

2017 ANNUAL INSPECTION 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 Name	Kansas City Power & Light Company
CCR Unit	Upper AQC Impoundment
Inspection Date	November 16, 2017

ANNUAL CCR UNIT INSPECTION REPORT

Rule	Inspection Results
(b)(1)(i) – Review of available information.	Files available in the operating record, including but not limited to seven-day (11/1/16 through 10/31/17) and thirty-day inspection reports (11/4/16 through 9/29/17) prepared by a qualified person, and design and construction documentation were reviewed. No issues of concern with the CCR unit were noted.
(b)(1)(ii) – Visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures.	A visual inspection of the CCR unit was made on November 16, 2017. No signs of distress or malfunction of the impoundment or appurtenant structures were identified.
(b)(1)(iii) – Visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.	A visual inspection of the hydraulic structures was made on November 16, 2017. Structures were observed to be visually stable. Based on visual inspection, continued safe and reliable operation is expected.
(b)(2)(i) – Changes in geometry of the impounding structure since the previous annual inspection.	None.
(b)(2)(ii) – Location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection.	Water level readings of nine piezometers present on the crest of the embankment and spaced around the impoundment and water levels measured at one pool gauge at the principal spillway were reviewed. No issues of concern were noted. The maximum recorded readings of each instrument since the last inspection date are listed in Table 1.
(b)(2)(iii) – Approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection.	The approximate minimum depth of water and CCR was zero to one foot. The approximate maximum depth of water and CCR was 22 and 40 feet, respectively. The elevation of the water surface at the time of the inspection was approximately 885 feet. The vegetation on the CCR in the upper AQC is being removed and dry CCR is being placed above this elevation to dewater and stabilize the wet CCR.
(b)(2)(iv) – The storage capacity of the impounding structures at the time of the inspection.	Approximately 13.6 million cubic yards ¹ .
(b)(2)(v) – Approximate volume of impounded water and CCR at the time of the inspection.	Approximately 13.7 million cubic yards ² .

(b)(2)(vi) – 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.	None.
(b)(2)(vii) – Other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.	None.

QUALIFIED PROFESSIONAL ENGINEER	
Prepared by	Patrick M. Goeke, P.E.
Date	January 9, 2018
Signature	



1. Current storage volume [(b)(2)(v)] exceeds calculated storage capacity [(b)(2)(iv)] because dry CCR is being placed in the unit above the top of the embankment as noted in (b)(2)(iii).
2. Volume calculations were completed by AECOM using an updated topographic survey dated November 30, 2017 by Tukup Technologies. Volume includes CCR placement through November 30, 2017.

Table 1 – Highest Water Level Readings in 2017 Inspection Period

(November 2016 to October 2017)

Piezometer	Water Level Elevation (ft)
P-501	856.91
P-502	852.71
P-503	859.07
P-504	858.61
P-505	862.87
P-506	876.13
P-507	882.94
P-508	881.71
P-509	869.14
Pool Gauge	885.2