



DMP Report
February 8, 2022

Discharge Management Plan Summary Report

Smelter Service Corporation

Mt. Pleasant, Tennessee

Reporting Year 2021

The Tennessee Department of Environmental and Conservation (TDEC) issued National Pollutant Discharge Elimination System (NPDES) Permit No. TN0078573, Attachment 3 Section E. titled "Discharge Management Plan", requires Smelter Service Corporation (SSC) to develop and submit an annual Discharge Management Plan (DMP) Summary Report that describes what upgrades SSC has made to improve control of chemicals used or generated on site.

Characteristic of Chemical Used and Generated On-site

At SSC, other than typical sanitary related discharges from bathrooms, water fountains, sinks, etc., that discharge to the POTW, the only substantial water discharge is the discharge of stormwater from the site. The following materials (chemicals and chemical products) are either used or generated on-site by SSC, and therefore are stored and handled on site:

- 1) Sodium Chloride (NaCl)
- 2) Potassium Chloride (KCl)
- 3) Cryolite (Na_3AlF_6)
- 4) Lime
- 5) Aluminum Dross
- 6) Salt Cake
- 7) Diesel Fuel
- 8) Oil/Used Oil
- 9) Baghouse Dust
- 10) Slag
- 11) Sows/Ingots

Chemical Storage/Handling/Safety/Spill Control/Emergency Plans

Flux/salts, (i.e., sodium chloride, potassium chloride, calcium chloride and Cryolite), are stored in bulk piles underroof and enclosed on three sides. Front-end loaders transport these materials for use in the rotary furnaces inside the furnace building. Flux storage bins are located close to the furnace buildings. The location of the bins helps prevent flux from coming in contact with stormwater during rain events.



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Furnace baghouse dust is collected in supersacks. The supersacks are transferred and stored in roofed storage bins located close to the baghouses. Storing the dust in supersacks and directly putting them into roll-off hoppers has reduced the potential of dust in contact with stormwater runoff.

SSC's lime bulk systems inject lime from 2,000 pounds supersacks into the baghouse air ducts of all five (5) furnaces. The lime bulk systems are located underroof inside the furnace building next to each furnace. The installation and operation of the lime bulk systems has reduced the potential of spillage from the past practice of handling 50 lbs bags of lime and reduced potential contact with stormwater runoff.

Aluminum dross, a feed material for the furnaces, and salt slag, a byproduct of the furnaces, are both stored in roofed three-sided bins. Like the sodium chloride and potassium chloride, these materials are transported throughout the site by front-end loaders.

Diesel fuel is stored in a 12,000-gallon double-wall storage tank. New/used oils are stored in drums and totes underroof and within containment areas.

SSC's Material Preprocessing (MPP) operation crushes and sorts dross and other byproduct material prior to placement in the furnaces. The MPP operation is performed inside a 4-sided building with a dual baghouse. The operation being underroof with a baghouse reduces potential solids from entering stormwater runoff. A mechanical sweeper cleans/sweeps the area around the preprocessing operation every shift.

SSC's finished products consist of solid-state aluminum ingots/sows. The ingots are cooled underroof in the Automation Building. After cooling, ingots are stored outside and in organized rows throughout the facility. There are no known pollutants associated with the ingots that are exposed to stormwater runoff.

SSC employs a team that is dedicated to cleaning and sweeping the facility daily. SSC continuously operates a mechanical sweeper on both the day and evening shifts. Additionally, there are personnel who are dedicated daily/shift to perform hand sweeping and cleaning of areas as needed.

Chemical Controls Training Programs

All plant employees are instructed on proper material handling and notification procedures upon initial employment. A minimum of once per year, a refresher/overview of the requirements of this plan, Stormwater Pollution Prevention Plan (SWPPP) and the NPDES stormwater discharge permit is discussed with all plant employees. The training class discusses the importance of storing raw and waste materials in bins and underroof; the storage location of non-dross/scrap



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material not underroof in the yard; the tracking of raw material, slag and other materials by front-end loaders exiting breezeway and preprocessing operations and other environmental issues that could potentially affect stormwater runoff.

In 2021, there were other changes or upgrades made to help reduce potential pollutants from entering stormwater run-off including:

- 1) In spring 2021, SSC installed rock check dams in several places along the Outfall SW1 stormwater conveyance ditch.
- 2) Polymer logs were also installed in Outfall SW1 stormwater conveyance ditch on the flow side of the rock check dams.
- 3) In summer of 2021, additional rock check dams' locations and polymer logs were installed in several places along the Outfall SW1 stormwater conveyance ditch.
- 4) In fall of 2021, SSC installed drop curtains over Slag Building Bin #3 entrance. This was done to help reduce potential dust being generated when Material Preprocessing System (MPP) fines are augered into the bin.
- 5) SSC replaced and expanded the existing roof that covers raw material Storage Bins 87 and 88 by adding a 60-foot by 116-foot extension. This allows SSC to receive and process black cross during rain events since the material is now stored and processed underroof.

Chemicals Environmental Control Options and Monitoring Requirements

During 2022, SSC will continue to evaluate existing environmental controls and monitoring methods to determine a more effective way of reducing the release of potential pollutants into stormwater runoff. Analytical results from each quarterly sampling event will be compared with previous data to determine if there are any improvements, trends, observations, etc. that will be useful in identifying potential material handling and/or storage improvements that could result in lesser impacts to the environment.

SSC performs weekly stormwater inspections. Any nonconformances are logged on the Stormwater Weekly Inspection Sheet Corrective Action Form (ISO14001 Form EF-94) where corrective actions are tracked until they are corrected. Additionally, to help prevent adverse impacts from spills, SSC personnel will routinely inspect raw and waste materials storage areas and promptly perform any necessary maintenance when needs are observed.

In 2022, SSC plans to implement or investigate the following:

- 1) SSC will continue to replace roof and gutters of storage bins to prevent stormwater from entering the bins during heavy rains.



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- 2) SSC will continue the replacement of broken concrete in the facility.
- 3) SSC will continue to improve the storage and transportation of raw materials and byproducts to reduce potential solids and materials from entering stormwater runoff.
- 4) SSC will continue to improve the reduction of the potential solids to stormwater runoff caused prior to and during loading/handling of slag and dust.
- 5) In February 2022, SSC is in process of installing rock check dam along Outfall SW3 stormwater conveyance ditch.
- 6) SSC plan to modify the current walls on the slag storage building bins to reduce potential dust escaping and coming in contact with Outfall SW1 stormwater conveyance ditch.