

**Memorandum to Merrimack Station NPDES Permit File**

**Re: Conference Call between EPA and Granite Shore Power (GSP)**

**Date: 4/6/2020**

**Attendees on the call: Elizabeth Tillotson, GSP, Allan Palmer, GSP, Damien Houlihan, EPA, and Sharon DeMeo, EPA**

This call was to clarify certain issues that could aide EPA in responding to comments received during the public comment periods for the Merrimack Station NPDES Permit. Information learned during this call includes the following:

**Landfill leachate:**

- Routine operation is to perform only pH adjustment on landfill leachate, which is routed through waste treatment plant #1 prior to entering the slag settling pond. PH of the leachate is generally increased in order to facilitate settling in the slag settling pond. Only infrequently is metal precipitation done when leachate discharge coincides with another wastestream (e.g., DI regeneration) that requires precipitation treatment.
- Monitoring and analysis of the leachate is completed once per year, solely to collect data. Cadmium has been detected above maximum contaminant levels (MCL) or “drinking water” levels and other metals have been detected as well.
- The landfill was not designed to take high volume materials such as fly ash from the precipitators, which is a fine [powdery] material that is the largest component of fly ash generated at the site. Bottom ash or “slag,” the largest byproduct of the Station, is beneficially reused.
- The landfill takes smaller volume wastestreams, primarily from dumpsters located beneath certain equipment throughout the site (e.g., coal yard misc. waste, hoppers under the FGD and other boiler components such as the air preheaters, base of the SCR, and the economizer, which collects larger combustion residual called “clinker material.”) These small volume waste sources destined for the on-site landfill are usually heavier, larger sized residuals that drop out of the process earlier and are generated intermittently.
- Solids (i.e., salt cake) from the FGD treatment system are not disposed of within the on-site landfill.
- In the past, when the Station operated at nearly full capacity, upwards of 10,000 yards/year of material was disposed of within the landfill. More recently, possibly 1,000 yards/year is generated.

**Fly Ash:**

- Fly ash is beneficially reused (i.e, component of cement) as much as possible. Though, reuse is preferred, when it cannot be reused, it is shipped to an off-site landfill for disposal.
- At the end of December 2019/early January 2020, for the first time, a modest amount of fly ash was disposed of in the on-site landfill. GSP was uncertain if the fly ash had been conditioned with FGD wastewater.
- Generally, the FGD treatment system installed was engineered so that FGD wastewater could be used to condition fly ash. Prior to that “clean” Station water was the only source. Therefore, fly ash is conditioned by 1) wastewater the FGD

SWWTS purge stream (or brine concentrate) generated from the salt cake filter press; 2) Station water; or 3) a combination of both.

- Filter press wastewater from the FGD PWWTS is not used to condition fly ash; it re-enters the treatment system.
- Conditioning or wetting the fly ash is done for dust suppression and does not generate a fly ash sludge or slurry. Fly ash is generally considered a pozzolanic material.

**Non-Chemical Metal Cleaning Waste:**

- At the Station, fly ash wash water is also considered non-chemical metal cleaning wastewater. This wastewater first goes to one of three treatment basins prior to the slag settling pond. In-house testing of iron is performed to confirm that high levels of iron are not in the basin prior to transferring this wastewater to the slag settling pond. Monitoring for copper and iron are done at the weir exit to the slag settling pond.

**FDG Wastewater Hauled Off-site:**

- Since GSP took ownership of the Station, there has been only one event that resulted in shipments of FGD wastewater to local POTW's. This occurred during back to back days in November 2018.
- Five shipments went to Lowell and three to Allenstown. Shipments to Lowell did not exceed 8,000 gallons per truck load and shipments to Allenstown did not exceed 5,000 gallons per truck load. Therefore, up to 55,000 gallons were transferred because the company decided that it was not cost effective to start up the secondary treatment system considering the amount of wastewater needing treatment.
- Although GSP does not intend to use this method of disposal on a routine basis, they still want to have the flexibility to do so.
- The indirect discharge permits with the POTWs have been recently renewed and testing has been performed on certain shipments.

**Coal Pile Run-off:**

- Coal pile runoff is not discharged to the Merrimack River. The coal pile is surrounded by a drainage trench system that drains to an old oil tank dike area. Coal pile runoff captured in this containment area percolates into the ground.
- Back in the 1980's, there was a direct discharge to the river.