

ARTICLE XV

PERFORMANCE STANDARDS FOR INDUSTRIAL ZONES

SECTION 15.0 APPLICATION OF PERFORMANCE STANDARDS: After the effective date of this ordinance, any use established or changed to, and any building, structure, or tract of land, developed, constructed, or used for any permitted or permissible principal or accessory use in the IP, I-1, or I-2 Zones shall comply with all of the performance standards herein set forth for the district involved. If any existing use, or building, or other structure is extended, enlarged, or reconstructed, the performance standards for the district involved shall apply with respect to such extended, enlarged, or reconstructed portion, or portions, of such use, or building, or other structure.

SECTION 15.1 TIME SCHEDULE FOR COMPLIANCE OF PERFORMANCE STANDARDS: Except for standards regulated and enforced by the state of Kentucky, compliance with the provisions of this article of the ordinance shall be according to the following time schedule:

- A. All new installations shall comply as of going into operation.
- B. All existing installations not in compliance, as of the effective date of this ordinance, shall be in compliance within one (1) calendar year of the effective date of this ordinance, unless the owner or person responsible for the operation of the installation shall have submitted to the zoning administrator a program and schedule for achieving compliance. Such program and schedule to contain a date on or before which full compliance will be attained and such other information as the zoning administrator may require. If approved by the zoning administrator, such date will be the date on which the person shall comply. The planning commission may require persons submitting such program to submit subsequent periodic reports on progress in achieving compliance.

SECTION 15.2 EFFECTS OF CONCURRENT OPERATIONS: The sum total of the effects of concurrent operations on two or more lots should not be greater or more offensive to the senses than the standards contained herein. Compliance with the provision of these performance standards by single or mutual changes in operational levels, scheduling of operations, and other adjustments is permitted.

- A. **BUILDING ENCLOSURES:** Every use permitted in the IP industrial district shall be operated in its entirety within a completely enclosed building. In the I-1 and I-2 industrial districts, permitted uses shall be operated either within a completely enclosed building or within an area enclosed on all sides by a solid noncombustible fence or wall, as regulated by Article XIV of this ordinance, provided further, that no goods, material, or objects shall be stacked higher than the fence or wall.

- B. LANDSCAPING: In the IP, I-1, or I-2 industrial districts, all required yards shall either be open landscaped and grassed areas or be left in a natural state, if acceptable to the planning commission. If said area is to be landscaped, it shall be landscaped attractively with lawn, trees, shrubs, etc., according to the initially submitted plans which were first approved of for the development of such tract as a permitted use.

In areas to be used for off-street parking, the parking arrangement and surfacing must likewise have been approved of for the development of such tract as a permitted use. Any landscaped areas shall be poorly maintained thereafter in a sightly and well kept condition. Parking areas shall likewise be maintained in good condition. Any areas left in a natural state shall be properly maintained in a well kept condition.

- C. NOISE: For the purpose of measuring the intensity and frequencies of a sound, a sound level meter and an octave band analyzer shall be employed that conforms to specifications published by the American National Standards Institute (specifications for Sound Level Meters S1.4 - 1971, or the latest edition of such standards, shall be used). In the enforcement of the regulation, noises produced by the operation of motor vehicles or other transportation facilities shall not be included in determining the maximum permitted decibel level. In the IP District, the sound pressure of noise radiated continuously from any activity shall not exceed the value given in Tables 1 and 2 of this section, in any octave band frequency at any point on or beyond any lot line. If the noise is not smooth and continuous, one or more of the corrections in Table 2 of this section shall be added or subtracted from each of the decibel levels given in Table 1 of this ordinance.

In the I-1 District, the sound pressure of noise radiated from any activity shall not exceed the value given in Table 3 of this section in any octave band frequency at any point on or beyond any lot line. If the IP or I-1 District adjoins a residential district, the maximum sound pressure level at any point on the district boundary shall be reduced by six (6) decibels from the maximum listed in Table 3.

In the I-2 District, the sound pressure of noise radiated from any activity shall not exceed the value given in Table 3 of this section in any octave band frequency at any point on or beyond the nearest district boundary. If an I-2 District adjoins a residential district, the maximum sound pressure shall be reduced by six (6) decibels from the maximum listed in Table 3 of this section.

In the IP, I-1, and I-2 Districts, industrial noise shall be muffled so as not to become objectionable due to intermittence, beat, frequency, or shrillness.

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- D. **ODOROUS MATTER:** No emission of odorous matter shall be allowed in excess of ambient air quality standards, as set forth by regulations adopted by the Kentucky Department for Natural Resources and Environmental Protection, Division of Air Pollution, Cincinnati Air Quality Region.
- E. **HUMIDITY, HEAT OR GLARE:** In the IP or I-1 districts, any activity producing humidity, in the form of steam or moist air, or producing heat or glare, shall be carried on in such a manner that the steam, humidity, heat, or glare is not perceptible at any lot line. In the I-2 District, any activity producing heat or glare shall be carried on in such a manner that the steam, humidity, heat, or glare is not perceptible at or beyond any residential or commercial district boundary. Detailed plans for the elimination of humidity, heat, or glare may be required before the issuance of a building permit.
- F. **EXTERIOR LIGHTING:** Any lights used for exterior illumination, except for overhead street lighting and warning, or traffic signals shall direct light away from the adjoining zones in the IP, I-1, and I-2 Districts.
- G. **VIBRATION:** Vibrations shall be measured at the lot line in the I-P and I-1 districts and at the nearest district boundary in the I-2 district. No vibration is permitted which is discernible to the human sense of feeling for three (3) minutes or more duration in any one (1) hour. Vibration shall not produce, at any time, an acceleration of more than 0.1 gravities or shall result in any combination of amplitudes and frequencies beyond the "safe" range of Table 7, United States Bureau of Mines, Bulletin No. 442, "Seismic Effects of Quarry Blasting", on any structure. The methods and equations of said Bulletin No. 442, or any subsequent revision or amendment thereto, shall be used to compute all values for the enforcement of these provisions. Detailed plans for the elimination of vibrations may be required before the issuance of any building permit.
- H. **EMISSIONS AND OPEN BURNING:** No emission of particulate matter, sulfur, compound, carbon monoxide, hydrocarbon, nitrogen oxide, and open burning shall be allowed in all industrial zones in excess of regulations adopted by the Kentucky Department for Natural Resources and Environmental Protection, Division of Air Pollution, Cincinnati Air Quality Region.
- I. **RADIATION:** In the IP, I-1, I-2, and I-3 zones, all sources of ionizing radiation shall be registered or licensed by the Kentucky State Department of Health and operated in accordance with their regulations.
- J. **ELECTRICAL RADIATION:** In the IP, I-1, I-2, and I-3 zones, any electrical radiation shall not adversely affect, at any point on or beyond the lot line, any operation or equipment, other than those of the creation of the radiation. Avoidance of adverse effects from electrical radiation by appropriate single or mutual scheduling of operations is permitted.
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- K. STORAGE: In the IP Zone, no material, products, or supplies shall be stored or permitted to remain on any part of the property outside the buildings constructed thereon. In the I-1 and I-2 Zones, storage of materials, supplies, and products on the property outside the building, constructed thereon is permitted at the rear of the property providing that the storage of materials, supplies, and products are within an area enclosed on all sides by a solid noncombustible fence or wall at least six (6) feet in height, provided further that no goods, materials, or objects shall be stacked higher than the fence or wall.
- L. FIRE AND EXPLOSIVE HAZARDS: In the I-2 zone only, storage, utilization, or manufacture of solid materials which requires free burning and intense burning may be allowed if permitted in said zones, provided that said materials or products shall be stored, utilized, or manufactured within completely enclosed buildings having incombustible walls and protected throughout by an automatic fire extinguishing system. In the I-2 zone only, the storage, utilization, or manufacture of flammable liquids, or materials which produce flammable or explosive vapors or gases, may be allowed if permitted in said zones, provided that storage, handling, and use shall be in accordance with Standards of American Insurance Association for Storage, Handling, and Use of Flammable Liquids, "American Insurance Association", Pamphlet No. 30, June 1959, or any subsequent revision or amendment thereto.
- M. WASTE: Within the IP, I-1, and I-2 zones, no waste material or refuse shall be dumped upon, or permitted to remain upon, any part of the part of the property outside of the buildings constructed thereon. All sewage and industrial waste shall be treated and disposed of in such a manner so as to comply with the standards of the appropriate authority. All plans for waste disposal facilities shall be required before the issuance of any building permit.
- N. MINING AND RECLAMATION: All methods of operation, construction of roads, back-filling, grading, blasting, water impoundments, treatment facilities, and reclamation must be in conformance with the regulations adopted by the Department for Natural Resources and Environmental Protection, Division of Reclamation. Any excavation or processing operations shall be subject to the regulations of the Kentucky Water Pollution Control Commission.
- O. BLASTING AND EXPLOSIVES: All blasting and the use of explosives must be conducted in accordance with the regulations set forth by the Department of Mines and Minerals, Division of Explosives and Blasting (pursuant to the authority of KRS 351.310 to 351.340 and 351.990) and in accordance with the Standards of Safety for Explosives, for the state of Kentucky, prepared by the Department of Public Safety, Division of Fire Prevention (pursuant to the authority of KRS 227.300).

TABLE 1

MAXIMUM PERMISSIBLE SOUND PRESSURE LEVEL (DECIBELS) AT
SPECIFIED POINTS OF MEASUREMENT FOR NOISE RADIATED
CONTINUOUSLY FROM A FACILITY

| OCTAVE BAND (CYCLES PER SECOND) | SOUND PRESSURE LEVEL (DECIBELS*) |
|------------------------------------|-------------------------------------|
| 20 - 75 | 69 |
| 75 - 150 | 54 |
| 150 - 300 | 47 |
| 300 - 600 | 41 |
| 600 - 1,200 | 37 |
| 1,200 - 2,400 | 34 |
| 2,400 - 4,800 | 31 |
| 4,800 - 10,000 | 28 |
| 10,000 - 20,000 | 26** |
| 20,000 - 30,000 | 25** |
| 30,000 - 40,000 | 24** |
| 40,000 - 50,000 | 23** |

* According to the following formula, Sound Pressure Level in Decibels equals
 $10 \log \text{ where } P_2 \text{ equals } 0.0002 \text{ dynes/cm}^2 \text{ } P_1/P_2$

** To avoid possible interference with animal experiments

TABLE 2

CORRECTION IN MAXIMUM PERMITTED SOUND PRESSURE LEVEL
IN DECIBELS TO BE APPLIED TO TABLE 1

| TYPE OF OPERATION OF CHARACTER OF NOISE | CORRECTION IN DECIBELS |
|--|------------------------|
| Noise source operates less than twenty (20) percent of any one hour period | plus 5* |
| Noise source operates less than five (5) percent of any one hour period | plus 10* |
| Noise source operates less than one (1) percent of any one hour period | plus 15* |
| Noise of impulse character (hammering, etc.) | minus 5 |
| Noise of periodic character (hum, screech, etc.) | minus 5 |

* Apply one of these corrections only

TABLE 3
MAXIMUM PERMITTED SOUND PRESSURE LEVEL IN DECIBELS

| OCTAVE BAND SOUND (CYCLES PER SECOND) | PRESSURE LEVEL (DECIBELS*) |
|--|-------------------------------|
| 0 – 74 | 79 |
| 75 - 149 | 74 |
| 150 - 299 | 66 |
| 300 - 599 | 59 |
| 600 - 1,199 | 53 |
| 1,200 - 2,399 | 47 |
| 2,400 - 4,799 | 41 |
| 4,800 and over | 39 |

* According to the following formula, Sound Pressure Level in Decibels equals
 $10 \log \frac{P_2}{P_1}$ where P_2 equals 0.0002 dynes/cm²