REPORT

ANNUAL CCR FUGITIVE DUST CONTROL REPORT

Gerald Gentleman Station
Nebraska Public Power District

Submitted To: Nebraska Public Power District
Gerald Gentleman Station
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1.0 INTRODUCTION

Golder Associates Inc. (Golder) has prepared this Annual Coal Combustion Residual (CCR) Fugitive Dust Control Report on behalf of Nebraska Public Power District (NPPD) for Gerald Gentleman Station (GGS). This report has been developed in accordance with recognized and generally accepted best management practices and is required under 40 CFR 257.80(c). Provided in this report are a description of the actions taken to control CCR fugitive dust. Citizen complaints and corrective measures regarding fugitive dust are addressed in Section 3.0 and 4.0, respectively; however, there have not been any citizen complaints to date.

1.1 Facility Description

GGS is a 1,365 mega-watt coal-fired electric facility located south of Sutherland, Nebraska. The plant and associated facilities pertaining to the handling of CCRs are shown on Figure 1.

CCRs generated at GGS include fly ash and bottom ash. These CCRs are managed in a dry landfill that is owned and operated by NPPD and regulated by Nebraska Department of Environmental Quality (NDEQ). The dust control measures for management and handling, transport and placement of CCRs are described in this report.

1.2 Regulatory Requirements

At GGS, CCR fugitive dust is regulated by the NDEQ and Standards in accordance with the Air Pollution Control Title V Permit to Operate and Title 129 of the Nebraska Air Quality Regulations (NDEQ 2015). Fugitive dust generated by CCR-related activities at GGS is also managed in accordance with the CCR Rule, 40 CFR 257. This Report is limited to addressing the annual requirements for the CCR Rule. Specific requirements of the Title V Operating Permit are not duplicated in this report. This report will be maintained within the operating record and GGS's publically accessible website for at least five years.

2.0 ACTIONS TAKEN TO CONTROL FUGITIVE DUST

Fugitive dust may be generated at GGS by loading, transport, and placement operations. The specific locations of potential CCR fugitive dust sources are as follows:

- Collection and Loading
  - Baghouse to fly ash silos
  - Boiler economizer hoppers to fly ash silos
  - Fly ash silos to trucks
  - Fly ash from truck to rail car

- Transport
  - Haul trucks
  - Vacuum trucks
  - Haul roads
- Placement and Storage
  - Ash Landfills #3 and #4 (Landfill)
  - Bottom ash landfill

Actions taken at GGS to control fugitive dust have not changed from the collection, handling, loading, transport, placement and control measures presented in the initial Dust Control Plan dated October 15, 2015. The Dust Control Plan will be amended as needed, maintained in the operating record, certified by a professional engineer registered in Nebraska and posted to the publicly accessible website.

NPPD staff performed the following tasks to evaluate the effectiveness of the current CCR fugitive dust measures and ensure that the procedures described in the Dust Control Plan adequately controlled CCR fugitive dust.

- Weather conditions were monitored daily for wind and precipitation events. If high winds are expected, additional measures were taken to minimize CCRs from becoming airborne. A water truck was operated as needed based on expected precipitation or freezing events.
- Routine observations were conducted to determine whether dust was becoming airborne in such quantities and concentrations that it remains visible in the ambient air beyond the premises where it originates.
- Conditioned CCR was assessed periodically to ensure that it was placed in such a manner to prevent the formation of fugitive dust.
- The fabric dust collectors were monitored continuously per the Title V permit to determine whether fabric dust collectors were functioning properly.

The observations and routine functions listed above are standard practice at GGS. Visual emissions were observed daily during operations to assure that fugitive dust at the site was controlled. Personnel involved in CCR handling and placement are instructed to ensure compliance with permits, facility plans, and appropriate regulations. Additional fugitive dust control activities completed by NPPD since October 2015 are described in the following sections.

2.1 Collection and Loading

Fly ash was collected in flue gas baghouses and boiler economizer section hoppers then pneumatically conveyed to the fly ash storage silos. The fly ash storage silos were unloaded through the fly ash silo truck system. At the baghouses, dust was controlled within a full enclosure using fabric dust collector filter bags.

2.1.1 Fly Ash Not Sold for Off-Site Beneficial Re-use

At the fly ash silos, fly ash was moisture conditioned in rotary pan mixers and loaded into haul trucks. Fugitive dust was controlled by the following:

- Conditioning the fly ash with water to an appropriate moisture content prior to loading into haul trucks. The moisture content helped prevent wind dispersal, but did not result in free liquids.
- Loading into haul trucks that are covered or enclosed at the fly ash silos.
- Minimizing the fall distance at the drop point with an enclosed chute.
- Reducing or halting operations during high winds.

2.1.2 Fly Ash for Off-site Beneficial Reuse

A portion of the fly ash that was marketed and used for off-site beneficial reuse was first screened at the fly ash silos prior to being loaded into the haul trucks. The fly ash screen tailings were conveyed to a temporary storage container using an enclosed chute. Screened fly ash tailings that were collected in the temporary storage container were placed in the Landfill when the container became full. At the rail car loading area, screened fly ash was conveyed from the haul trucks to rail cars via auger. To control dust, a drop chute and drop tube was used to connect the auger to the truck and rail car, respectively, and the rail cars were fully enclosed.

The remaining portion of the fly ash that was marketed and used for off-site beneficial reuse was loaded into fully enclosed haul trucks. This fly ash was not screened prior to loading.

Fugitive dust was controlled by the following:

- Loading into haul trucks or market trucks that were covered or enclosed at the fly ash silos
- Minimizing the fall distance at the drop point with an enclosed chute
- Reducing or halting operations during high winds

2.2 Transport

Fly ash was transported in covered or enclosed haul trucks while bottom ash, which was not easily entrained in the air, was transported in open trucks or containers as conditions warranted. CCR material may also have been transported in vacuum trucks and other covered containers. The haul routes are shown on Figure 1. GGS has both paved and unpaved haul roads. Fugitive dust was controlled on the haul roads by covering loads, and applying water to the roads with a water truck and operating the water truck when hauling of CCRs occurred with an exception for freezing conditions. During freezing conditions, alternatives may have been used to control dust as warranted. Alternatives for minimizing CCRs from becoming airborne on roadways include the following:

- Paving and sweeping roads
- Application of chemical dust suppressants or binders
- Application of sand or gravel
- Reducing speed limits on haul roads
- Reducing or halting operations during high winds

2.3 Placement

Placement of CCRs occurred at the GGS ash disposal facility. Fugitive dust at ash disposal facility was controlled by:

- Placing fly ash conditioned with water or an appropriate chemical dust suppression agent to achieve minimization of dust without the creation of free liquids.
- Compacting the fly ash after placement. Compaction was achieved by making a pass over spread materials with a haul truck. The fly ash formed a crust that helps to prevent re-entrainment of fly ash from the wind.
- Operating a water truck and/or watering pivot over recently placed CCRs, except during freezing conditions.
- Reducing or halting operations during high winds.
- Placing fly ash that was not moisture conditioned was only done if conditions were favorable and the method of transport required it, such as unloading vacuum trucks.
- Water was applied or other similar provisions were made to control fugitive dust during placement of dry fly ash.

3.0 RECORD OF CITIZEN COMPLAINTS

Citizen complaints were not received between October 15, 2015 and October 15, 2016. As stated in the Dust Control Plan, complaints that are received will be forwarded to the NPPD Corporate Environmental Department for review and coordination of response and corrective measures. The response and corrective measures to each complaint will be determined on a case-by-case basis. A copy of each complaint and its resolution, including a summary of corrective action taken, will be included in the operating record and the annual dust control report.

4.0 SUMMARY OF CORRECTIVE MEASURES TAKEN

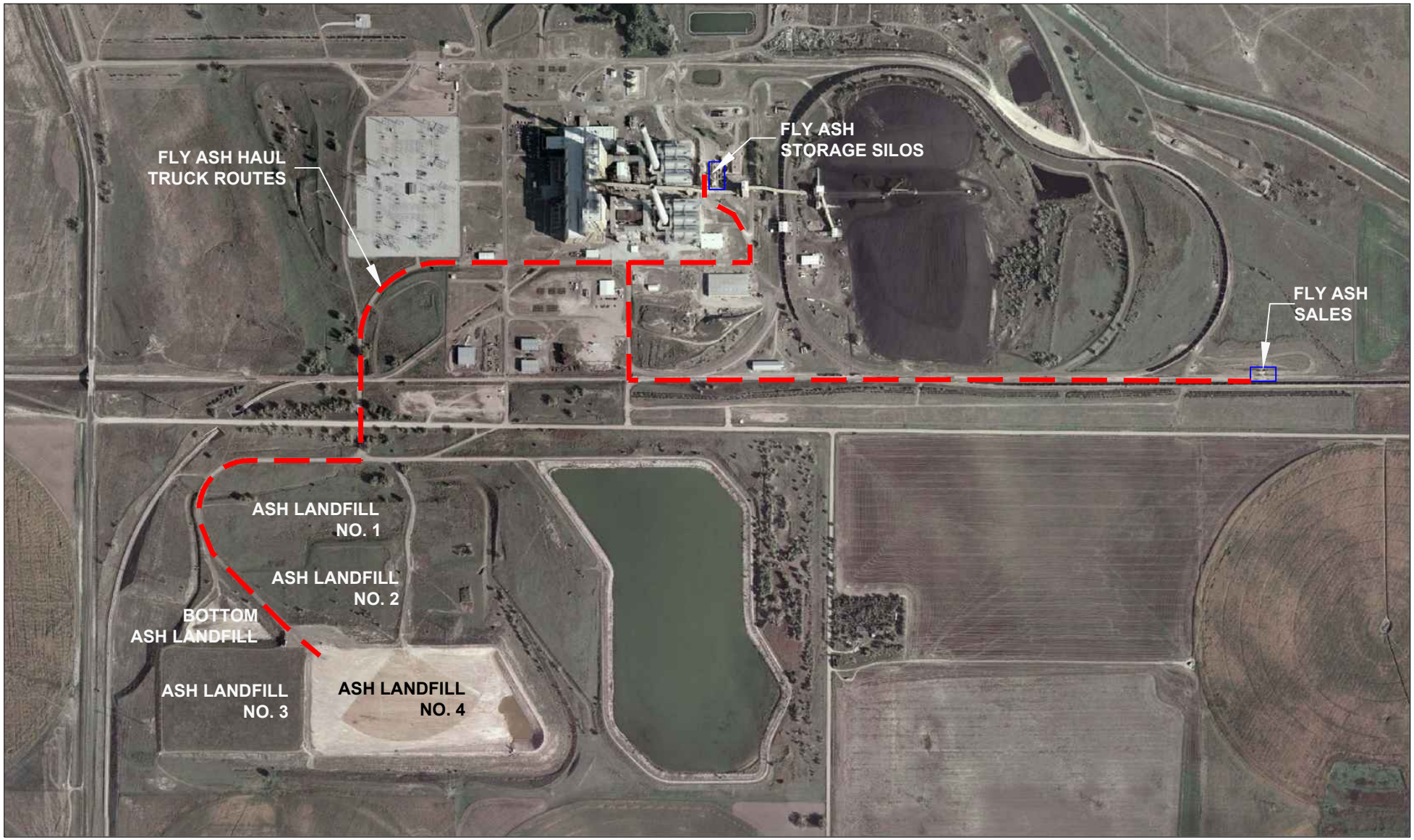
CCR fugitive dust was sufficiently managed using the procedures described in the Dust Control Plan. Corrective measures were not needed during the period from October 15, 2015 to October 15, 2016.

5.0 RECORD KEEPING AND NOTIFICATIONS

The NDEQ will be notified before the close of business on the day this annual report is placed in the operating record. Within 30 days of placing the annual report in the operating record, the report will be posted to a publicly accessible website. Each annual report will be retained and posted to the website for at least five years.

FIGURE

Path: \\Denver.golder.gds\projects\15JOBS\153662516 NPPD GGS CCR\CCR Documents\Annual Requirements\Dust Control Plan\ | File Name: Haul Route - from 2014 Permit Renewal.dwg



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NEBRASKA PUBLIC POWER DISTRICT
GERALD GENTLEMAN STATION
FUGITIVE DUST CONTROL PLAN

FIGURE 1

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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