Lime Stabilization Safety Plan

Adopted Jan. 2001

SAFETY CONSIDERATIONS & PLAN: Lime is an alkaline material that is reactive in the presence of moisture. These soil applications can cause drift of dusts containing lime, fly ash or cement dusts over a short distance. The chemical reaction between the soil, water and stabilizing material creates heat. Steam is often seen rising form the ground as the water in the soil evaporates. Workers must protect themselves from skin exposure to chemical and thermal buns. Burns can occur when mixed soil is trapped next to the skin, in a boot, glove, or tight fitting cloths, for a prolonged period of time. In many cases, this can cause second and third degree burns while causing little or no discomfort. Personal protection should be properly worn when employees are required to be in close contact with mixed soil within the first 24 to 48 hours of mixing.

- To prevent large dust clouds Petroff Co uses a closed system to transfer bulk products from the pneumatic trailers to the spreader. Filter bags on the spreader trap dusts generated during bulk transfer. Wind screens also cover the point of delivery to prevent drift as the material is placed onto the ground. Water trucks connected to the mixer add water during mixing to control dusts and improve the efficiency of the reaction with the soil. The mixing drum is also enclosed by a curtain which is lowered to the ground as the rotor is mixing the soil. While these efforts greatly reduce unintended drift, all workers must stay clear of the soil stabilizing operations and equipment.
- Workers must be aware of their surroundings and take actions to prevent unintended exposures. Soil stabilizing products react with water and workers need to protect their skin and eyes from contact with unreacted materials.
- Be aware and stay clear of drift and do not breathe dusts or touch raw materials on the ground. Wash skin with soap and water should it come into contact with lime, fly ash, cement or bentonite.
- If inhaled, remove person to fresh air and Irrigate the nose and throat with water if necessary.
- Impervious coveralls pulled down over the top of boots should be worn to prevent penetration of liquids. When conditions are wet and the mud is deep, the coveralls should be tapped in place to prevent them from pulling up and expositing the tops of the boots. Sleeves of the coveralls may also need to be tapped to prevent them from pulling up and exposing clothing or skin.
- The use of barrier creams is recommended to prevent exposure to the arms, hands, neck and face.
- Tight fitting goggles should be worn to protect the eyes form dusts and liquids, when it is necessary to work in conditions where employees can be exposed to wet soils, raw lime, fly ash, cement or bentonite or mixed soils where the chemical reaction is continuing to occur.
- Impervious Gloves should be worn to prevent contact with the skin. In wet and muddy conditions, the gloves may need to be tapped to prevent any moisture form getting in the top of the gloves. In some wet and muddy conditions, gloves with long gauntlets may be needed to protect the forearm, and clothing.
- High top work boots impervious to liquids.
- NIOSH approved respirators, rated to control silica exposure, and should be used when necessary.
- Confined spaces should be well ventilated and the atmosphere tested before any employee is allowed to enter.
- In the event of eye contact, immediately flush the eye(s) with ample water. Continue flushing for 20 minutes and seek medical assistance.
- Burns should be treated by a physician.

FOR ADDITIONAL INFORMATION:

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