.72	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R2 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	47.0	50,514.32	720	221,000.16	234,653.41	53.4	53.7	33.4	33.7
Evening	52.0	159,740.31	180						
Nighttime	57.0	505,143.23	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R3 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	52.3	170,123.65	720	744,290.97	790,272.79	58.7	59.0	38.7	39.0
Evening	57.3	537,978.22	180						
Nighttime	62.3	1,701,236.50	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R4 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	62.3	1,714,324.71	720	7,500,170.60	7,963,526.35	68.8	69.0	48.8	49.0
Evening	67.3	5,421,170.73	180						
Nighttime	72.3	17,143,247.08	540						

Initial Site Preparation/Berm Construction - Day-Night Impacts @ Receptors

Initial Site Preparation/Berm Construction

Initial Site Clearing/Ground Preparation Noise Level - Receptor R5 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	63.4	2,195,142.93	720	9,603,750.30	10,197,063.86	69.8	70.1	49.8	50.1
Evening	68.4	6,941,651.44	180						
Nighttime	73.4	21,951,429.26	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R6 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	63.4	2,195,142.93	720	9,603,750.30	10,197,063.86	69.8	70.1	49.8	50.1
Evening	68.4	6,941,651.44	180						
Nighttime	73.4	21,951,429.26	540						

Project Initiation Noise Level - Receptor R7 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	63.4	2,195,142.93	720	9,603,750.30	10,197,063.86	69.8	70.1	49.8	50.1
Evening	68.4	6,941,651.44	180						
Nighttime	73.4	21,951,429.26	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R8 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	63.6	2,315,402.76	720	10,129,887.10	10,755,705.05	70.1	70.3	50.1	50.3
Evening	68.6	7,321,946.44	180						
Nighttime	73.6	23,154,027.65	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R9 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	66.2	4,191,453.07	720	18,337,607.19	19,470,492.85	72.6	72.9	52.6	52.9
Evening	71.2	13,254,538.41	180						
Nighttime	76.2	41,914,530.71	540						

Initial Site Preparation/Berm Construction - Day-Night Impacts @ Receptors

Initial Site Preparation/Berm Construction

Initial Site Clearing/Ground Preparation Noise Level - Receptor R10 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	64.4	2,758,230.77	720	12,067,259.63	12,812,767.22	70.8	71.1	50.8	51.1
Evening	69.4	8,722,291.55	180						
Nighttime	74.4	27,582,307.72	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R11 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	60.5	1,111,597.30	720	4,863,238.17	5,163,685.92	66.9	67.1	46.9	47.1
Evening	65.5	3,515,179.30	180						
Nighttime	70.5	11,115,972.96	540						

Initial Site Clearing/Ground Preparation Noise Level - Receptor R12 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	58.6	716,781.36	720	3,135,918.47	3,329,653.51	65.0	65.2	45.0	45.2
Evening	63.6	2,266,661.69	180						
Nighttime	68.6	7,167,813.64	540						

FOOTNOTES:

A - Daytime noise levels are equivalent to the calculated L_{eq} noise levels at receptors. Per L_{dn} and CNEL standards, evening noise is estimated by adding +5 dBA to daytime L_{eq} noise levels and nighttime noise is estimated by adding +10 dBA to daytime noise levels.

B - Exterior L_{dn} and CNEL noise impacts at each receptor resulting from initial site clearing/ground preparation were estimated by taking the estimated daytime, evening, and nighttime L_{eq} noise levels and averaging per the minutes within a 24-hour day.

C - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of -20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). This is a conservatively low estimate of noise attenuation as residences are expected to generally keep windows closed, especially those facing sources of noise. The -20 dBA attenuation is applied to the daytime L_{eq} and L_{max} values.

Mining Operation/Aggregate Extraction - Noise Levels @ Receptors

Normal Mining Operation/Extraction of Aggregate

Mining Operations/Extraction of Aggregate - Source Noise Data							
Equipment	Make	L_{max} @ 50-feet[A]	Arithmetic SPL ($10^{(Lavg/10)}$)	Usage Factor (%)[A]	Reference Distance (ft.)[A]	L_{eq} @ 50-feet[B]	Arithmetic SPL ($10^{(Lavg/10)}$)
Dozer/Scraper	D9N Dozer	82.0	158489319.25	40%	50	78.0	63395727.70
Dozer/Scraper	D9T Dozer	82.0	158489319.25	40%	50	78.0	63395727.70
Loader	WA800 FEL	79.0	79432823.47	40%	50	75.0	31773129.39
Grader	14H Grader	85.0	316227766.02	40%	50	81.0	126491106.41
		Total L_{max} @ 50-feet[A]:	**88.5**	**dBA**		**Total L_{eq} @ 50-feet:**	**84.5** **dBA**

Source: Federal Highway Administration's *Roadway Construction Noise Model* (FHWA, 2006). Please note, for the water truck the FHWA's default values for a "flat bed truck" was utilized.

Predicted Noise Impacts @ Receptor Locations (Mining Operations/Extraction of Aggregate)					
Receptor	Distance Source to Receptor (ft.)[C]	Exterior Noise Levels @ Receptor Locations		Interior Noise Levels @ Receptor Locations[E]	
		L_{eq} (dBA)[D]	L_{max} (dBA)[D]	L_{eq} (dBA)	L_{max} (dBA)
R1	7,135	41.5	45.4	21.5	25.4
R2	2,505	50.6	54.5	30.6	34.5
R3	1,365	55.8	59.8	35.8	39.8
R4	430	65.9	69.8	45.9	49.8
R5	380	66.9	70.9	46.9	50.9
R6	380	66.9	70.9	46.9	50.9
R7	380	66.9	70.9	46.9	50.9
R8	370	67.2	71.1	47.2	51.1
R9	275	69.7	73.7	49.7	53.7
R10	339	67.9	71.9	47.9	51.9
R11	534	64.0	68.0	44.0	48.0
R12	665	62.1	66.1	42.1	46.1

FOOTNOTES:

A - Default equipment noise data (L_{max}, Usage Factor %, Reference Distance) was taken from Federal Highway Administration's (FHWA) *Roadway Construction Noise Model.*

B - $L_{eq}(h) = L_{max}$ @ 50-feet - 20log(D/50) + 10log(UF). D = distance of interest (50-feet). UF = usage factor. Source is Caltrans *Technical Noise Supplement* (2013).

C - Distance estimated using Google Earth. Represents distance between active equipment area and receptor. Please note, a 50-foot setback from the Area Q property boundary and the active equipment/mining area was included to account for the berm/vegetated setback. See Figures 5 and 6 in Attachment A for more detail.

D - $L_{eq}/L_{max} = L_{eq}/L_{max}$ @ 50-feet - 20*log(D/50). D = distance to receptor (feet)

E - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of 20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (25 dBA) and while windows are open (15 dBA). This is a conservatively low estimate of noise attenuation as residences are expected to generally keep windows closed, especially those facing sources of noise. The 20 dBA attenuation is applied to the daytime L_{eq} and L_{max} values.

Mining Operation/Aggregate Extraction - Day-Night Impacts @ Receptors

Mining Operations/Extraction of Aggregate

Calculated Receptor Noise Levels L_{eq} - Mining Operations/Extraction of Aggregate (see previous spreadsheet)												
Noise Parameter	Receptor Project Noise Levels (dBA)											
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
Exterior L_{eq}	41.5	50.6	55.8	65.9	66.9	66.9	66.9	67.2	69.7	67.9	64.0	62.1

Mining Operations/Extraction of Aggregate Noise Level - Receptor R1 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	41.5	13,998.51	720	61,243.48	65,027.06	47.9	48.1	27.9	28.1
Evening	46.5	44,267.17	180						
Nighttime	51.5	139,985.09	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R2 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	50.6	113,567.55	720	496,858.04	527,553.61	57.0	57.2	37.0	37.2
Evening	55.6	359,132.13	180						
Nighttime	60.6	1,135,675.52	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R3 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	55.8	382,476.21	720	1,673,333.40	1,776,710.87	62.2	62.5	42.2	42.5
Evening	60.8	1,209,495.96	180						
Nighttime	65.8	3,824,762.05	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R4 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	65.9	3,854,187.28	720	16,862,069.35	17,903,797.23	72.3	72.5	52.3	52.5
Evening	70.9	12,188,010.33	180						
Nighttime	75.9	38,541,872.80	540						

Mining Operation/Aggregate Extraction - Day-Night Impacts @ Receptors

Mining Operations/Extraction of Aggregate

Mining Operations/Extraction of Aggregate Noise Level - Receptor R5 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	66.9	4,935,174.71	720	21,591,389.35	22,925,291.60	73.3	73.6	53.3	53.6
Evening	71.9	15,606,392.73	180						
Nighttime	76.9	49,351,747.09	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R6 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	66.9	4,935,174.71	720	21,591,389.35	22,925,291.60	73.3	73.6	53.3	53.6
Evening	71.9	15,606,392.73	180						
Nighttime	76.9	49,351,747.09	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R7 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	66.9	4,935,174.71	720	21,591,389.35	22,925,291.60	73.3	73.6	53.3	53.6
Evening	71.9	15,606,392.73	180						
Nighttime	76.9	49,351,747.09	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R8 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	67.2	5,205,545.86	720	22,774,263.13	24,181,242.57	73.6	73.8	53.6	53.8
Evening	72.2	16,461,381.38	180						
Nighttime	77.2	52,055,458.58	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R9 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	69.7	9,423,328.63	720	41,227,062.78	43,774,044.40	76.2	76.4	56.2	56.4
Evening	74.7	29,799,181.63	180						
Nighttime	79.7	94,233,286.34	540						

Mining Operation/Aggregate Extraction - Day-Night Impacts @ Receptors

Mining Operations/Extraction of Aggregate

Mining Operations/Extraction of Aggregate Noise Level - Receptor R10 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	67.9	6,201,122.75	720	27,129,912.05	28,805,980.70	74.3	74.6	54.3	54.6
Evening	72.9	19,609,671.95	180						
Nighttime	77.9	62,011,227.54	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R11 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	64.0	2,499,120.58	720	10,933,652.54	11,609,126.61	70.4	70.6	50.4	50.6
Evening	69.0	7,902,913.18	180						
Nighttime	74.0	24,991,205.80	540						

Mining Operations/Extraction of Aggregate Noise Level - Receptor R12 L_{dn} & CNEL Calculations									
Time Period	Adjusted L_{eq}^{A}	$10^{(Lavg/10)}$	Minutes/Day	L_{dn} Average $10^{(Lavg/10)}$	CNEL Average $10^{(Lavg/10)}$	Exterior Noise (dBA)[B]		Interior Noise (dBA)	
						Day-Night (L_{dn})	CNEL	Day-Night (L_{dn})	CNEL
Daytime	62.1	1,611,485.62	720	7,050,249.58	7,485,809.50	68.5	68.7	48.5	48.7
Evening	67.1	5,095,964.97	180						
Nighttime	72.1	16,114,856.19	540						

FOOTNOTES:

A - Daytime noise levels are equivalent to the calculated L_{eq} noise levels at receptors. Per L_{dn} and CNEL standards, evening noise is estimated by adding +5 dBA to daytime L_{eq} noise levels and nighttime noise is estimated by adding +10 dBA to daytime noise levels.

B - Exterior L_{dn} and CNEL noise impacts at each receptor resulting from normal mining operations/extraction of aggregate were estimated by taking the estimated daytime, evening, and nighttime L_{eq} noise levels and averaging per the minutes within a 24-hour day.

C - Based on the EPA's *Protective Noise Levels* document (March, 1974), an outdoor to indoor attenuation of -20 dBA is assumed. This takes into account the average noise reduction provided while windows are closed (-25 dBA) and while windows are open (-15 dBA). This is a conservatively low estimate of noise attenuation as residences are expected to generally keep windows closed, especially those facing sources of noise. The -20 dBA attenuation is applied to the daytime L_{eq} and L_{max} values.

Vibration Impact Assessment

Initial Site Preparation/Berm Construction + Mining Operations/Material Excavation

Equipment Reference Vibration Source		
Equipment	**Distance (ft.)**	**PPV (in/sec)**
Large Bulldozer	25	0.089

Source: *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans, 2013).

Note: Large Bulldozer represents the largest, most powerful vibration source operating onsite. Therefore it is used to calculate worst-case vibration impacts to nearby receivers.

Human Responses to Transient Vibration	
PPV (in/sec)	**Human Response**
2	Severe
0.9	Strongly Perceptible
0.24	Distinctly Perceptible
0.035	Barely Perceptible

Source: *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans, 2013).

Vibration Impact Assessment							
Receptor/Site	**Receiver Type**	**Distance (ft.)[B]**	**Predicted Vibration PPV @ Receiver (in/sec)[A]**	**Applicable San Bernardino County Threshold - PPV (in/sec)[C]**	**Significant?**	**Applicable Caltrans PPV Threshold (in/sec)**	**Predicted Human Response @ Receptor**
R1	Commercial	7,135	0.0002	≥ 0.2	No	≥ 0.035	Barely Perceptible
R2	Industrial	2,505	0.001	≥ 0.2	No	≥ 0.035	Barely Perceptible
R3	Industrial	1,365	0.001	≥ 0.2	No	≥ 0.035	Barely Perceptible
R4	Residential	430	0.004	≥ 0.2	No	≥ 0.035	Barely Perceptible
R5	Residential	380	0.004	≥ 0.2	No	≥ 0.035	Barely Perceptible
R6	Residential	380	0.004	≥ 0.2	No	≥ 0.035	Barely Perceptible
R7	Residential	380	0.004	≥ 0.2	No	≥ 0.035	Barely Perceptible
R8	Residential	370	0.005	≥ 0.2	No	≥ 0.035	Barely Perceptible
R9	Residential	275	0.006	≥ 0.2	No	≥ 0.035	Barely Perceptible
R10	Residential	339	0.005	≥ 0.2	No	≥ 0.035	Barely Perceptible
R11	Residential	534	0.003	≥ 0.2	No	≥ 0.035	Barely Perceptible
R12	Residential	665	0.002	≥ 0.2	No	≥ 0.035	Barely Perceptible

FOOTNOTES:

A - $PPV_{Equipment} = PPV_{Ref} (25/D)^{n}$. PPV_{Ref} = reference PPV @ 25-ft. D = distance from equipment to the receiver in ft. n = 1.1 (the value related to the attenuation rate through ground) Source is the Caltrans *Transportation and Construction Induced Vibration Guidance Manual* (2013).

B - Distances estimated using Google Earth. Represents closest distance between active mining area and the receptor property boundary. Please note, a 50-foot setback from the Area Q property boundary and the mining area is included along the residential receptors (i.e., R4 through R12). No excavation of material, topsoil or overburden will take place within 100-feet of any adjacent public right-of-ways (e.g., SPRR tracks, Cajon Boulevard, etc.) or within 50-feet from other property lines. See Figures 2, 4, and 5 in Attachment A for more detail.

C - San Bernardino County Code, Chapter 83.01.090 (General Performance Standards, Vibration), which regulates both construction and Project vibration from stationary and mobile sources, states that no vibration shall be allowed that "produces a particle velocity ≥ 0.2 in/sec measured at or beyond the applicable lot line."

ATTACHMENT D

Regulatory References

VII. NOISE ELEMENT

Noise has long been accepted as a byproduct of urbanization and is considered a potential environmental hazard. Excessive and/or sustained noise can contribute to both temporary and permanent hearing loss, and may be associated with increased fatigue, stress, annoyance, anxiety, and other psychological reactions in humans. For the various elements of the society to coexist, noise levels need to be controlled and minimized to limit exposure to residential communities and noise-sensitive land uses. The control of noise, therefore, is an essential component in creating a safe, compatible, and productive environment.

A. PURPOSE OF THE NOISE ELEMENT

The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise-level contours must be mapped, and the conclusions of the element used as a basis for land use decisions. The Noise Element must be used to guide decisions concerning land use and the location of new roads and transit facilities because these are common sources of excessive noise levels. The Noise Background Report provides much of these technical data, and includes generalized estimates of distances to noise contours for typical traffic volumes on County roadways.

The most common sources of environmental noise in San Bernardino County are associated with roads, airports, railroad operations, and industrial activities. The facilities are used to transport residents, consumer products and provide basic infrastructure for the community by creating jobs and economic stability. In many areas of the County, noise-sensitive land uses such as residences, schools, churches and parks exist in proximity to these major noise sources.

1. RELATIONSHIP TO OTHER ELEMENTS OF THE GENERAL PLAN

The Noise Element is closely related to the Circulation and Land Use Elements. Transit thoroughfares, such as freeways, arterial highways, and railways, generate the majority of noise within the County and influence the type and intensity of development within a given area. Likewise, land uses sensitive to noise are to be considered when determining land use patterns and planned mitigation measures related to noise impacts. The location and amount of such noise generators and

receptors are also important considerations in the Open Space Element, which addresses such issues as public parks and open space buffers.

2. INPUT FROM PUBLIC PARTICIPATION PROGRAM

As part of the County's General Plan Update process, community meetings were held at several locations within the County to gather informative data and input from residents. Questions were posed to the attendees regarding the growth and development in their community, to inquire about their concerns and about what could be done to address their concerns. Noise was mentioned in several of the community meetings as being an issue of concern. Additionally, concern was expressed by citizens and staff regarding the efficacy of the noise complaint process and enforcement of noise regulations.

3. SUMMARY OF EXISTING CONDITIONS

The Noise Background Report describes the existing noise environment in the subareas of San Bernardino County. It also reviews the roles of the state and federal governments in regulating noise from specific sources. The County regulates noise from sources that are not pre-empted by state or federal jurisdiction. Such sources include project construction activities; stationary sources, such as fans, pumps, compressors or other mechanical equipment; or mobile sources operating on private property. Section 83.01.080 of the County's Development Code sets forth performance standards for affected (receiving) land uses from stationary and mobile sources, during daytime (7 AM to 10 PM) and nighttime (10 PM to 7 AM) periods. Exemptions from these standards include motor vehicles not under the control of the industrial use, emergency equipment, vehicles and devices, and temporary construction and repair or demolition activities taking place between the hours of 7 AM and 7 PM Monday through Saturday, excluding federal holidays.

4. SOURCES OF NOISE IN SAN BERNARDINO COUNTY

The County has promulgated and implemented noise policies and requirements for land development and construction projects by requiring these projects to provide specific noise analyses and implement any necessary measures to reduce noise to an acceptable level.

Circulation and transportation systems (roadways, airports and railroads) are the most significant noise-producing activities within the County, and subject some areas to unacceptable levels. Point sources, such as industrial, mining and recreational sites, also produce noise levels of concern. Some key problem areas

are wrecking yards, rock crushing, racetracks, snow and water ski areas, outdoor concerts, shooting facilities, and similar recreation facilities. Additional problems are off-road vehicles, snowmobiles, and the operation of specialized equipment.

Traffic Noise: The level of noise associated with roadways will vary with total traffic volume, vehicular speed, the relative numbers of trucks and cars in the traffic volumes, the roadway cross-section and geometric design, and the local topography. Typically, the greater the vehicle speed and truck percentage, the greater the level of noise emission from the transportation facility. Refer to the Noise Background Report for more information on traffic noise in San Bernardino County.

Rail Noise*:* Railroad activity, including heavy rail locomotives and railcars, also constitutes a major but less widespread element of the noise environment in the County. The passage of trains results in considerable noise impacts on adjacent lands, although the elevated noise levels are periodic and of relatively short duration. Railroad tracks within the County are used for passenger transportation and delivery of freight. Refer to the Noise Background Report for more information on rail noise in San Bernardino County.

Aircraft Noise: Aircraft noise generates occasional, but intrusive noise levels for the occupants of property adjacent to airports and/or under the flight patterns of aircraft using airports. The federal and state governments regulate aircraft noise. Refer to the Noise Background Report for more information on aircraft noise in San Bernardino County.

Industrial Noise: Industrial noise sources exist but do not materially affect noise-sensitive land uses within the unincorporated areas of the County. Refer to the Noise Background Report for more information on industrial noise in San Bernardino County.

5. CONCLUSION

The unincorporated portions of the County represent the full range of community noise environments from very quiet rural to moderately noisy suburban to noisy urban. Noise patterns in the County are generally consistent with published data regarding the intensity of development/type of land use and the expected levels of environmental noise.

B. COUNTYWIDE GOALS AND POLICIES OF THE NOISE ELEMENT

GOAL N 1.	**The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.**

POLICIES

N 1.1 Designate areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Chapter 83.01 of the Development Code.

N 1.2 Ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries.

N 1.3 When industrial, commercial, or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use will not exceed the performance standards of Table N-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards listed in Chapter 83.01 of the Development Code at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Programs

1. Require an acoustical analysis prior to approval of proposed development of new residential or other noise-sensitive land uses in a noise-impacted area or a new noise generating use in an area that could affect existing noise-sensitive land uses. The appropriate time for requiring an acoustical analysis is during the environmental review process so that noise mitigation may be an integral part of the project design. The acoustical analysis shall:

    a. Be the responsibility of the applicant.

b. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.

c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;

d. Include estimated noise levels in terms of the descriptors shown in Figures II-8 and II-9 of the Noise Background Report for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.

e. Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.

f. Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided.

2. Develop and employ procedures to ensure that requirements imposed pursuant to the finding of an acoustical analysis are implemented as part of the project review and building permit processes.

N 1.4 Enforce the state noise insulation standards (California Administrative Code, Title 24) and Chapter 35 of the California Building Code (CBC)[6].

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[6] Title 24 requires that an acoustical analysis be prepared for all new developments of multi-family dwellings, condominiums, hotels, and motels proposed for areas within the 60 dB Ldn (or CNEL) contour of a major noise source for the purpose of documenting that an acceptable interior noise level of 45 dB Ldn (or CNEL) or below will be achieved with the windows and doors closed. UBC Chapter 35 requires that common wall and floor/ceiling assemblies within multi-family dwellings comply with minimum standards for the transmission of airborne sound and structure-borne impact noise.

N 1.5 Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.

N 1.6 Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

Programs

1. Develop and implement a noise ordinance that will:

    a. Be consistent with this element of the General Plan.

    b. Include the development standards provided in this element in the Development Code.

N 1.7 Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future.

Programs

1. Examine the existing and projected future noise environment when considering amendments to the circulation system.

2. Periodically review and update the Noise Element to ensure that noise exposure information and specific policies are consistent with changing conditions within the County and with noise control regulations enacted after the adoption of this element.

3. Provide sufficient noise exposure information so that existing and potential noise impacts will be identified and addressed in the project review processes.

4. Compile and publish a list of standardized noise mitigation measures.

GOAL N 2. **The County will strive to preserve and maintain the quiet environment of mountain, desert and other rural areas.**

POLICIES

N 2.1 The County will require appropriate and feasible on-site noise attenuating measures that may include noise walls, enclosure of noise-generating equipment, site planning to locate noise sources away from sensitive receptors, and other comparable features.

N 2.2 The County will continue to work aggressively with federal agencies, including the branches of the military, the U.S. Forest Service, BLM, and other agencies to identify and work cooperatively to reduce potential conflicts arising from noise generated on federal lands and facilities affecting nearby land uses in unincorporated County areas.

C. VALLEY REGION GOALS AND POLICIES OF THE NOISE ELEMENT

NONE SPECIFIC TO THE VALLEY REGION.

D. MOUNTAIN REGION GOALS AND POLICIES OF THE NOISE ELEMENT

GOAL M/N 1. **The County will strive to preserve and maintain the quiet environment of the Mountain Region.**

POLICIES

M/N 1.1 Encourage and support strict enforcement of vehicle code regulations to reduce vehicular noise in the mountain communities.

M/N 1.2 Encourage responsible agencies to post signs near forest access roads which explain the acceptable vehicular noise levels for vehicles using those roads.

E. DESERT REGION GOALS AND POLICIES OF THE NOISE ELEMENT

NONE SPECIFIC TO THE DESERT REGION.

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K. NOISE

1. SETTING

The unincorporated and residential areas, along with noise-sensitive receptors and potential noise generators, are shown on Figures 4-1A through 4-1C of the Noise Background Report (Appendix I), for each of the three planning regions. Focusing on unincorporated areas of the County, noise-sensitive receptors include convalescent homes, hospitals, day-care centers, residential areas, fire stations, schools, hotels, libraries and campgrounds. Since hotels and most fire stations contain sleeping quarters, they are classified as noise-sensitive receptors. The County applies the same noise abatement criteria to hotels and residences and buildings where people normally sleep. Potential major noise generators include roadways, airports, industrial plants, railroads, racetracks, off-highway vehicle areas and public shooting ranges.

Based on the results presented in the Noise Background Report, prepared for the update to the County General Plan, the unincorporated portions of the County represent the full range of community noise environments from very quiet rural to moderately noisy suburban to noisy urban. Noise patterns in the County are generally consistent with published data regarding the intensity of development/type of land use and the expected levels of environmental noise. More details regarding the noise environment in the County can be found in the Noise Background Report. The Noise Element of the General Plan also contains additional information regarding noise and its effects, and presents policies and standards for compatibility between noise levels and land uses. Section 87-0905(b)(3) of the County Code reinforces these standards for new residential and other development that may be adversely affected by high noise levels. Section 87-0905(b)(2) of the County Development Code (Noise Ordinance) presents limits on noise generation from commercial and industrial uses that may adversely affect adjacent uses.

Noise levels discussed in the Noise Background Report, Noise Element, and in this section are based on equivalent noise levels (Leq) expressed as “A” weighted decibels (dBA). An Leq value is a constant or single computed noise level that represents the same acoustic energy associated with a varying noise level over a given period of time. Leq values are usually expressed for one-hour time periods, but longer or shorter times may be specified. “A” weighted decibels reflect the frequency sensitivity of human ears. Longer term standards are identified in the County Noise Element. These include the Day-Night Average Noise Level (Ldn), which is a 24-hour equivalent noise level with a “penalty” of 10 dBA added to noise levels during the night time (10:00 p.m. to 7:00 a.m.), to account for the added nuisance of noise during these hours. A similar 24-hour average is the Community Noise Equivalent Level (CNEL), which also includes a 5 dBA addition during the evening hours (7:00 p.m. to 10:00 p.m.). CNEL values are usually only about 1 dBA higher than Ldn values, and the two terms are often used interchangeably.

Decisions made by local governments affecting lands within defined influence boundaries around airports are subject to review by the local Airport Land Use Commission (ALUC) for consistency with the countywide Airport Land Use Plan. The Airport Land Use Plan addresses aircraft noise, as well as safety, and the planning and review process used by the ALUC is set forth in the California Public Utilities Code (Sections 21670 through 21679.5). Typically, Airport Land Use Plans define areas with a Community Noise Equivalent Level (CNEL) above 65 dBA as being incompatible with residential land uses.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Noise, if the project would cause any of the following effects:

- *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*
- *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.*
- *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*
- *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.*
- *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.*

Specific standards that can be used to define the numerical threshold above which noise levels are considered a significant impact for a given land use are found in the County Noise Element and are presented in Table IV-K-1. These standards indicate that a Day-Night Average Noise Level or a Community Noise Exposure Level (Ldn or CNEL) in excess of 70 decibels (dBA) is normally unacceptable for residential uses and for most other sensitive land uses. Ldn values between 60 and 70 dBA are conditionally acceptable, meaning that additional study and appropriate mitigation measures are necessary to avoid impacts. The County Code requires that exterior noise levels affecting new residential development be reduced to no more than 60 dBA, or 65 dBA if the best available noise reduction technology has been applied (Section 87-8905(b)(3)).

3. IMPACT ANALYSIS

Impact N-1

Vehicle traffic noise from freeways and arterial roadways causes the Ldn value of adjacent areas, some of which have land use designations allowing residential uses or other sensitive uses, to exceed 60 or even 70 dBA. Similar noise effects are associated with areas adjacent to railroad track operations.

The extent of noise impacts associated with freeways and arterial roadways depends on traffic volume, speed, and other factors. As an example, the Noise Background Report (Table 4-3 of the Noise Background Report) indicates that a freeway carrying a modest average daily traffic (ADT) volume of 28,000 will cause the Ldn to exceed 60 dBA out to a distance of 790 feet from the roadway. Distances to other Ldn contours under different traffic conditions are also presented in the Noise Background Report. Similarly, the estimated distance to the 60 dBA Ldn noise contour adjacent to an intensively used freight train line ranges from 800 to 1,200 feet, depending on train speed. Land use designations allowing residential and other

sensitive land uses within these distances from roadways or railroad lines with these noise levels are not compatible and could lead to significant noise impacts.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact N-2
The development of new industrial and commercial uses may create stationary noise sources that generate noise levels which are incompatible with adjacent residential or other sensitive land uses. Adherence to applicable regulations in the County Code will reduce these impacts.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact N-3
Aircraft noise generates occasional, but intrusive noise levels to the occupants of property adjacent to airports and/or under the flight patterns of aircraft using airports. Development of residential or other noise sensitive uses in the vicinity of airports may expose people to incompatible noise levels.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation N-1
The County shall consider areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Table IV-K-1 (see Noise Element Policy N-1.1, and Section 87-0905(b)(1) of the County Code). Consistent with (new) Policy N-1.7, the County shall prevent incompatible land uses in such areas.

Mitigation N-2
Consistent with Policy N-1.2 and N-2.1, the County shall ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Table IV-K-2. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries. For each application involving such a land use at a location where the Ldn is expected to be in excess of 60 dBA, based either on noise contours for future traffic volumes as presented n the Noise Element or on the project's location near a freeway, arterial street, or railroad line that may reasonably be expected to generate a similar noise level, the County shall require a project specific noise analysis.

As described in the Noise Element, the acoustical analysis shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;

- Include estimated noise levels in terms of the descriptors shown in the Noise Background Report (Appendix I) for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element;
- Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance; and include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided [see Existing Policy NO-1d].

Mitigation N-3
When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Mitigation N-4
Implementation of measures N-1 and N-2 above should avoid or reduce potential aircraft noise impacts to a level below significance. The County shall submit all projects involving land use decisions on properties within airport influence areas to the Airport Land Use Commission for review.

Mitigation N-5
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC).

Mitigation N-6
The County shall limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.

Mitigation N-7
Within the County's Development Code, one overlay district has been established to protect the public from high noise levels. The Noise Hazard "NH" Overlay District has been created to provide greater public safety by establishing land use review procedures and requirements for land uses in areas with identified high noise levels. The NH District operates as described below.

82.18.020 – Location Requirements

The NH overlay district may be applied to those areas where the Average Day-Night Sound Level (Ldn) is 65 decibels, 65 dBA or greater..

82.18.030 – Development Standards

When a land use application or development permit is proposed within the NH overlay district, the following standards shall apply with respect to residential uses:

(a) Acoustical report required. Noise levels shall be identified. An acoustical report shall be performed to identify noise impact. Any recommendation for noise attenuation or other mitigation measures shall be incorporated into the design standards or conditions of approval as applicable.

(b) Interior noise levels. Interior noise levels in all single family and multi family residences and educational institutions shall not exceed 45 dBA Ldn emanating from sources outside of the residential building.

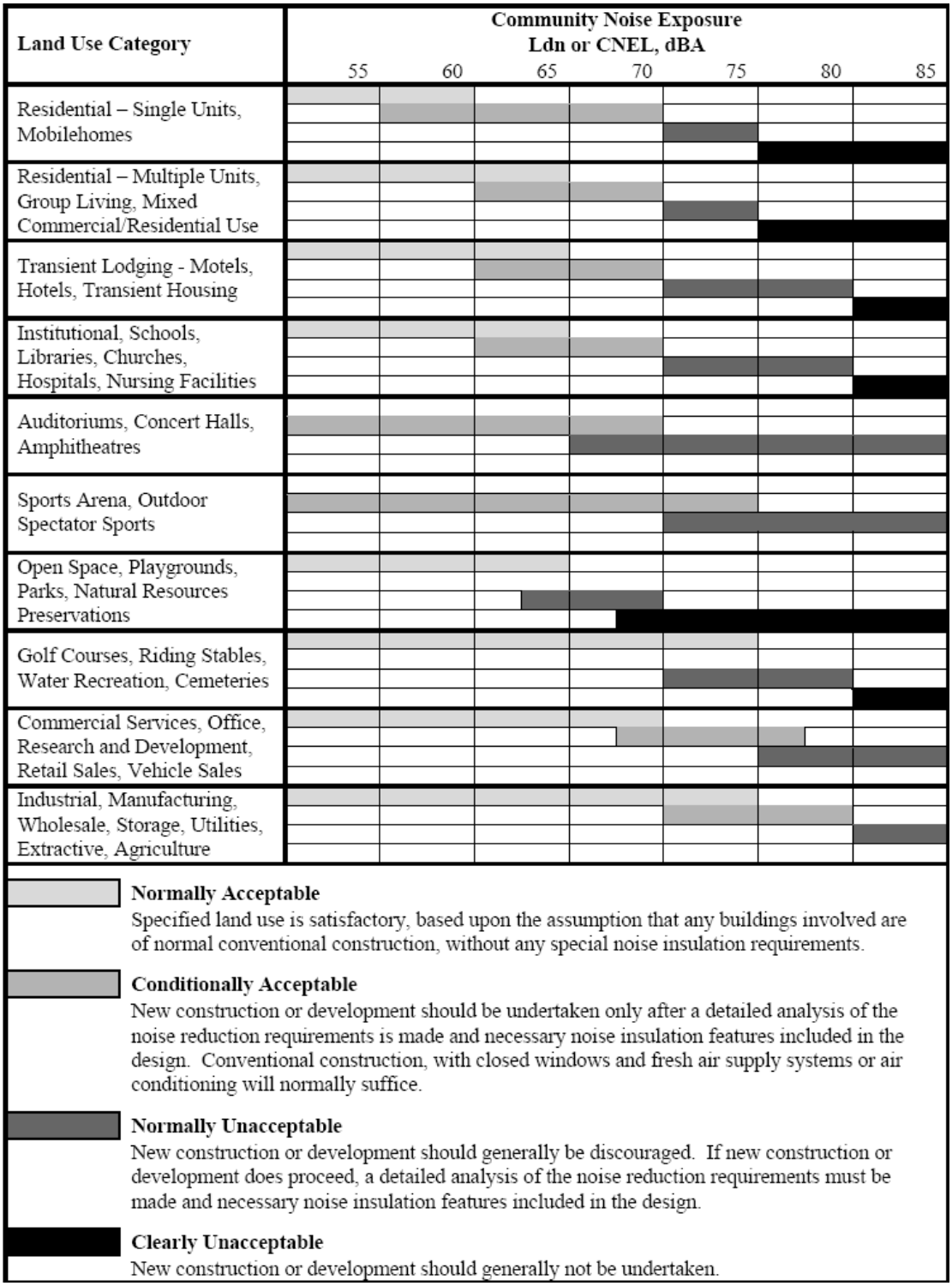
(c) Exterior noise levels. Exterior noise levels in all single family residential land use areas and multi family residential land use areas should not exceed 65 dBA Ldn. Exterior noise levels shall not exceed 70 dBA Ldn for any residential use areas. Ability to mitigate exterior noises to the levels of 65 dBA Ldn and 70 dBA Ldn shall be considered by the review authority when determining the actual Ldn level with which the land uses must comply.

(d) Noise mitigation measures. In areas where noise exceeds the noise standard, measures shall be taken to mitigate noise levels. An acoustical report identifying these mitigation measures shall be required and reviewed by the Environmental Health Services Division before issuance of any required development permits or approval of land use applications.

5. SIGNIFICANT UNMITIGATED IMPACTS

There are no noise impacts that cannot be mitigated to a level below significance.

Table IV-K-1. Noise Level Standards



Source: State of California General Plan Guidelines, Appendix C: Noise Element Guidelines, 2003, Governor's Office of Planning and Research, pg. 250

Table IV-K-2. Hourly Noise Level Performance Standards – Locally – Regulated Sources

	7 am - 10 pm		10 pm - 7 am	
LAND USE CATEGORY	**Leq**	**Lmax**	**Leq**	**Lmax**
Residential or other noise-sensitive receivers	55 dB(A)	75 dB(A)	45 dB(A)	65 dB(A)

* Noise sources that are stationary and not pre-empted from local noise control. Pre-empted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

These limits are set forth in Section 87-0905(b)(2) of the County Development Code. Additional limits are specified in the code for other land use categories, including professional services, commercial, and other industrial uses.

Print

San Bernardino County, CA Code of Ordinances

DIVISION 3: COUNTYWIDE DEVELOPMENT STANDARDS

CHAPTER 83.01: GENERAL PERFORMANCE STANDARDS

Section

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§ 83.01.010 Purpose.

The purpose of this Chapter is to establish uniform performance standards for development within the County that promotes compatibility with surrounding areas and land uses.

Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include air quality, glare, heat, noise, runoff control, and waste disposal. These general performance standards are intended to protect the health and safety of businesses, nearby residents, and workers and to prevent damaging effects to surrounding properties.

(Ord. 4011, passed - -2007)

§ 83.01.020 Applicability.

(a) *New and Existing Uses in All Land Use Zoning Districts.* The provisions of this Chapter apply to all new and existing uses in all land use zoning districts. The standards of this Chapter elaborate upon and otherwise augment the development standards specified for individual land use zoning districts in

Division 2 (Land Use Zoning Districts and Allowed Land Uses) and in Division 4 (Standards for Specific Land Uses and Activities).

(b) *Compliance of Alterations or Modifications.* Uses of the land that existed on the effective date of this Division shall not be altered or modified so as to conflict with, or further conflict with, these standards.

(c) *Evidence of Compliance with Standards.* If requested by the Director or the Review Authority, applicants shall provide evidence to the Director that the proposed development is in compliance with the standards in this Division and other applicable standards in this Development Code before the issuance of a Building Permit or business license.

(Ord. 4011, passed - -2007)

§ 83.01.030 Modification of Standards.

(a) *Modification by Specific Reference.* The provisions of this Division shall prevail should they conflict with the provisions of a land use zoning district or specific plan, unless the land use zoning district or plan standard specifically overrides or modifies the provisions of this Division by specific reference.

(b) *Modification by Establishment of Overlay or Approval of Planned Development or Variance.* An overlay, approved Planned Development, or approved Variance may modify the provisions of this Division.

(Ord. 4011, passed - -2007)

§ 83.01.040 Air Quality.

(a) *Equipment Permit and Inspection Requirements.* Required permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment for equipment that may cause air pollution. Before the equipment may be constructed, plans and specifications shall be submitted to the appropriate District for approval

(b) *Permits from Air Quality Management Districts.* Permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment. If requested by the Director, uses, activities, or processes that require Air Quality Management District approval to operate shall file a copy of the permit with the Department within 30 days of its approval.

(c) *Diesel Exhaust Emissions Control Measures.* The following emissions control measures shall apply to all discretionary land use projects approved by the County on or after January 15, 2009:

(1) *On-Road Diesel Vehicles.* On-road diesel vehicles are regulated by the State of California Air Resources Board.

(2) *Off-Road Diesel Vehicle/Equipment Operations.* All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the

following measures during their operations in order to reduce diesel particulate matter emissions from diesel-fueled engines:

(A) Off-road vehicles/equipment shall not be left idling on site for periods in excess of five minutes. The idling limit does not apply to:

(I) Idling when queuing;

(II) Idling to verify that the vehicle is in safe operating condition;

(III) Idling for testing, servicing, repairing or diagnostic purposes;

(IV) Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane);

(V) Idling required to bring the machine system to operating temperature; and

(VI) Idling necessary to ensure safe operation of the vehicle.

(B) Use reformulated ultra low-sulfur diesel fuel in equipment and use equipment certified by the U.S. Environmental Protection Agency (EPA) or that pre-dates EPA regulations.

(C) Maintain engines in good working order to reduce emissions.

(D) Signs shall be posted requiring vehicle drivers to turn off engines when parked.

(E) Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Desert Air Quality Management District or the California Air Resources Board.

(F) Provide temporary traffic control during all phases of construction.

(G) On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.

(H) Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.

(I) Contractors shall use ultra low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District (AQMD) Rules 431.1 and 431.2 to reduce the release of undesirable emissions.

(J) Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.

(3) *Project Design.* Distribution centers, warehouses, truck stops and other facilities with loading docks where diesel trucks may reside overnight or for periods in excess of three hours shall be designed to enable any vehicle using these facilities to utilize on-site electrical connections to power the heating and air conditioning of the cabs of such trucks, and any refrigeration unit(s) of any trailer being pulled by the trucks, instead of operating the diesel engines and diesel refrigeration units of such trucks and trailers for these purposes. This requirement shall also apply to Recreational Vehicle Parks (as defined in § 810.01.200(k) of this title) and other development projects where diesel engines may reasonably be expected to operate on other than an occasional basis.

(Ord. 4011, passed - -2007; Am. Ord. 4065, passed - -2008)

§ 83.01.050 Electrical Disturbances.

No activity, land use, or process shall cause electrical disturbance that adversely affects persons or the operation of equipment across lot lines and that does not conform to the regulations of the Federal Communications Commission. Existing or proposed uses that generate electrical disturbances that are be considered hazardous or a public nuisance shall be contained, modified, or shielded to prevent disturbances.

(Ord. 4011, passed - -2007)

§ 83.01.060 Fire Hazards.

This Section establishes standards for storage of solid materials susceptible to fire hazards and flammable liquids and gases where allowed in compliance with Division 2 (Land Use Zoning Districts and Allowed Land Uses).

(a) *Combustible Solids.* Land uses that include the storage of solid materials susceptible to fire hazards shall be subject to the following storage standards in the indicated land use zoning districts.

(1) *Regional Industrial (IR) Land Use Zoning District.*

(A) *Inside Storage.* A structure utilized for the storage, manufacture, or use of flammable solid materials shall be located no less than 40 feet from any lot line and any other on-site structures or shall adhere to standards specified in Subdivision (2) below.

(B) *Outdoor Storage.* Outdoor storage of flammable solid materials shall be no less than 50 feet from any lot line and any other on-site structures.

(2) *All Other Manufacturing or Industrial Uses Legally Established Within Any Other Land Use Zoning District.* The storage, manufacture, or use of highly flammable solid materials shall take place in enclosed spaces having fire resistance of no less than two hours and protected with an automatic fire extinguishing system.

(b) *Flammable Liquids and Gases.* Land uses that involve the storage of flammable liquids and gases shall be subject to the following standards when established within the land use zoning districts indicated.

(1) *Setbacks.* County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials) shall establish setback requirements for flammable liquids and gases.

(2) *Storage capacity.* The total storage capacity of flammable liquids and gases on a parcel shall not exceed the quantities indicated in Table 83-1 (Storage Standards for Flammable Liquids and Gases).

Table 83-1
Storage Standards for Flammable Liquids and Gases

Stored Substance	***Land Use Zoning District***	***Maximum Capacity***
SCF = Standard cubic feet at 60ºF and 29.92" Hg (i.e., mercury)		
Liquids	Regional Industrial District (IR)	120,000 gallons
	All other manufacturing or industrial uses legally established within any other land use zoning district	60,000 gallons
Liquefied Petroleum Gas (LPG)	All manufacturing or industrial uses established in any land zoning use district	Per County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials)
	All commercial uses legally established in any land use zoning district	15,000 gal./tank 20,000 gallons maximum aggregate total
	All agricultural uses legally established in any land use zoning district and aggregate total	15,000 gal./tank and aggregate total
Gases other than liquefied petroleum gas	Regional Industrial District (IR)	300,000 SCF above ground 600,000 SCF below ground
	All other manufacturing or industrial uses legally established within any other land use zoning district	150,000 SCF above ground 300,000 SCF below ground

(c) *Liquefied Petroleum Gas (LPG).*

(1) *General Requirements.*

(A) *Agricultural, Commercial, Industrial, or Manufacturing Uses and Land Use Zoning Districts.* Liquefied petroleum gas (LPG) storage and distribution facilities for agricultural, commercial, industrial, or manufacturing uses shall be allowed subject to a Use Permit in compliance with Division 2 (Land Use Zoning Districts and Allowed Land Uses). The location, installation, operation, and maintenance of LPG storage and distribution facilities shall be subject to:

(I) The standards in this Subdivision.

(II) The conditions, requirements, and standards imposed by the Review Authority in compliance with this Chapter.

(B) *Residential Uses and Land Use Zoning Districts.* County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials) shall establish standards for residential uses and residential land use zoning districts for LPG storage.

(C) *Conflict Between Land Use District and Use Permit Requirements.* In the event of a conflict

between the provisions of this § 83.01.060(c) (Liquefied Petroleum Gas [LPG]) and the provisions of a land use zoning district, including the requirement for Use Permit, the provisions of this Section shall prevail and control.

(2) *Fire Protection Requirements for All Parcels.*

(A) Setbacks for LPG storage and distribution facilities from structures and property lines shall be those specified by County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) LPG storage tanks shall be centrally located on the parcel to the satisfaction of the Fire Department.

(3) *Additional Fire Protection Requirements for Specific Types of Parcels.* For parcels that have no more than one occupied structure less than 5,000 square feet in size and where the water system provides substandard flows per International Standards Organization (ISO) standards for structure protection, additional fire protection requirements shall be as follows:

(A) *Where Parcel Size Is Ten Acres or More.* Fire flow shall be calculated for exposures only in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) *Where Parcel Size Is at Least Five Acres but less than Ten Acres.*

(I) A one hour approved protective coating shall be applied to the LPG storage tank.

(II) Fire flow shall be calculated for exposures only, in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(C) *Where Parcel Size Is at Least Two and One-half Acres, but less than Five Acres.*

(I) A two hour approved protective coating shall be applied to the tank.

(II) Fire flow shall be calculated for exposures only, in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(4) *Additional Fire Protection Requirements for Any Parcel with Adequate Fire Flow Available per ISO Standards.*

(A) Fire hydrant(s) shall serve the parcel in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) Fire flow shall provide for exposure protection (ISO Calculation) and LPG storage tank protection/suppression.

(I) Sprinklers shall use calculations, as adopted by County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(II) Hose lines shall use the formula: GPM = five times the square root of the tank capacity.

(C) Additional protection.

(I) Where the Fire Chief determines that water can be applied to the tank or exposures by the Fire Department in required amounts in eight minutes or less, no additional protection shall be required.

(II) Where the Fire Chief determines that water cannot be applied to the tank or exposures by the Fire Department in required amounts in eight minutes or less, one of the following protection measures shall be required:

(i) One hour approved protective coating shall be applied to the LPG storage tank; or

(ii) A fixed spray water system shall be installed as approved by the Fire Department.

(5) Additional fire protection requirements for any parcel not included in either Subdivisions (C)(III) or (C)(IV), above:

(A) Either a one-hour or more protective coating shall be applied to the LPG storage tank, as required by the Fire Department, or a fixed spray water system shall be installed instead of coating the tank.

(B) Fire flow shall be calculated for exposure only, in compliance with the San Bernardino Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(Ord. 4011, passed - -2007)

§ 83.01.070 Heat.

Land uses in industrial districts shall not emit heat that would cause a temperature increase on any adjacent property in excess of ten degrees Fahrenheit, whether the change is in the air, on the ground, or in a structure.

(Ord. 4011, passed - -2007)

§ 83.01.080 Noise.

This Section establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.

(a) *Noise Measurement.* Noise shall be measured:

(1) At the property line of the nearest site that is occupied by, and/or zoned or designated to allow the development of noise-sensitive land uses;

(2) With a sound level meter that meets the standards of the American National Standards Institute (ANSI § SI4 1979, Type 1 or Type 2);

(3) Using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A).

(b) *Noise Impacted Areas.* Areas within the County shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-

sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.

(c) *Noise Standards for Stationary Noise Sources.*

(1) *Noise Standards.* Table 83-2 (Noise Standards for Stationary Noise Sources) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

Table 83-2		
Noise Standards for Stationary Noise Sources		
Affected Land Uses (Receiving Noise)	***7:00 a.m. - 10:00 p.m. Leq***	***10:00 p.m. - 7:00 a.m. Leq***
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)
Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.		
dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.		
Ldn = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10:00 p.m. to 7:00 a.m.). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.		

(2) *Noise Limit Categories.* No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

(A) The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour. L50

(B) The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour. L25

(C) The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour. L8

(D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any L1

hour.

(E) The noise standard plus 20 dB(A) for any period of time. Lmax

(d) *Noise Standards for Adjacent Mobile Noise Sources.* Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 (Noise Standards for Adjacent Mobile Noise Sources).

Table 83-3			
Noise Standards for Adjacent Mobile Noise Sources			
Land Use		***Ldn (or CNEL) dB(A)***	
Categories	***Uses***	***Interior*** (1)	***Exterior*** (2)
Residential	Single and multi-family, duplex, mobile homes	45	60(3)
Commercial	Hotel, motel, transient housing	45	60(3)
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65
Notes:			
(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.			
(2) The outdoor environment shall be limited to: · Hospital/office building patios · Hotel and motel recreation areas · Mobile home parks · Multi-family private patios or balconies · Park picnic areas · Private yard of single-family dwellings · School playgrounds			
(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.			

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

(e) *Increases in Allowable Noise Levels.* If the measured ambient level exceeds any of the first four noise limit categories in Subdivision (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subdivision (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(f) *Reductions in Allowable Noise Levels.* If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by five dB(A).

(g) *Exempt Noise.* The following sources of noise shall be exempt from the regulations of this Section:

(1) Motor vehicles not under the control of the commercial or industrial use.

(2) Emergency equipment, vehicles, and devices.

(3) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

(h) *Noise Standards for Other Structures.* All other structures shall be sound attenuated against the combined input of all present and projected exterior noise to not exceed the criteria.

Table 83-4	
Noise Standards for Other Structures	
Typical Uses	***12-Hour Equivalent Sound Level (Interior) in dBA Ldn***
Educational, institutions, libraries, meeting facilities, etc.	45
General office, reception, etc.	50
Retail stores, restaurants, etc.	55
Other areas for manufacturing, assembly, testing, warehousing, etc.	65

In addition, the average of the maximum levels on the loudest of intrusive sounds occurring during a 24-hour period shall not exceed 65 dBA interior.

(Ord. 4011, passed - -2007; Am. Ord. 4245, passed - -2014)

§ 83.01.090 Vibration.

(a) *Vibration Standard.* No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths inches per second measured at or beyond the lot line.

(b) *Vibration Measurement.* Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings shall be made at points of maximum vibration along any lot line next to a parcel within a residential, commercial and industrial land use zoning district.

(c) *Exempt Vibrations.* The following sources of vibration shall be exempt from the regulations of this Section.

(1) Motor vehicles not under the control of the subject use.

(2) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

(Ord. 4011, passed - -2007)

§ 83.01.100 Waste Disposal.

(a) *Liquid Waste Disposal and Runoff Control.* No liquids of any kind shall be discharged into a public or private sewage or drainage system, watercourse, body of water, or into the ground, except in compliance with applicable regulations of the County Code, Title 23 (Waters) of the California Code of Regulations, the California Water Code, and related Federal regulations.

(b) *Hazardous Waste.* Refer to Chapter 84.11 (Hazardous Waste Facilities) for regulations relative to hazardous waste facilities.

(c) *Solid Waste Disposal.* Refer to Chapter 84.24 (Solid Waste/Recyclable Materials Storage) for regulations relative to solid waste disposal.

(Ord. 4011, passed - -2007)

§ 83.01.110 External Commercial or Industrial Activity on Private Property.

There shall be no unpermitted external or industrial activity on properties subject to the County's jurisdiction between the hours of 9:00 p.m. and 7:00 a.m. that shall at any time impair the quiet enjoyment of neighboring property owners or residents or in any manner disturb the public peace.

(Ord. 4245, passed - -2014)

14. LIGHTING

Exterior lighting shall be energy-efficient and shielded or recessed so that direct glare and reflections are contained within the boundaries of the parcel, and shall be directed downward and away from adjoining properties and public rights-of-way. No lighting shall blink, flash, or be of unusually high intensity or brightness. All lighting fixtures shall be appropriate in scale, intensity, and height to the use it is serving. Security lighting shall be provided at all entrances/exits.

15. NOISE

No loudspeaker, bells, gongs, buzzers, mechanical equipment or other sounds, attention-attracting, or communication device associated with any use shall be discernible beyond any boundary line of the parcel, except fire protection devices, burglar alarms and church bells. The following provisions shall apply:

A. In residential areas, no exterior noise level shall exceed 65dBA and no interior noise level shall exceed 45dBA.

B. All residential developments shall incorporate the following standards to mitigate noise levels:

1. Increase the distance between the noise source and receiver.

2. Locate land uses not sensitive to noise (i.e., parking lots, garages, maintenance facilities, utility areas, etc.) between the noise source and the receiver.

3. Bedrooms should be located on the side of the structure away from major rights-of-way.

4. Quiet outdoor spaces may be provided next to a noisy right-of-way by creating a U-shaped development which faces away from the right-of-way.

C. The minimum acceptable surface weight for a noise barrier is four pounds per square foot (equivalent to ¾-inch plywood). The barrier shall be of a continuous material which is resistant to sound including:

1. Masonry block

2. Precast concrete

3. Earth berm or a combination of earth berm with block concrete.

D. Noise barriers shall interrupt the line-of-sight between noise source and receiver.

16. ODOR

No use shall emit any obnoxious odor or fumes.

17. PROJECTIONS/CONSTRUCTION AND EQUIPMENT PERMITTED INTO SETBACKS

The following list represents the only projections, construction, or equipment that shall be permitted within the required setbacks:

A. Front Setback: Roof overhangs, fireplace chimney, awnings & canopies

B. Rear Setback: Roof overhangs, pools, patio covers, tennis courts, gazebos, and awnings & canopies, provided there is no projection within 10 feet of the property line. Accessory structures may be built to the interior side or rear property lines provided that such structures are not closer than 10 feet to any other structures.

(Ord. MC-876, 6-09-93)

C. Side Setback: Roof overhangs, fireplace chimney, awnings & canopies

Building Code requirements may further restrict the distance required to be maintained from the property lines and other structures.

28. VIBRATION

No vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property.

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors					
filename: EQUIPLST.xls					
revised: 7/26/05		Acoustical	Spec 721.560	Actual Measured	No. of Actual
	Impact	Use Factor	Lmax @ 50ft	Lmax @ 50ft	Data Samples
Equipment Description	Device ?	(%)	(dBA, slow)	(dBA, slow)	(Count)
				(samples averaged)	
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5

3.5.1 Barrier Design Goals and Insertion Loss.

The first step in barrier design is to establish the design goals. Design goals may not be limited simply to noise reduction at receivers, but may also include other considerations of safety and maintenance as well. These other considerations are discussed later in Sections 4 through 13.

In this section, the acoustical design goals of noise reduction will be discussed. Acoustical design goals are usually referred to in terms of barrier *Insertion Loss* (IL). IL is defined as the sound level at a given receiver before the construction of a barrier minus the sound level at the same receiver after the construction of the barrier. The construction of a noise barrier usually results in a partial loss of soft-ground attenuation. This is due to the barrier forcing the sound to take a higher path relative to the ground plane. Therefore, barrier IL is the net effect of barrier diffraction, combined with this partial loss of soft-ground attenuation.

Typically, a 5-dB(A) IL can be expected for receivers whose line-of-sight to the roadway is just blocked by the barrier. A general rule-of-thumb is that each additional 1 m of barrier height above line-of-sight blockage will provide about 1.5 dB(A) of additional attenuation (see Figure 13).

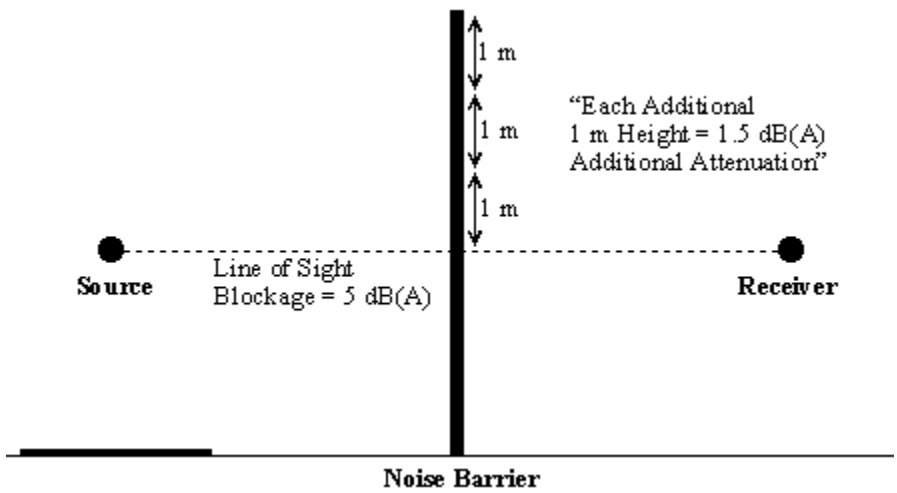

Figure 13. Line-of-sight

Properly-designed noise barriers should attain an IL approaching 10 dB(A), which is equivalent to a perceived halving in loudness for the first row of homes directly behind the barrier. For those residents not directly behind the barrier, a noise reduction of 3 to 5 dB(A) can typically be provided, which is just slightly perceptible to the human ear. Table 4 shows the relationship between barrier IL and design feasibility.

Table 4. Relationship between barrier insertion loss and design feasibility.

Barrier Insertion Loss	Design Feasibility	Reduction in Sound Energy	Relative Reduction in Loudness
5 dB(A)	Simple	68%	Readily perceptible
10 dB(A)	Attainable	90%	Half as loud
15 dB(A)	Very difficult	97%	One-third as loud
20 dB(A)	Nearly impossible	99%	One-fourth as loud

Source: Excerpt from the Federal Highway Administration's *Noise Barrier Design Handbook* (http://www.fhwa.dot.gov/environment/noise/noise_barriers/design_construction/design/design00.cfm)

Relationship Between Indoor and Outdoor Levels

The contribution of outdoor noise to indoor noise levels is usually small. That pan of a sound level within a building caused by an outdoor source obviously depends on the source's intensity and the sound level reduction afforded by the building. Although the sound level reduction provided by different buildings differs greatly, dwellings can be categorized into two broad classes-- those built in warm climates and those built in cold climates. Further, the sound level reduction of a building is largely determined by whether its windows are open or closed. Table II shows typical sound level reductions for these categories of buildings and window conditions, as well as an approximate national average sound level reduction.

Table II
Typical Sound Level Reductions of Buildings

	Windows Opened	**Windows Closed**
Warm Climate	12dB	24dB
Cold Climate	17dB	27dB
Approximate National Average	15dB	25dB

Sample measurements of outdoor and indoor noise levels during 24-hour periods are depicted in Figure 7. Despite the sound level reduction of buildings, indoor levels are often comparable to or higher than levels measured outside. Thus, indoor levels often are influenced primarily by internal noise sources such as appliances, radio and television, heating and ventilating equipment, and people. However, many outdoor noises may still annoy people in their homes more than indoor noises do. Indeed, people sometimes turn on indoor sources to mask the noise coming from outdoors.

An example of the range of hourly sound levels measured inside living areas in plotted for each hour of the day in Figure 8. The figure shows the median levels and the range of levels observed for 80% of the data. During late night hours the typical hourly sound level was approximately 36 dB. This level was probably dominated by outdoor noise. However, during the day, the hourly average levels ranged from about 40 to 70 dB, indicating the wide range of activities in which people engage.

INDIVIDUAL NOISE EXPOSURE PATTERNS

During a 24-hour period, people are exposed to a wide range of noises, including noise at home, work, school, places of recreation, shopping establishments, and while enroute to these or other. locations. Clearly, no single exposure pattern can be typical of all people, or even of those people who follow a common life style. Figure 9 shows hypothetical exposure patterns for broad classes of people. From these levels and some assumptions about the hours spent at different daytime activities, 24-hour average sound levels can be estimated for factory and office workers, housewives, and preschool and school-age children. Estimates based on these assumptions are found in Table III.

Industrial Noise Sources - Inputs

			Sound Pressure Level (dBA)					
Facility	**Sources**	**Height (m)**	**Dist. (ft)**	**L_{max}**	**$L_{1.7}$**	**$L_{8.3}$**	**L_{25}**	**L_{50}**
Rock Crushing Plant - Plant Area	Agg Plant Two Loaders Dumping Trucks Loading Trucks	5	150	86.0	85.0	82.0	79.0	78.0
Rock Crushing Plant - Pit Area	Agg Plant Two Loaders Dumping Trucks Loading Trucks	5	150	86.0	85.0	82.0	79.0	78.0
Asphalt Plant	Asphalt Plant Asphalt Trucks	5	50	80.0	80.0	80.0	80.0	80.0
RMC Plant	RMC Plant Concrete Trucks	5	100	85.0	84.5	83.5	81.0	81.0
Vac-Lite Plant	Vac-Lite Plant Trucks	5	100	85.0	84.5	83.5	81.0	81.0

			Sound Pressure Level @ 50' (dBA)					Sound Power Level (dBA)				
Facility	**Sources**	**Height (m)**	**L_{max}**	**$L_{1.7}$**	**$L_{8.3}$**	**L_{25}**	**L_{50}**	**L_{max}**	**$L_{1.7}$**	**$L_{8.3}$**	**L_{25}**	**L_{50}**
Rock Crushing Plant - Plant Area	Agg Plant Two Loaders Dumping Trucks Loading Trucks	5	95.5	94.5	91.5	88.5	87.5	127.3	126.3	123.3	120.3	119.3
Rock Crushing Plant - Pit Area	Agg Plant Two Loaders Dumping Trucks Loading Trucks	5	95.5	94.5	91.5	88.5	87.5	127.3	126.3	123.3	120.3	119.3
Asphalt Plant	Asphalt Plant Asphalt Trucks	5	80.0	80.0	80.0	80.0	80.0	111.8	111.8	111.8	111.8	111.8
RMC Plant	RMC Plant Concrete Trucks	5	86.0	86.0	86.0	86.0	86.0	117.8	117.8	117.8	117.8	117.8
Vac-Lite Plant	Vac-Lite Plant Trucks	5	91.0	90.5	89.5	87.0	87.0	122.8	122.3	121.3	118.8	118.8

Day/Night Activity

Source	Day	Night
Pit Plant	x	
Plant Agg Plant	x	x
RMC	x	x
HMA	x	x
Vac-Lite	x	x

Source Data from Robertson Ready Mix EIR (7/2000). The most conservative (i.e. highest) measurement used for each source, except for the RMC plant which is an average of the measurements because one measurement was made while concrete trucks were reving their engines. The Vac-Lite Plant is assumed to have a sound pressure level equal to the RMC plant.
Sound Power Level determined using SoundPLAN Essential 1.0.

previous noise studies for unrelated projects. The following paragraphs detail the results of the noise measurements.

1.3.2.1 Rock Crushing Noise

Noise levels from rock crushing activities were measured at Ewles Construction Materials on Construction Circle in the City of Irvine. The operations that were observed during the measurements were as follows. During the measurements, trucks arrived at the facility and dumped large chunks of concrete and asphalt into a pile. A loader fed the large chunks into the crusher. The large chunks were broken into aggregate by the crusher, which then dumped the aggregate into a pile via conveyor belts. Another loader dumped the aggregate into waiting dump trucks. The crushing activity appeared to be running at maximum capacity, as the above-described activity was constant. Table 3 shows the noise levels collected during two measurements. Each measurement lasted five minutes. The measurements were collected at an average distance of 150 feet from the activity.

Table 3
Noise Measurement Data - Rock Crushing Activities (dBA)

Includes trucks, 2x loader

	Lmax	L1.7	L8.3	L25	L50
Measurement 1	86	85	82	79	78
Measurement 2	84	83	81	80	79

The noise measurement data indicates a consistency over time. The maximum noise levels are generated by either by the trucks delivering the large chunks of material to be recycled (as in Measurement 1) or by loaders dumping the aggregate into the dump trucks to be hauled away (as in Measurement 2). The L50 levels are generated by a combination of the loaders and the crusher.

1.3.2.2 Asphalt Batch Plant Noise

Noise levels from asphalt batch plant activities were measured at All American Asphalt on Jeffrey Road in the County of Orange. The operations that were observed during the measurements were as follows. During the measurements, trucks arrived at the facility to be

Includes Concrete trucks

Table 5
Noise Measurement Data - Concrete Batch Plant (dBA)

	Lmax	L1.7	L8.3	L25	L50	Conditions
Measurement 5	80	79	78	78	78	No Trucks Loading
Measurement 6	90	90	89	84	84	With Trucks Loading

The data indicates that noise during Measurement 6 was louder than Measurement 5. Trucks revving their engines during loading generate the difference in noise levels. The maximum noise level during measurement 1 is from airbursts from the machinery. The maximum noise during Measurement 2 is from the concrete trucks.

1.3.2.4 Truck Noise at the Robertson Plant in the City of Pasadena

Noise measurements were made of a number of truck associated operations at the Robertson Ready Mix facility in the City of Pasadena. Measurements were conducted on Monday, February 27th, 1995, of material on-loading and off-loading to and from heavy trucks on the plant property. Measurements were typically taken at a distance of ten feet from the noise source. The truck noise measurements were made with a Brüel & Kjær Model 2231 Noise Level Analyzer calibrated with a Brüel & Kjær Model 4230 Sound Level Calibrator.

1.3.2.4.1 Material Off-Loading

The results of some of the truck noise measurements are shown in Table 6. The measurement results are presented in terms the peak noise level (Lmax) for the various measured off-loading operations. Noise levels were measured from off-loading operations at the Robertson Ready Mix plant in the City of Pasadena. Table 6 shows measurement data from the off-load location. At this location, trucks unload raw materials. The materials drop through a trap door in the bottom of the truck and then fall through a grate into a large funnel shaped bin that deposits the material onto a conveyor belt. The measurements were of the trap doors on the truck trailer opening and closing and of the material falling through the grate and hitting the bin. It is assumed for the sake of this study that these measured noise levels would be comparable to the noise generated by off-loading from rail cars at the proposed Robertson Ready Mix facility in the County of Los Angeles. Noise levels at a distance of 10 feet are almost 100 decibels for

ATTACHMENT E

Project Noise Impacts & Significance Determination

Initial Site Preparation/Berm Construction

San Bernardino County/City Significance Determination @ Receptors

Initial Site Preparation/Berm Construction (San Bernardino County: Hourly Noise Level Performance Standards - Locally - Regulated Sources)													
Receptor	Receptor Type	Daytime (7:00 a.m. - 10:00 p.m.)						Nighttime (10:00 p.m. - 7:00 a.m.)					
		L_{eq} (dBA)			L_{max} (dBA)			L_{eq} (dBA)			L_{max} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R1	Commercial	37.9	63.7	No	41.9	83.9	No	37.9	58.5	No	41.9	79.9	No
R2	Industrial	47.0	73.2	No	51.0	90.0	No	47.0	58.5	No	51.0	79.9	No
R3	Industrial	52.3	58.4	No	56.3	75	No	52.3	58.2	No	56.3	65	No
R4	Residential	62.3	62.0	**Yes**	66.3	75	No	62.3	62.7	No	66.3	79.8	No
R5	Residential	63.4	60.5	**Yes**	67.4	75	No	63.4	55.4	**Yes**	67.4	65	**Yes**
R6	Residential	63.4	55	**Yes**	67.4	75	No	63.4	53.3	**Yes**	67.4	65	**Yes**
R7	Residential	63.4	55	**Yes**	67.4	75	No	63.4	51.0	**Yes**	67.4	65	**Yes**
R8	Residential	63.6	55	**Yes**	67.6	75	No	63.6	55.5	**Yes**	67.6	78.7	No
R9	Residential	66.2	60.0	**Yes**	70.2	75	No	66.2	62.0	**Yes**	70.2	88.1	No
R10	Residential	64.4	70.1	No	68.4	82.0	No	64.4	63.6	**Yes**	68.4	100.7	No
R11	Residential	60.5	55	**Yes**	64.4	75	No	60.5	57.7	**Yes**	64.4	85.2	No
R12	Residential	58.6	55	**Yes**	62.5	75	No	58.6	53.9	**Yes**	62.5	71.9	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

Initial Site Preparation (San Bernardino County: Noise Standards for Adjacent Mobile Noise Sources)							
Receptor	Receptor Type	Exterior - L_{dn} (dBA)			Interior - L_{dn} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R1	Commercial	44.4	65	No	24.4	45	No
R2	Industrial	53.4	---	No	33.4	---	No
R3	Industrial	58.7	---	No	38.7	---	No
R4	Residential	68.8	72.7	No	48.8	52.7	No
R5	Residential	69.8	65.4	**Yes**	49.8	45	**Yes**
R6	Residential	69.8	63.3	**Yes**	49.8	45	**Yes**
R7	Residential	69.8	60	**Yes**	49.8	45	**Yes**
R8	Residential	70.1	60	**Yes**	50.1	45	**Yes**
R9	Residential	72.6	60	**Yes**	52.6	45	**Yes**
R10	Residential	70.8	60	**Yes**	50.8	45	**Yes**
R11	Residential	66.9	60	**Yes**	46.9	45	**Yes**
R12	Residential	65.0	60	**Yes**	45.0	45	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

FOOTNOTES:

A - Please see the source noise calculations for Initial Site Clearing/Ground Preparation presented in Attachment C. Values shown represents the noise level at each receptor resulting from the operation of Project noise sources (i.e., mining equipment/dozers/scrapers).

B - Significance thresholds shown represent appropriate San Bernardino County and City General Plan & Municipal Code noise thresholds (see Attachment B for more detail). Please note that per San Bernardino County Code Guidelines, if the existing ambient noise levels at receptors exceeded the applicable standards, then the noise level standards were increased by +3 dB increments to encompass the ambient. Please note, there are no L_{dn} significance thresholds for industrial receptors. See Attachment B for more details.

Initial Site Preparation/Berm Construction

FICON Noise Increase @ Receptors

FICON Change Criterion[A]	
Existing Ambient Noise Level	**Potential Significant Impact**
< 60 dBA	+5 dBA or more
60 - 65 dBA	+3 dBA or more
> 65 dBA	+1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON), 1992.

Initial Site Preparation/Berm Construction (Project-Related Noise Level Increases @ Receptors)								
Receptor	**Receptor Type**	**Ambient Daytime (L_{eq})**	**Predicted Project Noise @ Receptors (L_{eq})**	**Total Project Noise Level @ Receptors (L_{eq})**	**Total Noise Increase @ Receptor (dBA)[B]**	**FICON Significance Threshold[A]**	**Significant**	**Subjective Reaction to Noise Increase @ Receptor[C]**
R1	Commercial	60.7	37.9	60.8	0.0	+3	No	Imperceptible
R2	Industrial	70.2	47.0	70.2	0.0	+1.5	No	Imperceptible
R3	Industrial	55.4	52.3	57.2	1.7	+5	No	Imperceptible
R4	Residential	59.0	62.3	64.0	5.0	+5	No	Just Barely Perceptible
R5	Residential	57.5	63.4	64.4	6.9	+5	**Yes**	**Clearly Noticeable**
R6	Residential	53.6	63.4	63.8	10.2	+5	**Yes**	**About Twice as Loud**
R7	Residential	50.8	63.4	63.6	12.9	+5	**Yes**	**About Twice as Loud**
R8	Residential	51.2	63.6	63.9	12.7	+5	**Yes**	**About Twice as Loud**
R9	Residential	57.0	66.2	66.7	9.7	+5	**Yes**	**About Twice as Loud**
R10	Residential	67.1	64.4	69.0	1.9	+1.5	**Yes**	Imperceptible
R11	Residential	44.4	60.5	60.6	16.1	+5	**Yes**	**About Twice as Loud**
R12	Residential	52.1	58.6	59.4	7.3	+5	**Yes**	**Clearly Noticeable**

FOOTNOTES:

A - The Federal Interagency Commission on Noise (FICON) developed this graduated scale for use in the assessment of Project-related noise level increases. The rationale for this graduated scale is that test subject's reactions to increases in noise levels varied depending on the starting level (i.e., existing ambient noise level) of the noise. Specifically, with lower ambient noise environments (i.e., below 60 dBA), a larger increase in noise level (i.e., +5 dBA or more) is required to achieve a negative reaction than is necessary in more elevated noise environments.

B - Values shown represents the dBA increase in noise experienced at each receptor resulting from Project noise sources (i.e., mine equipment). Please note, the noise levels shown for Initial Site Clearing/Ground Preparation conservatively assumes that all mining equipment (i.e., dozers) would be operating at-grade in the area immediately adjacent to each receptor with no noise attenuation.

C - Subjective reaction shown based on test subjects' reaction to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source (i.e., mining equipment). 1 dBA change = "Imperceptible", 3 dBA change = "Just Barely Perceptible", 6 dBA change = "Clearly Noticeable", 10 dBA change = "About Twice as Loud". Please note, this subjective reaction shown is for informational purposes only, as the more conservative FICON change criterion is utilized to determine the significance of Project impacts. Source: *Architectural Acoustics* (M. David Egan, 1988).

Mining Operation/Aggregate Extraction (Minimum 10-Foot Berm Installed)

San Bernardino County/City Significance Determination @ Receptors

Mining Operation/Aggregate Extraction (San Bernardino County: Hourly Noise Level Performance Standards - Locally - Regulated Sources)													
Receptor	Receptor Type	Daytime (7:00 a.m. - 10:00 p.m.)						Nighttime (10:00 p.m. - 7:00 a.m.)					
		L_{eq} (dBA)			L_{max} (dBA)			L_{eq} (dBA)			L_{max} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R1	Commercial	41.5	63.7	No	45.4	83.9	No	41.5	58.5	No	45.4	79.9	No
R2	Industrial	50.6	73.2	No	54.5	90.0	No	50.6	58.5	No	54.5	79.9	No
R3	Industrial	55.8	58.4	No	59.8	75	No	55.8	58.2	No	59.8	65	No
R4	Residential	49.6	62.0	No	53.5	75	No	49.6	62.7	No	53.5	79.8	No
R5	Residential	50.6	60.5	No	54.6	75	No	50.6	55.4	No	54.6	65	No
R6	Residential	50.6	55	No	54.6	75	No	50.6	53.3	No	54.6	65	No
R7	Residential	50.6	55	No	54.6	75	No	50.6	51.0	**Yes**	54.6	65	No
R8	Residential	50.9	55	No	54.8	75	No	50.9	55.5	No	54.8	78.7	No
R9	Residential	53.2	60.0	No	57.2	75	No	53.2	62.0	No	57.2	88.1	No
R10	Residential	51.5	70.1	No	55.5	82.0	No	51.5	63.6	No	55.5	100.7	No
R11	Residential	47.8	55	No	51.8	75	No	47.8	57.7	No	51.8	85.2	No
R12	Residential	46.0	55	No	50.0	75	No	46.0	53.9	No	50.0	71.9	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

Mining Operation (San Bernardino County: Noise Standards for Adjacent Mobile Noise Sources)							
Receptor	Receptor Type	Exterior - L_{dn} (dBA)			Interior - L_{dn} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R1	Commercial	47.9	65	No	27.9	45	No
R2	Industrial	57.0	---	No	37.0	---	No
R3	Industrial	62.2	---	No	42.2	---	No
R4	Residential	56.0	72.7	No	36.0	52.7	No
R5	Residential	57.0	65.4	No	37.0	45	No
R6	Residential	57.0	63.3	No	37.0	45	No
R7	Residential	57.0	60	No	37.0	45	No
R8	Residential	57.3	60	No	37.3	45	No
R9	Residential	59.7	60	No	39.7	45	No
R10	Residential	57.9	60	No	37.9	45	No
R11	Residential	54.2	60	No	34.2	45	No
R12	Residential	52.4	60	No	32.4	45	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

FOOTNOTES:

A - Please see the source noise calculations for Normal Mining Operations/Extraction of Aggregate presented in Attachment C. Values shown represents the noise level at each receptor resulting from the operation of Project noise sources (i.e., mining equipment) during normal mining operations/aggregate extraction. Please note, once normal mining operations commence, the minimum 10-foot vegetated earthen berm will have been installed along the southern boundary of the Project site.

B - Significance thresholds shown represent appropriate San Bernardino County and City General Plan & Municipal Code noise thresholds (see Attachment B for more detail). Please note that per San Bernardino County Code Guidelines, if the existing ambient noise levels at receptors exceeded the applicable standards, then the noise level standards were increased by +3 dB increments to encompass the ambient. Please note, there are no L_{dn} significance thresholds for industrial receptors. See Attachment B for more details.

Mining Operation/Aggregate Extraction (Minimum 10-Foot Berm Installed)

FICON Noise Increase @ Receptors

FICON Change Criterion[A]	
Existing Ambient Noise Level	**Potential Significant Impact**
< 60 dBA	+5 dBA or more
60 - 65 dBA	+3 dBA or more
> 65 dBA	+1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON), 1992.

Mining Operations/Excavation of Aggregate (Project-Related Noise Level Increases @ Receptors)

Receptor	Receptor Type	Ambient Daytime (L_{eq})	Predicted Project Noise @ Receptors (L_{eq})	Total Project Noise Level @ Receptors (L_{eq})	Total Noise Increase @ Receptor (dBA)[B]	FICON Significance Threshold[A]	Significant	Subjective Reaction to Noise Increase @ Receptor[C]
R1	Commercial	60.7	41.5	60.8	0.1	+3 dBA	No	Imperceptible
R2	Industrial	70.2	50.6	70.2	0.0	+1.5 dBA	No	Imperceptible
R3	Industrial	55.4	55.8	58.6	3.2	+5 dBA	No	Just Barely Perceptible
R4	Residential	59.0	49.6	59.5	0.5	+5 dBA	No	Imperceptible
R5	Residential	57.5	50.6	58.3	0.8	+5 dBA	No	Imperceptible
R6	Residential	53.6	50.6	55.4	1.8	+5 dBA	No	Imperceptible
R7	Residential	50.8	50.6	53.7	2.9	+5 dBA	No	Just Barely Perceptible
R8	Residential	51.2	50.9	54.0	2.9	+5 dBA	No	Just Barely Perceptible
R9	Residential	57.0	53.2	58.5	1.5	+5 dBA	No	Imperceptible
R10	Residential	67.1	51.5	67.2	0.1	+1.5 dBA	No	Imperceptible
R11	Residential	44.4	47.8	49.4	5.0	+5 dBA	No	Just Barely Perceptible
R12	Residential	52.1	46.0	53.0	0.9	+5 dBA	No	Imperceptible

FOOTNOTES:

A - The Federal Interagency Commission on Noise (FICON) developed this graduated scale for use in the assessment of Project-related noise level increases. The rationale for this graduated scale is that test subject's reactions to increases in noise levels varied depending on the starting level (i.e., existing ambient noise level) of the noise. Specifically, with lower ambient noise environments (i.e., below 60 dBA), a larger increase in noise level (i.e., +5 dBA or more) is required to achieve a negative reaction than is necessary in more elevated noise environments.

B - Values shown represents the dBA increase in noise experienced at each receptor resulting from Project noise sources (i.e., mine equipment). Please note, the noise levels shown for Initial Ground Preparation/Berm Construction conservatively assumes that all mining equipment (i.e., dozers, graders, loaders) would be operating at-grade in the area immediately adjacent to each receptor with no noise attenuation. However, it is important to note that the minimum 10-foot vegetated earthen berm would be installed prior to normal mining operations beginning.

C - Subjective reaction shown based on test subjects' reaction to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source (i.e., mining equipment). 1 dBA change = "Imperceptible", 3 dBA change = "Just Barely Perceptible", 6 dBA change = "Clearly Noticeable", 10 dBA change = "About Twice as Loud". Please note, this subjective reaction shown is for informational purposes only, as the more conservative FICON change criterion is utilized to determine the significance of Project impacts. Source: *Architectural Acoustics* (M. David Egan, 1988).

Initial Site Preparation/Berm Construction Impacts (With 10-Foot Berm Installed)

San Bernardino County/City Significance Determination @ Receptors

Noise Attenuation Due to Minimum 10-Foot Vegetated Earthen Berm @ Impacted Receptors									
Noise Parameter	Noise Attenuation/Reduction Due to 10-Foot Earthen Berm (dBA)								
	R4	R5	R6	R7	R8	R9	R10	R11	R12
Exterior L_{eq}	-16.3	-16.3	-16.3	-16.3	-16.3	-16.5	-16.4	-16.2	-16.1

Note: A noise reduction is applied to predicted exterior source noise levels at each residential receptor (i.e., R4 through R12) to account for the natural noise attenuation provided by the minimum 10-foot vegetated earthen berm that will be installed along the Project site's southern boundary during Initial Site Preparation/berm construction phase (i.e., first 3 months of Project). See the berm insertion loss calculations presented in Attachment F for more detail. Please note, the minimum 10-foot vegetated earthen berm is estimated to provide an approximately -16.1 dBA's to -16.5 dBA's of additional noise attenuation along the residential receptors.

Initial Site Preparation Impacts (San Bernardino County: Hourly Noise Level Performance Standards - Locally - Regulated Sources)										
Receptor	Receptor Type	Daytime (7:00 a.m. - 10:00 p.m.)			Nighttime (10:00 p.m. - 7:00 a.m.)					
		L_{eq} (dBA)			L_{eq} (dBA)			L_{max} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R4	Residential	46.0	62.0	No	46.0	62.7	No	50.0	79.8	No
R5	Residential	47.1	60.5	No	47.1	55.4	No	51.1	65	No
R6	Residential	47.1	55	No	47.1	53.3	No	51.1	65	No
R7	Residential	47.1	55	No	47.1	51.0	No	51.1	65	No
R8	Residential	47.3	55	No	47.3	55.5	No	51.3	78.7	No
R9	Residential	49.7	60.0	No	49.7	62.0	No	53.7	88.1	No
R10	Residential	48.0	70.1	No	48.0	63.6	No	52.0	100.7	No
R11	Residential	44.3	55	No	44.3	57.7	No	48.2	85.2	No
R12	Residential	42.5	55	No	42.5	53.9	No	46.4	71.9	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

Initial Site Preparation Impacts (San Bernardino County: Noise Standards for Adjacent Mobile Noise Sources)							
Receptor	Receptor Type	Exterior - L_{dn} (dBA)			Interior - L_{dn} (dBA)		
		Project[A]	Threshold[B]	Significant?	Project[A]	Threshold[B]	Significant?
R4	Residential	52.5	72.7	No	32.5	52.7	No
R5	Residential	53.5	65.4	No	33.5	45	No
R6	Residential	53.5	63.3	No	33.5	45	No
R7	Residential	53.5	60	No	33.5	45	No
R8	Residential	53.8	60	No	33.8	45	No
R9	Residential	56.1	60	No	36.1	45	No
R10	Residential	54.4	60	No	34.4	45	No
R11	Residential	50.7	60	No	30.7	45	No
R12	Residential	48.9	60	No	28.9	45	No

Note: Values shown in **bold** represent an exceedance of the applicable San Bernardino County and City significance threshold. Daytime = 7:00 a.m. - 10:00 p.m., Nighttime = 10:00 p.m. - 7:00 a.m.

FOOTNOTES:

A - Please see the source noise calculations for initial site preparation/berm construction calculations presented in Attachment C. Values shown represents the noise level at each receptor resulting from the operation of Project noise sources (i.e., mining equipment/dozers/scraper) with the minimum 10-foot vegetated earthen berm installed along the Project site southern boundary adjacent to the residential receptors. See Figure 5 and Figure 6 in Attachment A which displays the location of the proposed berm.

B - Significance thresholds shown represent appropriate San Bernardino County General Plan & County Code noise thresholds (see Attachment B for more detail). Please note that per San Bernardino County Code Guidelines, if the existing ambient noise levels at receptors exceeded the applicable standards, then the noise level standards were increased by +3 dB increments to encompass the ambient. See Attachment B for more details.

Initial Site Preparation/Berm Construction Impacts (With 10-Foot Berm Installed)

FICON Noise Increase @ Receptors

Noise Attenuation Due to Minimum 10-Foot Vegetated Earthen Berm @ Impacted Receptors									
Noise Parameter	Noise Attenuation/Reduction Due to 10-Foot Earthen Berm (dBA)								
	R4	R5	R6	R7	R8	R9	R10	R11	R12
Exterior L_{eq}	-16.3	-16.3	-16.3	-16.3	-16.3	-16.5	-16.4	-16.2	-16.1

Note: A noise reduction is applied to predicted exterior source noise levels at each residential receptor (i.e., R4 through R12) to account for the natural noise attenuation provided by the minimum 10-foot vegetated earthen berm that will be installed along the Project site's southern boundary during initial ground preparation/berm construction operations. See the berm insertion loss calculations presented in Attachment F for more detail. Please note, the minimum 10-foot vegetated earthen berm is estimated to provide an approximately -16.1 dBA's to -16.5 dBA's of additional noise attenuation along the residential receptors.

FICON Change Criterion	
Existing Ambient Noise Level	Potential Significant Impact
< 60 dBA	+5 dBA or more
60 - 65 dBA	+3 dBA or more
> 65 dBA	+1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON), 1992.

Initial Site Preparation (w/ Minimum 10-foot berm installed) - Project-Related Noise Level Increases @ Receptors								
Receptor	Receptor Type	Ambient Daytime (L_{eq})	Predicted Project Noise @ Receptors (L_{eq})	Total Project Noise Level @ Receptors (L_{eq})	Total Noise Increase @ Receptor (dBA)	FICON Significance Threshold	Significant	Subjective Reaction to Noise Increase @ Receptor
R5	Residential	57.5	47.1	57.9	0.4	+5	No	Imperceptible
R6	Residential	53.6	47.1	54.5	0.9	+5	No	Imperceptible
R7	Residential	50.8	47.1	52.3	1.6	+5	No	Imperceptible
R8	Residential	51.2	47.3	52.7	1.5	+5	No	Imperceptible
R9	Residential	57.0	49.7	57.7	0.8	+5	No	Imperceptible
R10	Residential	67.1	48.0	67.2	0.1	+1.5	No	Imperceptible
R11	Residential	44.4	44.3	47.4	2.9	+5	No	Just Barely Perceptible
R12	Residential	52.1	42.5	52.5	0.4	+5	No	Imperceptible

FOOTNOTES:

A - The federal Interagency Commission on Noise (FICON) developed this graduated scale for use in the assessment of Project-related noise level increases. The rationale for this graduated scale is that test subject's reactions to increases in noise levels varied depending on the starting level (i.e., existing ambient noise level) of the noise. Specifically, with lower ambient noise environments (i.e., below 60 dBA), a larger increase in noise level (i.e., +5 dBA or more) is required to achieve a negative reaction than is necessary in more elevated noise environments.

B - Values shown represents the dBA increase in noise experienced at each receptor resulting from Project noise sources (i.e., mine equipment). Please note, the noise levels shown for Initial Ground Preparation/Berm Construction conservatively assumes that all mining equipment (i.e., dozers/scraper) would be operating at-grade in the area immediately adjacent to each receptor with no noise attenuation. Please note, that the mitigated noise levels shown above assume the minimum 10-foot vegetated earthen mitigation berm is installed.

C - Subjective reaction shown based on test subjects' reaction to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source (i.e., mining equipment). 1 dBA change = "Imperceptible", 3 dBA change = "Just Barely Perceptible", 6 dBA change = "Clearly Noticeable", 10 dBA change = "About Twice as Loud". Please note, this subjective reaction shown is for informational purposes only, as the more conservative FICON change criterion is utilized to determine the significance of Project impacts. Source: *Architectural Acoustics* (M. David Egan, 1988).

ATTACHMENT F

Predicted Noise Attenuation due to Barrier/Berm Insertion Loss

Berm Insertion Loss Calculations @ R4

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 4 (R4)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	430.01	feet	(total distance between mining equipment and R4)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	380.03	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R4)
f -	2,000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R4

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	380.04	430.01	1.22	15.9
9	50.65	380.05	430.01	1.25	16.0
10	**50.68**	**380.07**	**430.01**	**1.33**	**16.3**
11	50.72	380.08	430.01	1.44	16.6
12	50.79	380.10	430.01	1.60	17.1
13	50.88	380.12	430.01	1.80	17.6
14	50.99	380.14	430.01	2.03	18.1
15	51.12	380.16	430.01	2.31	18.6

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R4), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R5, R6 and R7

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptors 5, 6 and 7 (R5, R6 and R7)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	380.01	feet	(total distance between mining equipment and R5, R6 and R7)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	330.04	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R5, R6 and R7)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R5, R6 and R7

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	330.05	380.01	1.23	15.9
9	50.65	330.06	380.01	1.27	16.1
10	**50.68**	**330.08**	**380.01**	**1.34**	**16.3**
11	50.72	330.09	380.01	1.46	16.7
12	50.79	330.11	380.01	1.63	17.1
13	50.88	330.13	380.01	1.83	17.6
14	50.99	330.16	380.01	2.07	18.2
15	51.12	330.19	380.01	2.35	18.7

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R5, R6 and R7), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R8

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 8 (R8)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	370.01	feet	(total distance between mining equipment and R8)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	320.04	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R8)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R8

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	320.05	370.01	1.23	16.0
9	50.65	320.06	370.01	1.27	16.1
10	**50.68**	**320.08**	**370.01**	**1.35**	**16.3**
11	50.72	320.10	370.01	1.47	16.7
12	50.79	320.12	370.01	1.63	17.1
13	50.88	320.14	370.01	1.83	17.6
14	50.99	320.17	370.01	2.08	18.2
15	51.12	320.20	370.01	2.36	18.7

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R8), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R9

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 9 (R9)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	265.02	feet	(total distance between mining equipment and R9)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	215.06	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R9)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R9

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	215.08	265.02	1.27	16.1
9	50.65	215.10	265.02	1.32	16.2
10	**50.68**	**215.12**	**265.02**	**1.41**	**16.5**
11	50.72	215.14	265.02	1.54	16.9
12	50.79	215.17	265.02	1.72	17.4
13	50.88	215.21	265.02	1.95	17.9
14	50.99	215.25	265.02	2.22	18.5
15	51.12	215.29	265.02	2.53	19.0

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R9), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R10

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 10 (R10)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	339.01	feet	(total distance between mining equipment and R10)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	289.04	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R10)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R10

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	289.06	339.01	1.24	16.0
9	50.65	289.07	339.01	1.28	16.1
10	**50.68**	**289.09**	**339.01**	**1.36**	**16.4**
11	50.72	289.11	339.01	1.49	16.7
12	50.79	289.13	339.01	1.65	17.2
13	50.88	289.15	339.01	1.86	17.7
14	50.99	289.18	339.01	2.11	18.2
15	51.12	289.22	339.01	2.40	18.8

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R10), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R11

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 11 (R11)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	504.01	feet	(total distance between mining equipment and R11)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	454.03	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R11)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R11

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	454.04	504.01	1.21	15.9
9	50.65	454.05	504.01	1.24	16.0
10	**50.68**	**454.06**	**504.01**	**1.31**	**16.2**
11	50.72	454.07	504.01	1.42	16.6
12	50.79	454.08	504.01	1.58	17.0
13	50.88	454.10	504.01	1.77	17.5
14	50.99	454.12	504.01	2.00	18.0
15	51.12	454.14	504.01	2.27	18.5

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R11), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

Berm Insertion Loss Calculations @ R12

Berm Sound Barrier Noise Attenuation

Insertion Loss Calculations @ Receptor 12 (R12)

Insertion Loss (IL) Equation = 5dB + 20log((√2πN)/tanh(√2pN))dB

Source: Center for Transportation Research's *Design Guide for Highway Noise Barriers* (2003)

Caltrans *Technical Noise Supplement* offers the following guidance (Caltrans, 2013):
"Given the same site cross section, distance between source and receiver, and barrier height, a berm allows greater barrier attenuation than the thin screen (wedge), such as a soundwall. In general the actual extra attenuation associated with a berm is somewhere between -1 and -3 dBA."

Fresnel Number (N): $((a + b - l)f)/c_0$

Note: Fresnel number (N) is a nondimensional measure of how much farther the sound must travel as a result of the barrier.

l - The original length of the direct path from source to receiver (ft.)
a - Path length from barrier to source (ft.)
b - Path length from barrier to receiver (ft.)
f - Equipment sound frequency in hertz (Hz)
c_0 - Speed of sound propagation in air (approximately 1,100 ft./sec.)

Project Data[B]

l -	665.01	feet	(total distance between mining equipment and R12)
a -	50.64	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm and top of mining equipment)
b -	615.02	feet	(direct distance between the peak of the proposed minimum 10-ft. vegetated earthen berm along Area Q boundary and R12)
f -	2000	hertz	(2000 is appropriate for crushing/screening)

Sound Berm Attenuation @ R12

Barrier Height (ft.)	Top of Barrier to Source (a)	Top of Barrier to Receiver (b)	Source to Receiver (c)	Fresnel Number (N)	Estimated Insertion Loss (dB)[A]
8	50.64	615.03	665.01	1.19	15.8
9	50.65	615.03	665.01	1.22	15.9
10	**50.68**	**615.04**	**665.01**	**1.29**	**16.1**
11	50.72	615.05	665.01	1.40	16.5
12	50.79	615.06	665.01	1.54	16.9
13	50.88	615.07	665.01	1.72	17.4
14	50.99	615.09	665.01	1.94	17.9
15	51.12	615.10	665.01	2.20	18.4

FOOTNOTES:

Note - Mining equipment (e.g., graders, excavators, dozers, etc.) height is estimated to be 8-feet. Therefore, to ensure line-of-sight is broken between equipment and receiver (i.e., R12), the minimum sound berm height should be 8-feet.

A - Per Caltrans *Technical Noise Supplement* (2013) guidance referenced above, an additional -2 dB of noise attenuation is assumed due to barrier being constructed of "earthen berm" as opposed to a soundwall.

B - Transmission path data presented assumes that receiver (i.e., nearby resident) height is 5-feet above the ground and equipment height is 8-feet above the ground.

ATTACHMENT G

Quest DL SoundPro & Quest QC-10
Certificates of Compliance & Calibration

Certificate of Compliance and Calibration

edi engineering dynamics incorporated

Calibrated for:

Mr. Ben Seaman
Sespe Consulting, Inc.
374 Poli Street
Suite 200
Ventura, CA 93001

Client#S-100
EDI Job#CR5710-4 ID# 103

Manufacturer: Quest Technologies
Model Number: QC-10 Acoustic Calibrator
Serial No. : QIB070144
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

As-Received Pre-Calibration Values:

	ANSI S1.40, 2006 Lower Tolerance	Actual Value	ANSI S1.40, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB	113.6	113.8 dB	114.4	Yes
Acoustic Frequency, Hz	980.0	1,002 Hz	1020.0	Yes
AC Output Voltage	NA	1.000 Volts	NA	NA
AC Output Frequency	NA	1,002 Hz	NA	NA

Post-Calibration Values:

	ANSI S1.40, 2006 Lower Tolerance	Actual Value	ANSI S1.40, 2006 Upper Tolerance	Compliance
Acoustic Amplitude	113.6	114.0 dB	114.4	Yes
Acoustic Frequency	980.0	1,002 Hz	1020.0	Yes
AC Output Voltage	NA	1.000 Volts	NA	NA
AC Output Frequency	NA	1,002 Hz	NA	NA

Laboratory Conditions during Calibration

Atmospheric Pressure	838.5 hPa
Laboratory Air Temperature	24.1 Deg. C
Laboratory Air Humidity	30.1 %

Standards Used and Their Due Dates:

Measuring Amp	**B&K 2636**	**SN: 1943590**	**Trace# CAS-197354-L8M3P4-101**	**Due Date 02/14/2019**
Piston Phone	**B&K 4228**	**SN: 1747024**	**Trace # CAS-197365-Y3R3N6-602**	**Due Date 02/09/2019**
Calibrator	**B&K4231**	**SN: 1850369**	**Trace # CAS-197365-Y3R3N6-601**	**Due Date 02/09/2019**
Multimeter	**HP 34401A**	**SN: 3146A11478**	**Trace # 1-7761739074-1**	**Due Date 04/01/2018**

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Certificate of Compliance and Calibration

edi engineering dynamics incorporated

Calibrated for:
Mr. Ben Seaman
Sespe Consulting, Inc.
374 Poli Street
Suite 200
Ventura, CA 93001

Client#S-100
EDI Job#CR5710-1 ID# 103

Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

As-Received Pre-Calibration Values	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB at 1000 Hz	113.0 dB	114.5 dB	115.0 dB	Yes

Post-Calibration Values	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB at 1000 Hz	113.0 dB	114.0 dB	115.0 dB	Yes

Acoustical Parameter Check	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Fast Response	107.0 dB	108.9	110.0 dB	Yes
Slow Response	104.9 dB	105.9	106.9 dB	Yes
Crest Factor	109.5 dB	109.9	110.5 dB	Yes
Peak Response	112.5 dB	113.1	113.5 dB	Yes
Impulse	109.5 dB	110.0	110.5 dB	Yes

Linearity Check		dB Input Level at 1000 Hz				
	130.0 dB	120.0 dB	110.0 dB	100.0 dB	90.0 dB	80.0 dB
Linearity Tolerance ±0.4 dB	130.0	120.0	110.0	100.0	90.0	79.9
Compliance	Yes	Yes	Yes	Yes	Yes	Yes

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Electrical Linearity Check	dB Input Level at 1000 Hz				
	70.0 dB	60.0 dB	50.0 dB	40.0 dB	30.0 dB
Linearity Tolerance ±0.4 dB	70.0	60.0	50.0	40.0	30.1
Compliance	Yes	Yes	Yes	Yes	Yes

Range Check (at 1000 Hz)	100 dB Input Level				
	140 - 50 dB	130 - 40 dB	120 - 30 dB	110 -20 dB	100 - 10dB
Linearity Tolerance ±0.6 dB	100.0	100.0	100.0	100.0	100.0
Compliance	Yes	Yes	Yes	Yes	Yes

Range Check (at 1000 Hz)	70 dB Input Level		
	90- 0 dB	80 -10 dB	70 -20 dB
Linearity Tolerance ±0.6 dB	70.0	70.0	70.1
Compliance	Yes	Yes	Yes

Broadband Noise Floor Check	**Test Result (dB)**	Upper Limit (dB)	Compliance
A-weight Noise Floor	16.4dB	22.0dB	YES
C-weight Noise Floor	15.1dB	30.0dB	YES
Z-weight Noise Floor	17.8dB	35.0dB	YES
F-weight Noise Floor	19.4dB	40.0dB	YES

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Certificate of Compliance and Calibration

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

A-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	44.0	48.3	-56.7	+5/-∞	Yes
31.5	57.6	61.6	63.6	-39.4	± 3	Yes
63	71.8	74.1	75.8	-26.2	± 2	Yes
125	82.4	84.1	85.4	-16.1	± 1.5	Yes
250	89.9	91.5	92.9	-8.6	± 1.5	Yes
500	95.3	96.8	98.3	-3.2	± 1.5	Yes
1K REF.	98.5	100.0	101.5	0	± 1.5	Yes
2K	99.2	101.1	103.2	1.2	± 2	Yes
4K	98.0	100.4	104.0	1.0	± 3	Yes
8K	93.9	96.7	103.9	-1.1	± 5	Yes
16K	---	86.4	98.4	-6.6	+5/-∞	Yes

C-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	91.8	94.5	-8.5	+5/-∞	Yes
31.5	94.0	97.4	100.0	-3.0	± 3	Yes
63	97.2	99.3	101.2	-0.8	± 2	Yes
125	98.3	99.9	101.3	-0.2	± 1.5	Yes
250	98.5	100.0	101.5	0.0	± 1.5	Yes
500	98.5	100.0	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	97.8	99.5	101.8	-0.2	± 2	Yes
4K	96.2	98.5	102.2	-0.8	± 3	Yes
8K	92.0	94.8	102.0	-3.0	± 5	Yes
16K	---	84.3	96.5	-8.5	+5/-∞	Yes

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Z-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	98.6	105.0	-1.0	+5/-∞	Yes
31.5	97.0	99.8	103.0	0.0	± 3	Yes
63	98.0	99.9	102.0	0.0	± 2	Yes
125	98.5	100.0	101.5	0.0	± 1.5	Yes
250	98.5	100.0	101.5	0.0	± 1.5	Yes
500	98.5	100.0	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	98.0	99.6	102.0	0.0	± 2	Yes
4K	97.0	99.2	103.0	0.0	± 3	Yes
8K	95.0	98.3	105.0	0.0	± 5	Yes
16K	---	90.7	105.0	0.0	+5/-∞	Yes

F-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	99.9	105.0	-1.0	+5/-∞	Yes
31.5	97.0	100.1	103.0	0.0	± 3	Yes
63	98.0	100.0	102.0	0.0	± 2	Yes
125	98.5	100.0	101.5	0.0	± 1.5	Yes
250	98.5	100.0	101.5	0.0	± 1.5	Yes
500	98.5	100.0	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	98.0	99.7	102.0	0.0	± 2	Yes
4K	97.0	99.3	103.0	0.0	± 3	Yes
8K	95.0	98.9	105.0	0.0	± 5	Yes
16K	---	92.9	105.0	0.0	+5/-∞	Yes

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

OCTAVE BAND FILTER ROLL-OFF RESPONSE

Center Freq. Hz @ 110.0dB	Lower Band Limit	Limits dB 104.3/109.6	Upper Band Limit	Limits dB 104.3/109.6
12.5	11.2Hz	**106.1**	14.1Hz	**106.3**
16	14.1Hz	**106.1**	17.8Hz	**106.3**
20	17.8Hz	**106.5**	22.4Hz	**106.1**
25	22.4Hz	**106.5**	28.2Hz	**106.6**
31.5	28.2Hz	**106.3**	35.5Hz	**105.9**
40	35.5Hz	**106.5**	44.7Hz	**106.5**
50	44.7Hz	**106.8**	56.2Hz	**106.5**
63	56.2Hz	**106.7**	70.8Hz	**106.4**
80	70.8Hz	**106.5**	89.1Hz	**106.9**
100	89.1Hz	**106.5**	112.0Hz	**107.0**
125	112.0Hz	**106.3**	141.0Hz	**106.8**
160	141.0Hz	**106.5**	178.0Hz	**106.7**
200	178.0Hz	**106.9**	224.0Hz	**107.1**
250	224.0Hz	**106.9**	282.0Hz	**107.1**
315	282.0Hz	**106.7**	355.0Hz	**106.9**
400	355.0Hz	**106.5**	447.0Hz	**106.5**
500	447.0hZ	**106.8**	562.0Hz	**106.5**
630	562.0Hz	**106.4**	708.0Hz	**107.0**
800	708.0Hz	**106.1**	891.0Hz	**105.7**
1,000	891.0Hz	**106.6**	1,122.0KHz	**106.1**
1,250	1,122.0KHz	**106.5**	1,413.0KHz	**106.8**
1,600	1,413.0KHz	**106.5**	1,778.0KHz	**107.1**
2,000	1,778.0KHz	**106.4**	2,239.0KHz	**106.5**
2,500	2,239.0KHz	**106.8**	2,818.0KHz	**106.8**
3,150	2,818.0KHz	**106.5**	3,548.0KHz	**107.1**
4,000	3,548.0KHz	**106.4**	4,467.0KHz	**106.7**
5,000	4,467.0KHz	**106.5**	5,623.0KHz	**107.0**
6,300	5,623.0KHz	**106.3**	7,079.0KHz	**105.7**
8,000	7,079.0KHz	**106.9**	8,913.0KHz	**106.3**
10,000	8,913.0KHz	**106.5**	11,220.0KHz	**106.8**
12,500	11,220.0KHz	**106.3**	14,130.0KHz	**106.2**
16,000	14,130.0KHz	**106.3**	17,780.0KHz	**106.2**
20,000	17,780.0KHz	**106.2**	22,390.0KHz	**105.9**
Center Frequencies Meet ANSI Specifications			**Yes**	
Frequencies Roll-off Meet ANSI Specifications			**Yes**	

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2-1/3 Sound Level Meter
Serial No.: BIJ090010
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Laboratory Conditions during Calibration

Atmospheric Pressure	838.2 hPa
Laboratory Air Temperature	24.3 Deg. C
Laboratory Air Humidity	30.2 %

Standards Used and Their Due Dates:

Measuring Amp	**B&K 2636**	**SN: 1943590**	**Trace # CAS-197354-L8M3P4-101**	**Due Date 02/14/2019**
Piston Phone	**B&K 4228**	**SN: 1747024**	**Trace # CAS-197365-Y3R3N6-602**	**Due Date 02/09/2019**
Calibrator	**B&K4231**	**SN: 1850369**	**Trace # CAS-197365-Y3R3N6-601**	**Due Date 02/09/2019**
Multimeter	**HP 34401A**	**SN: 3146A11478**	**Trace # 1-7761739074-1**	**Due Date 04/01/2018**

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Calibrated for:

Mr. Ben Seaman
Sespe Consulting, Inc.
374 Poli Street
Suite 200
Ventura, CA 93001

Client#S-100
EDI Job#CR5710-2 ID# 103

Manufacturer: Quest Technologies
Model Number: QC-10 Acoustic Calibrator
Serial No. : QIJ090052
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

As-Received Pre-Calibration Values:

	ANSI S1.40, 2006 Lower Tolerance	Actual Value	ANSI S1.40, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB	113.6	113.9 dB	114.4	Yes
Acoustic Frequency, Hz	980.0	1,005 Hz	1020.0	Yes
AC Output Voltage	NA	1.001 Volts	NA	NA
AC Output Frequency	NA	1,005 Hz	NA	NA

Post-Calibration Values:

	ANSI S1.40, 2006 Lower Tolerance	Actual Value	ANSI S1.40, 2006 Upper Tolerance	Compliance
Acoustic Amplitude	113.6	114.0 dB	114.4	Yes
Acoustic Frequency	980.0	1,005 Hz	1020.0	Yes
AC Output Voltage	NA	1.001 Volts	NA	NA
AC Output Frequency	NA	1,005 Hz	NA	NA

Laboratory Conditions during Calibration

Atmospheric Pressure	838.6 hPa
Laboratory Air Temperature	24.2 Deg. C
Laboratory Air Humidity	29.9 %

Standards Used and Their Due Dates:

Measuring Amp	**B&K 2636**	**SN: 1943590**	**Trace# CAS-197354-L8M3P4-101**	**Due Date 02/14/2019**
Piston Phone	**B&K 4228**	**SN: 1747024**	**Trace # CAS-197365-Y3R3N6-602**	**Due Date 02/09/2019**
Calibrator	**B&K4231**	**SN: 1850369**	**Trace # CAS-197365-Y3R3N6-601**	**Due Date 02/09/2019**
Multimeter	**HP 34401A**	**SN: 3146A11478**	**Trace # 1-7761739074-1**	**Due Date 04/01/2018**

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Certificate of Compliance and Calibration

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Calibrated for:
Mr. Ben Seaman
Sespe Consulting, Inc.
374 Poli Street
Suite 200
Ventura, CA 93001

Client#S-100
EDI Job#CR5710-3 ID# 103

Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2 Sound Level Meter
Serial No.: BGI040008
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

As-Received Pre-Calibration Values	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB at 1000 Hz	113.0 dB	114.5 dB	115.0 dB	Yes

Post-Calibration Values	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Sound Pressure Level, dB at 1000 Hz	113.0 dB	114.0 dB	115.0 dB	Yes

Acoustical Parameter Check	ANSI S1.4, 2006 Lower Tolerance	Actual Value	ANSI S1.4, 2006 Upper Tolerance	Compliance
Fast Response	107.0 dB	108.9	110.0 dB	Yes
Slow Response	104.9 dB	105.8	106.9 dB	Yes
Crest Factor	109.5 dB	109.9	110.5 dB	Yes
Peak Response	112.5 dB	113.0	113.5 dB	Yes
Impulse	109.5 dB	110.0	110.5 dB	Yes

Linearity Check		dB Input Level at 1000 Hz				
	130.0 dB	120.0 dB	110.0 dB	100.0 dB	90.0 dB	80.0 dB
Linearity Tolerance ±0.4 dB	130.0	120.0	110.0	100.0	90.0	80.0
Compliance	Yes	Yes	Yes	Yes	Yes	Yes

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Certificate of Compliance and Calibration

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2 Sound Level Meter
Serial No.: BGI040008
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Electrical Linearity Check	dB Input Level at 1000 Hz				
	70.0 dB	60.0 dB	50.0 dB	40.0 dB	30.0 dB
Linearity Tolerance ±0.4 dB	70.0	60.0	50.0	40.1	30.1
Compliance	Yes	Yes	Yes	Yes	Yes

Range Check (at 1000 Hz)	100 dB Input Level				
	140 - 50 dB	130 - 40 dB	120 - 30 dB	110 -20 dB	100 - 10dB
Linearity Tolerance ±0.6 dB	100.0	100.0	100.0	100.0	100.0
Compliance	Yes	Yes	Yes	Yes	Yes

Range Check (at 1000 Hz)	70 dB Input Level		
	90- 0 dB	80 -10 dB	70 -20 dB
Linearity Tolerance ±0.6 dB	70.0	70.1	70.1
Compliance	Yes	Yes	Yes

Broadband Noise Floor Check	**Test Result (dB)**	Upper Limit (dB)	Compliance
A-weight Noise Floor	16.9dB	22.0dB	YES
C-weight Noise Floor	15.6dB	30.0dB	YES
Z-weight Noise Floor	18.1dB	35.0dB	YES
F-weight Noise Floor	19.6dB	40.0dB	YES

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Certificate of Compliance and Calibration

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Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2 Sound Level Meter
Serial No.: BGI040008
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

A-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	43.7	48.3	-56.7	+5/-∞	Yes
31.5	57.6	61.2	63.6	-39.4	± 3	Yes
63	71.8	73.7	75.8	-26.2	± 2	Yes
125	82.4	83.8	85.4	-16.1	± 1.5	Yes
250	89.9	91.3	92.9	-8.6	± 1.5	Yes
500	95.3	96.7	98.3	-3.2	± 1.5	Yes
1K REF.	98.5	100.0	101.5	0	± 1.5	Yes
2K	99.2	101.2	103.2	1.2	± 2	Yes
4K	98.0	101.3	104.0	1.0	± 3	Yes
8K	93.9	97.5	103.9	-1.1	± 5	Yes
16K	---	88.2	98.4	-6.6	+5/-∞	Yes

C-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	91.4	94.5	-8.5	+5/-∞	Yes
31.5	94.0	96.9	100.0	-3.0	± 3	Yes
63	97.2	99.1	101.2	-0.8	± 2	Yes
125	98.3	99.7	101.3	-0.2	± 1.5	Yes
250	98.5	99.9	101.5	0.0	± 1.5	Yes
500	98.5	100.0	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	97.8	99.7	101.8	-0.2	± 2	Yes
4K	96.2	99.4	102.2	-0.8	± 3	Yes
8K	92.0	95.4	102.0	-3.0	± 5	Yes
16K	---	86.3	96.5	-8.5	+5/-∞	Yes

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Certificate of Compliance and Calibration

edi engineering dynamics incorporated

Manufacturer: 3M/Quest Technologies
Model Number: SoundPro DL-2 Sound Level Meter
Serial No.: BGI040008
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Z-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	98.7	105.0	-1.0	+5/-∞	Yes
31.5	97.0	99.5	103.0	0.0	± 3	Yes
63	98.0	99.8	102.0	0.0	± 2	Yes
125	98.5	99.8	101.5	0.0	± 1.5	Yes
250	98.5	99.9	101.5	0.0	± 1.5	Yes
500	98.5	99.9	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	98.0	99.8	102.0	0.0	± 2	Yes
4K	97.0	100.0	103.0	0.0	± 3	Yes
8K	95.0	97.6	105.0	0.0	± 5	Yes
16K	---	92.4	105.0	0.0	+5/-∞	Yes

F-weighted Frequency Response with 100 dB Input						
Frequency (Hz)	Min. dB	Response Level dB	Max. dB	Relative Response Level dB	Tolerance Limit dB	Compliance
16	---	99.7	105.0	-1.0	+5/-∞	Yes
31.5	97.0	100.0	103.0	0.0	± 3	Yes
63	98.0	99.8	102.0	0.0	± 2	Yes
125	98.5	99.9	101.5	0.0	± 1.5	Yes
250	98.5	99.9	101.5	0.0	± 1.5	Yes
500	98.5	99.9	101.5	0.0	± 1.5	Yes
1K REF.	98.5	99.9	101.5	0.0	± 1.5	Yes
2K	98.0	99.9	102.0	0.0	± 2	Yes
4K	97.0	100.1	103.0	0.0	± 3	Yes
8K	95.0	98.2	105.0	0.0	± 5	Yes
16K	---	94.4	105.0	0.0	+5/-∞	Yes

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Serial No.: BGI040008
Calibration Date: 24-Aug-2017
Calibration Due Date: 24-Aug-2018
Calibrated By: John R. Johnson

Laboratory Conditions during Calibration

Atmospheric Pressure	837.9 hPa
Laboratory Air Temperature	24.4 Deg. C
Laboratory Air Humidity	30.3 %

Standards Used and Their Due Dates:

Measuring Amp	**B&K 2636**	**SN: 1943590**	**Trace # CAS-197354-L8M3P4-101**	**Due Date 02/14/2019**
Piston Phone	**B&K 4228**	**SN: 1747024**	**Trace # CAS-197365-Y3R3N6-602**	**Due Date 02/09/2019**
Calibrator	**B&K4231**	**SN: 1850369**	**Trace # CAS-197365-Y3R3N6-601**	**Due Date 02/09/2019**
Multimeter	**HP 34401A**	**SN: 3146A11478**	**Trace # 1-7761739074-1**	**Due Date 04/01/2018**

Engineering Dynamics, Inc. does hereby certify that the above referenced SOUND LEVEL ANALYZER meets the requirements of the American National Standards Institute and/or, if applicable; OSHA, MSHA, and the Manufacturer's Specifications at points tested, and is traceable to NIST.

Certification of this instrument is valid for 1-year from the calibration date listed above.
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