



**Standard Operating Procedure (SOP)¹ for District Mining Office
Evaluation of Noise During Permit Review
SOP No. BMP-012
August 17, 2021**

BACKGROUND

Noise is a common complaint registered by residents close to a mining operation. Other than for explosives, noise levels emanating from a mining operation are not addressed under either the Surface Mining Conservation and Reclamation Act or the Noncoal Surface Mining Conservation and Reclamation Act. There are no decibel-based standards established in Pennsylvania statutes. However, the Department has a duty to consider noise impacts during review of a mining permit application. The Environmental Hearing Board has determined in several cases that the Department must consider noise from a proposed mining operation and determine if operational mining noise will constitute a public nuisance under § 1917-A of the Administrative Code of 1929. *See Plumstead Twp. v. DER*, 1995 EHB 741, 789-90; *see also Chimel v. DEP*, 2014 EHB 957, 1000. The Department considers noise in a new application for a mining operation and during permit revision reviews.

This SOP outlines the District Mining Office evaluation of noise in the context of a proposed mining operation or revision to an existing operation. It can also be applied if a pattern of complaints regarding noise is established for an existing permit. In such cases, the Department can require the permittee to update the noise information in the existing permit.

PROGRAM SPECIFIC PRACTICES

Definitions

*Public nuisance*². A public nuisance is an unreasonable interference with a right common to the general public. Circumstances that may sustain a holding that an interference with a public right is unreasonable include the following:

- a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or
- b) Whether the conduct is proscribed by a statute, ordinance or administrative regulation,

¹ Disclaimer: The process and procedures outlined in this SOP are intended to supplement existing requirements. Nothing in the SOP shall affect regulatory requirements. The process, procedures and interpretations herein are not an adjudication or a regulation. There is no intent on the part of the Department to give the rules in this SOP that weight or deference. This document establishes the framework within which the Department will exercise its administrative discretion in the future. The Department reserves the discretion to deviate from this policy statement if circumstances warrant.

² This definition is from the Restatement (Second) of Torts §821B, a treatise issued by the American Law Institute (ALI) that summarizes general principles of tort law, and was applied by the Environmental Hearing Board in *Plumstead Township v. DER*, 1995 EHB 741, 791.

- c) Whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.

Current standards

There are no state-level regulatory standards for Pennsylvania that define a specific decibel level at which noise levels constitute a public nuisance at a mine site or for any other activity. Therefore, the Department does not have authority to impose a specific limit on noise in decibels. The Department cannot enforce operational noise decibel levels at the permit boundary or at a nearby building such as is done with blast monitoring.

While no state-level standards exist, many local municipalities have adopted noise ordinances. The application will request information regarding noise ordinances in the municipality(-ies) of concern and a description of how the mining operation will comply³. The permit reviewer evaluates whether compliance with the local ordinance prevents a public nuisance.

Blasting-related noise

Noise-levels related to blasting are covered under separate regulations. For the purposes of this document, general operational noise is considered but the blasting-related factors and limits will be reviewed by the blasting inspector as part of the Blast Plan portion of the application. However, the reviewer must consider blasting, in general, in the collective consideration of operational noise.

PERMIT REVIEW

During the permit review, the District Mining Office (DMO) must consider if noise generated by the mining operation may constitute a public nuisance and if additional actions are needed by the operator to mitigate noise. This evaluation must be done even if no specific public comments regarding noise concerns have been filed.

All applicants supply information on operational noise during the permit application process in one of the following formats:

- *Air Pollution and Noise Control Plan Modules*
 - Large Noncoal Surface Mine Permit 5600-PM-BMP0315-17
 - Bituminous Surface Mine Permit 5600-PM-BMP0311-17
 - Anthracite Surface Mine Permit 5600-PM-BMP0343-17
 - Bituminous UMP, Prep Plant, CRDA 5600-PM-BMP0324-16

- *Operations Narrative – Noise Control Plan*
 - ePermitting 5600-PM-BMP0416

The permit reviewer can request the following from the applicant:

1. Determination of existing background noise (base level) in the proposed area
2. Estimation of what noise the operation will contribute to the base level noise in an area
3. Assessment of the effect of the operation will have on the closest sensitive receptor(s)⁴
4. Proposed noise mitigation strategy to isolate sensitive receptors and ensure the operation does not

³ The permit application module will be revised to include this question to applicants.

⁴ The permit reviewer determines if the applicant has identified all *sensitive receptors* (i.e. residences, schools, etc.) and proposes a noise mitigation strategy to isolate these from operational noise.

become a public nuisance.

The above items should contain numeric data to support the narrative plans to a reasonable extent. In other words, there must be some substantive reasoning and foundation to the characterization of noise and the promoted mitigation efforts. General estimations and guesses are not adequate.

The application requires identification of operational noise sources. Examples of noise sources include:

- *Mobile Equipment* (i.e. construction equipment, mine equipment, yard equipment, trucking to and from the site entrance, etc.)
- *Stationary Equipment* (i.e. crushers, pumps, screening tower, conveyors etc.)
- *Mining Activity* (i.e. spoil dumping)

As part of the permitting process, the DMO will evaluate if the contribution of noise from the activity will interfere with the community at large and if the noise will significantly interfere with the community's use and enjoyment of their property. Therefore, the permit reviewer should consider the setting of the operation (rural, residential, commercial, urban) and if the noise sources proposed by the operation will be continuous, sustained, intermittent or occasional. The reviewer assesses noise reduction measures proposed by the applicant to control noise and prevent it from becoming a public nuisance.

In most cases, the operation will not be located in a dense residential area and noise will not be an issue. However, if a noise concern is raised by the public during the public notice period or appears in previous complaints, the reviewer should document these comments and complaints and address them during the review.

In a residential area, applicants should be encouraged to conduct a pre-mining environmental sound level survey to characterize noise levels prior to mining. The data can be used to model the anticipated changes in noise levels from the mine operation. The model of the expected noise levels should be reviewed to determine if they rise to a point where they could be a public nuisance. Previously, the California DMO has successfully used the following guideline to request a noise mitigation plan that demonstrates an attempt to less the noise at the closest sensitive receptor: if the difference in pre-mining versus post-mining sound levels exceeds ten (10) decibels.

If in consideration of all factors, the Department finds that the noise generated by the mining activities would increase to a level that can be considered a public nuisance, the applicant must apply additional mitigation measures.

Several best management practices (BMPs) are suggested in all cases where noise can be reasonably mitigated. Typical BMPs are as follows:

- earthen berms surrounding plant and yard area
- incorporation of below ground level (in-pit) plant and yard area in mine plan
- vegetation barriers (especially evergreen-type)
- use of electric equipment
- white noise backup alarms and/or strobe lighting system
- use of rubber-tire or -tracked equipment vs. metal-tracked equipment
- limitation of operating hours
- enclosing crushing equipment and screening towers
- regular preventative maintenance to insure quiet operation of machinery
- foam insulation included on enclosures around crushing equipment,
- rubber lined dump hoppers
- mufflers on equipment exhaust systems and acoustical walls/barriers
- insulation of buildings
- prohibition of engine brakes

- improved exhaust systems on equipment
- directing noise source direction away from the sensitive receptor
- alternate site design/layout

In some unique situations, a noise waiver may be the best available tool. Noise waivers have been historically used by District Mining Offices to address unique situations such as ventilation fan installations. A noise waiver/easement may be considered under special circumstances and when all feasible mitigation techniques cannot address increased operational noise. The waiver is signed by the property/dwelling owner, and by an authorized company representative, notarized, and recorded with the property deed upon which a dwelling (sensitive receptor) is located. This waiver and documentation of the recording must be provided with the permit application. Company-owned homes would also be included under a waiver provision to ensure that subsequent residents would be informed while the mining facilities are still in operation.

PERMIT CONDITIONS

The permit can contain specific permit conditions, if applicable, to detail when certain actions must be installed or deployed by the operator, but the documentation for all noise mitigation plans is contained in the application information and can be enforced as part of the approved permit documentation. General permit conditions on noise are not recommended.