Frequently Asked Questions (FAQs) about Concrete Crusher Facilities

1. What is a Concrete Crusher Facility?

A concrete crusher facility is an industrial site where concrete is processed and crushed into smaller aggregate materials for reuse in construction projects. These facilities typically involve the following components and processes:

a) Receiving Concrete Debris**:** Concrete waste from demolition sites, construction activities, or surplus concrete is brought to the facility.
b) Crushing Process**:** The concrete is fed into a crusher, which breaks down the material into smaller, manageable pieces. Crushers can be of various types, including jaw crushers, impact crushers, and cone crushers.
c) Screening and Sorting**:** After crushing, the material is screened to separate finer particles from larger aggregates. The sorted materials can then be used for different construction purposes, such as road base, construction fill, or recycled concrete aggregate (RCA).
d) Dust and Noise Control**:** Concrete crushing generates significant silica dust and noise.
e) Recycling**:** The primary purpose of a concrete crusher facility is to recycle concrete.

2. What are the dangers associated with a Concrete Crusher Facility?

Dust Emissions & Respiratory Issues:

- Silica Dust**:** Concrete crushing produces fine silica dust, which, when inhaled, can lead to serious respiratory conditions such as silicosis, chronic obstructive pulmonary disease (COPD), and lung cancer.
- Particulate Matter (PM): Dust from the crushing process can include various particulate matter, which can exacerbate asthma, bronchitis, COPD and other respiratory issues, especially in vulnerable populations such as children and the elderly.

Noise Pollution:

- Hearing Damage: Constant exposure to high noise levels from crushing operations can lead to hearing loss or tinnitus for workers and nearby residents.
- Stress and Sleep Disturbance**:** Persistent noise can also cause stress, sleep disturbances, and other indirect health impacts by affecting overall well-being.

Chemical Exposure to Hazardous Substances:

- Contaminants in Concrete**:** Concrete may contain hazardous substances like lead, asbestos, or other toxic materials, which can be released during crushing and pose additional health risks.
- Chemical Dust Suppressants**:** The use of chemical agents to suppress dust may introduce additional health risks if not properly managed.

Water and Soil Contamination:

- Runoff from concrete crushing sites can carry fine particulate matter and potentially hazardous substances into local waterways, impacting drinking water and soil quality.

In addition to direct health impacts, the presence of a concrete crusher facility can also lower the quality of life for nearby residents, leading to decreased property values and increased anxiety and stress related to potential health risks and environmental degradation.

3. What are the health effects of Silica, Crystalline that is contained in the concrete dust?

The hazards of respirable crystalline silica exposure have been known for decades. It poisons the air and will leach into our groundwater. We will not have access to the safety gear workers have, and silica dust travels easily. It can stay in the air for up to 12 days and because of its small size, it is difficult to control. Clouds of silica dust can be swept up by the wind and travel, at minimum 750 meters and up to HUNDREDS OF MILES, per the EPA (www.epa.gov). Many of us live within YARDS of this planned location.

According to OSHA, living or working near a crusher that generates silica dust can have significant health consequences. The presence of silica dust in the air and local water bodies can lead to various respiratory and overall health issues. Breathing in very small ("respirable") crystalline silica particles causes multiple diseases, including silicosis, an incurable lung disease that leads

to disability and death. Respirable crystalline silica also causes lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease. Exposure to respirable crystalline silica is related to the development of autoimmune disorders and cardiovascular impairment. These diseases are life-altering and debilitating disorders that annually affect thousands of workers across the United States and can affect those living in close proximity.

Silicosis

Breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. When silica dust enters the lungs, it causes the formation of scar tissue, which makes it difficult for the lungs to take in oxygen. There is no cure for silicosis.

Silicosis typically occurs after 15–20 years of occupational exposure to respirable crystalline silica. Symptoms may or may not be obvious; therefore, workers need to have a chest x-ray to determine if there is lung damage. As the disease progresses, the worker may experience shortness of breath upon exercising. In the later stages, the worker may experience fatigue, extreme shortness of breath, chest pain, or respiratory failure.

Because silicosis affects the immune system, exposure to silica increases the risk of lung infections, such as tuberculosis. In addition, smoking causes lung damage and adds to the damage caused by breathing silica dust.

In rare instances, individuals exposed to very high concentrations of respirable crystalline silica can develop typical silicosis symptoms as well as fever and weight loss within weeks instead of years. In these cases, medical evaluation should be performed as soon as possible.

Lung Cancer

Exposure to respirable crystalline silica increases the risk of developing lung cancer. Lung cancer is a disease where abnormal cells grow uncontrollably into tumors, interfering with lung function. The abnormal cancer cells can also travel ("metastasize") and cause damage to other parts of the body. Most cases are not curable.

Chronic Obstructive Pulmonary Disease (COPD)

Exposure to respirable crystalline silica increases the risk of other lung diseases, primarily COPD, which includes emphysema and chronic bronchitis. The main symptom of COPD is shortness of breath due to difficulty breathing air into the lungs. COPD is not usually reversible and may worsen over time.

Kidney Disease

Studies of workers exposed to respirable crystalline silica have found that these workers are at increased risk of developing kidney disease. For instance, kidney failure has been observed among workers with high silica exposure, such as in abrasive blasters who also were suffering from silicosis.