

2016 JRPS LANDFILL INSPECTION REPORT

CITY UTILITIES OF SPRINGFIELD, MISSOURI

PREPARATION DATE:

January 12, 2017

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JRPS LANDFILL INSPECTION REPORT CERTIFICATION

Gerald Fox, Missouri Professional Engineer, License Number 2013019048, has prepared the 2016 JRPS Landfill Inspection Report herein as required 40 CFR Section 257.84.

Name: Gerald Fox

Signature: 

Date: 1/12/17

Affix Seal Here:



1. WEEKLY LANDFILL INSPECTIONS REVIEW

A City Utilities of Springfield MO (CU) qualified person performed weekly landfill visual inspections of the JRPS landfill each week in the year 2016. Inspections were completed using a Landfill Inspection Checklist prepared by CU. Inspection items include:

- Visible settlement or depressions
- Visible sign of structural weakness
- Proper function/maintenance of run-off system
- Condition present that may disrupt operation
- Surface water percolation minimized
- Adequate vegetation (Capped Areas)
- Visible erosion
- Transverse, longitudinal, or desiccation cracks
- Cap system maintained and operational (Capped Areas)
- Proper placement of waste (Uncapped Areas)
- Dust controlled
- Transverse, longitudinal, or desiccation cracks
- Visible depressions, bulges, sloughs, or slides
- Visible animal burrows
- Presence of leachate collection
- Visible sign of leachate leaving system

During this process each weekly Landfill Inspection Checklist was reviewed along with the corrective action taken for each issue noted on the weekly Landfill Inspection Checklist. CU performed the weekly inspections at least every 7 days as required by the Coal Combustion Residual (CCR) rule. No major concerns were noted on the weekly inspections reviewed. Visible erosion on the capped and uncapped section of the landfill was noted after heavy rainfall events as well as disturbances of vegetation on the capped portion of the landfill. Work orders to regrade, compact and revegetate the affected areas were submitted and completed in a timely manner after discovering the visible erosion and disturbed vegetation. There were times where remediation was delayed due to limited access to the JRPS landfill during high water periods for CU personnel and heavy equipment to cross a low water bridge over the James River. Animal burrows were discovered and noted on multiple weekly inspections. CU responded to the animal burrows by contacting the United State Department of Agriculture (USDA) to remediate the issue. Overall the weekly landfill inspections and process appears to be functional and appropriate in ensuring the JRPS landfill is operating properly.

2. ANNUAL LANDFILL INSPECTION REVIEW

On January 12, 2017 a CU qualified professional engineer performed an annual inspection on the JRPS Landfill. The inspection was completed using the Landfill Inspection Checklist – Annual form. The annual inspection checklist is attached to this report. Inspection items include:

- Visible settlement or depressions
- Visible sign of structural weakness
- Proper function/maintenance of run-off system
- Condition present that may disrupt operation
- Surface water percolation minimized
- Adequate vegetation (Capped Areas)
- Visible erosion
- Transverse, longitudinal, or desiccation cracks
- Cap system maintained and operational (Capped Areas)
- Proper placement of waste (Uncapped Areas)
- Dust controlled
- Transverse, longitudinal, or desiccation cracks
- Visible depressions, bulges, sloughs, or slides
- Visible animal burrows
- Presence of leachate collection
- Visible sign of leachate leaving system
- Review of available operating records
- Review results of weekly inspections
- Review previous annual inspections
- Any visible sign of stress/malfunction of unit or structures
- Any visible changes in geometry
- Approx. volume of CCR in unit
- Liner system maintained and operational

The JRPS landfill appears to be in good working/operating condition. Results of the inspection checklist attached show no actual or potential structural weakness present in or around the JRPS landfill that will disrupt the operation and safety of the CCR unit. The finished or capped portion of the landfill appears to be functioning properly and is being maintained with adequate vegetation presently. The water run-off system appears to be working properly in both the capped and uncapped areas with minimal ponding or visible signs of surface water. CU is currently clean closing its inactive retired temporary ash holding ponds and is placing CCR from the ponds in the JRPS landfill. CUS is also placing CCR from the John Twitty Energy Center into the JRPS landfill. Minor visible erosion was present in the area near the leachate system. CU is placing the CCR in a conditioned state within the landfill as required by the CCR

2016 JRPS Landfill Inspection Report

rule. No fugitive dust was observed during the inspection. The landfill leachate system is in good working condition maintaining containment of the leachate water.

The landfill operating records were reviewed. The landfill operating record includes daily amount of ash hauled to the landfill as well as records of any maintenance activities including but not limited to; final cover placement, seeding and mowing, outfall water releases, soil cement application, and state inspection reports.

As stated in the Weekly Inspection Report Review section of this report the weekly landfill inspections were reviewed, verified and determined to be satisfactory.

The CCR rule states that any geometry changes since the last annual inspection and the previous annual inspections reports are to be reviewed as part of this report. CUS has completed a permitted vertical lift on the JRPS landfill to increase its capacity and is in the process of completing another permitted vertical lift. In the Initial Annual JRPS Landfill Inspection Report it was mentioned that CU needed to improve on their recorded keeping. Specifically when recording the work order completed date and the description of work that was completed. CU's record keeping was improved as part of the review for the 2016 JTEC Landfill Inspection Report

As part of this annual inspection CU is required to estimate the amount of CCR within the JRPS landfill. CU performed a landfill survey in December of 2015. The permitted capacity of the JRPS landfill 1,866,886 cubic yards if all permitted landfill lifts are completed. At the time of the survey the JRPS landfill had 1,080,040 cubic yards of CCR within the landfill. A landfill survey was not performed in 2016 however approximately 255,417 cubic yards of CCR was placed in the JRPS landfill. The total amount of CCR within the JRPS landfill is now approximately 1,335,457 cubic yards leaving the remaining volume of approximately 531,429 cubic yards available for CCR placement.

In conclusion the JRPS landfill appears to be in good working condition with no major issues. CU needs to continue to watch for visible erosion during heavy rainfall events and remedy the situation as quickly and practicably as possible.

APPENDIX A
(Annual Landfill Inspection Checklist)



LANDFILL INSPECTION CHECKLIST-ANNUAL INSPECTION BY PROFESSIONAL ENGINEER

The CCR landfill is visually examined by a licensed professional engineer as required by §257.84 and is recorded in the facility's operating record as required by § 257.105.

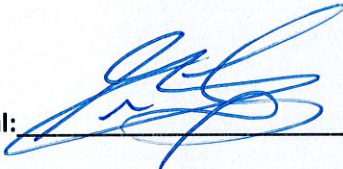
ID: JRPS Landfill	Date Inspected: 1/12/2017	Inspector: Gerad Fox	
	YES	NO	COMMENTS
CAPPED (INACTIVE)			
A. Visual settlement or depressions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Visible sign of structural weakness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Proper function/maintenance of run-off system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Condition present that may disrupt operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Surface water percolation minimized?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F. Adequate vegetation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G. Visible erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Transverse, longitudinal, or desiccation cracks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Cap system maintained and operational?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J. Visible animal burrows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
UNCAPPED (ACTIVE)			
A. Visible settlement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Signs of structural weakness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Proper function/maintenance of run-off system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Condition present that may disrupt operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Proper placement of waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F. Surface water percolation minimized?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G. Dust controlled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H. Visible erosion?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
I. Transverse, longitudinal, or desiccation cracks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
J. Visible depressions, bulges, sloughs, or slides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Visible animal burrows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LEACHATE COLLECTION			
A. Presence of leachate collection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Visible sign of leachate leaving system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

LANDFILL INSPECTION CHECKLIST (continued)

	YES	NO	COMMENTS
ADDITIONAL ANNUAL INSPECTION ITEMS			
A. Review of available operating records?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Review results of weekly inspections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Review previous annual inspections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Any visible sign of stress/malfunction of unit or structures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Any visible changes in geometry?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
F. Approx. volume of CCR in unit? 1,335,457 cubic yards			
G. Liner system maintained and operational?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

ADDITIONAL COMMENTS:

No major issues were found at the JRPS landfill during the annual inspection. Very minor visible erosion present in the uncapped/ working portion of the landfill near the leachate collection system. CU is currently clean closing an inactive CCR temporary ash holding ponds and is actively placing and compacting CCR in the JRPS landfill. CUS completed a permitted vertical lift on the JRPS landfill since the last inspection to increase its capacity and is in the process of completing another permitted vertical lift during the pond closure project.

Inspector Signature and Seal: 



1/12/12