COAL COMBUSTION RESIDUAL (CCR)

FUGITIVE DUST CONTROL PLAN

INTERMOUNTAIN GENERATING STATION

850 West Brush Wellman Road

Delta, UT 84624

October 19, 2015

COAL COMBUSTION RESIDUAL FUGITIVE DUST CONTROL PLAN

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COAL COMBUSTION RESIDUAL FUGITIVE DUST CONTROL PLAN

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LIST OF ACRONYMS

CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
FGD	Flue Gas Desulfurization
IGS	Intermountain Generating Station
SI	Surface Impoundment

SECTION 1

BACKGROUND

The purpose of this Plan is to identify and describe the Coal Combustion Residuals (CCR) fugitive dust control procedures used to reduce the potential for CCR becoming airborne at the Facility. The following sections provide background information on (1) coal combustion residuals and (2) regulatory requirements.

1.1 Coal Combustion Residuals

CCR materials are produced at the Intermountain Generating Station (IGS) when coal is burned to produce electricity. All CCR materials are managed on site, including on-site storage, processing (such as dewatering), and final disposal. Types of CCRs typically generated include fly ash, bottom ash, and flue gas desulfurization (FGD) materials. General characteristics of these CCR materials are described below.

- Fly Ash – Fly ash is captured from exhaust (flue) gases by baghouses at the IGS. Fly ash is characterized by clay-sized and silt-sized fine grain materials, consisting of silica, calcium, alumina, iron, and trace heavy metals. Due to the small particle size and consistency, fly ash can often be mobilized by windy conditions when it is dry. However, Class C fly ash, which is generated at IGS, has self-cementing properties in the presence of water. For this reason, a crust generally forms on its surfaces, reducing the potential for dust issues from Class C fly ash storage areas.
- FGD Materials – FGD materials are produced by FGD emissions control systems, which are designed and operated to remove sulfur dioxide (SO_2) from exhaust (flue) gases. FGD materials are produced as a wet sludge, which is then dewatered and mixed with fly ash. FGD materials can form a crust on surfaces reducing potential for dust issues from FGD storage areas.
- Bottom Ash – Bottom ash is characterized by sand-sized and gravel-sized materials, which settle by gravity to the bottom of a coal-fired furnace. Under certain conditions, such as differential settling in a surface impoundment, the smaller-grained materials can be concentrated at the surface and be a potential source of dust issues.

1.2 Regulatory Requirements

This Fugitive Dust Control Plan has been developed for the IGS Facility in accordance with applicable federal regulations discussed below.

1.2.1 CCR Rule Requirements

The CCR Rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D) requires preparation of a Fugitive Dust Control Plan for facilities including CCR landfills, CCR surface impoundments, and any lateral expansion of a CCR unit. Definitions from the CCR Rule are provided below.

CCR fugitive dust means solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than a stack or chimney.

CCR 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.

CCR surface impoundment means a natural topographic depression, manmade excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

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. The CCR Rule requires owners or operators of these CCR facilities to adopt and document "measures that will effectively reduce the potential for CCR becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management, and material handling activities" (40 CFR 257.80). Existing CCR surface impoundments and existing CCR landfills must prepare a Fugitive Dust Control Plan "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" (40 CFR 257.80 (b)(5)).

SECTION 2

FACILITY INFORMATION

Name of Facility:	Intermountain Generating Station
Location:	Latitude 39.507290 Longitude -112.573390
Name of Operator:	Intermountain Power Service Corporation
Operator Mailing Address:	850 West Brush Wellman Road
	Delta, UT 84624
Name of Owner:	Intermountain Power Agency
Owner Mailing Address:	10653 S River Front Pkwy # 120
	South Jordan, UT 84095

Facility Description

The IGS is located in Millard County, Utah, approximately 12 miles north of the city of Delta and consists of two identical 950 MWG Generating Units. Both Units have emission controls for particulate and sulfur oxides. The flue gases, leaving the boiler, pass through a fabric filter baghouse and a FGD scrubber. After passing through the scrubber, the wet flue gases are discharged into the atmosphere through a fiberglass liner.

There are three sources of CCR materials, fly ash from the baghouses, blow down from the FGD scrubber, and bottom ash from the boilers.

Fly ash is collected in the baghouses and pneumatically transferred to the Sludge Conditioning Building where it is stored in silos. Blow down from the scrubbers is pumped to the Sludge Conditioning Building where it is dewatered and the solids are mixed with fly ash. The ash and conditioned sludge mixture is then transported by belt to a stackout area where it is then transported to the adjacent Combustion By Products Landfill. Liquids from the dewatering process are sent to the Waste Water Basin, where the remaining solids are allowed to settle out. The water is then reused.

Bottom ash from the boilers is sluiced from the boilers to the three Bottom Ash Basins for disposal. The bottom ash is settled out and the water is returned to the bottom ash system. CCR materials and water from the boiler area sump are also sluiced to the Bottom Ash Basin.

CCR materials were placed into the impoundments and landfill starting in 1986.

SECTION 3

DUST CONTROL PROCEDURES

The following sections discuss dust control procedures for:

- CCR short-term storage and management areas.
- CCR surface impoundment units.
  - Intermountain Power Bottom Ash Basin (UT00463).
  - Intermountain Power Waste Water Basin (UT00468).
- CCR landfill unit.
  - Intermountain Power Combustion By-Products Landfill.
- Facility roads.

3.1 CCR Short-Term Storage and Management Areas

Short-Term Storage Areas for CCR materials at the IGS are temporary dumpsters, sludge emergency stackout, and combustion by-products landfill stackout.

- Temporary dumpsters will be located at the scrubber, baghouse, generation building, and other locations when activities require the handling and removal of CCR materials.
- CCR materials at the Sludge Emergency Stackout and the combustion by-products landfill stackout will be removed and transported to the active face of the combustion by-products landfill, or ash pond for disposal as soon as practical. This conditioned sludge is not prone to dusting.
- During loading and unloading activities, drop height is kept low to reduce the potential for mobilization of CCR dust. During high wind conditions, loading and management operations may be reduced or halted.
- CCR materials that are collected from maintenance activities are placed on the working face of the landfill or in the ash basin.
- CCR materials on the ground due to maintenance activities on the CCR handling, transfer equipment, piping, conveyor systems, or breakdowns will be cleaned up as soon as practical.
- Water spray will be applied, as needed, to CCR material short-term storage and handling activities.
- Conveyor systems are covered on two and one half sides to minimize dusting issues.

3.2 CCR Surface Impoundment Units

Bottom ash for the generating units is stored in the Bottom Ash Basin SI. Since the CCR is stored as a slurry mixture with high water content, and the wetted CCR pond surface is present at a lower elevation than its surroundings and would not cause dusting. However, as the SI is filled, the CCR is placed above the water level and based on these conditions CCR can become airborne during storage in the CCR SI.

An encrusting and encapsulating agent may be applied as needed to the CCR material that is above the water level of the basin. If dry dusty areas are observed on the CCR SI, a water spray will be applied as needed, and/or activity may be suspended.

CCR materials in the Waste Water Basin have high moisture content and would not cause a dusting problem. If a dusting condition is identified on the Waste Water Basin, these areas will be sprayed with water as needed.

3.3 CCR Landfill Unit

In accordance with 40 CFR 257.80(a), CCR will be conditioned and placed into the Combustion By-Products Landfill. A water spray will be added to CCR materials on the working face of the landfill to reduce any wind dispersal and improve compaction during CCR.

Additional dust control procedures are implemented for active CCR landfill units, as discussed below.

- The active landfill cell area and the working face will be maintained as small as feasible.
- During loading and unloading activities, drop height will be minimized to control mobilization of CCR dust. Water spray will be used as needed during loading and unloading.
- Water spray or chemical dust suppressant is applied, as needed to the exposed CCR materials, including on the working face.
- During high wind conditions, unloading operations at the working face may be reduced or halted.

When active CCR operations are completed in a given area, they are contoured as needed to reduce the slopes of any exposed CCR and a final cap is put in place.

Following the installation, the final cap and cover are maintained to reduce the potential for CCR becoming exposed. An encrusting and encapsulating agent may be applied as needed.

3.4 Facility Roads

Dust control procedures for roads in active use for CCR management activities at the Facility, or that are being traveled by equipment employed in CCR management activities, are discussed below.

- Speed limits are posted to reduce dust mobilization. During high wind conditions, operations and related traffic may be reduced or halted.
- During transportation, water may be added to CCR prior to transportation.
- A solution of magnesium chloride or equivalent product will be applied to unpaved roads where applicable. Figure 1 illustrates the unpaved roads that are sprayed with magnesium chloride.
- Water sprays will be used on CCR unpaved roads at the Facility, and can be sprayed multiple times per day using water wagons. Figure 1 illustrates unpaved roads that are routinely watered; as activities progress at the Facility, these locations may change.
- Paved roads used to transport CCR materials at the Facility will be sprayed with water, as needed by water trucks. Figure 1 illustrates the paved roads that may be used to transport CCR. As activities progress at the Facility, these locations may change.

SECTION 4

INSPECTIONS

Visual inspections are conducted by site personnel to observe signs of inadequate dust control. Appendix A provides the CCR Seven Day Inspection Form. Documentation of any inspections noting non-conforming items, are maintained in the Facility Operating Record.

Monitoring of the CCR landfill, surface impoundments, short term storage, management areas, and facility roads will be conducted per 4.1 below.

4.1 Monitoring Method

Indicators that fugitive dust is being minimized may include:

- Visible fugitive dust does not extend beyond the extent of access roads right-of-way.
- Visible fugitive dust does not extend past the downwind Facility boundaries.
- Visible fugitive dust does not extend beyond the extent of the surface impoundment area.
- Visible fugitive dust does not extend beyond the extent of the storage area.

4.2 Control Measures

Plant personnel will insure that the appropriate levels of control measures are taken to meet the visual monitoring indicators as needed.

Control measures for each CCR area are listed below.

Combustion By-Products Landfill	Control Level	Control Measure
	1	No Action
	2	Compact as needed
	3	Apply water with water truck
	4	Apply more water to hot spots
	5	Reduce equipment speed
	6	Reduce or suspend activities

CCR Short Term Storage and Management Areas	Control Level	Control Measure
	1	No Action
	2	Increase moisture in mixture
	3	Apply water with water truck
	4	Spray the pile while loading

CCR Surface Impoundments	Control Level	Control Measure
	1	No Action
	2	Apply water with water truck
	3	Reduce or suspend activities

CCR Roads	Control Level	Control Measure
	1	No Action
	2	Apply water with water truck
	3	Reduce vehicle speed

Control measures may be increased or decreased to reflect current conditions and activities. Some levels of control may not be used if a higher level is deemed necessary. If the fugitive dust observation meets the monitoring indicator, the control level may be maintained at its current level or may be relaxed to the next less stringent level if monitoring indicators are not likely to be exceeded.

SECTION 5

TRAINING

Training will be conducted annually to update qualified employees on changes in the regulations, laws, or in-house procedures related to CCR management, including dust control procedures. Training records will be maintained at the Facility for five years. Sign-in sheets and topics of discussion at each briefing are maintained for documentation.

SECTION 6

RECORDKEEPING AND REPORTING

The following sections provide details regarding (1) plan preparation, (2) community involvement, (3) annual reporting, and (4) Fugitive Dust Control Plan assessment and update process.

6.1 Plan Preparation

In accordance with 40 CFR 257.80(a), 257.105(g), and 257.107(g), a complete, updated copy of this Fugitive Dust Control Plan is maintained in the Facility operating record and on the IGS publicly accessible internet site www.ipsc.com.

In accordance with 40 CFR 257.106(g), the Director of the Utah Division of Waste Management and Radiation Control is notified when this Fugitive Dust Control Plan, or any subsequent amended version, is placed in the Facility operating record and on the IGS internet site.

6.2 Community Involvement

As discussed above, IGS maintains a publicly accessible internet site (www.ipsc.com) to provide information to stakeholders. The IGS internet site also provides contact information and requests that stakeholders contact IGS with any questions, concerns, or complaints regarding dust controls at the Facility.

In accordance with 40 CFR 257.80(b), IGS will maintain records of stakeholder correspondence, including any questions or concerns regarding dust controls at the Facility.

6.3 Annual Reporting

In accordance with 40 CFR 257.80(c), IGS prepares annual dust control reporting to document the following information:

- Description of dust control procedures implemented at the following CCR Units:
  - Combustion By-Products Landfill.
  - Bottom Ash Basin.
  - Waste Water Basin.
  - CCR short-term storage and management areas.
  - Summary of any questions of concerns raised by stakeholders.
  - Description of any corrective actions taken.

Appendix B provides a template for the Annual Dust Control Report.

The first Annual Dust Control Report will be completed on or before December 19, 2016. Subsequent Annual Dust Control Reports will be completed by December 19 of each calendar year thereafter. Each Annual Dust Control Report is completed and placed in the Facility operating record and on the IGS internet site, as required by 40 CFR 257.80(c), 257.105(g), and 257.107(g), within the timeframes above. In accordance with 40 CFR 257.106(g), the Director of the Utah Division of Waste Management and Radiation Control is notified when each Annual Dust Control Report has been placed in the Facility operating record and on the IGS internet site.

6.4 Plan Assessment and Update Process

In accordance with 40 CFR 257.80(b), IGS periodically assesses the effectiveness of this Fugitive Dust Control Plan. The Fugitive Dust Control Plan is reviewed at least once five years from the date of the last review for adherence to the requirements of 40 CFR 257. If more effective prevention and control technology has been field-proven at the time of the review and will significantly improve dust controls, the Fugitive Dust Control Plan will be amended to reflect changes. As required by 40 CFR 257.80(b), technical changes made to this Fugitive Dust Control Plan must be certified by a Professional Engineer. Appendix C provides a template for the Fugitive Dust Control Plan Review Documentation.

In accordance with 40 CFR 257.80(b), IGS will also amend this Fugitive whenever there is a change in conditions that would substantially affect the written Fugitive Dust Control Plan in effect, such as the construction and operation of a new CCR unit. The amended Fugitive Dust Control Plan will be implemented before or concurrently with the initial receipt of CCR into any new CCR unit(s). As required by 40 CFR 257.80(b), technical changes made to this Fugitive Dust Control Plan must be certified by a Professional Engineer.

In accordance with 40 CFR 257.106(g), the Director of the Utah Division of Waste Management and Radiation Control will be notified when this Fugitive Dust Control Plan has been amended and placed in the Facility operating record and on the IGS internet site.

SECTION 7

MANAGEMENT APPROVAL

This statement is the written commitment of management to provide the resources required to effectively reduce the potential for CCR becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities. This Dust Control Plan will be fully implemented as herein described, and the Dust Control Plan will be maintained in the Facility's operating record and on the IGS publicly accessible internet site www.ipsc.com.

Name: Jon Finlinson Date

Title: President and Chief Operation Officer

Jon A Finlinson Oct 12, 2015

Date of full implementation: October 19, 2015

Management Initials:

SECTION 8

ENGINEERING CERTIFICATION

Pursuant to 40 CFR 257.80 and by means of this certification I attest that:

(i) I am familiar with the requirements of the CCR rule (40 CFR 257);

(ii) I, or my agent, have visited and examined the Site;

(iii) the Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the CCR rule; and

(iv) the Fugitive Dust Control Plan meets the requirements of 40 CFR 257.80.

Hyrum Blaine Ipson
Printed Name of Registered Professional Engineer

Hyrum Blaine Ipson
Signature of Registered Professional Engineer

Registration No. 168299-2202 State: Utah

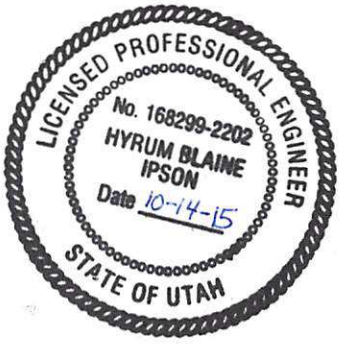
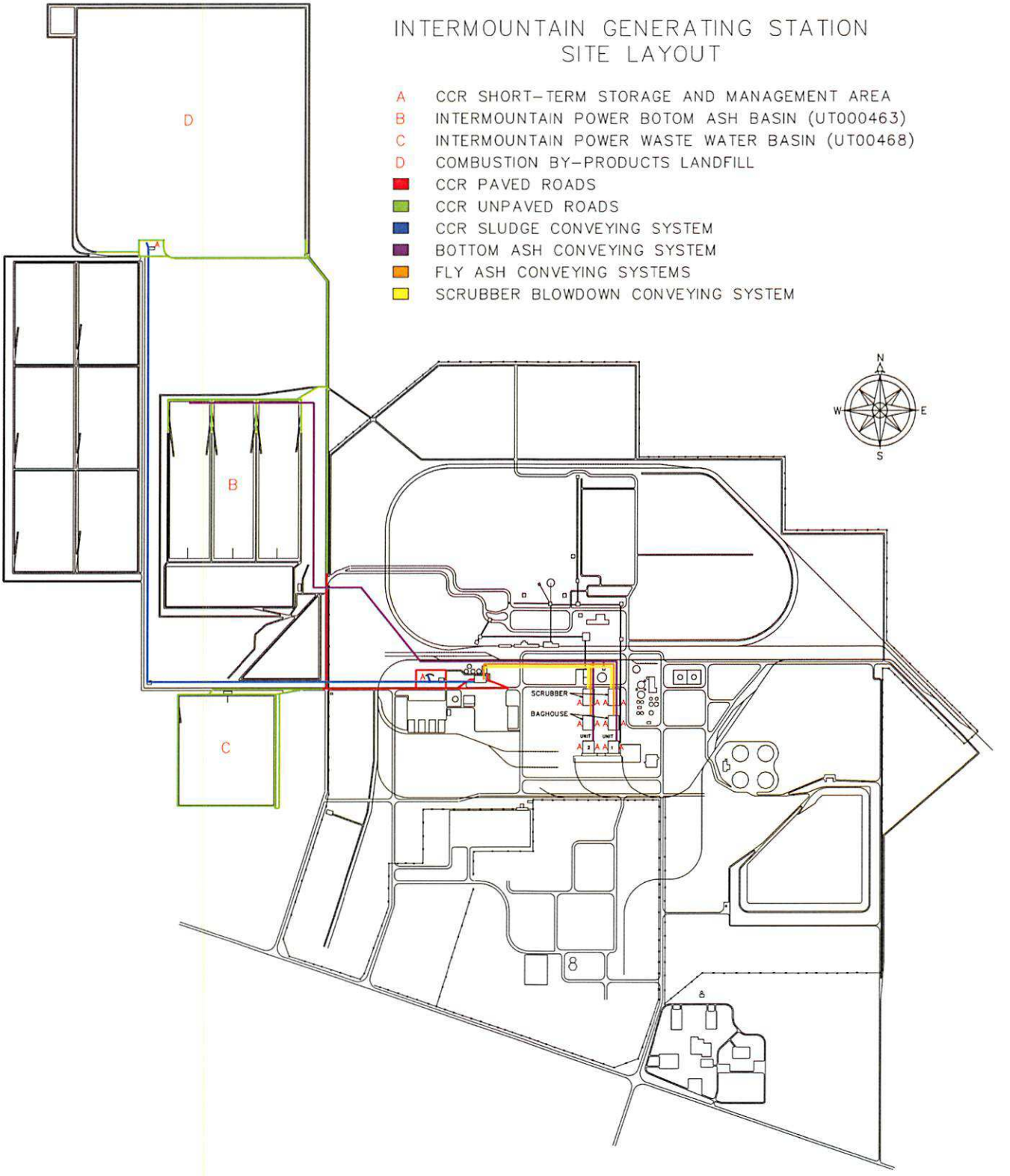


FIGURE 1


INTERMOUNTAIN GENERATING STATION
SITE LAYOUT
A CCR SHORT-TERM STORAGE AND MANAGEMENT AREA
B INTERMOUNTAIN POWER BOTOM ASH BASIN (UT000463)
C INTERMOUNTAIN POWER WASTE WATER BASIN (UT00468)
D COMBUSTION BY-PRODUCTS LANDFILL
CCR PAVED ROADS
CCR UNPAVED ROADS
CCR SLUDGE CONVEYING SYSTEM
BOTTOM ASH CONVEYING SYSTEM
FLY ASH CONVEYING SYSTEMS
SCRUBBER BLOWDOWN CONVEYING SYSTEM
N
W
E
S
D
B
C
SCRUBBER
BAGHOUSE
UNIT
UNIT

APPENDIX A CCR Seven Day Inspection Form

CCR SEVEN DAY INSPECTION FORM

Name:_____

Date:_____

Intermountain Power Bottom Ash Basin (UT00463)		
Inspection Item*	Check	Remarks (size, location, etc.)
Excessive, turbid, or sediment-laden seepage	Yes ☐ No ☐	
Piping or other internal erosion	Yes ☐ No ☐	
Transverse, longitudinal, and desiccation cracking (crest/embankment)	Yes ☐ No ☐	
Slides, bulges, boils, sloughs, scarps, sinkholes, or depressions	Yes ☐ No ☐	
Abnormally high or low pool levels	Yes ☐ No ☐	
Animal burrows	Yes ☐ No ☐	
Excessive or lacking vegetative cover	Yes ☐ No ☐	
Slope erosion	Yes ☐ No ☐	
Debris (around intake or outflow structures)	Yes ☐ No ☐	
Abnormal discoloration, flow, or discharge of debris or sediment at outlets	Yes ☐ No ☐	
Is Dust Control required	Yes ☐ No ☐	

Intermountain Power Waste Water Basin (UT00468)		
Inspection Item*	Check	Remarks (size, location, etc.)
Excessive, turbid, or sediment-laden seepage	Yes ☐ No ☐	
Piping or other internal erosion	Yes ☐ No ☐	
Transverse, longitudinal, and desiccation cracking (crest/embankment)	Yes ☐ No ☐	
Slides, bulges, boils, sloughs, scarps, sinkholes, or depressions	Yes ☐ No ☐	
Abnormally high or low pool levels	Yes ☐ No ☐	
Animal burrows	Yes ☐ No ☐	
Excessive or lacking vegetative cover	Yes ☐ No ☐	
Slope erosion	Yes ☐ No ☐	
Debris (around intake or outflow structures)	Yes ☐ No ☐	
Abnormal discoloration, flow, or discharge of debris or sediment at outlets	Yes ☐ No ☐	
Is Dust Control required	Yes ☐ No ☐	

Intermountain Power Combustion By-Products Landfill		
Inspection Item**	Check	Remarks (size, location, etc.)
Proper placement of the waste	Yes ☐ No ☐	
Slope stability and erosion control	Yes ☐ No ☐	
Surface water percolation minimized (i.e. ponding minimized)	Yes ☐ No ☐	
Liner and leachate collection systems properly operated and maintained	Not Applicable	
Water quality monitoring systems maintained and operating	Yes ☐ No ☐	
Dust controlled	Yes ☐ No ☐	
Run-On and Run-Off controls	Yes ☐ No ☐	
Plan in place to address and correct problem(s)	Yes ☐ No ☐	

APPENDIX B Annual Dust Control Report

Annual Dust Control Report

Intermountain Generating Station

Date _____

Introduction

In accordance with 40 CFR 257.80(c), IGS has prepared this Annual Dust Control Report to document the following information for the IGS Facility located near Delta, Utah:

- Description of dust control procedures implemented at:
  - Intermountain Power Bottom Ash Basin (UT00463).
  - Intermountain Power Waste Water Basin (UT00468).
  - Intermountain Power Combustion By-Products Landfill.
- Summary of any questions or concerns raised by stakeholders.
- Description of any corrective actions taken.

Implementation of Dust Control Procedures

During the last 12 months, dust control procedures have been implemented at [list CCR units], as discussed in the Fugitive Dust Control Plan, dated October 19, 2015. A copy of the current Fugitive Dust Control Plan is available in the Facility operating record and on the IGS internet site, as required by 40 CFR 257.105(g) and 257.107(g).

Stakeholder Correspondence

During the last 12 months, the following concerns or complaints have been received by IGS:

- [insert, or state that no concerns or complaints were received]
-

For each correspondence item, follow-up communications were completed, and records have been maintained by IGS. If needed, corrective actions have been implemented as discussed below.

Corrective Actions

Based on inspections and/or stakeholder correspondence during the last 12 months, the corrective actions [have/have not] been identified to improve dust control at IGS. A summary of corrective actions, including completion date or status, is provided below.

-
-

Closing

A copy of the most recent Annual Dust Control Report is available in the Facility operating record and on the IGS internet site, as required by 40 CFR 257.105(g) and 257.107(g). The IGS internet site also provides contact information and requests that stakeholders contact IGS with any questions or concerns regarding dust controls at the Facility.

APPENDIX C Fugitive Dust Control Plan Review Documentation

Fugitive Dust Control Plan Review Documentation

In accordance with 40 CFR 257.80(b), this Fugitive Dust Control Plan has been reviewed to assess if more effective control procedures are available to significantly reduce the likelihood of CCR from becoming airborne at the facility.

By means of this certification, I attest that I have completed a review and evaluation of this Plan for the Facility located near Delta, Utah, and as a result

Will

Will Not

amend the Plan. Technical amendments to the Plan have been certified by a Professional Engineer.

Signature, Authorized Facility Representative Date

Name (Printed)

Title