



Memorandum

Date: December 13, 2022
To: Mayor Vinis and City Council
From: Sara McKinney, 541-682-8497
Subject: Testimony Submitted

Attached is testimony submitted at the Public Hearing on November 21, 2022. A copy of this material is also included with the meeting materials posted on the web at:

<https://eugene.ompnetwork.org/embed/sessions/257501/city-council-public-hearing-november-21-2022>

Good evening, my name is Jason Goldberg, and I have been asked to attend and testify on the behalf of Zip-O-Laminators LLC, located at 2701 West First Ave in Eugene. My role within the company is the Human Resources and Environmental, Health and Safety Manager.

As this public hearing is being held in response to community complaints regarding industrial noise, and as much of the complaints surrounding this issue have been made against Zip-O-Laminators, I would like to start off with a brief history of the actions taken to date regarding this matter. But before I do I want to express that by no means should this testimony be construed that Zip-O-Laminators in any way discounts or diminishes the feelings of the residents who have expressed their annoyance at the noise coming from our plant.

To begin, since receiving the first complaint in August of 2020, Zip-O-Laminators has taken this issue and the complaints serious. A thorough investigation was initiated in cooperation with the City of Eugene and residents who have complained about the noise and included taking measurements and readings of sounds coming from the machinery emitting the noise being complained about.

The initial results of the sound surveys were as follows:

- 93 decibels at the noise source.
- 63 decibels at the north property line 226 feet away facing the direction of the noise source.
- Multiple readings in the 45 - 50 decibel ranges at the perimeter lines of two residential zones located at the intersections of Roosevelt Blvd and Seneca Road and Roosevelt Blvd and Foch Street. 1,680 ft and 1,860 ft straight line from the noise source respectively.

Despite being compliant with current City of Eugene Noise Disturbance Regulations of no more than 60 decibels of sound pressure wave being emitted by industrial activity at the perimeter of a residential zone, Zip-O-Laminators in March of 2021 installed noise cancelling poly styrene insulation designed to dampen noise within residential structures to the structure over and around the noise emitting machine.

Subsequent follow-up noise testing yielded results of:

- 76 decibels at the noise source. A reduction of 17 decibels.

- 45 decibels in front of one of the residents' homes on Foch Street approximately 2,200 feet from the noise source when operating in the early am hours.
- 43 decibels in front of a second residents' home on Park Ave approximately 5,400 feet from the noise source when operating in the early am hours.

Observations were also noted in both sampling periods of sound coming from vehicle traffic and trains ranging from 51 decibels – 69 decibels as measured in front of the same residences.

Subsequently, as least one of the citizens responded telephonically that the noise was less noticeable and was thankful for the company's attention to this matter, and then there was an absence of complaints for brief period.

However, the complaints resumed in the late spring of 2021, and it became clear that this was a case where individual sensitivities were involved as the nature the complaints changed from audible sounds to low frequency vibration. After this development the company made plans to move the noise emitting machine indoors, a process which is currently underway.

Now with that brief history of actions taken to date covered, the chief issue at hand is: does the City of Eugene change its noise ordinance as result of the complaints?

To that question, as a business operating in the City of Eugene, our opinion and belief is that the change is not necessary on the basis that the current regulations are sufficient. Section 4.080 of the City Code sets clear parameters that a noise disturbance is any sound which injures or endangers the safety or the health of a human, annoys or disturbs a reasonable person of normal sensitivities and endangers or injures personal or real property. Furthermore, the sound must be plainly audible where the listener can clearly hear the content of the sound produced by the noise source.

The current regulation establishes a very clear quantitative standard of measurement for industry and commercial businesses to use. Furthermore, the measurement is in an appropriate scale, and that is the dBA wavelength scale.

Dating back to 1974, the field of study of acoustics has provided scientifically accepted standards for the identification and measurement of noise. That system is to measure sound in decibels. The range of the decibel scale is from zero, at which the human ear receives little or no sensation, to approximately 120 decibels, where the sound becomes extremely intense.

With a great deal of both analysis and deliberation, both the United States EPA and the World Health Organization both describe, as well as prescribe, levels identified to protect public health and welfare from the effects of environmental noise in a simple, uniform, and appropriate way using the long-term equivalent A-weighted sound level in decibels.

Particularly the World Health Organization recommends in their draft published guideline against unwanted noise levels which can disturb sleep, cause annoyance, or result in speech interference; to be in the A-weighted scale.

To quote from the guideline:

“The A-weighted decibel scale, expressed as "dBA", is designed to correct decibel readings to account for the fact that the human ear is less sensitive to low pitched sounds than it is to high pitched sounds. The A-weighted scale provides a better measure of the subjective response of a human to any given noise.”

Furthermore, the tools designed to measure sound in the A-weighted scale can be easily obtained at a reasonable cost to both businesses and municipalities alike.

In contrast Low Frequency noise is measured in Octave Bands with a unit of frequency called Hertz. It requires complex sampling equipment and the corresponding sampling metrics are very confusing and hard to understand and read. Essentially industry, commercial businesses and even the city would need to hire sound engineers to investigate complaints at unreasonable expenses.

Studies on Low Frequency noise show that it is common as background noise in urban environments, and is an emission from many artificial sources including road vehicles, aircraft, industrial machinery and air movement machinery including wind turbines, compressors, and ventilation or air-conditioning units. Loudness judgments and annoyance reactions are particular to certain individuals sensitive to low frequency sounds anatomically. Field measurements and

laboratory studies of persons who complain of low frequency noise in their homes show several common factors including:

- The noise was often close to inaudibility and heard by a minority of people.
- The noise was typically audible indoors and not outdoors.
- The noise was more audible at night than day as it is masked by noises from other environmental sources.
- The noise had a throb or rumble characteristic.
- The main complaints came from the 55-70 years age group.

Furthermore, variables of exposure and response to low frequency noise are vast including health, age, location to or from the noise source, type of home construction, type of windows in a residence, floor level which the residents sleep, etc.

Thus, in closing we urge the City not to amend the existing City of Eugene Code removing the current text and requirements on Environmental Noise Requirements as found in 6.750 pertaining to industrial and commercial noise, and add Section 6.752 as drafted, whereby both Industry, operating in areas of the City properly zoned for its activities, and Commercial Businesses operating in all zones of the City, will be subject to noise complaints by a minority of residents with individual sensitivities. To do so will subject both industrial and commercial businesses, as well as the city to burdensome and costly regulation, which is not objective, easily definable, understandable, nor measurable and as well does not align with nor meet the prerequisites of a noise disturbance as defined in Section 4.080 given low frequency noise does not reasonably affect persons with normal sensitivities and the sound is not always plainly audible.