

Fugitive Dust Control Plan

Waste Management; La Grange, TX October 2015



FUGITIVE DUST CONTROL PLAN

Prepared for:



Waste Management National Services, Inc. 1634 Highway 531 Minden, Louisiana 71055

and



LCRA Fayette Power Project 6549 Power Plant Road La Grange, TX 78945

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Waste Management National Services, Inc.

La Grange, TX

ACRONYMS

Acronym	Definition
CBL	Combustion Byproduct Landfill
CCR	Coal Combustion Residual ¹
EPA	U.S. Environmental Protection Agency
FGD	Fluidized Gas Desulfurization
FPP	Fayette Power Project
FR	Federal Register
LCRA	Lower Colorado River Authority
LOI	Loss on Ignition
MW	Megawatts
PRB	Powder River Basin
RCRA	Resource Conservation and Recovery Act
TCEQ	Texas Commission on Environmental Quality
WMNS	Waste Management National Services, Inc.

 $^{^{1}}$ Synonymous with Coal Combustion Products (CCP); "CCR" is utilized exclusively throughout the plan given the use in the regulation.

I. EXECUTIVE SUMMARY

The purpose of this Fugitive Dust Control Plan (hereinafter referred to as "the Plan") is to maintain compliance with 40 CFR 257.80 which requires owners and operators of Coal Combustion Residual (CCR) landfills 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.

This Plan identifies the dust control measures utilized at the Lower Colorado River Authority (LCRA) Fayette Power Project (FPP) landfill facility ("the Facility") located at 6549 Power Plant Road, La Grange, TX 78945 under the management of Waste Management National Services, Inc. (WMNS). These dust control measures control fugitive emissions from CCR at the landfill.

In accordance with 40 CFR 257.80(b)(5), the Plan was prepared and will be implemented prior to October 19, 2015 and placed in the Facility's operating record as required by 40 CFR 257.105(g)(1).

II. PROFESSIONAL ENGINEER CERTIFICATION

It is recognized that the LCRA Facility is subject to the CCR Rule which requires preparation and implementation of a Fugitive Dust Control Plan, and specifically requires a Professional Engineer's review and certification in accordance with 40 CFR 257.80(b)(7). By means of this certification, the Professional Engineer (PE) attests that:

- (i) He is familiar with the requirements of the 40 CFR 257.80 rule;
- (ii) He or his agent has visited and examined the Facility;
- (iii) The Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the rule;
- (iv) Procedures for implementation have been established; and
- (v) The Plan is adequate for the Facility.

Therefore, I, Christopher G. Gesing, certify that I am familiar with the 40 CFR 257.80 regulation and that the provisions of this Plan, have been prepared in accordance with good engineering practices and meet the requirements of 40 CFR 257.80. I attest that the information provided by the Facility and contained herein is, to the best of my knowledge and belief, true, accurate, and complete.

(SEAL)



Christopher G. Gesing, PE

October 6, 2015

Date

PE99840

PE License Number

III. REGULATORY AUTHORITY & CROSS-REFERENCE

The United States Environmental Protection Agency (EPA) Administrator, Gina McCarthy, signed the "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule on December 19, 2014, and it was published in the *Federal Register* (FR) on April 17, 2015 [80 Fed. Reg. 21,302 (April 17, 2015)].

The rule establishes requirements for CCR landfills under subtitle D of the Resource Conservation and Recovery Act (RCRA), the nation's primary law for regulating solid waste.

The specific requirements of the Final Rule pertaining to the Fugitive Dust Control Plan are as follows:

Regulatory Requirement of §257.80 Air criteria:	Plan Section Cross-Reference:
(a) The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit must 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.	The Plan in its entirety.
(b) CCR fugitive dust control plan. The owner or operator of the CCR unit must prepare and operate in accordance with a CCR fugitive dust control plan as specified in paragraphs (b)(1) through (b)(7) of this section. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act.	The Plan in its entirety.
(1) The CCR fugitive dust control plan must identify and describe the CCR fugitive dust control measures the owner or operator will use to minimize CCR from becoming airborne at the facility. The owner or operator must select, and include in the CCR fugitive dust control plan, the CCR fugitive dust control measures that are most appropriate for site conditions, along with an explanation of how the measures selected are applicable and appropriate for site conditions. Examples of control measures that may be appropriate include: locating CCR inside an enclosure or partial enclosure; operating a water spray or fogging system; reducing fall distances at material drop points; using wind barriers, compaction, or vegetative covers; establishing and enforcing reduced vehicle speed limits; paving and sweeping roads; covering trucks transporting CCR; reducing or halting operations during high wind events; or applying a daily cover.	Section V:Dust Control measures
(2) If the owner or operator operates a CCR landfill or any lateral expansion of a CCR landfill, the CCR fugitive dust control plan must include procedures to emplace CCR as conditioned CCR. Conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal, but will not result in free liquids. In lieu of water, CCR conditioning may be accomplished with an appropriate chemical dust suppression agent.	Section V: Dust Control Measures, which references conditioned CCR.
(3) The CCR fugitive dust control plan must include procedures to log citizen complaints received by the owner or operator involving CCR fugitive dust events at the facility.	Section VII and Appendix A.
(4) The CCR fugitive dust control plan must include a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan.	Section VIII: Review and Revision Log.
(5) The owner or operator of a CCR unit must prepare an initial CCR fugitive dust control plan for the facility no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015. The owner or operator has completed the initial CCR fugitive dust control plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(1).	The Plan in its entirety; it will be placed in the facility's operating record prior to October 19, 2015.

Regulatory Requirement of §257.80 Air criteria:	Plan Section Cross-Reference:
(6) Amendment of the plan. The owner or operator of a CCR unit subject to the requirements of this section may amend the written CCR fugitive dust control plan at any time provided the revised plan is placed in the facility's operating record as required by §257.105(g)(1). The owner or operator must amend the 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.	Section VIII: Review and Revision Log.
(7) The owner or operator must obtain a certification from a qualified professional engineer that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of this section.	Section II: Professional Engineer Certification.
(c) Annual CCR fugitive dust control report. The owner or operator of a CCR unit must prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The initial annual report must be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. For purposes of this paragraph, the owner or operator has completed the annual CCR fugitive dust control report when the plan has been placed in the facility's operating record as required by § 257.105(g)(2).	Section IX. The Annual Report will be completed upon conclusion of the first calendar year by WMNS.
(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).	Section X: Recordkeeping Requirements.

IV. INTRODUCTION

WMNS provides operation and maintenance services for the management of CCRs generated at the FPP, a coal-fired power plant located in La Grange, Fayette County, Texas. The Combustion Byproduct Landfill (CBL) is registered by the Texas Commission on Environmental Quality (TCEQ) as an on-site nonhazardous industrial waste landfill (TCEQ Registration No. 31575) and an on-site waste management unit (Notice of Waste Registration No. MU013). The CBL currently receives CCRs generated during the operation and maintenance of the three coal-fired units at FPP including: fly ash, bottom ash, Flue Gas Desulfurization (FGD, aka "synthetic gypsum") by-products, and reclaimed pond sediment sludge.

V. DUST CONTROL MEASURES

This section presents the dust control measures that will be used at the Facility by WMNS.

1. Locating CCR inside an enclosure or partial enclosure

Enclosures and partial enclosures are utilized to prevent fugitive emissions from products prior to placement in the landfill:

Fly Ash: Transferred into several enclosed silos for dispensing via telescoping chutes into trucks Bottom Ash: Transferred into three-sided bays with curb protection Synthetic Gypsum: Transferred into a fully enclosed dome building

Silo Operations

WMNS regularly inspects the silos and notifies LCRA when maintenance needs are identified. Silo management practices that aid in minimizing fugitive emissions include:

- Daily operation and monitoring of all equipment that supports the storage, loading, and weighing of all fly ash delivered to the silos.
- Maintain the silo at or below normal operating capacity (i.e., roughly 1,600 tons each for Silos 1 and 2 and 3,600 tons each for Silos 3A and 3B).
- Load dry fly ash into pneumatic trucks for off-site beneficial use.
- Collect daily samples from silos for moisture content, Loss on Ignition (LOI), and Fineness.
- Inspect silos, pipes, and other equipment for repair needs.
- The silo area will be washed down at the end of each day, and the silo area will be kept neat and orderly.
- WMNS is responsible for loading fly ash stored in the silo into pneumatic trucks for transport offsite as part of marketing efforts or tandem trucks for transport to the landfill. Fly ash not transported off-site or not staged for beneficial use will be conditioned to meet the optimum moisture content to achieve compaction when placed in the landfill.

Stockpiling

Since there may be times when generation exceeds demand, WMNS stockpiles CCR within the landfill. Fly ash, bottom ash, and synthetic gypsum are stored in segregated piles awaiting sales.

2. Operating a water spray system

Surface Treatment Options:

WMNS will water all paved plant roads, actively used dirt perimeter roads, and all landfill roads and areas in an effort to reduce fugitive dust emissions.

Water is applied to keep the road surface wet to control emissions. This increases the moisture content, which conglomerates particles and reduces their likelihood to become suspended when vehicles pass over the surface. The control efficiency depends on how fast the road dries after water is added. This is impacted by:

- The amount of water added per application,
- The time period between applications,
- Weight, speed, and traffic volume, and

 Meteorological conditions (temperature, wind speed, cloud cover, etc.) that affect evaporation of the watering.

WMNS has elected to utilize wet suppression methods exclusively. Plant water is used to surface treat via water truck application on all of the plant and landfill roads, as well as the landfill itself. WMNS may utilize additional dust suppression methods, which may include chemical stabilization.

Dust suppression efforts are implemented per the water truck schedule provided weekly by LCRA, and when visible observations indicate a need for corrective measures. The frequency of application depends on season, relative moisture of the surface, wind speed, air temperature and volume of vehicle traffic. There are various water truck fill stations located through the Facility.

Within the landfill, a WMNS water truck with a sprayer is utilized for dust suppression and for moisture addition to CCR materials. During hot, dry, and windy conditions, the windward sides of the CBL may also experience dusting which will require the application of water. Care is taken to utilize only the minimum amount of water needed for dust suppression to avoid saturating the ash.

The landfill also utilizes a sprinkler (i.e., a mobile unit connected to a 2-inch diameter, 500' hose) to wet and condition the landfill material. Additional sprinkler systems may be used as needed when conditions warrant.

Conditioned CCR and Protection of Fly Ash Crust

This Plan is required to include procedures to emplace CCR as "conditioned CCR", meaning wetting CCR with water to a moisture content that prevents wind dispersal, but does not result in free liquids.

The various CCR from the plant have different moisture contents: fly ash (<1%), bottom ash (approximately 27.2%), and synthetic gypsum (approximately 20.1%). The fly ash and bottom ash require conditioning to increase the moisture content to optimal conditions for compaction (i.e., 11.4% and 36.5%, respectively) prior to spreading and compaction.

Compacted synthetic gypsum and ash will normally form a "crust" that resists water and wind erosion. Once a portion of the on-site landfill reaches temporary grade, WMNS minimizes equipment usage on these areas. If the "crust" is broken, the area is watered and re-compacted to control erosion.

3. Reducing fall distances at material drop points

Engineered solutions are utilized to reduce fall distances at material drop points as much as possible. These practices include:

- Fly Ash: Transferred from several silos and dispensed via telescoping chutes directly into trucks.
- Bottom Ash: Transferred from conveyors from the lowest practical point into three-sided bays with curb protection. Bottom ash has sufficient moisture content at this point to prevent dusting.
- Synthetic Gypsum: Transferred into a fully enclosed dome building from the lowest practical point. Synthetic gypsum has sufficient moisture content at this point to prevent dusting.

When products are transferred to the landfill, products exit the truck bed directly onto the landfill surface. Thus fall distances at material drop points have been reduced as much as practically possible for all CCRs.

4. Compaction

LCRA requires that CCR's placed in the landfill for disposal be compacted via a vibratory smooth drum roller capable of meeting the landfill design compaction standards. WMNS utilizes the following equipment:

Equipment Type	Make & Model	Equipment Use
Vibratory Smooth Drum Roller	CAT CS74 or Equivalent	Compaction of CCRs

5. Interim covers

Fly ash that is properly compacted will normally form a "crust" that resists water and wind erosion. Therefore, once a portion of the fill area has reached final grade, operators will avoid running equipment on these areas until an intermediate cover of bottom ash or other suitable material is applied. However, if landfill areas are anticipated to be inactive for extended periods of time, WMNS will establish additional temporary stabilization measures which may include applying the temporary seed mixture and mulching the applicable landfill surface.

6. Establishing and enforcing vehicle speed limits

Vehicle traffic on unpaved roads can result in the pulverization of surface material. Particles can be lifted and dropped from the vehicle and the road surface is exposed to air currents, which can create fugitive dust. To reduce these effects, the Facility speed limit is restricted and posted. It varies between 10 mph on smaller roads and up to 30 mph on paved, plant roadways. The limit is clearly posted, legible, and enforced by Facility security personnel.

Additionally, vehicle traffic is restricted in inactive landfill areas to avoid breaking formed crusts, in an effort to prevent fugitive emissions.

7. Roads

The Facility has many permanent roads. Power plant roads are paved, though there are no permanent landfill roads due to the nature of operations. Within the landfill area, unpaved access road maintenance includes adding bottom ash or road base, grading, cleaning, and other actions required to provide continuous access during wet and dry weather conditions. These roads will continue to be maintained, as necessary, to allow access by LCRA and WMNS. Specific maintenance activities related to road maintenance include:

- WMNS waters all paved and unpaved roads
- All paved plant roads shall be kept free of CCRs and any spill should be cleaned up.

8. Covering trucks transporting CCR

Dump trucks hauling CCR materials to the CBL shall have closed tailgates to prevent spillage of materials. Trucks should not be loaded such that materials spill over the sideboards of the trucks or in such a way that these materials accumulate on the wheel wells or bumpers. The trucks utilize custom tarps to cover

fly ash (dump trucks hauling wet material do not utilize covers). All trucks hauling CCR materials stay on designated haul roads and adhere to the plant speed limit.

At the end of each day, trucks hauling CCR materials are emptied and cleaned of any excess materials. Equipment contacting ash materials may be rinsed as needed before exiting the landfill to avoid dust generation. WMNS will verify that equipment/vehicles leaving the site have been adequately rinsed.

9. Reducing or halting operations during high wind events

WMNS may, at the determination of on-site WMNS and/or plant personnel, temporarily suspend major loading/unloading operations during high wind events (> 40 mph), should they occur.

VI. LANDFILL LATERAL EXPANSION

If LCRA decides to laterally expand the landfill, WMNS will amend this plan to incorporate and reflect any applicable changes.

VII. CITIZEN COMPLIANTS

WMNS will manage fugitive dusts and eliminate or minimize the impact on the population in the surrounding communities. However, should community complaints occur WMNS will log complaints in the recordkeeping sheet contained in **Appendix A** in compliance with 40 CFR 257.80(b)(3). If LCRA receives a complaint, they will notify WMNS in a timely manner and relay all of the relevant information.

WMNS is committed to maintaining a lasting partnership with the community. As such, WMNS is dedicated to resolve any potential citizen complaints in a timely manner. All corrective measures will be recorded in **Appendix A**.

In the event that LCRA or WMNS receives a citizen complaint related to the landfill or its associated network of roads and vehicles, WMNS will:

- 1. Receive information from LCRA or WMNS will record the information that describes the complaint.
- 2. Investigate the issue and develop a strategy to immediately resolve the issues (e.g., adding more wet suppression on the landfill roads).
- 3. Verify the remedy is sufficient.
- 4. Record the event and resolution in the Citizen Complaint Log contained in Appendix A.
- 5. Notify LCRA personnel that the issue has been resolved.

In the event that certain complaints become more frequent, WMNS will partner with LCRA personnel to develop additional and improved solutions to prevent recurrence.

VIII. REVIEW AND REVISION LOG

In compliance with 40 CFR 257.80(b)(4): This plan includes a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan.

Annual Review:

WMNS will annually review the:

- Plan for accuracy, current practices, and areas of deficiencies,
- Dust control measures that are ineffective and/or necessitate improvement,
- Summary log of citizen complaints to identify potentially recurring themes, and
- Facility operations for any new or changing operations requiring incorporation and/or reflection in the Plan.

Plan Amendment:

Upon review, WMNS will develop and adopt new/additional strategies to better manage any identified deficiencies. In compliance with 40 CFR 257.80(b)(6) WMNS will amend the written plan whenever there is a change in conditions that would substantially affect the Plan, such as the construction and operation of a new CCR unit.

Implement & Train:

WMNS will implement the new plan and train responsible employees on applicable changes immediately upon plan revision/implementation. The Site Superintendent will enforce the plan.

Documentation:

The Plan will be revised accordingly and a record of each revision will be captured in the following log:

Date of Review/Revision	Description of Review/Revision	Reviewer(s)

IX. ANNUAL REPORT

40 CFR 257.80 (c) Annual CCR fugitive dust control report. The owner or operator of a CCR unit must prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The initial annual report must be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. For purposes of this paragraph, the owner or operator has completed the annual CCR fugitive dust control report when the plan has been placed in the facility's operating record as required by § 257.105(g)(2).

See **Appendix B** for a copy of the Annual Report to be completed annually by WMNS will complete the annual report, which will contain the following components as seen in **Appendix B**:

- The Reporting Year
- Descriptions of the Actions to Control Fugitive Dust
- Citizen Complaints and Corrective Measures Taken
- Other comments

X. RECORDKEEPING REQUIREMENTS

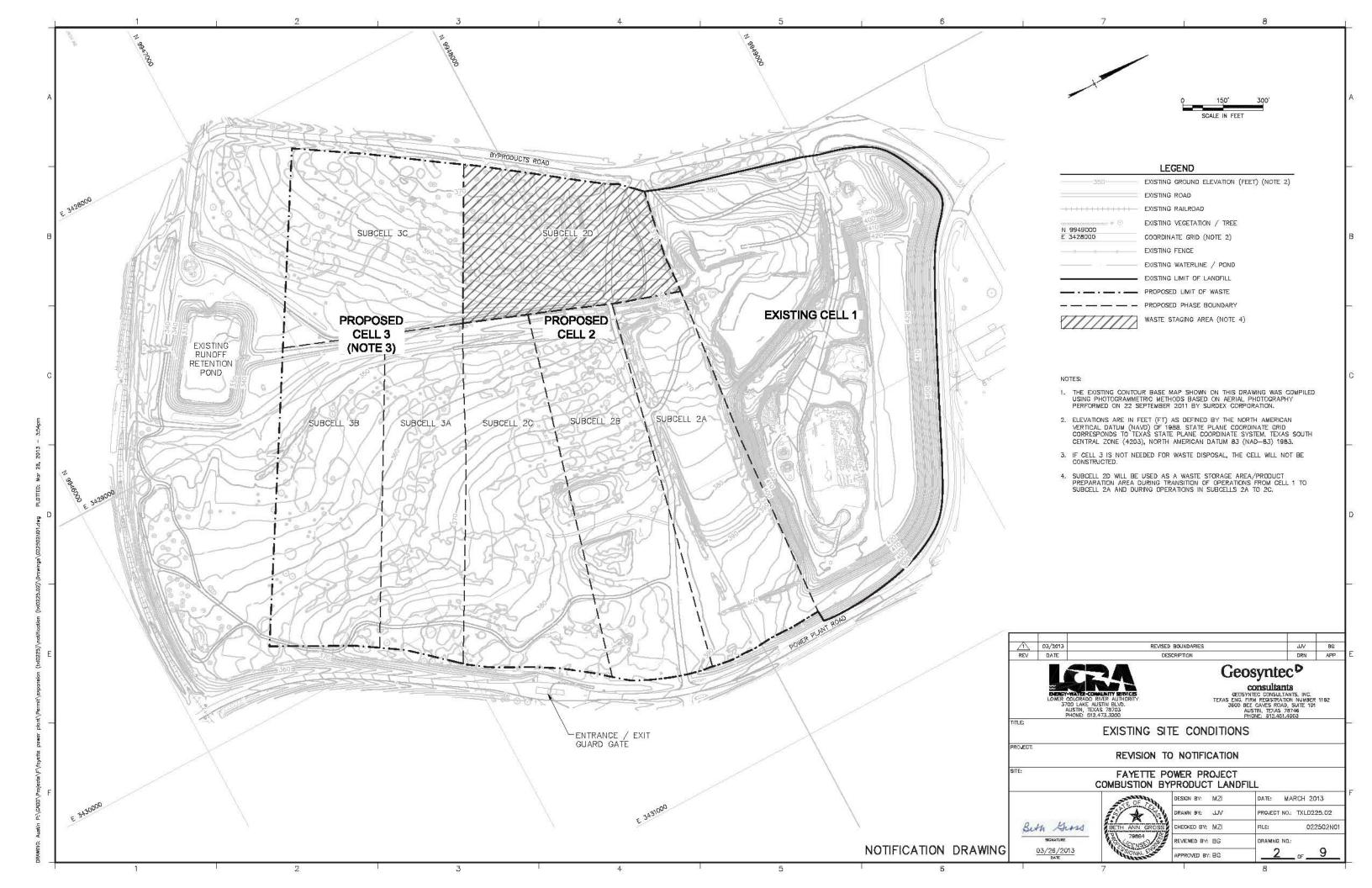
40 CFR 257.80(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(q).

- Initial CCR Fugitive Dust Control Plan placed in Operating Record on or before 10/19/15
- Initial CCR Fugitive Dust Control Plan placed on the LCRA Web Site on or before 11/19/15
- TCEQ notified of availability of Initial CCR Fugitive Dust Control Plan on or before 11/19/15
- LCRA provides information concerning any Citizen Complaints to WMNS on a monthly basis.
- First Annual Fugitive Dust Control Annual Report due to LCRA on December 1, 2016
- First Annual Fugitive Dust Control Annual Report placed in Operating Record on or before 1/18/17. Subsequent Annual Reports due annually from the date of the first report.
- TCEQ notified of availability of First Annual Fugitive Dust Control Annual Report on or before 2/18/17
- First Annual Fugitive Dust Control Annual Report placed on the LCRA Web-site on or before 2/18/17





Existing Site Conditions







Citizen Complaint Log

Date Received	Citizen / Contact Information	Nature of Citizen Complaint	Corrective Action Taken	Date Issue Resolved
	<u> </u>			

Citizen Complaint Log Prepared: September 2015



ATTACHMENT B

Annual Report

ANNUAL REPORT

Reporting Year:	
Description of Actions to	Place a copy of all methods contained in the Best Management (Section
Control Fugitive Dust:	VI.) and/or provide specifics in the space below:
Γ	
Citizen Complaints:	Place a copy of all citizen complaints recorded in Appendix A.
Commonts	
Comments:	

Annual Report Prepared: September 2015