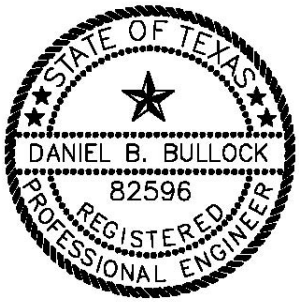
# COAL COMBUSTION RESIDUAL
# FUGITIVE DUST MONITORING PLAN

## COLETO CREEK POWER PLANT
**FANNIN, TEXAS**

**OCTOBER 12, 2015**

*Prepared for:*

**IPA OPERATIONS, INC.**
Coleto Creek Power, LLP
Fannin, Texas




*Prepared by:*

**BULLOCK, BENNETT & ASSOCIATES, LLC**
Engineering and Geoscience
Registrations: Engineering F-8542, Geoscience 50127

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BBA Project No. 15214-2

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## Site Summary

Coleto Creek Power, LLP operates the Coleto Creek Power Plant located at 45 FM 2987 near the city of Fannin in Goliad County, Texas (Figure 1). One boiler is operated at the facility to generate electricity for distribution to the area power grid. The boiler uses coal as the primary fuel and fuel oil as a backup fuel. There are two streams of coal combustion residuals (CCR) generated at this plant. Bottom ash is collected from the boiler, combined with water, and transferred in slurry form for disposal in the facility's surface impoundment (Figures 2 and 3). Fly ash is collected from the boiler exhaust and transported pneumatically to two storage silos. From there, the fly ash is loaded onto enclosed dry haul hoppers for off-site beneficial use. Off-spec fly ash is combined with water and pumped to the facility's surface impoundment for disposal (Figure 3). Bottom ash in the surface impoundment is recovered for beneficial reuse via excavation, screening, and placement in covered dump trucks for transport off site.

Pursuant to Rule 40 *CFR* §257.80, "the owner or operator of a CCR landfill, CCR surface impoundment…must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, road, and other CCR management and material handling activities." 40 *CFR* §257.80(b) requires the owner or operator of the CCR unit to "prepare and operate in accordance with a CCR fugitive dust control plan." This Fugitive Dust Control Plan has been prepared to meet the requirements of the rule. This plan should be amended at any time that CCR management operations substantially change. A copy of this Plan and all associated inspection reports/neighborhood complaints shall be maintained in the facility's operating record and publicly accessible internet site.

The potential for excessive CCR fugitive dust emissions at the Coleto Creek Power Plant site is relatively low. Bottom ash is conveyed to the surface impoundment for disposal in slurry form. Fly ash from the boiler is conveyed to two storage silos in an enclosed pneumatic conveyance system. Fugitive emissions are possible in equipment flanges/piping leading to the storage silos. Off-spec fly ash that is not shipped off-site for beneficial use and requires on-site disposal is conveyed in slurry form to the surface impoundment. The surface impoundment is surrounded on three sides by dense tree cover that serves as a windbreak. Dry areas of the impoundment are generally either crusted over or covered with vegetation. CCR is not landfilled on site in piles unless there is a facility outage. Some old piles of CCR are present within the confines of the surface impoundment but are mostly vegetated. New smaller piles (generally less than 10 feet in height) are created within the surface impoundment boundary when the material is being recovered as a plant product for off-site beneficial re-use (and thus, because they are part of beneficial re-use operations are not considered CCR piles per §257.73). Ingress and egress from the surface impoundment is via a paved road. The road surrounding the surface impoundment is a dirt road that is primarily vegetated with the exception of the tire paths. Figure 3 shows potential fugitive dust source locations. There are no sensitive receptors (i.e., residential areas/schools) within a ¼ mile radius of the site (Figure 1).

This Plan will be assessed to evaluate its effectiveness (40 *CFR* §257.80(4)) at a minimum frequency of once per year. Any changes will be noted and included in the facility operating record (§257.105(g)) and publicly accessible internet site (§257.107(g)). In addition, notification of any amendment of this plan will be reported to the relevant State director as required in §257.106(g)(1).

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**
**Section 1 – General Information – Page 1**

## 1-A Facility Name and Location

Facility Name: Coleto Creek Power Plant
Facility Address: 45 FM 2987
Major X-Streets: Hwy 59 and FM 2987
City: Fannin County: Goliad

## 1-B Contacts

Names, addresses, and phone numbers of persons and owners or operators responsible for the implementation of the Dust Control Plan and responsible for the dust generating operation and dust control applications.

**Property Owner:** GDF Suez Energy North America, Inc.
Address: 1990 Post Oak Blvd., Suite 1900
City / State / Zip: Houston, TX 77056-4499
Phone: 713-636-0000 Fax: 713-636-1602

**Health and Safety Coordinator:** Richard Coleman
Address: 45 FM 2987 P.O. Box 8
City / State / Zip: Fannin, TX 77960
Phone: 361-788-5145 Fax: 361-788-5136

**Plant Manager:** Robert Stevens
Address: 45 FM 2987 P.O. Box 8
City / State / Zip: Fannin, TX 77960
Phone: 361-788-5112 Fax: 361-788-5136

**This Dust Control Plan was prepared by:**
Name: Kimberly Maloney Title: Project Manager
Company Name: Bullock, Bennett & Associates, LLC
Address: 165 N. Lampasas St
City / State / Zip: Bertram, TX 78605
Phone: 512-355-9198 Fax: 512-355-9197

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**
**Section 1 – General Information – Page 2**

**Facility Name:** **Coleto Creek Power Plant**

## 1-C Contractors

Names, addresses, and phone numbers of the contractors involved in CCR dust generating activities **or** performing dust control as part of this project.

**1.** Boral Material Technologies, Inc.
45 NE Loop 410 San Antonio, TX 78216-5832
210-349-4069

**2.**

**3.**

**4.**

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**
**Section 2 – CCR Fugitive Dust Sources – Page 1**

**Facility Name:** **Coleto Creek Power Plant**

## 2-A Responsibilities

All staff members will be required to notify the operations manager of excessive CCR fugitive emissions when observed. This will include a description of the source of the excessive emission. The operations manager will be responsible for directing dust control measures.

## 2-B Surface Impoundment Sources of CCR Fugitive Dust

This section describes the minimum requirements for limiting visible dust emissions from activities that cause CCR fugitive dust.

### Active Operations Within the Surface Impoundment

- ☒ Water will be applied to dry areas during leveling, grading, trenching, and earthmoving activities as needed to reduce dust emissions. Chemical dust suppressants may also be used.
- ☒ Material fall distances will be reduced to the lowest level reasonably practicable.
- ☒ The existing tree line and other vegetative cover which serve as wind barriers will be maintained.
- ☒ In the event that the application of water does not achieve the desired reduction in visible emissions, such as may occur during a high wind event, all operations will cease to the extent practicable until such time conditions will not result in excessive visible emissions.

### Inactive Operations Within the Surface Impoundment

- ☒ Vehicle access will be restricted to maintain the surface crust and/or vegetative cover.
- ☒ The existing tree line and other vegetative cover which serve as wind barriers will be maintained.

### Temporary Stabilization of CCR Stockpile Areas that Remain Unused for Seven or More Days

- ☒ Water or dust suppressants will be applied as needed to reduce visible emissions if excessive dusting is observed. CCR piles also may be covered with a tarp, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.

### Unpaved Access and Haul Roads Surrounding the Surface Impoundment

- ☒ Restrict traffic to only necessary activities.
- ☒ Post "Drive Slow – Reduce Dusting", or similar, signs at each entrance.
- ☒ Water or dust suppressants will be applied to vehicle traffic areas if high traffic use is necessary and excessive visible emissions are observed.

### High Wind Events

- ☒ Water application equipment will apply water to control fugitive dust during high wind events if excessive visible emissions are occurring, unless unsafe to do so. Outdoor activities that disturb the CCR will cease whenever excessive visible dust emissions cannot be effectively controlled.

## 2-C Bulk CCR Materials

### Outdoor Handling of Bulk CCR Materials (Only occurs during equipment maintenance/malfunction)

- ☒ Water or dust suppressants will be applied when handling bulk materials as needed to reduce emissions.
- ☒ Material fall distances will be reduced to the lowest level reasonably practicable.
- ☒ If the addition of water and/or dust suppressants does not achieve the desired reduction in visible emissions, wind barriers, administrative controls, or other engineering controls will be used to reduce dusting.

### Outdoor Storage of CCR Bulk Materials (Only occurs during equipment maintenance/malfunction)

- ☒ Water or dust suppressants will be applied as needed to storage piles.
- ☒ Storage piles may also be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
- ☒ Wind barriers may be installed and maintained around the storage piles and water or dust suppressants applied as needed in the event that excessive visible emissions are not adequately controlled using water only.

### On-Site Transport of Bulk CCR Materials

- ☒ Transport vehicles will be operated at low speeds to reduce potential for dusting.
- ☒ Haul trucks will maintain adequate freeboard to prevent excessive dusting while in transit.
- ☒ Water will be applied to the load to reduce visible dust emissions if the material is not already sufficiently moist.
- ☒ Haul trucks will be covered with a tarp or other suitable cover as needed for dust control.
- ☒ Spills on roadways (unless deminimus) will be cleaned up in a timely manner using shovels, brooms, or other equipment appropriate for the amount of the spill. Collected materials shall be appropriately disposed.

### Pneumatic Fly Ash Conveyance Equipment

- ☒ Pneumatic conveyance equipment will be periodically inspected to ensure that no leaking piping, flanges, or other equipment is present.
- ☒ Leaking equipment will be repaired as soon as practicable.
- ☒ Operations will cease if excessive fugitive emissions are observed until such time that the equipment is repaired.

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**
**Section 3 – CCR Dust Control Methods – Page 1**

**Facility Name:** **Coleto Creek Power Plant**

## 3-A Dust Suppressant Products

These materials include, but are not limited to: hygroscopic suppressants (road salts), adhesives, petroleum emulsions, polymer emulsions, and bituminous materials (road oils).

The following information will be attached as-appropriate to describe dust control products that may be used at this facility.

- ☒ Product Specifications (MSDS, Product Safety Data Sheet, etc.)
- ☒ Manufacturer's Usage Instructions (method, frequency, and intensity of application)
- ☒ Environmental impacts and approvals or certifications related to the appropriate and safe use for ground application.

## 3-B Other CCR Dust Control Methods

Other types of dust control methods that may be employed at the site depending on conditions.

- ☒ Physical barriers:
  - ☐ Plastic ☐ Tarps ☐ Gravel
  - ☐ Other: _____
- ☒ Wind barriers Describe: _____
- ☒ Re-establish vegetation for temporarily stabilizing previously disturbed surfaces.
- ☐ Other: _____

## 3-C Contingencies

Contingencies to be implemented if application equipment becomes inoperable, more equipment is needed to effectively control CCR fugitive dust emissions during active and inactive periods, accessibility limitations occur at the water sources, or staff is not available to operate the application equipment. Contingencies include:

- Dust-causing operations will be limited to the extent practicable.
- Rental equipment may be obtained from local (Victoria, TX) locations, including United Rentals (361)578-5125, Hertz Equipment Rental (361)579-9425, Sunbelt Rentals (361)576-3434, or others as-needed.
- Various sources of water exist on site, the Health and Safety Coordinator may be contacted regarding alternate sources as-needed.
- Off-site support contractors may be contacted if sufficient staff is not available to operate equipment.

## 4-A Recordkeeping

**Records and any other supporting documents for demonstrating compliance will be maintained in the facility operating record and on the publicly accessible internet site as required in 40 *CFR* §257.105(g) and §257.107(g). Records shall be maintained for at least five (5) years (§257.105(b)).**

The following recordkeeping forms will be used to report the response to fugitive dust events (see attached).

☒ Fugitive Dust Control Report (to be completed in the event that active CCR fugitive dust control methods, such as the application of water and/or dust suppressants, is utilized.

☒ Citizen Complaint Log (40 *CFR* §257.80(3))

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Report – Page 1 of 2**

**Site Area:** _____ **Date:** _____

## Cause of CCR Fugitive Dust

## Water Application

**Water Application Equipment:**

☐ Sprinklers: Describe the activities that used sprinklers:

_____

Minimum treated area: _____ ☐ Square Feet ☐ Acres

Maximum treated area: _____ ☐ Square Feet ☐ Acres

Minimum water flow rate: _____ Gallons/minute Duration: _____

☐ Water Truck, ☐ Water Trailer, ☐ Water Wagon, ☐ Other: _____

Describe the activities that utilized this equipment:

_____

Number of application equipment used: _____

Application equipment capacity: _____

Application frequency: _____

Application rate: _____ Gallons per acre per application

Hours of operation: _____

**Water Supply:**

☐ Fire hydrants

☐ Storage tanks

☐ Wells

☐ Canal, River, Pond, Lake, etc. Describe: _____

☐ Other: _____

## CCR Dust Suppressant Application

**Dust Suppression Product Application:**

☐ Dust Suppressant Product: Describe the dust suppressant. Attach MSDS and other information if not already contained within the facility's Fugitive Dust Control Plan:

_____

Minimum treated area: _____ ☐ Square Feet ☐ Acres

Maximum treated area: _____ ☐ Square Feet ☐ Acres

Application rate: _____ Duration: _____

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Report – Page 2 of 2**

| **Other CCR Dust Control Methods** |
|---|
| Check below the other types of dust control methods that were employed at the site. |
| ☐ Physical barriers:<br>☐ Plastic ☐ Tarps ☐ Gravel<br>☐ Other: _____ |
| ☐ Wind barriers Describe: _____ |
| ☐ Re-establish vegetation for temporarily stabilizing previously disturbed surfaces.<br>Explain: _____ |
| ☐ Other: _____ |

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Citizen CCR Fugitive Dust Complaint Record**

**Date:** _____ **Time:** _____

| **Citizen Contact Information** | |
|---|---|
| **Citizen Name:** | |
| Address: | |
| City / State / Zip: | |
| Phone: | |
| E-mail: | |

| **Employee Logging Complaint:** | |
|---|---|

**Description:** (Include as much information regarding location/conditions/nature of complaint (e.g., odor, respiratory issues, etc.) as possible)

**Weather Conditions:**

| | | | | | |
|---|---|---|---|---|---|
| Temp (deg. F): | | Avg. Wind Speed (mph): | | Wind Direction: | |

**Employee Comments:**

**Employee Signature:** _____

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**
**Section 5 – Certification**

**Facility Name:** **Coleto Creek Power Plant**

## 5-A Certification

I certify that all information contained herein and information submitted in the attachments to this documents are true and correct.

**Facility Representative**

| Print Name | Title |
|---|---|
| Signature | Date |

| Phone Number | Fax Number | Cell Number |
|---|---|---|

**Professional Engineer**

| Dan Bullock, P.E. | Principal Engineer |
|---|---|
| Print Name | Title |
| Daniel B. Bullock | 10/15/15 |
| Signature | Date |

| Phone Number 512-355-9198 | Fax Number 512-355-9197 | Cell Number 512-587-8079 |
|---|---|---|

**Coleto Creek Power Plant**
**Coal Combustion Residuals Management**
**Fugitive Dust Control Plan**

## Figures

| **Facility Name:** | **Coleto Creek Power Plant** |
|---|---|

**Figures**


N

APPROXIMATE SCALE: 1" = 2000'

0 1000 2000 4000

SOURCE: AERIAL PHOTO PROVIDED BY IMAGEPATCH.COM EARTHSTAR GEOGRAPHICS, DATE: MAY-OCT 2011.

**Coleto Creek Power, LP**

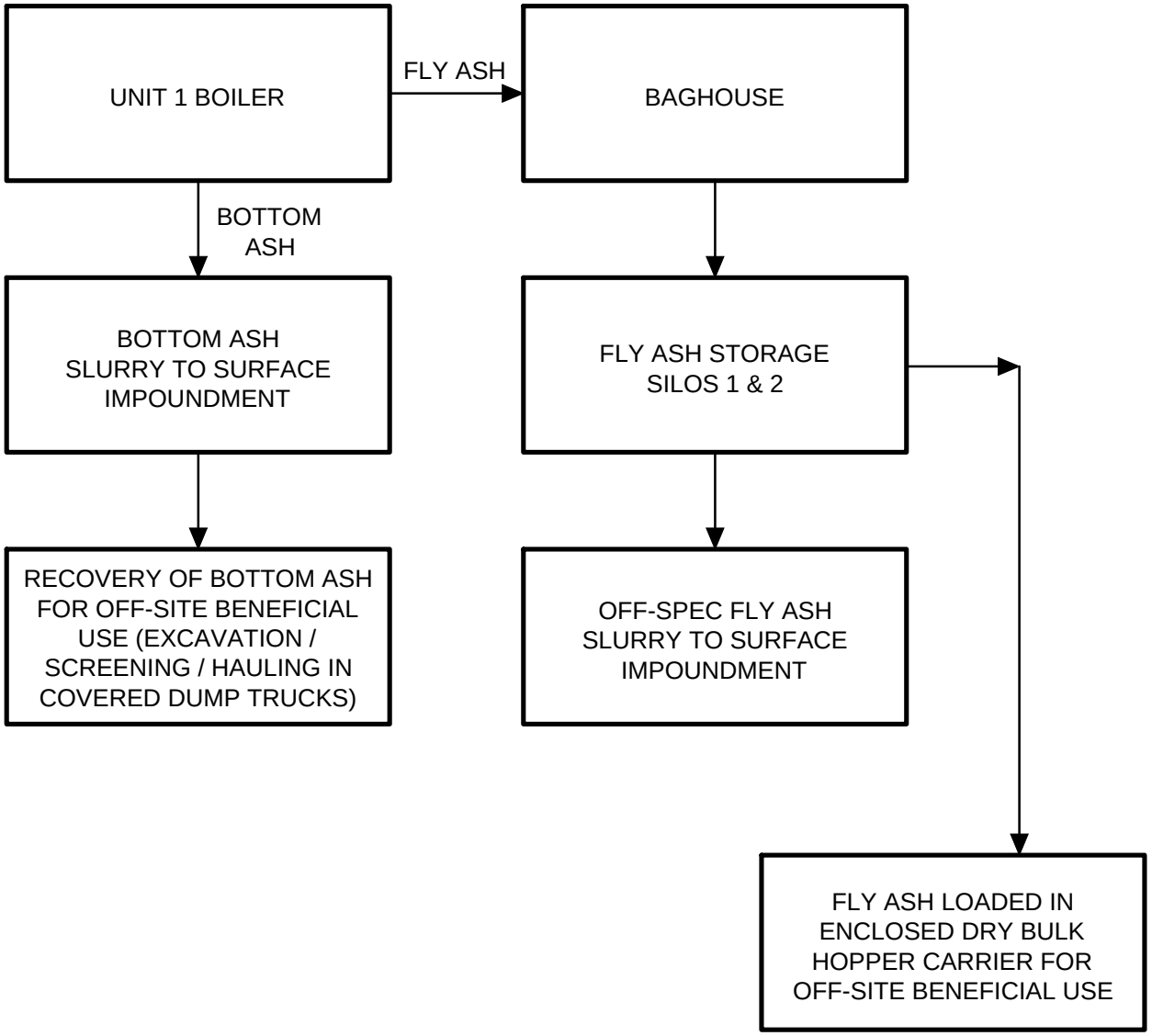
Figure 1

# AREA MAP

| PROJECT: 15214-2 | BY: K2P-RR | DATE: OCT. 2015 | CHECKED: DBB |
|---|---|---|---|

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

Plot Date: 10/12/15 - 4:49pm, Plotted by: roodfj
Drawing Path: K:\ACAD\clients\BBA\Coleto Ck\, Drawing Name: C-ST-PL101.dwg




**Coleto Creek Power, LP**

Figure 2

# SIMPLIFIED CCR MANAGEMENT PROCESS FLOW DIAGRAM

| PROJECT: 15214-2 | BY: K2P-RR | DATE: OCT. 2015 | CHECKED: DBB |
|---|---|---|---|

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Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127


NOTE:
ALL ROADS ON WHICH CCR WOULD POTENTIALLY BE TRANSPORTED ARE PAVED UNLESS OTHERWISE INDICATED.

SOURCE: AERIAL PHOTO PROVIDED BY IMAGEPATCH.COM EARTHSTAR GEOGRAPHICS, DATE: MAY-OCT 2011.

N

APPROXIMATE SCALE: 1" = 1500'

0 750 1500 3000

**Coleto Creek Power, LP**

Figure 3

# POTENTIAL CCR FUGITIVE DUST SOURCES

| PROJECT: 15214-2 | BY: K2P-RR | DATE: OCT. 2015 | CHECKED: DBB |
|---|---|---|---|

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

Plot Date: 10/12/15 - 4:50pm, Plotted by: roodfj
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