

SHAMROCK ENVIRONMENTAL LANDFILL

**COAL COMBUSTION RESIDUALS
FUGITIVE DUST CONTROL PLAN**

**CARLTON COUNTY, MINNESOTA
MINNESOTA PCA PERMIT SW-399**

Prepared for
Shamrock Landfill, Inc.

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INTRODUCTION

The following Coal Combustion Residuals (CCR) Fugitive Dust Control Plan has been prepared for the Shamrock Environmental Landfill (Landfill), owned and operated by Shamrock Landfill, Inc., to comply with the recently promulgated CCR management rules by the US Environmental Protection Agency (EPA). The Landfill is permitted as an industrial solid waste landfill. The Landfill is permitted to accept construction and demolition debris, and industrial solid waste per the approved Industrial Solid Waste Management Plan (ISWMP), which includes CCR materials, for disposal. As an industrial waste disposal facility, and based on discussions with the EPA, the Landfill is not subject to the regulatory exclusion provided to municipal solid waste (MSW) landfills within the CCR rules.

Background

On April 17, 2015, the EPA published the final CCR rules, which established location restrictions, design criteria, operating criteria, groundwater monitoring and corrective actions, and closure and post-closure care requirements for CCR surface impoundments and landfills. The CCR rules are contained in Title 40 of the Code of Federal Regulations Part 257 (40 CFR 257). The CCR rules require that CCR landfill owners and operators prepare a CCR fugitive dust control plan (referred to herein as the Plan) meeting the requirements of 40 CFR §257.80 – Air Criteria. The required contents of the Plan include:

- Description and condition of CCR delivered to the landfill
- CCR fugitive dust control measures
- Periodic CCR fugitive dust control assessment and reporting
- Citizen CCR fugitive dust complaints
- Annual reporting
- Recordkeeping, notification and internet posting requirements

The above requirements are addressed within this Plan.

The requirements set forth in this Plan are not applicable to excluded wastes as described in 40 CFR 257, which include CCR generated by facilities that are not a part of an electric utility or independent power producer, such as manufacturing facilities, universities, hospitals. The Plan also is not applicable to ash generated

from a mixed fuel containing less than 50 percent of coal (as measured from a mass input basis or total heat input basis, whichever results in the greatest mass feed rate of coal (40 CFR 257.50(g)).

Landfill Description

The Landfill is an approximately 59 acre landfill located south of Cloquet, Carlton County, Minnesota, at the southwest corner of the intersection of Interstate 35 and State Highway 45. The landfill is owned and operated by Shamrock Landfill, Inc. The landfill is permitted as an industrial solid waste landfill, and accepts construction and demolition debris, and non-hazardous industrial waste. CCR and other ISW is only disposed over lined portions of the landfill, as shown on Figure 1 (Attachment A). The lined portions of the landfill are designed and operated to meet or exceed the requirements for industrial and solid waste landfills within the Resource Conservation and Recovery Act (RCRA) Subtitle D requirements for Municipal Solid Waste Landfills and the State of Minnesota Industrial Solid Waste Management Rules. Surrounding land uses include undeveloped lands, residential, light industrial and commercial. A site plan of the Landfill is provided as Attachment A.

The Landfill accepts non-hazardous industrial waste, asbestos, low-level PCB wastes, non-hazardous waste spills, foundry waste, dried paint wastes, sludges, CCR, and other wastes. The acceptance of waste at the Landfill is predicated on a pre-screening process set forth in the Landfill's (ISWMP).

CCR waste is not accepted for disposal into the unlined portion of the landfill.

CCR FUGITIVE DUST CONTROL

Description and Condition of CCR Delivered to Landfill

CCR accepted for disposal at the Landfill is comprised primarily of bottom ash, although all categories of CCR (including bottom ash, flyash, boiler slag and flue gas desulfurization (FGD) materials) can be accepted by the landfill. The CCR is accepted as a special waste, and includes the requirement the customer provide a waste profile for the CCR prior to disposal at the Landfill. As set forth in the Landfill's ISWMP, the CCR is tested for metals by TCLP prior to acceptance, unless the customer can demonstrate that testing is not necessary.

CCR is typically moisture conditioned by the generator or hauler to control fugitive dust prior to transport to the Landfill. Moisture conditioning implies the CCR is wetted with water or other dust suppressing agents in a manner that controls dust and fugitive particulates without adding free water during transport and discharge at the Landfill.

Dry or unconditioned CCR may also be received by the Landfill, provided it is delivered in a manner that does not generate CCR fugitive dust during transport on landfill roads or property (i.e., tarped or enclosed containers, super sacks, tarped dump trucks, etc.), and provided the CCR is conditioned with water (by spraying or misting) or other dust suppressant by the landfill operator prior to placement into the landfill. Dry or unconditioned CCR that is susceptible to dust generation may not be placed into the landfill. CCR delivered to and disposed at the Landfill in supersacks or other containers, or CCR that is not susceptible to dust generation (bottom ash for example) does not require moisture conditioning.

In accordance with the Landfill's ISWMP, incoming transport vehicles are checked for hot loads, and wetted if needed. Slag and bottom ash may be considered for use as cover material (within the landfill footprint) if they do not contain fractions susceptible to wind dispersal. CCR that is subject to wind dispersal is deposited and covered with waste or cover soils at the landfill working face.

Potential Sources of Fugitive CCR Dust

CCR dust can be generated during the discharge from the transport vehicle and covering at the landfill working face. CCR slag and bottom ash that is not susceptible to wind dispersal is assumed to not be a source of CCR fugitive dust. CCR disposed at the working face is subsequently covered with waste or cover soil in a timely

manner, thus preventing the occurrence of windblown CCR fugitive dust. Stockpiled CCR (slag and bottom ash) is subsequently used as cover material. CCR is not used as fill or soil conditioner outside of the lined footprint of the landfill.

CCR Fugitive Dust Control Measures

The primary means of dust suppression for the CCR is the application of water by a water truck or spray hose, or by sprinklers. Other suitable methods of dust suppression include the use of tarps, dust suppression agents, or temporary soil cover. The CCR will be maintained at the Landfill in a manner that limits the generation of fugitive dust. During dry weather conditions, the landfill manager or his designee will routinely inspect the Landfill and establish a frequency, if necessary, to spray the CCR with water to prevent nuisance conditions. Fugitive dust along the landfill haul roads will be controlled by enforcement of facility speed limits.

Dust suppression also is provided by burial of the CCR at the landfill working face. For CCR disposed at the working face that is susceptible to fugitive dust generation, the CCR will be maintained in a limited space, and covered with waste or soil in a timely manner.

The potential for CCR fugitive dust generation is generally limited to the discharge or dumping of dust-susceptible CCR from the transport vehicle and covering of the CCR at the landfill working face. The use of water sprayed from a water truck onto the CCR is the primary means of fugitive dust control is both applicable and appropriate.

Periodic CCR Fugitive Dust Control Assessment and Reporting

Assessment of CCR fugitive dust and the effectiveness of the Plan will be the responsibility of the landfill operator or his designee as a part of the ongoing landfill operations.

Inspection of the CCR stockpiles and CCR unloading and covering operations has been incorporated into a weekly inspection report form, a copy of which is included as Attachment B. The inspection form includes a section for the landfill operator to comment on observations of CCR fugitive dust during unloading or stockpiling of CCR, CCR fugitive dust control measures implemented throughout the course of the inspection period, and recommendations for corrective measures to the current CCR management practices. The results of the weekly inspections will serve as the basis of periodic assessment of the effectiveness of the Plan for the annual report, as described below.

In the event inspections or operational observations indicate that fugitive dust is being emitted off site by the CCR on a regular occurrence, the landfill operator will make an internal assessment of their operations, and corrective measures to the management practices for CCR will be implemented. Revisions might include increased application of dust suppression agents (water, dust suppressant, cover soils), cessation of stockpiling and use of the CCR for cover material, or direct burial of the CCR into the landfill working face. If changes to the CCR management practices are deemed necessary, this Plan will be amended as required by 40 CFR §257.80(b)(6).

Citizen CCR Fugitive Dust Complaints

As required by 40 CFR §257.80(b)(3), SKB has developed a citizen complaint log used to document complaints received by the Landfill involving CCR fugitive dust. A copy of the Citizen Complaint Log is included as Attachment C. As shown, the complaint log incorporates the following information:

- Date of complaint
- Citizen name and phone number
- Who logged the complaint
- Weather conditions (including wind direction and estimated speed)
- Description of complaint
- Corrective measures implemented to control CCR fugitive dust.

Copies of the citizen complaint log will be maintained in the Landfill's site operating record.

ANNUAL REPORTING

An Annual CCR Fugitive Dust Control Report will be prepared for the landfill, incorporating the following site-specific information:

- General description of methods used by landfill operator to control CCR fugitive dust
- Citizen complaint log
- Corrective measures undertaken by the landfill operator to address CCR fugitive dust.

The initial annual report will be completed and placed into the record no later than 14 months after this Plan is placed into the Landfill site operating record, with subsequent reports prepared every 12 months subsequent to completion of the initial annual report.

RECORDKEEPING, NOTIFICATION AND INTERNET POSTING REQUIREMENTS

Recordkeeping

As required by 40 CFR §257.105(g), the Plan, subsequent amendments, and annual reports (including citizen complaint log) will be placed into the Landfill's site operating record.

Notification

As required by 40 CFR §257.106(g), the owner or operator will file a notification with the State Director of the placement and availability of the Plan, subsequent amendments, and annual reports (including citizen's complaints) into the Landfill's site operating record. Notification shall be made in writing to:

Minnesota Pollution Control Agency
Industrial Division Director
520 Lafayette Road N
St. Paul, MN 55155-4194
Telephone – 800-657-3864

Internet Posting

As required by 40 CFR §257.107(g), the Plan, subsequent amendments, and annual reports (including citizen complaints) will be posted and maintained at the following internet address:

www.CCR-Shamrock.com

ENGINEER CERTIFICATION

This Coal Combustion Residual (CCR) Fugitive Dust Control Plan has been prepared to comply with the requirements set forth in Title 40 of the Code of Federal Regulations, Chapter 257.80 – Air criteria.

PROFESSIONAL ENGINEER

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Bryan de Varona

Signature: 

Date: 10/16/2015 License#: 47342

ATTACHMENT A
FIGURE

ATTACHMENT B
WEEKLY INSPECTION FORM

WEEKLY COAL COMBUSTION RESIDUAL (CCR) INSPECTION REPORT

SHAMROCK ENVIRONMENTAL LANDFILL

Date: _____ Inspector: _____

Time: _____ Weather Conditions: _____

		<i>Yes</i>	<i>No</i>	<i>Notes</i>
CCR Landfill Integrity Inspection (per 40 CFR §257.84)				
1.	Was bulging, sliding, rotational movement or localized settlement observed on the sideslopes or upper deck of cells containing CCR?			
2.	Were conditions observed within the cells containing CCR or within the general landfill operations that represent a potential disruption to ongoing CCR management operations?			
3.	Were conditions observed within the cells or within the general landfill operations that represent a potential disruption of the safety of the CCR management operations.			
CCR Fugitive Dust Inspection (per 40 CFR §257.80(b)(4))				
4.	Was CCR received during the reporting period? If answer is no, no additional information required.			
5.	Was all CCR conditioned (by wetting or dust suppressants) prior to delivery to landfill?			
6.	If response to question 5 is no, was CCR conditioned (wetted) prior to transport to landfill working face, or was the CCR not susceptible to fugitive dust generation?			
7.	Was CCR spillage observed at the scale or on landfill access roads?			
8.	Was CCR fugitive dust observed at the landfill? If the answer is yes, describe corrective action measures below.			
9.	Are current CCR fugitive dust control measures effective? If the answer is no, describe recommended changes below.			
10.	Were CCR fugitive dust-related citizen complaints received during the reporting period? If the answer is yes, answer question			
11.	Were the citizen complaints logged?			

Additional Notes:

ATTACHMENT C
CITIZEN COMPLAINT LOG

CCR Fugitive Dust Citizen Complaint Log

Shamrock Environmental Landfill

1	Date: _____ Complainant Name: _____ Complainant Phone No. _____ Call Logged By: _____ Weather, Wind Direction and Speed: _____ Description of Complaint: _____ Corrective Action Taken: _____
2	Date: _____ Complainant Name: _____ Complainant Phone No. _____ Call Logged By: _____ Weather, Wind Direction and Speed: _____ Description of Complaint: _____ Corrective Action Taken: _____
3	Date: _____ Complainant Name: _____ Complainant Phone No. _____ Call Logged By: _____ Weather, Wind Direction and Speed: _____ Description of Complaint: _____ Corrective Action Taken: _____
4	Date: _____ Complainant Name: _____ Complainant Phone No. _____ Call Logged By: _____ Weather, Wind Direction and Speed: _____ Description of Complaint: _____ Corrective Action Taken: _____