DEKRA
CONSTRUCTION

Politics

to reduce dust at the construction area

The dusting of a construction area can adversely affect the health of people working on a construction area and living near the area. The key to reducing dust's harmful effects is managing this type of pollution. The goal of a construction area dust reduction policy is to control and manage this type of pollution and create a healthy environment for people working on a construction area and living in its immediate vicinity. When implementing the policy, it is necessary to be guided by environmental and economic feasibility principles.

The text of the dust reduction policy at the construction area is a guide for the management and executive staff of the group of companies. In addition, the procedure is a public declaration of the company's commitment to achieving dust and emission reduction targets at the construction area. For the collaborative work of the performers, all the goals and plans fixed in the policy should be commented on by the top management discussed and the responsible person, and the corresponding reporting documents should be developed.

The direction of dust reduction policy and primary sources of emissions

The following three principles are critical to the management strategy proposed in this paper. They follow a hierarchy to control any polluting emissions and reduce human exposure:

1. Prevention
2. Suppression
3. Containment

These three principles are used differently for different situations depending on the size of the project, the potential for contamination exposure of area workers, the presence of residential development adjacent to the construction area, and other pollution receptors. The following is a procedure for determining the degree of pollution risk and measures to reduce pollution.

The policy is aimed at:

— Determining the degree of dusting risk of the construction area;

— Determination of strategies and technologies to combat dust and major pollutants;

— Formation of acceptable standards for emissions from off-road vehicles;

— Definition of a protocol for monitoring environmental pollution using measurement at sensitive receptors;

— Requirement to ban direct combustion at the construction area;

— Formation of the main approaches to implementing the policy, as well as creating a concept of interaction for the workers and the management team.

Reference data

The type of particles distinguishes various particulate emissions from the construction process. This document applies to the control of emissions of the following types of particles:

Dust is defined as a solid particle less than 75 cm in diameter and consisting of suspended and settled particles.

Fine dust - a mass fraction of an air particle with an aerodynamic diameter of about 10 microns or less. It consists of large particles (2.5-10 cm in diameter) that originate from non-oxidized sources and simple particles (less than 2.5 cm) that involve an oxidation process or are formed in the atmosphere due to chemical reactions during primary gas emissions.

The matter that makes up the particles includes various types and sizes and will vary in composition depending on conditions and location. Most dust particles are too large to be inhaled but can irritate the eyes, nose, and throat and contaminate cars, windows, and property. Fine dust is more harmful to human health because. It can enter the lungs, causing respiratory problems and breathing problems, thus causing long-term complications. Fine dust particle size may be associated with severe diseases such as asthma, lung and respiratory tract carcinogens, and increased mortality. In areas of intense dust pollution, several specific diseases occur. These include, among others, silicosis and asbestosis, which lead to changes in lung tissue. Silicosis is caused by quartz dust with a particle size of about 3 microns; asbestos needles cause asbestosis with a length of more than 5 microns and a cross-section of about 3 microns. Unlike chemically inert particles of quartz and asbestos, which act on the body purely mechanically, the smallest particles of metals, or metal ions, cause the formation of toxic products of biochemical reactions in the blood. Prevalent diseases are toxic poisoning with lead, cadmium, aluminum, beryllium, and their compounds, as well as outbreaks of infectious diseases in people who have had prolonged contact with the dust of tungsten, vanadium, titanium, and several slags from metallurgical industries.

Many types of the dust of anthropogenic origin are the causes of allergic diseases. At the same time, mineral and organic origin dust can be an allergen.

Older people, young people, and people with health problems are the most affected.

Exposure to aerosol particles is not limited to the construction area; the particle can travel further than bulky dust particles and affect the health and well-being of many people in the vicinity of the construction area. Dusting affects not only people's health but also the state of flora and fauna of nearby areas. Hygroscopic dust can dehydrate the surfaces of plant leaves, forming a crust on them, which disrupts the natural metabolic processes. Deposits of several dust specks hinder the photosynthesis process, reflecting part of the radiant energy in the wavelength range of 400-750 nm. On the contrary, the dust typical of cities absorbs infrared radiation, thus contributing to the overheating of plant leaves. All this disrupts the normal water and temperature regime and ultimately reduces the activity of photosynthesis enzymes. Therefore, special attention should be paid to lowering construction areas' dust content near specially protected natural areas.

Declaration of commitment to dust reduction at the construction area

Where possible and economically feasible, DEKRA CONSTRUCTION JSC and its project contractors undertake to reduce dust levels from construction activities and processes. Where possible and financially viable, the group of companies JSC "DEKRA CONSTRUCTION" and project contractors undertake to purchase alternative types of power generators and use construction equipment prudently to ensure the reduction of emissions at the construction area.

The area Superintendent is responsible for the area dust reduction policy and good logistics.

The dust reduction policy at the construction area comes into force from the moment it is approved by the General Director of JSC "DEKRA CONSTRUCTION."

General Director of JSC "DEKRA CONSTRUCTION"

Denisov S.A.

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