

# 2017 Coal Combustion Residuals Annual Inspection

## Hunter Power Plant

### *Hunter CCR Landfill*



*Prepared for*  
PacifiCorp Energy  
North Temple Office  
1407 West North Temple  
Salt Lake City, Utah 84116

November 30, 2017



# URS

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# 1 Findings

This annual inspection and report are being completed for the purpose of providing due diligence by PacifiCorp to ensure the safety of its coal combustion residual (CCR) facilities. The inspection was performed according to the requirements for annual inspections under Section 257.84 (for CCR landfills) of 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Final Rule, dated April 17, 2015 [1].

URS observed no signs, such as slumps, tension cracks or other movements that would indicate imminent failure of the embankment for the Hunter Power Plant CCR Landfill. Figure 1-1 on the following page is an aerial photograph of the landfill.

The CCR requirement for signage is not applicable to landfills. They are only required for surface water impoundments. The Hunter CCR Landfill does not accept hazardous wastes.

Maintenance items from the 2017 inspection include:

1. Obstruction of culverts in the perimeter drainage ditch at south haul road crossing and north access road crossing. The obstructions in both culverts are the result of eroded sediment similar to the condition observed in the 2016 inspection report [2]. Refer to photos 2, 4, 5, 33, 34, and 35, Appendix A.
2. Partial obstruction of inlet culvert at the south end of the retention basin located east of the CCR Landfill. The obstruction is composed of eroded sediment at the downstream end of the culvert. Refer to photo 25, Appendix A.
3. Observation of minor erosion rills and shallow gullies. Refer to photos 10, 13, and 15, Appendix A. These rills and gullies are typical of the exterior slopes of the landfill and have not changed significantly since the 2016 inspection. These do not represent a threat to safety or the integrity of the slopes. The eroded material has been retained at the toe of the embankment and there is no potential for it to move off site. This erosion is superficial and will be covered with closure of the slopes.

Observations from the 2017 inspection include:

4. A rumble rack was installed as a tire clean-off and runoff break on the main haul road at the entrance to the CCR Landfill. Refer to photos 1, 3, and 5, Appendix A.
5. Additional segments of the exterior slopes have been partially covered with straw. These segments include the west exterior slopes, south of the haul road, and the east exterior slopes above the retention pond. Vegetation continues to improve on straw-covered slopes observed in 2016 inspection [2]. Refer to photos 6, 7, 23, 28, and 29, Appendix A.

All of the photos in the Photograph Log (Appendix A) show landfill conditions as basis for comparison when performing future inspections.



Figure 1-1. Hunter Power Plant CCR Landfill



## 2 Description and History of CCR Landfill

### 2.1 General Overview

The Hunter Power Plant is operated and majority-owned by PacifiCorp. The Hunter CCR Landfill is situated about one mile southeast of the plant.

Flue-gas desulfurization (FGD) scrubber waste, fly ash, and bottom ash produced by the plant are disposed of in the CCR Landfill [3]. These waste materials are delivered to the landfill by truck by way of a haul road entering the CCR Landfill from the west. In addition, a small area at the north end of the CCR Landfill has been designated and permitted as a Class IIIb industrial waste landfill [4], [5].

### 2.2 Location

The Hunter Power Plant is located in Emery County, Utah, approximately 2.5 miles south of Castle Dale, Utah. Access to the plant is provided by Utah Highway 10 (UT-10). See the vicinity map on Figure 1-1 for the site location.

### 2.3 Hunter Landfill Description

This study specifically addresses the CCR waste storage facility identified as the Hunter CCR Landfill (also known as Ash Landfill), which includes the Industrial Waste Landfill. An aerial map showing the location of the CCR Landfill and the location of the Industrial Waste Landfill within the perimeter of the CCR Landfill is shown in Figure 1-1.

Runoff from the Hunter CCR Landfill is directed to an unlined, zero-discharge retention basin located east of the landfill (see Figure 1-1). Water is held in the retention basin and evaporated. Although there are outlets to release water from the basin, they are not used. There is no evidence of water discharging from the basin.

A summary of pertinent data for the Hunter CCR Landfill at the Hunter Power Plant is provided in Table 2-1.

**Table 2-1. Hunter Power Plant Landfill Pertinent Data**

Parameter Description	Facility
	CCR Landfill
Approximate Current Area (acres)	290 <sup>1</sup>
Length (feet)	4,800 [6]
Width (feet)	3,600 [6]
Top Elevation (feet amsl)	5,670-5,680 <sup>2</sup>
Slopes (H:V)	4:1 [4]
Status	Active

Notes: H = Horizontal; V = Vertical

1. Estimated by URS from 2017 aerial photographs.

2. Elevations were estimated by URS based on 2-foot interval contour data.

## **2.4 Performance History**

The current 260-acre landfill is used as the sole depository of CCR material from the Hunter Power Plant. There have been no recorded incidences of embankment failure or other discharges of CCR from the Hunter Landfill.

## **2.5 Construction History**

Bottom ash, fly ash, and FGD waste is hauled by truck to the landfill. CCR in the form of fly ash and bottom ash is spread and compacted to approximately 87 pounds per cubic foot (pcf) [7] with only vehicular traffic and FGD waste is dumped throughout the landfill.

## **2.6 Review of Operating Record Files**

The list of operating records to be reviewed during the annual inspection as contained in 40 CFR §257, Disposal of Coal Combustion Residuals for Electric Utilities is “CCR unit design and construction information required by §§257.73(c)(1) and 257.74(c)(1), previous periodic structural stability assessments required under §§257.73(d) and 257.74(d), the results of inspections by a qualified person, and results of previous annual inspections” [1]. The following subsections describe the review of operating record files.

### **2.6.1 Design and Construction Information**

URS reviewed the documents listed in Section 5. However, there are no design or construction drawings in the record files for the current geometry of the landfill. Construction of a vertical expansion of the CCR Landfill had not begun at the time of this report; however, design drawings were produced [8].

### **2.6.2 Previous Periodic Structural Analyses**

The Cornforth Phase 1 geotechnical study [6] was completed in 2009 and did not recommend a formal risk assessment of the landfill structure.

In 2015, URS completed a geotechnical study to evaluate the feasibility of expanding the landfill vertically [8]. The study includes geotechnical analyses assessing the stability of the landfill under the additional loading. This study concluded that it is feasible and that the landfill is stable for this expansion, provided that monitoring of internal pore pressures is performed.

### **2.6.3 Results of Inspection by a Qualified Person**

The Hunter CCR Landfill is subject to periodic inspections by the Hunter Power Plant staff. URS reviewed inspection reports and did not find anything that would affect the safety of the landfill. These inspections are documented and retained by PacifiCorp. A sample of PacifiCorp’s Inspection Form can be found in Appendix C. In the opinion of this report’s author, the interim inspections by the plant staff are adequate and appropriate for this CCR unit.

### **2.6.4 Results of Previous Annual Inspections**

The first annual inspection under CCR rules [1] for the Hunter CCR Landfill was conducted in September 2015 [9]. PacifiCorp has completed other independent inspections by third parties [10], [6]. None of the observations from this or previous inspections indicated imminent safety concerns.

This report and other pertinent reports and data are accessible at the following website:

<http://www.berkshirehathawayenergyco.com/ccr/ppw.html>

Section 5 of this report is a list of references for the Hunter Landfill.

### **3 Field Inspection of Hunter Landfill**

A field inspection was conducted on September 7, 2017, by URS staff, Bryan Franke, P.E., and Robert Snow, P.E. Mr. Franke participated previously in the CCR impoundment inspections in 2014 for Hunter CCR Landfill [10].

A photo log documenting features and their condition at the time of the inspection is presented in Appendix A. These photos are referenced in this report and in the Annual Inspection Report form.

The completed Annual Inspection Report Form is presented in Appendix B. This checklist should be considered an integral part of the report and remain attached whenever the report is forwarded or otherwise reproduced.

An example of the weekly inspection report form completed by PacifiCorp staff is included in Appendix C.

#### **3.1 General**

The field inspection was performed by the URS inspectors by driving the perimeter road and the crest, stopping at approximately ¼-mile intervals or when observations warranted stopping. Intermittently, photos of the outer face of the embankment provide a baseline for future inspections (Appendix A).

Features and conditions were documented on the Annual Inspection Report form (Appendix B) and were photographed. The approximate locations of the photos are detailed in the inspection photograph log overview map located at the beginning of the Photograph Log, Appendix A. In addition to documenting current features, the photo log of existing conditions is intended on aiding future inspections.

#### **3.2 Hunter Landfill Geometry**

Figure 3-1 shows a cross section of the embankment slope on the south face of the landfill. This section is found in the Industrial Landfill Renewal Application, June 27, 2006, Plan Sheet 3 and is typical of the other landfill faces. The slopes are a maximum of 4 horizontal to 1 vertical.

The landfill has both a perimeter road and a perimeter drainage ditch at the toe of the landfill slope. On the south side of the landfill, there is a drainage berm and diversion ditch outside the perimeter road to prevent off-site runoff from discharging to the road or the perimeter ditch.

The plant received a permit to dispose of and store industrial waste in two designated portions of the CCR Landfill [4], [5], [11]. The primary location was in the north-central portion of the embankment with an area of 6.2 acres [12]. The secondary location, where the where industrial waste is disposed of at present, is located near the north boundary of the CCR embankment with an area of 9.8 acres.

### **3.3 Instrumentation**

There is currently no permanent instrumentation within the landfill itself. Landfill instrumentation is not required by the CCR rule.





### **3.4 Volume of CCR**

URS estimated the current volume of CCR stored in the landfill in 2017 at approximately 14.6 million cubic yards. This was based on the estimate of 12.6 million cubic yards [8] in 2014 plus 1.2 million additional cubic yards reported as being added in 2015 and 2016<sup>1</sup> and 0.8 million cubic yards added since 2016.

### **3.5 Observed or Potential Structural Weaknesses**

There were no appearances of actual or potential structural weakness or existing conditions that are disrupting, or have the potential to disrupt the operation and safety of the CCR unit.

### **3.6 Observed Changes**

There were no observable changes in the structure of the CCR Landfill's embankments. Locations were chosen along the embankments to document this year compared to 2016. These locations are marked on the overview map in Appendix A and should be monitored in any further inspection for change.

Following are 2017 observations:

1. A rumble rack was installed as a tire clean-off and runoff break on the main haul road at the entrance to the CCR Landfill. Refer to photos 1, 3, and 5, Appendix A.
2. Obstruction of culverts in the perimeter drainage ditch at south haul road crossing and north access road crossing. The obstructions in both culverts are the result of eroded sediment similar to the condition observed in the 2016 inspection report [2]. Refer to photos 2, 4, 5, 33, 34, and 35, Appendix A.
3. Partial obstruction of inlet culvert at the south end of the retention basin located east of the CCR Landfill. The obstruction is composed of eroded sediment at the downstream end of the culver. Refer to photo 25, Appendix A.
4. Observation of minor erosion rills and shallow gullies. Refer to photos 10, 13, and 15, Appendix A. These rills and gullies are typical of the exterior slopes of the landfill and have not changed significantly since the 2016 inspection. These do not represent a threat to safety or the integrity of the slopes. The eroded material has been retained at the toe of the embankment and there is no potential for it to move off site. This erosion is superficial and will be covered with closure of the slopes.
5. Additional segments of the exterior slopes have partially been covered with straw. These segments include the west exterior slopes, south of the haul road, and the east exterior slopes above the retention pond. Vegetation continues to improve on straw-covered slopes observed in 2016 inspection [2]. Refer to photos 6, 7, 23, 28, and 29, Appendix A.

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<sup>1</sup> Aerographics volume computation from difference in LIDAR between 2014 and 2015.

## **4 Limitations and Consultant Qualifications**

### **4.1 Limitations**

This report presents observations, and conclusions drawn from a review of pertinent documents referenced in Section 5, and a field inspection of the Hunter CCR Landfill. The field inspection was limited to the interior of the perimeter road. The purpose of the review and inspection has been to assess the safety or adequacy of the facilities against catastrophic failure of the major constructed elements during normal operations or unusual or extreme events based on visual inspection and available information. A secondary purpose is to identify any potential deficiencies related to the CCR rules [1].

The conclusions and professional opinions presented herein were developed by the independent consultant and are in accordance with generally accepted engineering principles and practices at the time and location the services were provided. URS makes no other warranty, either expressed or implied.

### **4.2 Professional Engineer Qualifications**

The professional engineer for this inspection is Bryan Franke. He is licensed in the State of Utah (9819797) as a geotechnical engineer. He has over 4 years' experience in geotechnical and mining engineering and has performed inspections and safety evaluations on dams, slopes, and other waste depositories.

## 5 References

- [1] 40 CFR § 257 Disposal of Coal Combustion Residuals from Electric Utilities, April 17, 2015.
- [2] URS, “2016 Coal Combustion Residuals Annual Inspection: Hunter Power Plant Landfill,” November 29, 2016.
- [3] O’Brien & Gere, “Dam Safety Assessment of CCW Impoundments: Hunter Power Plant, Castle Dale, Utah,” Washington, D.C., 2013.
- [4] Water & Environmental Technologies PC, “Industrial Landfill Permit Renewal Application: Hunter Power Plant,” Salt Lake City, Utah, 2006.
- [5] Utah Division of Solid and Hazardous Waste, “Solid Waste Permit Renewal: Hunter Power Plant Class IIIb Landfill,” Salt Lake City, Utah, 2007.
- [6] Cornforth Consultants Inc., “Phase I Geotechnical Assessments: Scrubber Emergency Holding Pond and FGD Cell/Ash Landfill, Hunter Power Plant,” Castle Dale, Utah, 2009.
- [7] PacifiCorp Electric Operations, “Combustion Waste Embankment Expansion Project: Operations Manual,” Hunter Power Plant, Castle Dale, Utah, 1997.
- [8] URS, “Memorandum – Hunter CCR Landfill Vertical Expansion Feasibility Evaluation”, February 17, 2015.
- [9] URS, “2015 Coal Combustion Residuals Annual Inspection: Hunter Power Plant Landfill,” December 29, 2015.
- [10] URS, “2014 Coal Combustion Residuals Impoundment Inspection and Assessment – Hunter Power Plant Ash Landfill, ,” January 6, 2015.
- [11] Utah Division of Solid and Hazardous Waste, “Solid Waste Facility Fact Sheet: Hunter Power Plant Class IIIb Landfill,” 2014. [Online]. Available: <http://www.deq.utah.gov/businesses/P/PacificCorp/HunterPowerPlantClassIIIbLandfill.htm>. [Accessed: 12-Nov-2014].
- [12] PacifiCorp Energy, “Thermal Generation Fact Sheets: Hunter Plant,” 2011. [Online]. Available: <http://www.pacificorp.com/es/thermal.html>. [Accessed: 14-Nov-2014].




**Appendix A**  
**Photograph Log**





Aerial Photo Source: USDA NAIP July 11, 2016

**Legend**

 Approximate Photo Point



**Photo Locations**

PacifiCorp Energy  
Hunter Power Plant  
Castledale, Utah  
October 2017



**Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
September 07, 2017  
Page No. A-1







**Photograph No. 1** View of rumble rack as tire cleanout and runoff break at entrance/exit to CCR Landfill on south haul road, looking northeast. Note armored ditch for runoff.



**Photograph No. 2** View of pipe culvert (upstream side), which was almost completely blocked, under south haul road, looking southeast.

## Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
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**Photograph No. 3** View of rumble rack as tire cleanout and runoff break at entrance/exit to CCR Landfill on south haul road, looking northeast.



**Photograph No. 4** View of pipe culvert (downstream side), which was almost completely blocked, under south haul road, looking southwest.

### Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-3





**Photograph No. 5** View of rumble rack as tire cleanout and runoff break at entrance/exit to CCR Landfill on south haul road, looking southwest. Note armored ditch for runoff.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
September 07, 2017  
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**Photograph No. 6** View of west slope, looking south-southwest. Some vegetation is visible on lower ash slopes.



**Photograph No. 7** View of straw on west ash slope to help with erosion control and establishment of vegetation, looking approximately south.

## Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-5





**Photograph No. 8** View of west ash slope and onsite runoff collection ditch running along the toe of the slope, looking northeast.



**Photograph No. 9** View of southwest ash slope and onsite runoff collection ditch running along the toe of the slope, looking southeast.

### **Inspection Photographs**

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-6





**Photograph No. 10** View of typical west exterior slope with sparse vegetation, widespread erosional rills, and thicker vegetation beneath the toe of the slope, looking approximately northeast.



**Photograph No. 11** View of drainage ditch diverting offsite runoff around permitted CCR Landfill, looking south-southeast.

### **Inspection Photographs**

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-7





**Photograph No. 12** View of drainage ditch diverting offsite runoff around permitted CCR Landfill, looking east. Note erosion and steepened earthen sides of the channel.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
September 07, 2017  
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**Photograph No. 13** View of southwest ash slope and onsite runoff collection ditch running along the toe of the slope, looking northwest.



**Photograph No. 14** View of south ash slope and onsite runoff collection ditch running along the toe of the slope, looking east.

### **Inspection Photographs**

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
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**Photograph No. 15** View of typical south exterior slope with sparse vegetation, widespread erosional rills, and thicker vegetation beneath the toe of the slope, looking approximately north.



**Photograph No. 16** View of south exterior slope of landfill. Note vegetation growth on straw-treated slope compared with untreated slope.

### **Inspection Photographs**

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
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**Photograph No. 17** View of straw-treated south ash slope with some vegetation and more moderate vegetation beneath the toe, looking east-northeast.



**Photograph No. 18** View of south ash slope, looking west-northwest.





**Photograph No. 19** View of drainage ditch diverting offsite runoff around permitted CCR Landfill, looking approximately east. Note erosion and steepened earthen sides of the channel.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
September 07, 2017  
Page No. A-12





**Photograph No. 20** View of southeast ash slope, looking northeast.



**Photograph No. 21** View of southeast ash slope, looking west. Slope has been treated with straw for erosion protection on the top portion of the slope.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
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**Photograph No. 22** View of southeast ash slope of landfill, looking southwest.



**Photograph No. 23** View of east ash slope of landfill. Some portions of the slope were straw treated, looking north-northwest. Frac tank used for underdrain water storage is also shown.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
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**Photograph No. 24** View of south retention basin inlet pipe (upstream end). Pipe culvert was unobstructed and free of debris, looking northwest.



**Photograph No. 25** View of south retention basin inlet pipe (downstream end). Pipe culvert was partially obstructed at this end, looking southeast.

### **Inspection Photographs**

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
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**Photograph No. 26** View of drain line from underdrains to Frac tank (see Photograph No. 27), looking south-southwest.



**Photograph No. 27** View of Frac tank used for underdrain water storage, looking north-northwest.





**Photograph No. 28** View of east slope with straw treatment for erosion control, looking northwest. Retention basin is also shown.



**Photograph No. 29** View of outlet gate and gate control, looking northwest. This facility is a zero-discharge facility and gate remains closed.

## Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-17





**Photograph No. 30** View of outlet slide gate and outlet pipe structure, looking southeast. The slide gate appeared to be in good condition.



**Photograph No. 31** View of auxiliary spillway (upstream end) adjacent to the slide gate control structure, looking approximately east. The pipe is unobstructed at this end.

## Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
 Page No. A-18





**Photograph No. 32** View of auxiliary and primary spillway (downstream end), looking down into energy dissipation structure. Inspection team did not inspect downstream end of pipes.



**Photograph No. 33** View of retention basin north inlet pipe (upstream end), looking east-southeast. Pipe culvert was partially obstructed by soil and debris.

### Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
 September 07, 2017  
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**Photograph No. 34** View of erosion from perimeter road above retention basin north inlet pipe (downstream end), looking approximately south-southwest.

### **Inspection Photographs**

PacifiCorp Energy  
CCR Landfill – Hunter Power Plant  
September 07, 2017  
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**Photograph No. 35** View of retention basin north inlet pipe (downstream end), looking southwest. Pipe culvert was almost completely obstructed by debris. Pipe outlet partially collapsed.



**Photograph No. 36** View of west ash slope north of south access/haul road, looking approximately north. Onsite runoff collection ditch is visible beneath the toe of the slope.

### Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
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**Photograph No. 37** View of northwest temporary ash slopes, looking south-southwest.



**Photograph No. 38** View of northwest temporary ash slopes, looking approximately east.





**Photograph No. 39** View of native soils stockpiled at top of landfill, looking approximately west. Soil was visible in several locations along the east edge on top of the landfill.



**Photograph No. 40** View of FGD gypsum disposed of in the active area of the CCR Landfill, looking approximately southeast.

### Inspection Photographs

PacifiCorp Energy  
 CCR Landfill – Hunter Power Plant  
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**Appendix B**  
**Annual Inspection Report Form**



# Annual Landfill Inspection Report

**Feature Name:**  
**Hunter CCR Landfill**
**Feature ID:**
**Date:**  
**September 07, 2017**

<b>Station/Owner</b> PacifiCorp	<b>County,</b> Emery	<b>State</b> Utah
<b>Inspected By</b> Bryan Franke, P.E. & Robert Snow, P.E.	<b>Date</b> 09-07-17	<b>Phone No.</b> 801-904-4047
<b>Type of Inspection</b> <input type="checkbox"/> Initial <input checked="" type="checkbox"/> Periodic <input type="checkbox"/> Follow up <input type="checkbox"/> Other		<b>Weather</b> <input type="checkbox"/> Wet <input checked="" type="checkbox"/> Dry <input type="checkbox"/> Snow Cover <input type="checkbox"/> Other
<b>Remarks</b> PacifiCorp representative did not accompany the inspection team during the inspection. This was the third annual inspection under CCR regulations. B. Franke performed a similar inspection at Huntington Plant CCR Landfill in 2014.		
<b>Total Precipitation last 24 hrs:</b> none		

<b>COVER</b>	<b>PROBLEMS</b>				<b>COVER</b>
	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Animal burrows <input type="checkbox"/> 3. Animal damage <input type="checkbox"/> 4. Weeds & Brush	<input type="checkbox"/> 5. Vegetation >2" dia. <input type="checkbox"/> 6. Vegetation islands <input checked="" type="checkbox"/> 7. Poor grass cover <input type="checkbox"/> 8. Slope Stability	<input type="checkbox"/> 9. Settlement <input type="checkbox"/> 10. Cracks <input type="checkbox"/> 11. Erosion <input checked="" type="checkbox"/> 12. Rills	<input type="checkbox"/> 13. Seepage <input type="checkbox"/> 14. Ponding <input type="checkbox"/> 15. Other	<input checked="" type="checkbox"/> Vegetation <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/> Other Temp. bottom ash.
	Comments /Action Items: Topsoil, which will probably be used as cover for the landfill at some future date, has been stockpiled in a couple of areas along the east side of the landfill. At the time of this inspection, many of the slopes had been treated with straw and/or bottom ash for erosion control. Some minor rills were observed on CCR slopes during the inspection.				
	<b>Actions</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering				
<b>SLOPES &amp; PERIMETER BERMS</b>	<b>PROBLEMS</b>				<b>COVER:</b>
	<input checked="" type="checkbox"/> 1. None <input type="checkbox"/> 2. Animal burrows <input type="checkbox"/> 3. Animal damage <input type="checkbox"/> 4. Weeds & Brush	<input type="checkbox"/> 5. Vegetation >2" dia. <input type="checkbox"/> 6. Bare spots >25ft <sup>2</sup> <input type="checkbox"/> 7. Poor grass cover <input type="checkbox"/> 8. Slope Stability	<input type="checkbox"/> 9. Settlement <input type="checkbox"/> 10. Cracks <input type="checkbox"/> 11. Erosion <input type="checkbox"/> 12. Rills	<input type="checkbox"/> 13. Seepage <input type="checkbox"/> 14. Ponding <input type="checkbox"/> 15. Other	<input type="checkbox"/> Vegetation <input type="checkbox"/> Gravel <input type="checkbox"/> Soil <input type="checkbox"/> Asphalt <input type="checkbox"/> Other
	<b>OBSERVATIONS</b>				
	16. Do slopes and berms provide positive drainage?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
	17. Is there exposed waste on exterior slopes?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
	Comments /Action Items: The perimeter berm beyond perimeter road surrounding the CCR Landfill is in good condition.				
<b>Actions</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering					
<b>LEACHATE SYSTEM</b>	<b>PROBLEMS</b>				
	<input checked="" type="checkbox"/> 1. None <input type="checkbox"/> 2. Sump	<input type="checkbox"/> 3. Piping leaking <input type="checkbox"/> 4. Containment Leaking	<input type="checkbox"/> 5. Tank leaking <input type="checkbox"/> 6. Other		
	<b>OBSERVATIONS</b>				
	7. Is the Leachate transmission system functioning properly?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
	8. Is the leak detections system functioning properly?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
	Comments /Action Items: A couple of the underdrains, which are not part of a leachate collection system, were in operation at the time of the inspection draining trapped water to a frac tank onsite.				

# Annual Landfill Inspection Report

Issue Date: 8-24-2015  
Form XXXXX Revision A

Page 2 of 2

Feature Name:  
**Hunter CCR Landfill**

Feature ID:

Date:  
**September 07, 2017**

<b>Actions</b> <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering		
<b>EROSION SEDIMENT CONTROLS</b>	<b>PROBLEMS</b>	
	<input type="checkbox"/> 1. None <input type="checkbox"/> 3. Ditch Failure. <input type="checkbox"/> 5. Debris <input type="checkbox"/> 7. Silt Fences <input type="checkbox"/> 9. Rip Rap Aprons <input checked="" type="checkbox"/> 2. Channel <input type="checkbox"/> 4. Ditch Washouts <input checked="" type="checkbox"/> 6. Sediment <input type="checkbox"/> 8. Filter Socks <input type="checkbox"/> 10. Other	
	<b>OBSERVATIONS</b>	
	11. No erosion or sediment controls? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	12. Are drop structures in good repair? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
	13. Are perimeter run-on diversion ditches present and in good repair? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	14. Are perimeter run-off diversion ditches present and in good repair? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	Comments /Action Items: Perimeter ditch has obstructions ranging from minor to severe including pipe culverts passing under access/haul roads entering the CCR Landfill (see Photo Nos. 2, 4, 25, 33, and 34, Appendix A). These culverts should be cleared of all obstructions, sediment, and debris.	
	<b>Actions</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering	
	<b>Other</b>	<b>Observations</b>
1. Are temporary covers functioning as intended? Ash with straw treatment is effective. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2. Are Stormwater systems functioning as intended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3. Fences and Gates in good condition? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
4. Security devices in good condition? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
5. Signs in good condition? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
6. Reference monuments/Survey Monuments in good condition? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Comments /Action Items:		
<b>Actions</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering		

Inspector Signature *Bryan Frankel*

Date 09-07-2017



**Appendix C**  
**Example PacifiCorp Inspection Form**

## Hunter Landfill Inspection Report

CCR Landfill Name: <b>Hunter CCR Landfill</b>	Date:	Inspected By:
Inspection Frequency: <input type="checkbox"/> Routine <input type="checkbox"/> Weather/Seismic Event <input type="checkbox"/> Other: _____		
Type of Landfill: <input type="checkbox"/> Active <input type="checkbox"/> Inactive	Weather Conditions: <input type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Snow Cover <input type="checkbox"/> Windy <input type="checkbox"/> Other	

	Checks & Observations	
<b>Operations</b>	1. Placement procedures are being followed.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	2. Dust control is effective.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	3. Dust control logs are complete and available.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	4. Haul road maintained and dust controlled.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Observations:	
	Actions: <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Engineering	
Notification/Work Order#:		

	Problems	Cover
<b>Cover (if applicable)</b>	<input type="checkbox"/> None <input type="checkbox"/> Animal burrows <input type="checkbox"/> Animal damage	<input type="checkbox"/> Slope stability <input type="checkbox"/> Settlement <input type="checkbox"/> Cracks
	<input type="checkbox"/> Erosion <input type="checkbox"/> Rills	<input type="checkbox"/> Seepage <input type="checkbox"/> Ponding <input type="checkbox"/> Other
	5. Exterior slopes in good condition, with no exposed CCR waste (non-beneficial). Observations:	
	Actions: <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Engineering	
Notification/Work Order#:		

	Problems	Cover
<b>Slopes &amp; Perimeter Berms</b>	<input type="checkbox"/> None <input type="checkbox"/> Animal burrows <input type="checkbox"/> Animal damage	<input type="checkbox"/> Slope stability <input type="checkbox"/> Settlement <input type="checkbox"/> Cracks
	<input type="checkbox"/> Erosion <input type="checkbox"/> Rills	<input type="checkbox"/> Seepage <input type="checkbox"/> Ponding <input type="checkbox"/> Other
	<b>Observations</b>	
	6. Slopes and berms provide positive drainage. Observations:	
Actions: <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Engineering		
Notification/Work Order#:		

Issue Date:

Rev. 2

<b>Erosion Sediment Controls</b>	<b>Problems</b>				
	<input type="checkbox"/> None	<input type="checkbox"/> Ditch Failure <input type="checkbox"/> Ditch Washouts	<input type="checkbox"/> Debris <input type="checkbox"/> Sediment	<input type="checkbox"/> Berms <input type="checkbox"/> Bales/Waddles	<input type="checkbox"/> Other
	<b>Observations</b>				
	7. Erosion or sediment controls in good condition.				<input type="checkbox"/> Yes <input type="checkbox"/> No
	8. Drop inlet or other storm water controls structures are in good repair.				<input type="checkbox"/> Yes <input type="checkbox"/> No
	9. Perimeter run-on and run-off diversion ditches present and in good repair.				<input type="checkbox"/> Yes <input type="checkbox"/> No
	Observations:				
Actions: <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Engineering   Notification/Work Order#:					

<b>Other</b>	<b>Observations</b>	
	10. Temporary covers functioning as intended.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	11. Storm water systems functioning as intended.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	12. Any appearance of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR landfill?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	13. Other non-structural or non-emergency safety issues.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Observations:	
	Actions: <input type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Engineering   Notification/Work Order#:	

Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_