



GRANITE SHORE POWER

Coal Combustion Residuals
Annual Fugitive Dust Control Report

Merrimack Station Coal Ash Landfill
Bow, New Hampshire

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1.0 Introduction

On April 17, 2015, the United States Environmental Protection Agency (US EPA) published the final rule on Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities under 40 Code of Federal Regulations (CFR) Parts 257 and 261. The rule regulates the disposal of CCR as a solid waste under subtitle D of the Resource Conservation and Recovery Act (RCRA). CCR includes fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. The rule includes minimum criteria for existing and new CCR landfills and existing and new CCR surface impoundments and all lateral expansions consisting of location restrictions, design and operating criteria, groundwater monitoring and corrective action, closure requirements and post closure care, and recordkeeping notification, and internet posting requirements. The final rule became effective on October 19, 2015.

The final rule requires owners or operators of CCR units to record certain information in the facility's operating record. In addition, owners and operators are required to maintain a publicly accessible internet site for this information, hereinafter referred to as CCR website.

A Fugitive Dust Control Plan was prepared in October 2015 and uploaded to the Company's CCR website to satisfy the air operating criteria of 40 CFR 257.80, which requires the owner or operator of a CCR landfill to adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.

As required by 40 CFR 257.80(c), this annual fugitive dust control report includes a description of the actions taken to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective actions taken.

1.1 General Facility Description

GSP Merrimack LLC owns and operates the Merrimack Station coal ash landfill located at 67 Ryan Road in Bow, New Hampshire as a disposal facility for ash generated at the Merrimack Station electrical generation facility. The landfill was designed for the disposal of ash residuals from the combustion of coal at Merrimack Station and meets the criteria of an existing CCR landfill under 40 CFR Part 257. The landfill is a single lined facility, approximately 5.5 acres in size with a capacity of approximately 300,000 cubic yards. The landfill is currently permitted by the New Hampshire Department of Environmental Services (NHDES) Waste Management Division, under Permit No. DPHS-SW-85-012.

2.0 Fugitive Dust Control

2.1 Dust Control Measures

The need for dust control during coal ash transport and placement activities is assessed on a continuing basis. The available methods to minimize fugitive emissions associated with coal ash landfill operations at Merrimack Station are described in detail in the Fugitive Dust Control Plan. Natural enclosures such as trees, vegetation, and topography act as a partial enclosure to protect from wind erosion. The natural enclosures represent passive dust control measures that are in place at all times throughout the year. Additionally, in 2019, the most commonly used dust control measures included: moisture conditioning, compaction, sand cover (active portion of the landfill), vehicle speed limits, truck covers, and general good housekeeping practices.

2.2 Citizen Complaints

On April 19, 2019 GSP became aware of an inquiry submitted to the New Hampshire Department of Environmental Services (NHDES) by a neighboring property owner regarding the Merrimack Station Ash Landfill. A representative from NHDES made an unannounced visit to the unmanned landfill site to investigate on April 19, 2019 and coincidentally encountered a GSP employee who was performing routine observations at the landfill. NHDES made the GSP employee aware of an inquiry by neighboring property owner and indicated that NHDES would follow-up with GSP environmental personnel to obtain additional information. GSP environmental personnel, upon return from vacation on April 29, 2019, was made aware of the encounter with NHDES at the landfill. The GSP representative called NHDES on April 30, 2019 and received a return call on May 2, 2019. The phone discussion revealed that the inquiry was related to a dust condition observed by a neighboring property owner on March 14, 2019 from the direction of the landfill property and that a truck was observed either entering or leaving the landfill property on that day.

GSP environmental personnel immediately investigated the inquiry. The internal investigation revealed that there were no ash trucks unloading at the landfill on the date in question, as verified through review of the ash truck logbook and load slips. Additionally, a contractor periodically visits the landfill to make visual observations and place temporary sand cover as needed. The contractor reported that site visits occurred on an approximately weekly basis, including March 13, 2019, the day prior to the date in question. Therefore, GSP believes that there should have been appropriate temporary cover on any ash material on the working lifts at the landfill. There are other trucks that periodically visit the landfill for activities unrelated to ash placement or handling, including contractors that pump and truck leachate from a holding tank. GSP reached out to the neighboring property owner via email on May 3, 2019 to schedule a meeting time to discuss the inquiry and share information regarding GSP's fugitive dust control plan for the landfill; however, a response has not yet been received and GSP has not identified a specific issue related to the fugitive dust inquiry made.

A subsequent complaint was made by the same neighboring property owner on June 12, 2019 resulting in NHDES personnel arriving at the landfill to witness the ash unloading. NHDES witnessed that the material was appropriately wetted prior to dumping, per the Fugitive Dust Control Plan. Additionally, a small amount of dust from dry cyclone canisters during the final vibratory release was observed, but NHDES personnel found it to be of minimal concern due to the appropriate conditioning of the truck's main compartment. NHDES indicated that there were no actionable issues with the ash unloading operations.

GSP has taken these opportunities to review its fugitive dust plan and make revisions aimed at improving best practices to minimize fugitive dust as described below in Section 2.2.

2.3 Corrective Actions

GSP's response to the above complaints included:

- Immediate investigation upon becoming aware of the details of the inquiry;
- Outreach to neighboring property owner who initiated the inquiry with NHDES;
- Internal meeting to review existing fugitive dust control plan and discuss options available to improve dust minimization techniques;
- Visual observations at the landfill on a high-wind day without ash unloading or handling activities to assess effectiveness of temporary cover;
- Revisions to fugitive dust control plan to include reduction of high-wind threshold related to "stop work" authority (from 25 mph to 15mph);
- Initiating evaluation of alternate temporary cover methods;
- More frequent oversight during ash dumping activities and maintaining a log book of observations;
- Redistributing roles and responsibilities as a result of personnel changes and ownership transition; and
- Training employees and contractors involved in ash related activities at the landfill on the revised fugitive dust control plan.

GSP continues to work towards developing additional procedures that will aid in fugitive dust control, such as:

- Minimizing excess wetting of ash in vac-trucks to prevent free liquid entering the landfill;
- Ensuring dump trucks used to transport ash are lined and have spray nozzles to adequately wet the materials; and
- Developing a plan for ash dumpster conditioning during freezing temperatures to maintain fugitive dust controls and prevent freezing.

2.4 Effectiveness of Fugitive Dust Plan

The annual review of effectiveness of the fugitive dust plan resulted in changes to reflect the new ownership, access road location, and landfill address (result of property subdivision) in addition to the items noted as corrective actions in Section 2.3. The fugitive dust plan was revised in May 2019.