Fugitive Dust Control Plan

Lon D. Wright Power Plant
Fremont, Nebraska

Prepared for

Fremont Department of Utilities

400 E. Military Avenue
Fremont, NE 68025

October 2015

TETRA TECH, INC.
6307 Center Street, Suite 210
Omaha, Nebraska

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Acronyms and Abbreviations

CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
FDCP	Fugitive Dust Control Plan
EPA	Environmental Protection Agency
ESP	Electrostatic Precipitator
SDA	Spray Dryer Absorber

Section 1: Introduction

1.1 Facility Information

Facility Name:	Lon D. Wright Power Plant
Facility Street Address:	2701 E. First St. Fremont, NE 68025
24-Hour Facility Phone Number:	(402) 727-2646
Owner Name:	**Fremont Department of Utilities**
Owner Address:	400 E. Military Avenue Fremont, NE 68025

1.2 Dust Control Plan Implementation

This Fugitive Dust Control Plan (FDCP) satisfies the requirement to prepare and implement a fugitive dust control plan in 40 CFR 257.80 and shall be implemented upon management approval (see subsection 2.1 below for management approval). Reasonable measures must be taken to eliminate or minimize fugitive Coal Combustion Residuals (CCR) dust and keep it from reaching the property boundary (i.e., point of compliance). The objective of this FDCP is to be proactive by implementing reasonable dust management activities to prevent airborne CCR dust and implement reasonable control measures when necessary to ensure compliance is met.

1.3 Definitions

The following definitions are applicable to this FDCP. [40 CFR 257.53]

- "Coal combustion residuals (CCR) means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers".
- "CCR unit means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified".
- "CCR landfill or landfill means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR".
- Beneficial Use of CCR means the CCR meet all of the following conditions:

Section 2: Plan Reviews and Certifications

2.1 Management Approval

This FDCP has the full approval of facility management. The Lon D. Wright Power Plant management is committed to implementing the measures described within this FDCP to effectively minimize coal combustion residual (CCR) from becoming airborne including CCR fugitive dust originating from CCR units, roads, and other CCR management and handling activities.

Name: JEFF SHANAHAN

Signature: Jeff Shanahan

Date: 10-16-2015

2.2 Engineer Certification

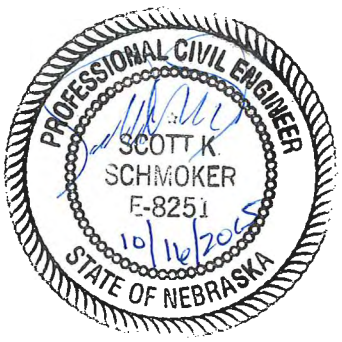
I hereby attest that:

1. I am familiar with the requirements 40 CFR 257.80. This FDCP is consistent with the requirements of 40 CFR 257.80 with respect to the Lon. D Wright Power Plant operations and maintenance activities.

Certifying Engineer:
State: Nebraska
Registration Number: E-8251

Signature:

Certification Date: 10-16-2015



2.3 Plan Revision History

This FDCP must be reviewed, updated, amended, and/or recertified whenever there is a change in the conditions that would substantially affect the written plan in effect.

All amendments to this FDCP will be recertified by a Professional Engineer to ensure the requirements of 40 CFR 257.80 are met. Changes that may require amendment of this FDCP include, but are not limited to, the following:

- Increases in quantities of CCR managed.
- Additional CCR management activities.
- Changes in CCR handling/storage practices and procedures.
- Changes in or modifications to CCR handling/storage equipment.

(1) The CCR must provide a functional benefit;

(2) The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction;

(3) The use of the CCR must meet relevant product specifications, regulatory standards or design standards when available, and when such standards are not available, the CCR is not used in excess quantities; and

(4) When unencapsulated use of CCR involving placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to groundwater, surface water, soil and air are comparable to or lower than those from analogous products made without CCR, or that environmental releases to groundwater, surface water, soil and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

- Changes to the inspection and training program described in this FDCP.

Provided is the revision log for all revisions to this FDCP to include the following information: revision number, revision date, the section numbers that were revised, a code referencing the type of revision made, and whether or not that revision requires a review by a Professional Engineer.

Dust Control Plan Revision Log

Revision Number	Revision Date	Revised Section Number	Code* Number	Initials
0	October 2015	All	3	

*** - Code Descriptions**

1 Procedure Change – Requires PE Review
2 Physical System Change – Requires PE Review
3 New Practice – May Require PE Review
4 Work/Format Change – No PE Review Required
5 Name/Phone Change – No PE Review Required
6 Typographical Error – No PE Review Required

Section 3: Facility Operations and Procedures

3.1 Facility Operations

The Lon D. Wright Power Plant is located at 2701 East First Street in Fremont, Nebraska (see Figure 1 for location) and operates 3 coal-fired electric generation units (Units 6, 7, and 8) each consisting of a boiler and a steam turbine.

The 3 coal-fired electric generation units share an ash handling system including, but not limited to, silos, dewatering and settling tanks, and conveyance systems. Each unit has a dedicated baghouse. Additionally, the Unit 8 ash handling system includes an electrostatic precipitator (ESP) and a spray dryer absorber (SDA).

Ash resulting from the combustion process may be beneficially used or disposed of in the ash landfill (a.k.a., "CCR Unit" or "CCR landfill"). Additionally, waste ash is accepted as a special waste at the Pheasant Point Landfill in Douglas County, Nebraska.

This FDCP predominantly affects the areas of the Lon D. Wright Power Plant presented in Table 1 below:

TABLE 1
Affected Areas

Location	Equipment Description
East Silo	A partially enclosed, vertically configured cylindrical ash storage device that receives fly ash from Units 6, 7, and 8. Ash is unloaded via gravity into trucks for transportation to the CCR landfill or to beneficial use projects.
West Silo	A partially enclosed, vertically configured cylindrical ash storage device that receives fly ash from Units 6, 7, and 8. Ash is unloaded via gravity into: (1) trucks for transportation to the CCR landfill or to beneficial use projects or (2) into the DustMASTER® for pelletization. Pelletized ash is then unloaded via gravity into trucks for disposal.
Haul Roads	Paved and unpaved roads used for transportation routes to the CCR landfill.
CCR Landfill	Single celled, lined landfill used for CCR storage and disposal.
Baghouse (3)	Apparatus with multiple cloth bags used to remove fly ash and particulate matter from the flue gas.
Electrostatic Precipitator	Apparatus on Unit 8 with ionically charged plates used to remove fly ash from the flue gas. A vibration system removes the collected ash from the ESP at which point it is conveyed to the East Silo or West Silo.
Spray Dryer Absorber	Apparatus on Unit 8 is used to remove Sulfur Dioxide from the flue gas using lime injection. CCR resulting from this process is collected in the baghouse. Lime solids are periodically removed during maintenance of the SDA.

3.2 Dust Control Procedures

Dust control procedures described in this plan are categorized as proactive and reactive.

The following proactive dust control procedures shall be implemented:

- CCR conditioning;

- Personnel training and communications;
- Routine evaluation of the affected areas (see Table 1 above) under specified weather conditions and subsequent implementation of dust control measures based on findings of the evaluation; and
- Written and verbal communications with contractors that have the potential to generate dust.

The following reactive dust control procedures shall be implemented:

- Implementation of citizen complaint management protocol.

3.2.1 CCR Conditioning

Wet bottom ash is sluiced into a holding tank and dewatered to a condition in which the moisture content remains sufficient to prevent wind dispersal but will not result in free liquids.

Fly ash that is not destined for beneficial use:

- Is pneumatically conveyed to the DustMASTER® mixing system. In this system, a chemical dust suppression agent is used to pelletize the ash resulting in a condition sufficient to prevent wind dispersal with no free liquids; or
- Receives water application sufficient to prevent wind dispersal but will not result in free liquids.

3.2.2 Personnel Training and Communications

Training for employees responsible for implementation of this FDCP shall be conducted annually.

New employees shall be trained within 6 months of their hire date or before participating in dust evaluation activities described in subsection 3.2.3 below, responding to dust control issues communications from contractors as described in subsection 3.2.4 below, or responding to or participating in the citizen complaint management protocol and procedures described in subsection 3.2.5 below.

3.2.3 Routine Evaluation of Affected Areas

Evaluation of the affected areas (see Table 1 above) should be conducted at times when operation and maintenance (O&M) activities coupled with environmental conditions are the most likely to result in airborne dust. Therefore, evaluation and inspection activities outlined in this FDCP shall be conducted as needed based on weather conditions and planned O&M activities.

To facilitate this approach, Environmental Staff shall present and discuss weather forecast information with the management group during morning meetings. During the meetings, discussion of: (1) weather conditions such as moderate to high winds, wind direction, and forecasted storms and (2) planned O&M activities will be used to determine the need for and

details of visual inspections including inspection time, affected areas to be inspected, and inspection participants.

The inspection form presented in Appendix A to this FDCP shall be used to document all inspections.

If airborne CCR dust has the potential to affect air quality as determined during the visual inspection, reasonable control measures as described in subsection 3.3 below or other measures deemed reasonable and effective may be used to immediately address airborne CCR dust. Additionally, the inspection results shall be discussed in the subsequent morning management meeting, and the need for implementation of or changes to standard procedures and protocols shall be evaluated.

Completed inspection form(s) including documentation of control measures used, if any, shall be maintained to document the process as described in Section 4 below.

3.2.4 Contractor Communications

A CCR dust control communications memorandum shall be provided to third-party contractors and subcontractors to document written acknowledgement that dust control procedures must be implemented during O&M activities involving the affected areas (see Table 1 above). Environmental staff shall provide the memorandum and obtain signature indicating acknowledgement of the procedures and protocol. A standard memorandum format is provided in Appendix B of this FDCP. Signed acknowledgements shall be kept in accordance with recordkeeping provisions described in Section 4 of this FDCP.

Primarily, third-party contractors are required to immediately notify Lon D. Wright Power Plant management staff of potential CCR dust control issues if such issues are observed while the contractors are present at the facility. Should reasonable control measures be necessary to eliminate or minimize airborne CCR dust issues associated with contractor activities, additional written and verbal communications with the contractor(s) shall be documented and kept in accordance with recordkeeping provisions described in Section 4 of this FDCP.

3.2.5 Citizen Complaint Protocol and Procedures

Citizen complaints related to CCR fugitive dust shall be addressed through the protocol and procedures described in this subsection below. While all legitimate citizen complaints must be investigated, only CCR fugitive dust complaints are required to follow this plan for action, follow-up, and resolution.

The protocol and procedures shall follow the following steps:

1. All citizen complaints must be directed to Environmental staff or other person(s) approved by the General Manager. The Citizen Complaint Log (see the blank form presented in Appendix C of this FDCP) shall be used to document the complaint, investigation findings, and any short-term or long-term control measures taken in response as described in the steps below.

2. Efforts to investigate the complaint shall be undertaken. Communication with the complainant, other facility staff, and/or contractors shall be conducted as necessary. Expediency is important because the CCR dust issue may be short-term and visual

observance may be necessary to understand the cause and most effective control measure(s). Findings of the investigation shall be logged on the Citizen Complaint Log.

3. If the issue addressed in the complaint is determined not to be related to fugitive CCR dust, then stop. This FDCP does not apply. Discuss other applicable protocols and procedures with the General Manager.

   If the issue addressed in the complaint is determined to be related to fugitive CCR dust, then an evaluation of short-term and long-term control measures shall be conducted. Short-term (i.e., immediate) and/or long-term control measures shall be implemented, if necessary, and logged on the Citizen Complaint Log.

4. Approved staff may conduct a follow-up meeting with the Complainant either in-person (recommended) or by telephone. Results of the investigation and description of control measures taken may be presented to the Complainant if necessary.

5. The Citizen Complaint Log shall be maintained in accordance with recordkeeping provisions described in Section 4 of this FDCP.

3.3 Potential Control Measures

In response to routine dust control evaluation and/or citizen complaints, control measures may be necessary to eliminate or minimize CCR dust issues. This subsection 3.3 provides discussion of potential control measures, but is not an exhaustive list.

Additionally, control measures proactively taken should be documented to assist in the annual evaluation of the effectiveness of this FDCP (see Section 5 related to annual reporting for more information).

Consideration of short-term and long-term implementation should be made to ensure repeat deficiencies are not identified and additional complaints related to the similar activities and conditions are not received.

The following are potential control measures:

- Application of additional water or chemical dust suppressant in problem areas and/or during specified weather conditions and/or specified activities.
- Cease specified activities during times of moderate or high winds.
- Reduce speed limits on haul roads.
- Cover or provide wind blocks for specified activities or small areas that have the potential to disperse CCR ash via wind.
- Other measures as applicable.

Section 4: Recordkeeping

The facility record is an online record controlled by Lon D. Wright Power Plant staff. This FDCP and subsequent amendment to FDCP shall be maintained in the facility record.

All records generated in accordance with the procedures described in this FDCP are maintained onsite in a readily accessible manner for a minimum of 5 years. These records include:

- Completed inspection forms as described in subsection 3.2.3 of this FDCP including description of any activities, procedures, and/or equipment used to mitigate observed airborne CCR dust;
- Signed contractor acknowledgements as described in subsection 3.2.4 of this FDCP;
- All written records of communications with contractors related to fugitive CCR dust control activities as described in subsection 3.2.4 of this FDCP;
- Updated Citizen Complaint Log as described in subsection 3.2.5 of this FDCP; and
- All records related to CCR dust management control measures taken at the Lon D. Wright Power Plant.

All records shall be used to evaluate the effectiveness of this FDCP and complete the Annual CCR Fugitive Dust Control Report. The Annual CCR Fugitive Dust Control Report shall be uploaded to the facility record in accordance with Section 5 below.

Section 5: Reporting

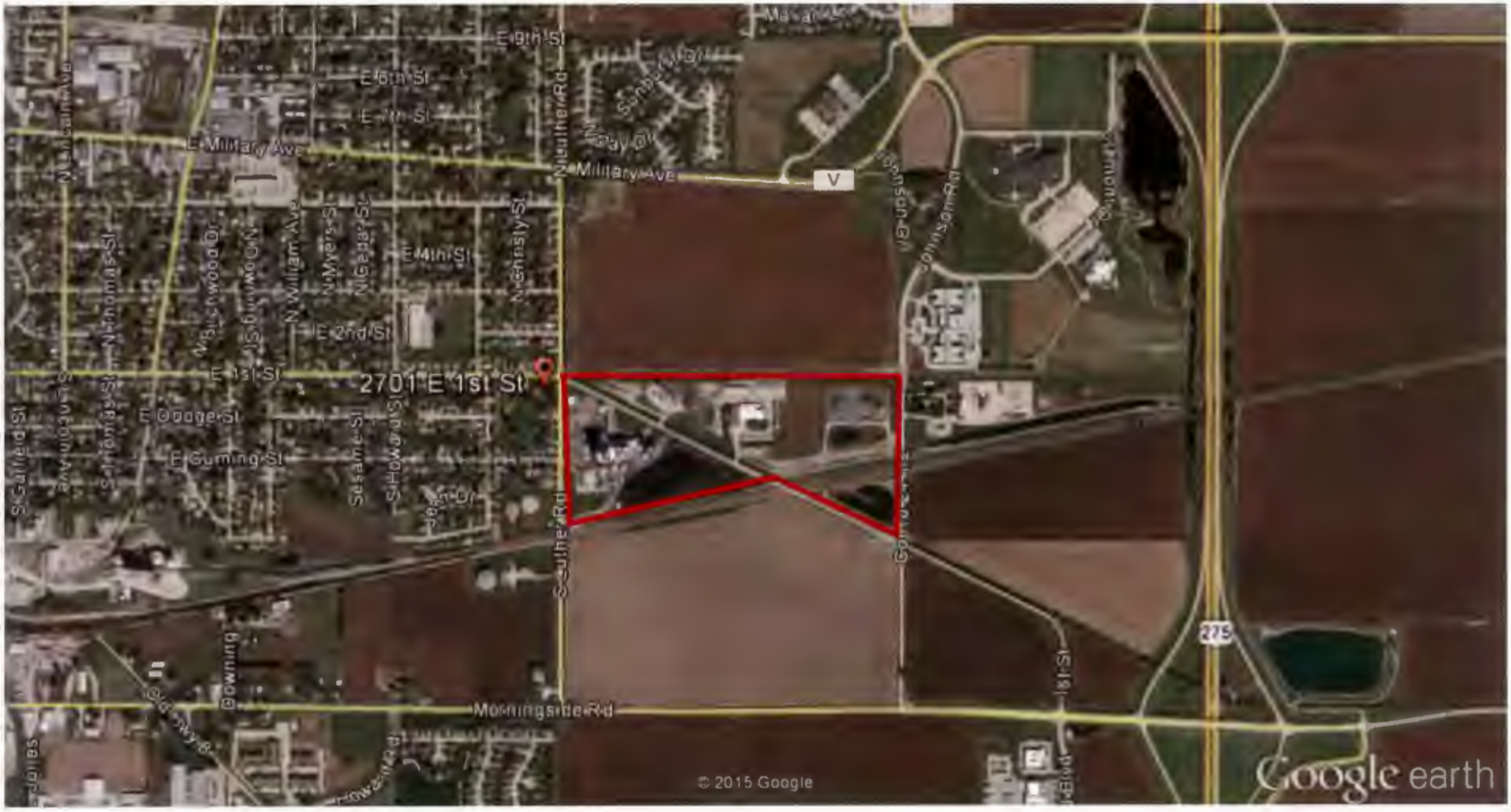
The Lon D. Wright Power Plant shall prepare an Annual CCR Fugitive Dust Control Report that includes:

1. A description of the actions taken to control fugitive CCR dust;
2. A record of all citizen complaints; and
3. A summary of any corrective measures taken.

The initial annual report is due 14 months after placing this original FDCP into the facility operating record. Subsequent annual reports are due 1 year after the date of completion of the previous annual report. These reports are considered complete when uploaded into the facility record.

Figures

Figure 1 – Site Location



Approximate Site Boundary

APPENDIX A

Inspection Form

LON D. WRIGHT POWER PLANT
DUST CONTROL PLAN - INSPECTION FORM

INSTRUCTIONS:
Legibly complete both sides of this form. Include all applicable data. If not applicable, write "N/A" in the space provided. Note that all completed forms must be kept in a readily accessible manner at the Lon D. Wright Power Plant for use in preparation of the Annual CCR Dust Control Report. See the Dust Control Plan for additional details and explanation of the objective of DCP inspections.

INSPECTOR AND OTHER INSPECTION PARTICIPANTS:

_____
Inspector Name

_____
Inspector Signature **Date**

_____
Other Participants

_____

TIME OF DAY: _____

WEATHER CONDITIONS: _____

AFFECTED AREA OBSERVED: _____

ACTIVITY OBSERVED: _____

OBSERVATIONS: _____

_____

_____

CONTROL MEASURES TAKEN: _____

_____

_____

OTHER COMMENTS: _____

_____

_____

APPENDIX B

CCR Dust Control Communications Memorandum

Fremont Department of Utilities
Lon D. Wright Power Plant
2701 E. First Street
Fremont, NE 68025

Date: _____

Contractor (Company) Name: _____
Attention (Name): _____
Contractor (Company) Address: _____
Contractor (Company) City: _____

Subject: CCR Dust Control Communications Memorandum

To whom it may concern:

This memorandum serves to notify and obtain acknowledgement from contractors handling Coal Combustion Residuals (CCR) and/or conducting maintenance or repairs of CCR handling equipment or units at the Lon D. Wright Power Plant including use of haul roads and disposal of CCR in the CCR landfill must immediately notify Lon D. Wright Power Plant of any observations of significant airborne CCR dust. "Significant" means any airborne dust that does not visibly dissipate within 10 feet of its source and/or airborne dust that may reach the Lon D. Wright property boundary.

If significant airborne CCR dust is observed, contractors must immediately contact the Lon D. Wright Operations Control Room at: (402) 727-2646 and have a shift supervisor notified.

Note that this procedure applies only to airborne CCR dust. Other contact procedures for environmental issues may apply.

The Lon D. Wright Power Plant Dust Control Plan may be viewed at the Lon D. Wright Power Plant or the City of Fremont website.

Please sign this acknowledgement and return the original signed copy to the Lon D. Wright Power Plant via mail or hand delivery to:

Lon D. Wright Power Plant
Attn: Tony Sedlacek
2701 E. First Street
Fremont, NE 68025

Contractor Acknowledgement:

Name: _____

Title: _____

Company: _____

Signature: _____

APPENDIX C

Citizen Complaint Log

Lon D. Wright Power Plant
2701 E. First Street
Fremont, NE 68025

CITIZEN COMPLAINT LOG

DATE RECEIVED	COMPLAINT CONTACT	DESCRIPTION OF COMPLAINT	RESOLVED DATE	ACTIONS TAKEN

Lon D. Wright Power Plant
2701 E. First Street
Fremont, NE 68025
