2018 ANNUAL INSPECTION REPORT OF CCR SURFACE IMPOUNDMENT BY QUALIFIED PROFESSIONAL ENGINEER
40 CFR 257.83

FACILITY INFORMATION	
Facility Name / Address	La Cygne Generating Station / 25166 East 2200 Road La Cygne, Kansas 66040
Owner	Kansas City Power & Light Company
CCR Unit	Lower AQC Impoundment
Inspection Date	November 20, 2018

ANNUAL CCR UNIT INSPECTION REPORT

Rule	Inspection Results
§257.83(b)(2)(i): ***"(2) Inspection report. The qualified professional engineer must prepare a report following each inspection that addresses the following:*** ***(i) Any changes in geometry of the impounding structure since the previous annual inspection;"***	A visual inspection of the Lower AQC Impoundment and associated hydraulic structures was completed on November 20, 2018 by Mr. Patrick Goeke, a qualified professional engineer (QPE) and/or his designated representative. No changes in the geometry of the impounding structure were noted since the 2017 site inspection.
§257.83(b)(2)(ii): ***"(ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;"***	Existing instrumentation at the Lower AQC Impoundment consists of three piezometers present on the crest of the embankment and spaced around the impoundment and one pool gauge in the southwest corner of the impoundment. The water levels in the piezometers are measured no less than every 30 days. A review of the 7- and 30-day inspection reports completed since the prior year's inspection was competed. The maximum recorded readings of each instrument since the last inspection date are listed in Table 1. No issues of concern were noted.
§257.83(b)(2)(iii): ***"(iii) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;"***	The maximum and minimum depths of impounded water frequently change depending on plant needs and rainfall events. At the time of inspection, the maximum, minimum and present elevation of the water and CCR in the impoundment were as follows.
§257.83(b)(2)(iv): ***"(iv) The storage capacity of the impounding structure at the time of the inspection;"***	The storage capacity of the impoundment structure at the time of inspection was 4.7 million cubic yards[1].

Water	Depth (ft)	Elevation (MSL)
Minimum	0	852
Maximum	23.5	858.5
Present	0-20	855
CCR	**Depth (ft)**	**Elevation (MSL)**
Minimum	0	835
Maximum	25	870
Present	0-25	835-870

§257.83(b)(2)(v): ***"(v) The approximate volume of the impounded water and CCR at the time of the inspection;"***	The approximate volume of the impounded water and CCR at the time of inspection was 4.1 million cubic yards[2].
§257.83(b)(2)(vi): **"(vi) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures;"**	At the time of this inspection, there were no signs of distress or malfunction that would indicate actual or potential structural weakness of the impoundment dike. The QPE reviewed §257.84(a)(1) 7-day and 30-day reports as part of the annual inspection. There were no indications that existing conditions at the Lower AQC Impoundment have disrupted or have the potential to disrupt safety or operations.
§257.83(b)(2)(vii): **"(vii) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection."**	There have been no changes to the impoundment since the previous annual inspection.

1. Storage capacity calculations completed by AECOM using updated bathymetric and topographic survey dated June 23, 2016 by Tukuh Technologies and Stage-Storage Curve developed by AECOM in August 2016 for Lower AQC Impoundment at an elevation of 864 ft MSL.
2. Volume calculation completed in 2017 by SCS Engineers using the Stage-Storage Curve developed by AECOM in August 2016 for Lower AQC Impoundment at an elevation of 856 ft MSL. The change in the CCR and water volume between the November 2017 volume and the November 2018 volume was determined by adding the CCR trucked from the plant to the Lower AQC to the 2017 volume.

PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of the CCR Rule and has visited and examined the CCR unit or has supervised examination of the CCR unit by appropriately qualified personnel. I hereby certify based on a review of available information within the La Cygne Generating Station's operating records and observations from my personal on-site inspection, that this CCR unit does not exhibit any appearances of actual/potential structural weakness that would be disruptive to the safety or normal operations of the unit. The unit is being operated and maintained consistent with recognized and generally accepted good engineering standards and practices. This certification was prepared as required by 40 CFR Part §257.83.

Name of Professional Engineer: Patrick M. Goeke, P.E.

Digitally signed by Pat Goeke
DN: cn=Pat Goeke, o=SCS Engineers, ou, email=pgoeke@scsengineers.com, c=US
Date: 2019.01.09 15:18:03 -06'00'

Professional Engineer Seal:

Table 1 – Highest Water Level Readings in 2018 Inspection Period

(November 2017 to November 2018)

Piezometer	Water Level Elevation (ft)
P-601	855.02
P-602	851.27
P-603	856.80
Pool Gauge	3.5