WA PARISH GENERATING STATION
UNITS 5-8

CCR FUGITIVE DUST CONTROL PLAN

Prepared for

NRG Energy, Inc.

Issue: For Use, Rev. A
Date: October 6, 2015
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ISSUE SUMMARY PAGE

FUGITIVE DUST CONTROL PLAN

W.A. PARISH, UNITS 5-8

FOR

NRG ENERGY, INC.

Purpose of Issue	*Date*	*Pages Affected*
For Use, Rev. A	10-06-2015	All
Addition of E-Pond (SMU-020), AP-Pond (SMU-021), and Administrative Amendment	05-05-2022	CP-2, 1-2, 2-3, Appendix A

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CCR FUGITIVE DUST CONTROL PLAN

WA PARISH, UNITS 5-8

FOR

NRG ENERGY, INC.

CERTIFICATION PAGE

Sargent & Lundy, L.L.C. registered engineering firm F-2202

I certify that this Report was prepared by me or under my direct supervision and that I am a registered professional engineer under the laws of the State of Texas.

This document is released for Use under the authority of James H. Staehlin, Texas, P.E. #87527 on October 6, 2015.

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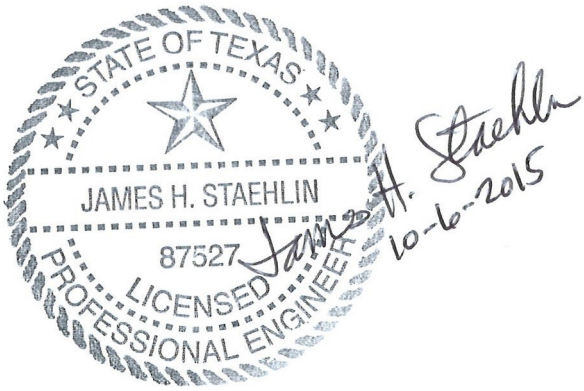

CCR FUGITIVE DUST CONTROL PLAN ADDENDUM FOR ADDITION OF E-POND AND AP-POND

WA PARISH, UNITS 5-8

FOR

NRG ENERGY, INC.

CERTIFICATION PAGE

TRC Environmental, registered engineering firm number 3775

I certify that this Report Addendum was prepared by me or under my direct supervision and that I am a registered professional engineer under the laws of the State of Texas.

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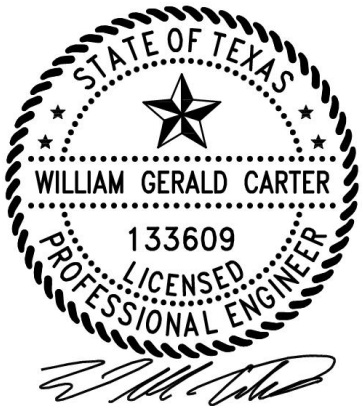

May 5, 2022 NRG WAP
Fugitive Dust Amendment
and Administrative Update

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EXECUTIVE SUMMARY

NRG Energy, Inc. (NRG) is committed to protecting the quality of the environment through feasible and effective measures. As one of these measures, NRG has prepared this Coal Combustion Residuals (CCR) Fugitive Dust Control Plan to minimize fugitive dust generated through its operations. This Fugitive Dust Control Plan was developed to meet the requirements of 40 CFR 257.80.

This CCR Fugitive Dust Control Plan is intended to apply to all employees and to all CCR operations activities which create fugitive dust at the WA Parish Station (WAP). Employees shall minimize fugitive dust generated on site and shall implement and follow this plan. Operations activities shall also be conducted in accordance with this plan.

1. INTRODUCTION

1.1 PURPOSE OF THIS PLAN

The purpose of this plan is to minimize Coal Combustion Residuals (CCR) from becoming airborne at the WA Parish facility. The primary sources of fugitive dust are listed in this plan. This Fugitive Dust Control Plan was developed to meet the requirements of 40 CFR 257.80.

1.2 STATION DESCRIPTION

The W.A. Parish Generating Station (Parish) is located in Thompsons, TX on the banks of Smithers Lake in Fort Bend County, TX. The generating station consists of four (4) coal fired units, Units 5-8. Unit 8 is equipped with a wet flue gas desulfurization (FGD) for SO_2 control and baghouses for particulate control. CCR waste products are trucked to an 800-acre on-site landfill.

The combustion byproducts of coal are bottom ash, fly ash and FGD waste. Bottom ash from the units is sluiced with water and carried through pipes to dewatering bins. Decanted bottom ash is discharged into trucks for resale or for transportation to the on-site landfill. Bottom ash may be resold for beneficial use. Fly ash is conveyed from the boilers to storage silos via an enclosed pneumatic system. Fly ash may also be loaded into enclosed trucks for resale or for transportation to the on-site landfill. As necessary, vehicles are washed to prevent tracking of sediment on plant and public roads. Water used to wash vehicles in CCR loading operations is discharged to a plant wash down pond.

The wet FGD system uses limestone to reduce SO_2 emissions and produces gypsum slurry as a byproduct. The slurry is pumped to a scrubber waste handling facility where the waste is dewatered. The dewatered waste is collected in a storage area and loaded on trucks for transportation to the on-site landfill. Runoff from the storage area drains into an adjacent scrubber pond.

1.3 SOURCES OF CCR FUGITIVE DUST

Primary sources of fugitive CCR dust at WAP are:

a. Small spills of fly ash and bottom ash around pipes and other equipment
b. Equipment malfunction
c. Small amounts of fly ash generated by emptying fly ash and economizer ash from the silos into trucks
d. Waste trucks (fly ash, bottom ash and FGD waste) travelling on plant roads
e. Waste trucks (fly ash, bottom ash and FGD waste) dumping material into the landfills
f. Active portions of the CCR landfill
g. Dried out portions of the scrubber pond and plant wash down ponds
h. Dried out portions of E-Pond (SMU-020) and surrounding roadways
i. Dried out portions of AP-Pond (SMU-021) and surrounding roadways

2. MONITORING

2.1 FREQUENCY OF MONITORING

Fugitive dust is monitored as part of normal plant operations.

2.2 MONITORING METHODS

For purposes of this fugitive dust control plan, fugitive dust is monitored visually. Indicators that fugitive dust is being minimized may include, as applicable:

a. Clearly visible fugitive dust that does not rise higher than the top of the vehicle
b. Clearly visible fugitive dust does not rise above pushing, moving, or loading equipment
c. Fugitive dust does not exceed the dust from similar natural terrain in adjacent areas as determined from a visual assessment of the dust source

2.3 CONTROL MEASURES

The CCR handling equipment at WAP is designed to minimize fugitive CCR dust. The equipment handles boiler bottom ash, fly ash and FGD waste.

Bottom ash is sluiced with water and carried through pipes to dewatering bins. The sluice water facilitates bottom ash handling and reduces the amount of dust that may be generated. Decanted bottom ash is discharged into trucks for resale or for transportation to the on-site landfill. Bottom ash sold for beneficial use also reduces the volume of waste stored in the landfill.

Fly ash is conveyed from the boilers to storage silos via an enclosed pneumatic system. This enclosed system reduces the amount of dust that may enter the air. Fly ash may also be loaded into enclosed trucks for resale or for transportation to the on-site landfill. The enclosed trucks are designed to reduce the amount of CCR dust that may be generated. Fly ash sold for beneficial use also reduces the volume of waste stored in the landfill.
The wet FGD system uses limestone to reduce SO2 emissions and produces gypsum as a byproduct. The gypsum is in slurry form which reduces the amount of dust that may be generated. The slurry is pumped to a scrubber waste handling facility where the waste is dewatered. The dewatered waste is collected in a storage pile and loaded on trucks for transportation to the on-site landfill. Runoff from the gypsum storage area is discharged to the scrubber pond. At the landfill, the FGD waste is used to stabilize fly ash by dumping the FGD waste on top of the fly ash previously spread out in the landfill area. The layered fly ash and FGD waste are compacted with equipment and water to blend and stabilize the two products.

Water spray is used at the landfill and as needed on plant roads to reduce the amount of airborne fugitive dust. Water sprays are suitable for a range of climate conditions, including warm humid conditions like those of southeast Texas where WAP is located. Other control measures at the landfill involve compaction of material with trucks and bulldozers, relocating activity, or reducing activity as needed. If necessary, vehicles will be washed to prevent tracking of sediment on plant and public roads.

Other control measures include reduced speed limits at the plant. Regular inspections of piping and other CCR handling equipment at the plant and routine preventive maintenance help to minimize CCR fugitive dust.

Table 1 lists control measures that are considered applicable to the respective potential dust source. Some sources have multiple means of controlling dust, while others are controlled most effectively by a single method. In practice, some activities may require multiple measures at the same time.

Plant personnel will ensure that the appropriate control measures are taken to meet the visual monitoring indicators described above. Appropriate actions taken to implement this Fugitive Dust Control Plan will be logged on the "Fugitive Dust Monitoring Report" in Appendix A.

Table 1: Control Measures		
Sources	**Control Measure**	**Description**
Small spills of fly ash or bottom ash around pipes or equipment	1	Remove small spill
	2	Apply water as needed
Equipment malfunction (examples: excess fly ash emission from vacuum / pressure relief valves on top of the fly ash silos or bin vent filters)	1	Repair equipment
	2	Reduce flows
Emptying fly ash from silos into trucks	1	Repair silo discharge dust collection equipment
Waste hauling trucks (fly ash, bottom ash and FGD waste) travelling on plant roads	1	Wash trucks before they leave the loading area
	2	Apply water to roads as needed
	3	Reduce vehicle speed
Fly ash, bottom ash and FGD waste dumping into the landfill	1	Apply water as needed
	2	Compact material as needed
	3	Reduce equipment speed
	4	Relocate activity on landfill
	5	Minimize activity on landfill
Active landfills (areas that have dried out)	1	Compact material as needed
	2	Apply water as needed
	3	Reduce equipment speed
	4	Relocate activity on landfill
	5	Minimize activity on landfill
Dried out portions of the scrubber pond and wash down pond	1	Apply water as needed
Dried out portions of E-Pond (SMU-020) and surrounding roadways	1	Apply water as needed, slow traffic as needed
Dried out portions of APH-Pond (SMU-021) and surrounding roadways	1	Apply water as needed, slow traffic as needed

Application of these control measures is considered NRG's best effort to minimize fugitive dust at WAP. However, NRG recognizes that there may be periods of unusual weather conditions when the above measures to control fugitive dust may be less than successful. In such cases, NRG may take other feasible and economically reasonable measures to minimize fugitive dust. Sources in Table 1 that involve CCR dust emissions from landfills may use water to emplace the CCR material into the landfill, Final CCR Rule 257.80(b)(2).

3. RECORD KEEPING

3.1 CONTENT OF RECORDS

The CCR Fugitive Dust Monitoring Report form (Appendix A) shall be completed when an action is taken to reduce CCR fugitive dust. The completed reports shall serve as a record of visual monitoring and any control measures taken (to satisfy Final CCR Rule 257.80(b)(1)). It shall also serve to assess the effectiveness of the dust control plan (Final CCR Rule 257.80(b)(4)). The report shall include:

a. The date and local time of monitoring.
b. Description of the fugitive dust source
c. The observer
d. Numerical control measure applied for dust control (Table 1)
e. Corrective actions taken and results of those actions. Depending on the dust source, it may be necessary to apply multiple control measures.

Appendix B contains a blank Log of Citizen Complaints form for logging citizen complaints. The form contains entries for recording the following information, per Final CCR Rule 257.80(c):

a. The date and local time of the complaint.
b. The name of the complainant.
c. Description of the fugitive dust source.
d. Corrective actions taken and the results of those actions.

The form shall be completed on an as-needed basis. Each year the completed form will be placed in the annual CCR fugitive dust control report (Section 4.3).

3.2 RECORD STORING AND RETENTION

This plan is complete when it is placed in the station's operating record (Final CCR Rule 257.105(g)(1)). Within 30 days of placing the control plan in the station's operating record, it must be posted to the NRG CCR website (Final CCR Rule 257.107(d) and (g)(1)).

NRG will amend this written plan whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit (Final CCR Rule 257.80(b)(6)). The amended plan, when placed in the station's operating record, is considered the most recent control plan. Only the most recent control plan must be maintained in the station's operating record (Final CCR Rule 257.105(g)(1)). Similarly, the most recent dust control plan must also be maintained on the NRG CCR website (Final CCR Rule 257.107(g)(1)).

The completed CCR Fugitive Dust Monitoring Report forms will be kept for use in the annual CCR fugitive dust control report but are not required to be individually placed in the station's operating record or CCR website.
The Log of Citizen Complaints forms will be kept for use in the annual CCR fugitive dust control report but is not required to be individually placed in the station's operating record or CCR website.

4. REPORTING

4.1 NOTIFICATION REQUIREMENTS

Within 30 days of placing this CCR fugitive dust control plan or future amendment and annual updates in the station's operating record and on the NRG CCR website, NRG will notify the Texas Commission on Environmental Quality (TCEQ) that the document is available (Final CCR Rule 257.106(d) and (g)(1)).

4.2 CITIZEN COMPLAINTS

The Log of Citizen Complaints form (Appendix B) will be used to log citizen complaints received by NRG involving CCR fugitive dust events at the station (Final CCR Rule 257.80(b)(3)). The Log of Citizen Complaints will be kept for use in the annual CCR fugitive dust control report but is not required to be individually placed in the station's operating record or CCR website.

4.3 ANNUAL CCR FUGITIVE DUST CONTROL REPORT

NRG will prepare an annual CCR fugitive dust control report that includes the following:

a. A description of the actions taken to control CCR fugitive dust.
b. A record of all citizen complaints and a summary of corrective actions taken.

NRG will complete the initial annual report no later than 14 months after placing the initial CCR fugitive dust control plan in the WAP operating record. The deadline for completing each subsequent report is one year after the date of completing the previous report. Each report will be deemed complete when NRG has entered the report into the WAP operating record (Final CCR Rule 257.80(7)(c)).

5. QUALITY CONTROL

5.1 EVALUATING FUGITIVE DUST CONTROL PLAN EFFECTIVENESS

NRG will review and evaluate the effectiveness of this Fugitive Dust Control Plan (Final CCR Rule 257.80 (b)(4)). NRG will evaluate this plan by reviewing the CCR Fugitive Dust Monitoring Report forms at least quarterly. Revisions to this plan will only be made with approval of NRG environmental staff.

5.2 FUGITIVE DUST CONTROL PLAN COMPLETION

The Final CCR Rule requires preparation of an initial CCR fugitive dust control plan by October 19, 2015. Per Final CCR Rule 257.80 (b)(5), NRG will place a copy of this plan into the WAP operating record, and the initial plan will be deemed complete.

5.3 FUGITIVE DUST CONTROL PLAN AMMENDMENTS

NRG will revise this Fugitive Dust Control Plan when there is a significant change in operating conditions that would substantially affect this Plan (Final CCR Rule 257.80 (b)(6)). The changes in operating conditions include, but are not limited to, construction and operation of a new CCR unit.

5.4 PROFESSIONAL ENGINNEER (PE) CERTIFICATION

NRG will obtain a certification from a qualified professional engineer that Fugitive Dust Control Plan and subsequent amendments meet the air criteria requirements of Final CCR Rule (Final CCR Rule 257.80 (b)(7)).

APPENDIX A

Fugitive Dust Monitoring Report

Fugitive Dust Monitoring Report					
Date	Local time	Description of fugitive dust source	Observer	Control measure applied (1-5 from table below)	Corrective actions and results of the action

Sources	Control Measure	Description
Small spills of fly or bottom ash around pipes or other equipment	1	Remove small spill
	2	Apply water as needed
Equipment malfunction	1	Repair equipment
	2	Reduce flows
Emptying fly ash from silos into trucks or rail cars	1	Repair silo discharge dust collection equipment
Waste hauling trucks (fly ash, bottom ash, FGD waste) travelling on plant roads	1	Wash trucks before they leave the loading area
	2	Apply water as needed
	3	Reduce vehicle speed
Fly ash, bottom ash and FGD waste dumping into the landfill	1	Apply water as needed
	2	Compact material as needed
	3	Reduce equipment speed
	4	Relocate activity on landfill
	5	Minimize activity on landfill
Active landfills (Areas that have dried out)	1	Compact material as needed
	2	Apply water as needed
	3	Reduce equipment speed
	4	Relocate activity on landfill
	5	Minimize activity on landfill
Dried out portions of the scrubber pond, washdown pond, E-Pond, APH-Pond, and surrounding roadways	1	Apply water as needed, slow traffic as needed

APPENDIX B

Log of Citizen Complaints

Log of Citizen Complaints				
Date	Local time	Name of complainant	Description of the fugitive dust source	Corrective action taken and results of the action