

Discussion Platform:

Environmental conditions for the application of coal ash in infrastructures and road paving

Background:

Bottom ash leaching results indicate an “inert” material.

Fly ash leaching results indicate a “non-hazardous” material.

The properties of coal ash in road embankments under construction.

Limiting contact of the ash in road embankment with the environment.

“Aging” effect on pH of ash in an embankment (when Ca(OH)_2 occurs, it is transformed into calcite, if it is in contact with air) and this influence on the leaching of trace elements (TE).

Influence of sealing the ash embankment of TE leaching from the ash.

Changes with time of ash permeability in an embankment.

Fly ash in an embankment becomes a monolith.

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Existing Environmental Conditions:

Limitations for the use of fly ash in susceptibility zones, A,B and C, request water authority authorization according to the different compliance tests.

Limitation for the use of bottom ash: only the Boron concentration in the ash and the groundwater in certain areas.

Subjects for discussion:

Fly ash impact on the environment in road embankments.

Leaching of TE to the interface layer.

Leaching of TE from monolith-like fly-ash in road embankments.

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Proposed Environmental Conditions Derived from Research Findings:

**In paving of roads- for fly ash in susceptibility zones A, B, and C,
according to the compliance tests.**

For bottom ash: unrestricted use.

**In soil improvement for infrastructure- for fly ash in susceptibility
zones A, B, and C.**

In other infrastructure- remaining existing conditions.

**Re-examination of restriction radius from ground water wells, in
light of Zikim site monitoring**