

Saltcake and Baghouse Dust Landfill Management Recommendations and Considerations

Introduction

Saltcake (SC) and Baghouse Dust (BHD) are generated as byproducts of rotary furnace operations that melt aluminum dross and scrap to recover aluminum. Due to the physical and chemical characteristics of SC & BHD, these materials have the potential to create problems in the landfill environment if not properly managed. As contact between SC & BHD and water can result in a chemical reaction generating heat accompanied by ammonia and hydrogen gas evolution, the recommendations provided are primarily focused on the prevention and minimization of contact between the SC & BHD and water.

Landfill Management Recommendations

- Manage in a monofill/monocell if possible
- Manage in as dry a state as possible
 - Manage in closed/tarped containers prior to landfilling
 - Do not landfill during periods of sustained precipitation
 - Utilize daily or more frequent immediate compaction and cover practices
- Do not damage the integrity of baghouse dust bags
 - Consider trenching the bags into the working face and then providing immediate cover
- Manage only in landfills that do not recirculate leachate as leachate recirculation can exacerbate the chemical reaction

Other Considerations

- If moist conditions exist, ensure protection from ammonia exposure of workers at the landfill working face
- Alkalinity of SC & BHD leachate can raise the pH of the overall landfill leachate
- POTW acceptance of leachate can be affected by pH, ammonia and salinity levels
- Ammonia and hydrogen gas evolution can damage landfill gas collection equipment and contaminate collected methane

References

- [Aluminum Association Saltcake Position Paper](#)
- [Aluminum Association Research Summary Document](#)
- [EPA Research Report - Secondary Aluminum Processing Waste: Saltcake Characterization and Reactivity, EPA/600/R-155/109/May 2015](#)

- [EPA Research Report - Secondary Aluminum Processing Waste: Baghouse Dust Characterization and Reactivity, EPA/600/R-15/203/April 2015](#)
- [EPA Research Report - Modeling Thermal Changes at Municipal Solid Waste Landfills: A Case Study of the Co-Disposal of Secondary Aluminum Processing Waste, EPA/600/R-16/174/November 2016](#)

The references noted above are also available through <http://www.aluminum.org/resources/faqs-information/saltcake>.

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