



CCR Surface Impoundment Post-Closure Care Plan

Independence Power & Light
Blue Valley Power Station
21500 E. Truman Road
Independence, Missouri 64056

Prepared for:

City of Independence Power & Light
P.O. Box 1019
Independence, Missouri 64051

Prepared by:

SCS ENGINEERS
7311 West 130th Street, Suite 100
Overland Park, Kansas 66213
(913) 681-0030

January 2018
File No. 27215142.00

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- 1 Quarterly Inspection Form

PROFESSIONAL ENGINEER CERTIFICATION

I, Patrick M. Goeke, hereby certify that this Post-Closure Care Plan meets the requirements of 40 CFR 257.104(d), 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 Missouri.



Patrick M. Goeke, P.E. (E-19041) (License renewal data is 12/31/18)

1.0 INTRODUCTION AND PROJECT SUMMARY

On behalf of Independence Power and Light (IP&L), SCS Engineers (SCS) has prepared this Post-Closure Care Plan for the three former inactive coal combustion residual surface impoundments at the IP&L Blue Valley Power Station (BVPS) in accordance with 40 CFR 257.104(d) as follows.

Note: On June 14, 2016, the U.S. Court of Appeals for the D.C. Circuit ordered the vacatur of the early closure provisions of 40 CFR 257.100 in which IP&L utilized to commence closure. On November 7, 2017 EPA filed a motion asking the D.C. Circuit to remand certain provisions of the CCR rule for the Agency’s reconsideration. In particular, EPA requested remand of 40 CFR 257.50(c) & 257.100 stating that EPA lacks authority to impose RCRA’s Open Dump Prohibition on Inactive Surface Impoundments. Due to the legal uncertainty of 40 CFR 257.100, this post closure care plan is being written as if the vacatur of 257.100 is final and the remand is denied. IPL will keep this plan on file, but will not post on its public website nor implement the provisions related to 40 CFR 257.104 until the judicial review has been completed and a decision on Inactive Surface Impoundments is final.

40 CFR 257.104(d). “Written post-closure plan – (1) Content of the plan. The owner or operator of a CCR unit must prepare a written post-closure plan that includes, as a minimum, the information specified in paragraphs (d)(1)(i) through (iii) of this section.”

The BVPS facility includes three coal combustion residuals (CCR) units:

- North Fly Ash Pond – The North Fly Ash Pond is a closed, lined CCR surface impoundment. The North Fly Ash Pond is subject to the requirements of 40 CFR 257.100 and was closed in December 2017 by leaving CCR in place under a final cover system. Therefore, the North Fly Ash Pond is also subject to the requirements of 40 CFR 257.104.
- South Fly Ash Pond – The South Fly Ash Pond is a closed, unlined CCR surface impoundment. The South Fly Ash Pond is subject to the requirements of 40 CFR 257.100 and was closed in December 2017 by leaving CCR in place under a final cover system. Therefore, the South Fly Ash Pond is also subject to the requirements of 40 CFR 257.104.
- South Bottom Ash Pond (northern 7 acres) – The northern seven acres of the South Bottom Ash Pond is a closed, unlined CCR surface impoundment. The northern seven acres of the South Bottom Ash Pond are subject to the requirements of 40 CFR 257.100. Approximately seven acres of the South Bottom Ash Pond was closed in December 2017 by leaving CCR in place under a final cover system. Therefore, the approximate seven acre northern portion of the South Bottom Ash Pond is also subject to the requirements of 40 CFR 257.104.
- South Bottom Ash Pond (southern 3 acres) – The southern three acres of the South Bottom Ash Pond is a closed, unlined CCR surface impoundment. The southern

three acres of the South Bottom Ash Pond is subject to the requirements of 40 CFR 257.100. Approximately three acres of the South Bottom Ash Pond were closed in December 2017 by removal of the CCR. Therefore, the southern three acre portion of the South Bottom Ash Pond is NOT subject to the requirements of 40 CFR 257.104.

The site location is shown on **Figure 1**, and **Figure 2** shows the current conditions at the facility and monitoring locations.

CCR was de-watered and graded to level in each of the three separate ash impoundments and the areas were closed by covering the CCR with the final cover system as described in the Closure Plan for this CCR unit. Following the closure of the BVPS ash impoundments, IP&L will conduct post-closure care in accordance with 40 CFR 257.104(b) for the required 30 years.

2.0 MONITORING AND MAINTENANCE ACTIVITIES

40 CFR 257.104(d)(1)(i). *“A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.”*

Monitoring and Maintenance Activities	Frequency
Mowing	Annually
Inspections by Owner/Operator	Quarterly
Repair to final cover for erosion concerns	As needed, determined by inspection
Underdrain systems	Quarterly
Environmental Monitoring (groundwater)	Semi-Annually

IP&L will perform and document quarterly inspections of the final cover surface, the underdrain system, and groundwater monitoring systems using a form similar to the form contained in Attachment 1. If issues are noticed during the inspection, action will be taken to remedy the situation. Eroded areas will be repaired and reseeded. Repairs or replacement will be performed on groundwater monitoring system components as needed.

2.1 FINAL COVER MAINTENANCE

Mowing will be performed annually during the growing season unless additional mowing is required in response to the vegetation growth rate, or to control woody vegetation, or to deter habitation by vectors, and to allow inspection and access to the cap and related structures. If eroded areas are noted during quarterly inspections, IP&L will repair and reseed the area.

The vegetative cover will be amended and fertilized as needed to maintain healthy vegetation. Areas without a healthy stand of vegetation will be re-seeded and re-mulched as needed to re-establish vegetation as soon as practical. Depressions in the cover that pond water or otherwise impair the function of the final cover will be repaired, re-graded and re-vegetated.

2.2 UNDERDRAIN MONITORING AND MAINTENANCE

An underdrain system was installed in four of the discharge areas of the cap. The underdrain system included a pressure port to monitor the water level in the discharge piping for the system. IP&L will check the underdrain monitoring port on a quarterly basis to determine the head of water in the pipe discharge system. If the head is increasing, a vacuum truck should be mobilized to the site to remove water from the underdrain system and dispose of the water in the sedimentation pond or directly into the Little Blue Valley Sewer District monitoring structure.

2.3 GROUNDWATER MONITORING AND SYSTEM MAINTENANCE

Groundwater monitoring wells will be installed and sampled in accordance with the requirements provided in the site NPDES permit No. MO-0115924 from the Missouri Department of Natural Resources (MDNR) as well as those listed in Appendix III to Part 257 and in accordance with 40 CFR 257.90-.

3.0 POST-CLOSURE PERIOD CONTACTS

40 CFR 257.104(d)(1)(ii). *“The name, address, telephone number, and email address of the person or office to contact about the facility during the post-closure period.”*

The contact information for IP&L BVPS during the post-closure period is as follows:

Independence Power & Light
Attn: Eric Holder
17221 E. 23rd St.
Independence, MO 64051
(816) 325-7455
eholder@indepmo.org

4.0 POST-CLOSURE PERIOD SITE USE

40 CFR 257.104(d)(1)(iii). *“A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system or the function of the monitoring systems unless necessary to comply with the requirements of the subpart...”*

The final use of the closed BVPS CCR surface impoundments will ensure no disturbance of the final cover or any other related components. The former ponds are located with a secured and fenced power plant facility and will not be accessible to the public.

5.0 CERTIFICATIONS

40 CFR 257.104(d)(4). *“The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post-closure plan meets the requirements of this section.”*

Patrick M. Goeke, P.E., a licensed professional engineer in the State of Missouri, has overseen the preparation of this Post-Closure Care Plan. A certification statement is provided on **page ii** of this plan.

6.0 RECORDKEEPING AND REPORTING

40 CFR 257.104(b)(2)(iii). *“The owner or operator has completed the written post-closure plan when the plan including the certification required by paragraph (d)(4) of this section, has been placed in the facility’s operating record as required by Section 257.105(i)(4).”*

The Post-Closure Care Plan and any associated documentation will be placed in the facility’s operating record and on IP&L’s CCR Rule Compliance Data and Information website, as will all amendments, if any (See Note in Section 1.0).

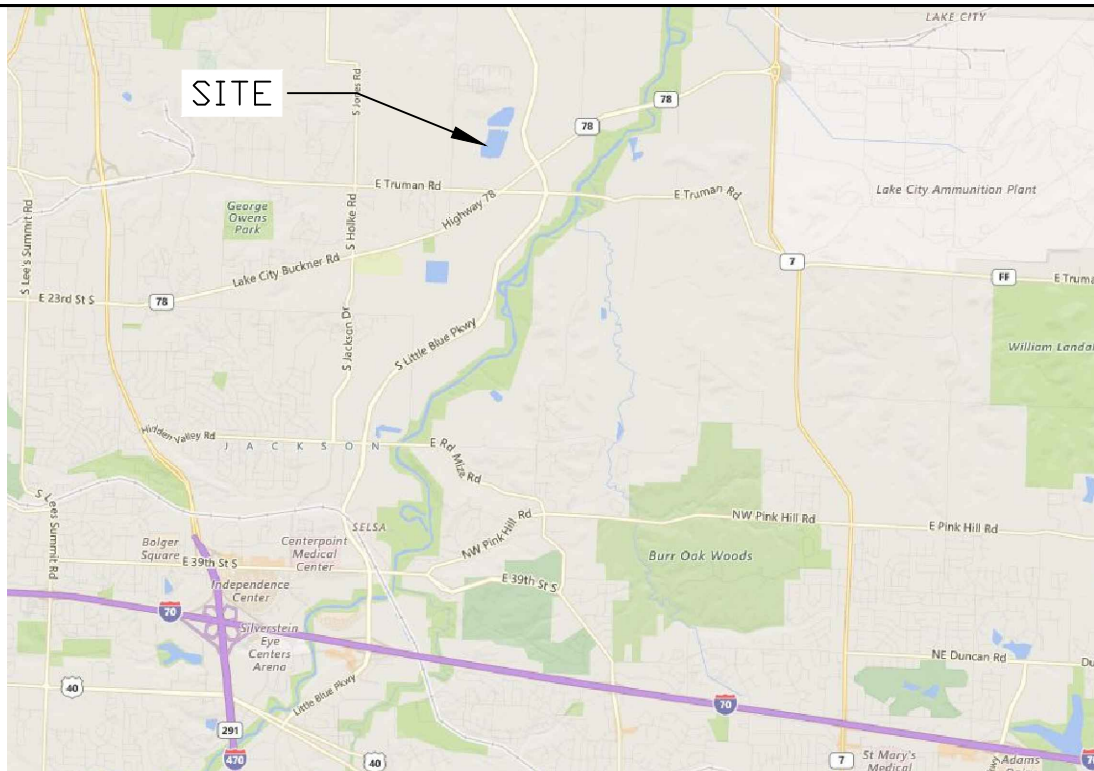
(<https://www.ci.independence.mo.us/PL/CCRRuleCompliance>)

IP&L will amend the Post-Closure Care Plan if there is a change in the CCR unit(s) that affects the written Post-Closure Care Plan or, if after post-closure activities have started, unexpected events (including changes in CCR regulations) cause a need for revision(s) to the plan.

Subject to conditions discussed in Section 1.0 Note, IP&L will provide notification of completion of post-closure care requirements no later than 60 days following the completion of the post-closure care period. The notification will include certification by a qualified professional engineer verifying that post-closure care has been completed in accordance with the plan. The notification will be placed in the facility’s operating record and on the website.

FIGURES

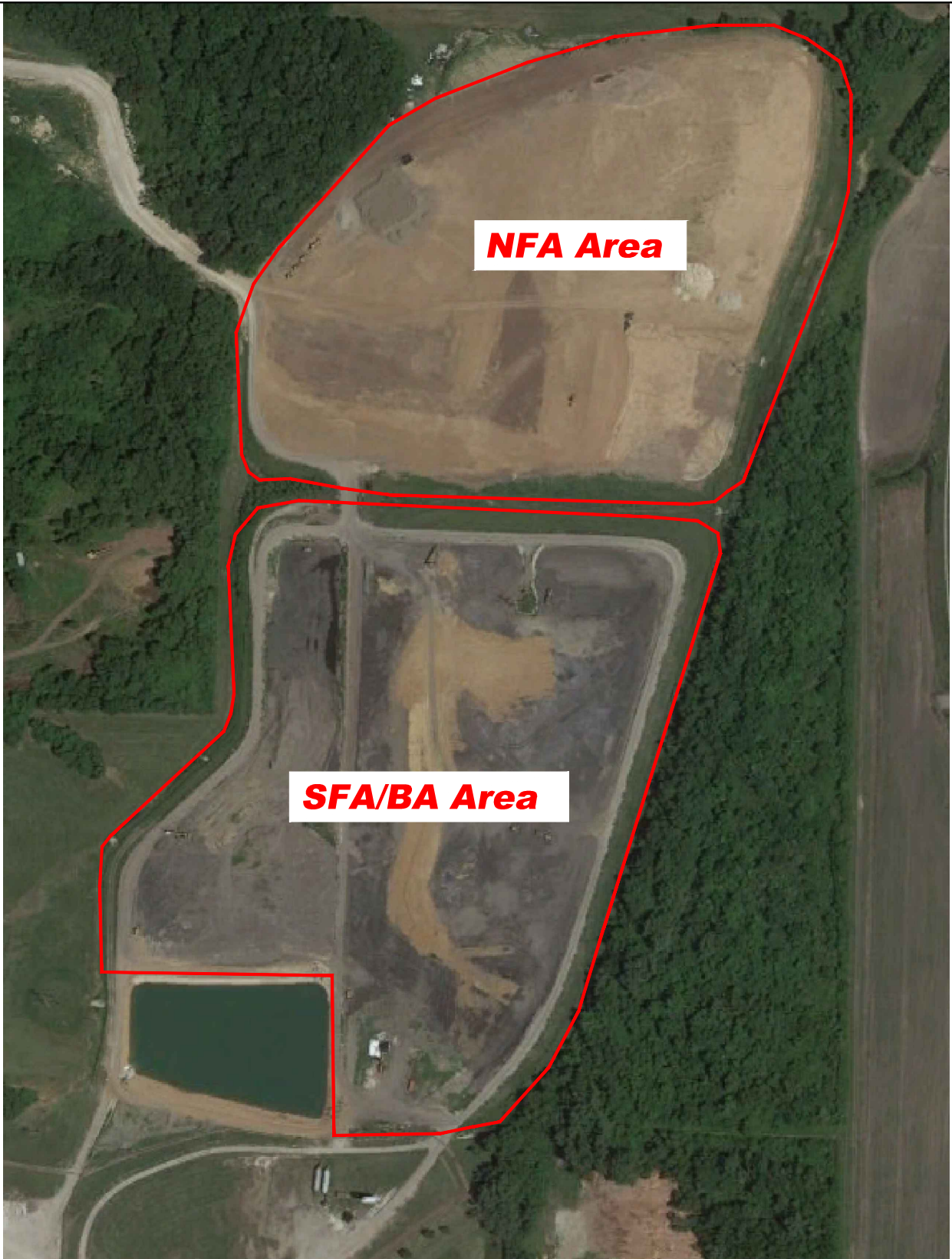
- 1 Site Location Map
- 2 Site Plan



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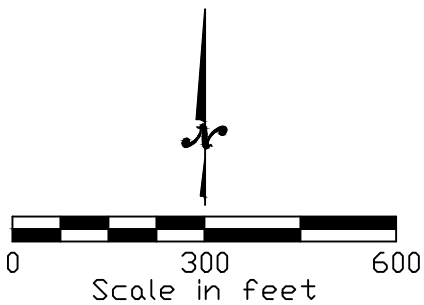
Figure 1
Location Street Map
 Independence Power & Light – Blue Valley Plant
 21500 E. Truman Road, Independence, Missouri

Project Mgr.	PMG	Date	1/29/18	File Name	Gridley SSA WP.dwg	Proj No.	27215142.00
Scale:				File Name	Gridley SSA WP.dwg		



NFA Area

SFA/BA Area



SCS ENGINEERS ENVIRONMENTAL CONSULTANTS AND CONTRACTORS 7311 West 130th Street Overland Park, Kansas 66213			
Figure 2 Site Plan Independence Power & Light – Blue Valley Plant 21500 E. Truman Road, Independence, Missouri			
Project Mgr.	PMG	Date	1/29/18
File Name	Gridley SSA WP.dwg		Proj No.
Scale:		File Name	Gridley SSA WP.dwg
			27215142.00

ATTACHMENTS

- 1 Quarterly Inspection Form

Coal Combustion Residuals Impoundment Quarter/Annual Inspection Checklist

Facility Name
Blue Valley Generating Station

Feature ID
Closed CCR Impoundments

Inspection Date

D.	IMPOUNDMENT CAP SURFACE		
PROBLEMS			COVER
<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Animal burrows <input type="checkbox"/> 3. Animal damage <input type="checkbox"/> 4. Trees, large brush <input type="checkbox"/> 5. Vegetation <input type="checkbox"/> 6. Vegetation islands	<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. Bare Spots <input type="checkbox"/> 16. Other:	<input type="checkbox"/> Vegetation <input type="checkbox"/> Gravel <input type="checkbox"/> Soil (haul road) <input type="checkbox"/> Other:

Comments /Action Items:

Actions None Maintenance Monitoring Minor Repair Engineering

E.	CAP UNDERDRAIN SYSTEM	YES	NO	N/A
1.	Are valves closed?			
2.	Are caps on end of pipes?			
3.	Are vented caps on pressure port?			

4. Depth to water on pressure ports from top of pipes:

Pressure Port	Elev top of pipe	Depth to Water below TOC	Elev of Water in pipe
NFA – SE Structure	_____	_____	_____
NFA – South Structure	_____	_____	_____
SFA – North Structure	_____	_____	_____
SFA – SE Structure	_____	_____	_____

TOC = Top of Casing

Comments /Action Items:

Actions None Maintenance Monitoring Minor Repair Engineering

F.	NOTES