NELSON PLANT

CCR FUGITIVE DUST CONTROL PLAN

Revision 0

October 19, 2015

1.0 Introduction

This document represents the CCR Fugitive Dust Control Plan (Plan) for the Entergy Nelson Plant (Nelson) as required by §257.80(b) of the Disposal of Coal Combustion Residuals from Electric Utilities final rule (Rule) published in the Federal Register on April 17, 2015.

Fly ash is the fine particle size ash that is removed from the exhaust stream by the boiler's Electrostatic Precipitator (ESP) and pneumatically transferred to a storage silo, which is abated by a fabric filter dust collector. Bottom ash is a coarse material similar in particle size to a sand gravel mix that is collected in the bottom of the boiler, is quenched and hydraulically conveyed to two dewatering bins located adjacent to the fly ash silo. Economizer ash, a larger particle sized fly ash, is collected in a single silo located between the boiler and ESP.

This fugitive dust control plan covers identified sources associated with the loading, unloading, transfer, and disposal of coal combustion residuals (CCRs). This plan identifies three categories of CCRs which are generated from different areas during the combustion process: fly ash, bottom ash, and economizer ash. Emissions associated with fugitive dust are abated by industry accepted best management practices. Sources of fugitive dust include the following: vehicular travel, material handling, storage piles and exposed landfill surfaces. The storage piles and landfill operations are permitted (Solid Waste Facility Number GD-019-0261) and operated in compliance with the Louisiana Department of Environmental Quality Solid Waste regulations.

2.0 CCR Fugitive Dust Control Measures

2.1 Vehicular Travel

Fly ash is loaded into trucks directly from the fly ash silo and then either shipped off-site for sale, or is transported to the on-site landfill to be disposed or later reclaimed for sale. Fly ash that is transported to the on-site landfill is transferred via closed tanker truck. Fly ash, bottom ash or their mixtures are sold by the onsite ash marketing contractor. Fly ash that is sold directly from the silo is loaded and hauled offsite in either enclosed tanker trucks operated by the onsite ash marketing contractor or their customers. Fly ash is also sold and loaded in open top trucks operated by the onsite ash marketing contractor, which are equipped with a full enclosure tarp. This enclosure tarp completely covers the open top area of the truck and has an opening for loading. There is an additional tarp flap that covers the opening after loading is completed. Fly ash is also sold and loaded into open top trucks owned by customers. To abate fugitive emissions from becoming airborne during transport in the open top trucks, the ash will be wetted to hydrate the layer of exposed fly ash to form a thin encapsulated layer or, if so equipped, the load will be tarped prior to leaving the loading area. Bottom ash, in a moist condition, is either shipped off-site for sale directly from the dewatering bins, or is sent to the on-site landfill to be either disposed or later reclaimed for sale and shipped off-site via open top trucks that are covered or have been wetted. Economizer ash is transferred from the economizer ash silo to the landfill for disposal or later reclaimed for sale, via covered open top dump trucks.

A paved road is used to transport fly ash, bottom ash, and economizer ash from the silos and dewatering bins to the landfill or to the customer. Using an accepted industry Best Management Practice (BMP), the paved road will be wetted using a watering truck on an as-needed basis to prevent airborne dust emissions at the facility property line due to vehicular traffic. Depending upon the current weather conditions and on an as-needed basis, a dust control agent may be added to increase the effectiveness of this dust control measure. Any such agent will comply with applicable VOC and HAP content limits as specified in the Plant's Title V Operating Air Permit. Fugitive dust generated from vehicular traffic from the landfill access road will be minimized by enforcing a posted speed limit of 25 mph. Vehicular traffic not associated with ash management activities will be minimized.

Fugitive emissions from vehicular traffic in the landfill occur from the tanker trucks delivering fly ash, dump trucks delivering bottom ash and economizer ash, a front-end loader, a reclaimer, and other as-needed equipment required for moving material. Fugitive dust in the landfill area will be controlled with a watering truck on an as-needed basis to prevent airborne dust emissions at the facility property line from occurring due to vehicular traffic from the trucks and other CCR moving equipment. In addition, fugitive dust generated from vehicular traffic within the landfill boundary will be minimized by enforcing a speed limit of 5 mph. Vehicular traffic and equipment movement not associated with ash management activities will be minimized.

2.2 Material Handling

Fugitive emissions from material handling occur during truck loading, during unloading at the landfill for disposal or staging, and material reclaimed or transferred by the front-end loader and other equipment.

For loading of fly ash, tanker trucks park directly under the enclosed fly ash silos where a telescoping port connects with the tanker truck's top hatch to create a dust-free seal. When loading is complete, the telescoping port retracts and negative pressure limits residual dust collected in the accordion shaped tube from releasing. The bottom ash loaded from the dewatering bins remains inherently moist and is typically not prone to fugitive dust generation. Bottom ash is loaded into dump trucks prior to transfer for sale or to the landfill for disposal or staging. Economizer ash is unloaded from the silo using a telescopic chute. The chute is equipped with a knife gate that forms a negative pressure seal to prevent fugitive dust. Economizer ash is loaded to covered dump trucks prior to transfer to the landfill.

Fly ash is deposited in the landfill by belly-dumping from the bottom of the tanker trucks in order to minimize the material drop distance. The bottom hatches are opened as the tanker slowly progresses forward while depositing a piled line of fly ash. Economizer ash is dumped via covered dump trucks in the landfill. The deposited fly ash and/or economizer ash is then transferred and comingled with the more moist CCR material in the landfill to minimize the

potential for fugitive wind-blown emissions. Bottom ash is dumped via dump truck in the landfill. Due to the retained moisture in the bottom ash, fugitive emissions from both the drop and wind-blown activity associated with bottom ash are minimal. Reclaimed CCR material, used as a synthetic aggregate retains some moisture but will be hydrated as needed. Reclaimed CCR material is loaded to trucks via front-end loader.

All material handling activities will be conducted in a manner to minimize fugitive dust formation and to prevent the occurrence of visible emissions at the facility property line. Should visible emissions be observed at the property line, then additional mitigation measures will be deployed or the activity causing the emissions will be stopped.

2.3 Storage Piles and Landfill Operations

Mixed bottom ash and fly ash is sent to staging piles within the landfill to be sold at a later time. The moisture content in the mixed CCR material aids in forming an encapsulating outer shell to minimize fugitive emissions from wind-blown activity. To prevent fugitive emissions associated with windblown activity in the unencapsulated landfill, drier fly ash and economizer ash will be mixed with the higher moisture content bottom ash mixtures. In addition and on an as-needed basis, a water truck will be used to wet down the exposed, dust prone areas. At the end of each day, exposed areas of the existing landfill or new lateral expansion areas will be watered and compacted to minimize dust emissions until the next day of activity. During high-wind conditions, if visible emissions are observed at the facility property line, the exposed and/or dust prone areas of the landfill will be watered and disposal operations will cease until the wind-speeds decrease to an acceptable level and visible emissions are not observed at the facility property line. All watering of CCR material is done in quantities so as not to accumulate free liquids.

3.0 Conditioned CCR

Fly ash or any other CCR that is inherently dry and capable of generating windblown fugitive emissions that is designated for disposal or staging, will be conditioned prior to emplacement within the landfill. Conditioning may be performed through the application of water or various chemical dust suppressants in a matter that does not result in free liquids. Any dust suppressant used will comply with applicable VOC and HAP limits as specified in the Title V Operating Air Permit. Disposal by belly-dumping tanker trucks should be done in a manner that slowly releases a controlled amount of material over a short distance to minimize the generation of airborne particulate matter. Water or chemical dust suppressants should be employed while dumping or immediately following, in a manner that does not cause harm to operational equipment. Unloading by end-dumping any dry CCR material should be done in a slow and controlled manner to minimize the generation of airborne particulate matter. Water or chemical

dust suppressants should be employed during the disposal process in a manner that minimizes fugitive dust formation and which does not cause harm to operational equipment.

4.0 Citizen Complaints

In the event that a citizen intends to file a comment or complaint concerning visible dust emissions, please utilize the Nelson Plant Fugitive Dust Control Comments or Complaints submittal form located on the publicly accessible CCR Rule Compliance Data and Information website.

All complaints are quickly followed up and remedied as necessary.

5.0 Plan Assessment

Landfill activities are monitored by qualified personnel to ensure fugitive dust does not cause a nuisance off-site. In the event of chronic visible emission problems associated with CCR sources, new fugitive dust controls methods will be evaluated. New control methods that prove to be effective and are technically and economically feasible will be employed. This plan will be amended as necessary to incorporate the new control measures. The amended Fugitive Dust Control Plan will be placed in the facility operating record, notification will be submitted to Louisiana Department of Environmental Quality Solid Waste Division that the amended plan has been placed in the facility operating record and the amended plan will be made available on the publically accessible website.

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PROFESSIONAL ENGINEER'S REVIEW – [40 CFR 257.80(b) (7)]

The undersigned licensed Professional Engineer is familiar with the requirements of Chapter 40 of the Code of Federal Regulations Part 257.80(b) and has supervised examination of the facility. The undersigned licensed Professional Engineer attests that this Fugitive Dust Control Plan has been prepared in accordance with good engineering practices including applicable industry standards and in accordance with the requirements of Chapter 40 of the Code of Federal Regulations Part 257.80; that procedures and control measures were selected to be appropriate and effective.

I hereby certify that I have examined the facility and being familiar with the provisions of 40 CFR, Part 257.80, and attest that this Fugitive Dust Control Plan was prepared in accordance with good engineering practices.

Engineer: Tarek Elnaggar, PE

Signature: _____

Registration No: 23832

State: Louisiana

Date: October 14, 2015