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REPORT ON

CORRECTIVE MEASURES ASSESSMENT
UPPER AIR QUALITY CONTROL IMPOUNDMENT, LOWER AIR QUALITY CONTROL IMPOUNDMENT, AND DRY ASH LANDFILL
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

by
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for
Evergy Metro, Inc.
Kansas City, Missouri

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CMA Report Overview

Evergy Metro, Inc. (Evergy; f/k/a/ Kansas City Power and Light Company) retained Haley & Aldrich, Inc. (Haley & Aldrich) to prepare this Corrective Measures Assessment (CMA; Report) for the coal combustion residual (CCR) multi-unit groundwater monitoring system which encompasses the Upper Air Quality Control (UAQC) Impoundment, Lower Air Quality Control (LAQC) Impoundment, and the Dry Ash Landfill (CCR LF), herein referred to as the "CCR System," located at the La Cygne Generating Station (LCGS; Site).

The LCGS is an active coal-fired electricity generating facility located near the Kansas-Missouri border in Linn County, Kansas. This CMA was completed in accordance with requirements stated in the U.S. Environmental Protection Agency (USEPA) rule entitled *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities,* Title 40 Code of Federal Regulations (CFR) Parts 257 and 261 (April 17, 2015) and subsequent revisions (USEPA, 2015).

Assessment monitoring conducted in 2024 indicated the presence and concentration of Appendix IV constituents in groundwater specified in the CCR Rule. Lithium was detected at a statistically significant level (SSL) above the Groundwater Protection Standards (GWPS) established for the CCR System.

Haley & Aldrich completed a detailed environmental evaluation of the CCR System and the surrounding area in preparing this CMA. That evaluation included a risk evaluation, provided as Appendix A, to identify whether current groundwater conditions pose an unacceptable risk to human health and the environment, and whether corrective measures mitigate such risk, if present. **The risk evaluation concluded that there are no adverse effects on human health or the environment currently or under reasonably anticipated future uses from either surface water or groundwater due to CCR management practices at the CCR System.**

CMA Report Contents and Highlights

As discussed in Section 1 of this Report, Haley & Aldrich considered the following elements while conducting the CMA process: the presence, distribution, and geochemical behavior of the CCR SSL (lithium) in groundwater, the nature of the CCR contents and configuration/historical operations of the Site, CCR System hydrogeologic setting, and results of the detailed Site-specific risk evaluation. Each of these elements were considered holistically in performing the CMA exercise for the CCR System.

Section 2 of this Report provides the basis for the comprehensive conceptual site model (CSM) which characterizes the subsurface conditions including site geology and the uppermost groundwater flow regime at the CCR System. The CSM was used to not only support the development of an informed CCR groundwater monitoring program for the CCR System, but it was also a fundamental support for evaluation of the groundwater remedies included in the CMA process.

The subsurface conditions underlying the CCR System consists of terrace deposits, which are underlain by interbedded sandstone, shale, and limestone strata. The uppermost aquifer beneath the CCR System consists of shale and limestone bedrock with saturated thicknesses ranging from approximately 5 to 10 feet based on observations made during drilling at the CCR System. Groundwater flow direction in the uppermost aquifer at the CCR System is predominantly to the west-northwest (toward the La Cygne

Lake). This flow direction is evidenced by piezometric data collected during the initial Site characterization and subsequent groundwater monitoring data collected over a period of years.

Section 3 of this Report addresses development of the Site-specific risk evaluation prepared in support of this CMA. It is clear from the risk evaluation conducted that there are no adverse effects on human health or the environment currently or under reasonably anticipated future uses of either surface water or groundwater resulting from CCR management practices at the Site.

There are no downgradient users of groundwater for drinking water, thus there is no impact on drinking water sources. For the limited area where water quality results that may be above GWPS for some of the groundwater sampling events, there is no complete drinking water exposure pathway to groundwater. Where there is no exposure, there is no potential for adverse risk. Furthermore, because no adverse risk currently exists, all the remedies included in this CMA are considered protective of human health and the environment (40 CFR §257.97(b)(1)).

In Section 4 of this Report, the CMA process is defined as specified in the CCR Rule, and a comprehensive narrative is provided, which explains how the CMA process was applied for the evaluation of groundwater remedies associated with the SSL identified at the CCR System. To achieve a comprehensive and defensible CMA, the process includes source control through closure activities and groundwater remediation alternatives that were then combined to constitute comprehensive groundwater remedies designed to achieve the GWPS. Evergy is actively instituting a Closure in Place (CIP) closure method for all three CCR units which includes a consolidation of the footprint of LAQC.

Those comprehensive remedies include:

- <u>Alternative 1</u>: CIP with groundwater intercept trench and ex-situ treatment;
- <u>Alternative 2</u>: CIP with groundwater pumping and ex-situ treatment;
- <u>Alternative 3</u>: CIP with in-situ groundwater treatment via permeable reactive barrier (PRB); and
- <u>Alternative 4:</u> CIP with hydraulic fracturing, groundwater pumping, and ex-situ treatment.

As part of the CMA process, these four groundwater alternatives were evaluated based on the remedial threshold criteria provided in the CCR rule [40 CFR §257.97(b)] and then compared to the balancing criteria stated in the CCR Rule [40 CFR §257.97(c)]. These criteria are introduced below and included in their entirety in Section 1 and subsequent sections of this Report:

> 40 CFR §257.97 Selection of Remedy
> (b) [Threshold Criteria] Remedies must:
>
> > (1) Be protective of human health and the environment;
> >
> > (2) Attain the groundwater protection standard as specified pursuant to §257.95(h);
> >
> > (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part into the environment;
> >
> > (4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
> >
> > (5) Comply with standards for management of wastes as specified in §257.98(d).

(c) [Balancing Criteria] In selecting a remedy that meets the standards of paragraph (b) of this section, the owner or operator of the CCR unit shall consider the following evaluation factors:

(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful;

(2) The effectiveness of the remedy in controlling the source to reduce further releases;

(3) The ease or difficulty of implementing a potential remedy(s); and

(4) The degree to which community concerns are addressed by a potential remedy(s).

As stated, all groundwater remedies considered in the CMA must be capable of achieving the GWPS and satisfy the five CCR Rule threshold criteria cited above. A narrative describing development of each corrective measure alternative and its conformance with the threshold criteria is presented in this report.

In Section 5, a comparison of the corrective measure alternatives is provided. This comparison includes evaluation of the corrective measure alternatives in relation to the first three balancing criteria listed above. The fourth balancing criterion, which considers the degree to which community concerns are addressed, will be evaluated following a public meeting to be held at least 30 days prior to remedy selection [40 CFR §257.96(e)].

Section 6 presents a summary of the overall comparative process used for evaluation of corrective measures in the context of Site-specific conditions and the process defined by the CCR Rule.

This CMA, the input received during the public meeting, and any additional nature and extent (N&E) investigation results will be used to identify a final corrective measure (remedy) for implementation at the CCR System. In addition, Section §257.97(a) of the CCR Rule requires that a semiannual report be prepared to document progress toward remedy selection and design. Once a remedy is selected, a final remedy selection report must be prepared to document details of the selected remedy and how the selected remedy meets 40 CFR §257.97(b) requirements. The final selected remedy report must also be certified by a professional engineer, placed in the operating record, and posted to the Evergy CCR website.

In accordance with 40 CFR §257.98, Evergy will implement a groundwater monitoring program to document the effectiveness of the selected remedial alternative. Corrective measures are considered complete when monitoring reflects that the SSL constituent concentrations in groundwater downgradient of the CCR System do not exceed Appendix IV GWPS for three consecutive years [40 CFR §257.98(c)(2)]. It should be noted that USEPA is in the process of modifying certain CCR Rule requirements and, depending upon the nature of the changes, assessments made herein may be modified or supplemented to reflect such future regulatory revisions. See *Federal Register (March 15, 2018; 83 FR 11584*).

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List of Acronyms and Abbreviations

Abbreviation	Definition
AQC	Air Quality Control
bgs	below ground surface
BMP	best management practices
CCR	Coal Combustion Residual
CCR LF	Dry Ash Landfill
CFR	Code of Federal Regulations
CIP	Closure in Place
CMA	Corrective Measures Assessment
cm/sec	centimeters per second
CSM	Conceptual Site Model
Evergy	Evergy Metro, Inc. (f/k/a/ Kansas City Power and Light Company)
FGD	flue gas desulfurization
GWPS	groundwater protection standards
Haley & Aldrich	Haley & Aldrich, Inc.
KDHE	Kansas Department of Health and Environment
KGS	Kansas Geological Survey
LAQC	Lower Air Quality Control Impoundment
LCGS	La Cygne Generating Station
MNA	Monitored Natural Attenuation
N&E	nature and extent
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
ppe	personal protective equipment
PRB	permeable reactive barrier
RO	reverse osmosis
SSI	statistically significant increase
SSL	statistically significant level
UAQC	Upper Air Quality Control Impoundment
USEPA	U.S. Environmental Protection Agency
WWC5	Water Well Completion Records Database

1. Introduction

Haley and Aldrich Inc. (Haley & Aldrich) was retained by Evergy Metro, Inc. (Evergy; f/k/a/ Kansas City Power and Light Company) to prepare this Corrective Measures Assessment (CMA; Report) for the coal combustion residual (CCR) multi-unit groundwater monitoring system which encompasses the Upper Air Quality Control Impoundment (UAQC), Lower Air Quality Control Impoundment (LAQC), and the Dry Ash Landfill (CCR LF), herein referred to as the "CCR System," located at the La Cygne Generating Station (LCGS; Site). Haley & Aldrich conducted detailed geologic and hydrogeologic investigations under the U.S. Environmental Protection Agency (USEPA) rule entitled *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities,* Title 40 Code of Federal Regulations (CFR) Parts 257 and 261 effective October 19, 2015 including subsequent revisions. These investigations were, in part, related to the Site groundwater monitoring and corrective action requirements in the CCR Rule.

This CMA includes a summary of the groundwater monitoring results for the CCR Rule Appendix III and Appendix IV constituents, an evaluation of the Appendix III constituents for statistically significant increases (SSI) compared to background, and a comparison of the Appendix IV constituents detected in assessment monitoring to the groundwater protection standards (GWPS). These evaluations identified a statistically significant level (SSL) above GWPS for lithium in groundwater at monitoring well MW-707B located downgradient of the CCR System. This Report describes an evaluation of potential corrective measures to remediate groundwater for the exceedance of the lithium GWPS in groundwater.

1.1 FACILITY DESCRIPTION/BACKGROUND

Evergy owns the LCGS located near La Cygne, Kansas in the northeast area of Linn County, Kansas (Figure 1). The LCGS has three CCR units containing CCR materials from their air quality control systems at the station. These are referred to as Air Quality Control (AQC) impoundments, consisting of the LAQC impoundment, the UAQC impoundment, and the CCR LF. Both the LAQC and UAQC impoundments are bounded by earth fill embankments which provide containment of the CCR materials. The area in between and around the AQC impoundments consist of access roads and lower elevation flatland covered with vegetation. La Cygne Lake borders the western boundary of the facility.

The LAQC was constructed to receive flue gas desulfurization (FGD) sludge sluiced from the power plant and was built as part of the original power plant construction in the early 1970s. The UAQC was constructed in the late 1970s to provide additional storage for sluiced FGD sludge. Overflow from the UAQC was directed to the LAQC through the UAQC main spillway. All surface water discharge at the CCR System is managed through a facility-wide National Pollutant Discharge Elimination System (NPDES) Permit Number KS0080071. The impoundments are managed as a non-discharge facility. Water levels are managed through enhanced evaporation and by drawing water from the LAQC for power plant operations. The CCR LF currently receives waste and CCR including bottom ash, fly ash, and economizer ash. The receipt of CCR and/or non-waste streams by the LAQC and UAQC was terminated in 2021.

1.2 GROUNDWATER MONITORING

Groundwater monitoring under the CCR Rule occurs through a phased approach to allow for a graduated response (i.e., baseline, detection, and assessment monitoring, as applicable) and evaluation of steps to address groundwater quality. SCS Engineers prepared a sampling and analysis plan (SCS

Engineers, 2023a), a certification of statistical methods (SCS Engineers, 2023b), and a groundwater monitoring system certification (SCS Engineers, 2023c), as required by the CCR Rule. The documents outline the design of the groundwater monitoring system, groundwater sampling and analytical procedures, and groundwater statistical analysis methods.

The current certified multi-unit groundwater monitoring network for the LAQC, UAQC, and CCR LF was installed by Evergy in 2015. The monitoring network includes eight upgradient monitoring wells (MW-13, MW-14R, MW-601, MW-602, MW-701, MW-702, MW-703, and MW-704), and 13 downgradient monitoring wells (MW-6, MW-7, MW-15, MW-705, MW-706, MW-707B, MW-708, MW-801, MW-802, MW-803, MW-804, MW-805, and TW-1).[1] This groundwater monitoring network meets the requirement criteria in 40 CFR §257.91(c)(1) defining a ground water monitoring system with a minimum of one upgradient and three downgradient monitoring wells. Compliance monitoring well locations are shown on Figure 2.

Monitoring wells MW-10 and MW-11 were included in the certified groundwater monitoring networks for the UAQC and CCR LF-LAQC, respectively, from June 2016 through November 2023, and were subsequently removed when the multi-unit groundwater monitoring system was certified in December 2023. Analytical data from these wells are presented and included in the Groundwater Risk Evaluation and will be used to evaluate the nature and extent(N&E) of Appendix IV constituents detected above the GWPS.

Baseline and detection groundwater monitoring occurred between 2016 and 2023. Analytical results obtained from these sampling events were compared to background/upgradient concentrations and natural groundwater values, and USEPA and Kansas Department of Health and Environment (KDHE) approved statistical methods were used to determine whether an SSI of Appendix III constituent concentrations occurred downgradient of the CCR System at concentrations above background. The results of statistical evaluations completed in November 2023 identified SSIs of Appendix III constituents in multiple downgradient monitoring wells relative to concentrations observed at background concentrations. Accordingly, an assessment monitoring program was initiated in March 2024, and respective notification of establishment of an assessment monitoring program was completed on March 1, 2024.

The first annual assessment monitoring sampling event was completed in April 2024 for all Appendix IV constituents in accordance with 40 CFR §257.95(b). Semi-annual assessment monitoring was completed in May 2024 for Appendix III and Appendix IV constituents detected during the April 2024 annual assessment monitoring sampling event as defined in 40 CFR §257.95(d)(1). The statistical evaluation completed for the May 2024 analytical data indicated that lithium was present in groundwater at an SSL above the GWPS in downgradient monitoring well MW-707B[2] (SCS Engineers, 2024). Analytical results for baseline, detection monitoring, and assessment monitoring sampling events are summarized in Table 1.

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[1] There are 11 additional wells and piezometers at the CCR System used to monitor groundwater elevation and flow (MW-10, MW-11, MW-12, MW-601D, MW-2, MW-3, MW-4, MW-5, MW-702A, MW-702B, and MW-702C) – these monitoring devices are not part of the certified CCR groundwater compliance monitoring network.

[2] The SSL notification submitted for the May 2024 analytical data included cobalt at MW-707B as an SSL. A revised statistical evaluation concluded that the calculated 95% Lower Confidence Limit of the mean of the last 13 sample concentrations does not exceed the GWPS for cobalt; therefore, cobalt at MW-707B is not an SSL and is not addressed further in this CMA (Haley & Aldrich, 2025).

1.3 CORRECTIVE MEASURES ASSESSMENT PROCESS

The CMA process involves assessment of groundwater remediation technologies. These remedies must meet the following threshold criteria as stated in the CCR Rule:

> 40 CFR §257.97 Selection of Remedy [Threshold Criteria]
> (b) Remedies must:
>
> (1) Be protective of human health and the environment;
>
> (2) Attain the groundwater protection standard as specified pursuant to §257.95(h);
>
> (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part into the environment;
>
> (4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
>
> (5) Comply with standards for management of wastes as specified in §257.98(d).

Once these technologies are demonstrated to meet these threshold criteria, they are then evaluated with respect to the following balancing criteria as stated in the CCR Rule:

> 40 CFR §257.97 Selection of Remedy [Balancing Criteria]
> (c) In selecting a remedy that meets the standards of paragraph (b) of this section, the owner or operator of the CCR unit shall consider the following evaluation factors:
>
> (1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:
>
> (i) Magnitude of reduction of existing risks;
>
> (ii) Magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following implementation of a remedy;
>
> (iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;
>
> (iv) Short-term risks that might be posed to the community or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of contaminant;
>
> (v) Time until full protection is achieved;
>
> (vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment;
>
> (vii) Long-term reliability of the engineering and institutional controls; and
>
> (viii) Potential need for replacement of the remedy.
>
> (2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:
>
> (i) The extent to which containment practices will reduce further releases; and
>
> (ii) The extent to which treatment technologies may be used.

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(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

(i) Degree of difficulty associated with constructing the technology;

(ii) Expected operational reliability of the technologies;

(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(iv) Availability of necessary equipment and specialists; and

(v) Available capacity and location of needed treatment, storage, and disposal services.

- (4) The degree to which community concerns are addressed by a potential remedy(s).

The fourth balancing criterion involves evaluating the degree to which community concerns regarding the proposed corrective measure alternatives are addressed. This criterion will be assessed by presenting the corrective measure alternatives at a public meeting and soliciting comments. That meeting will be held by Evergy at least 30 days prior to remedy selection.

1.4 RISK REDUCTION AND REMEDY

As presented above, the CCR Rule [40 CFR §257.97(b)(1) - Selection of Remedy] requires that remedies must be protective of human health and the environment. Further, 40 CFR §257.97(c) of the CCR Rule requires that in selecting a remedy, the owner or operator of the CCR unit must consider specific evaluation factors, including the risk reduction achieved by each of the proposed corrective measures. Each of the balancing criteria listed here from 40 CFR §257.97 and discussed in Section 5 are those that consider risk to human health or the environment including:

- (c)(1)(i) Magnitude of reduction of existing risks;
- (c)(1)(ii) Magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following implementation of a remedy;
- (c)(1)(iv) Short-term risks that might be posed to the community or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of contaminant; and
- (c)(1)(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment;

The following are additional factors related to risk that are factored into the schedule for implementing and completing remedial activities once a remedy is selected [40 CFR §257.97(d)]:

- (d)(4) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy[3];
- (d)(5)(i) Current and future uses of the aquifer;
- d)(5)(ii) Proximity and withdrawal rate of users; and

[3] Factors (d)(4) and (d)(5) are not part of the CMA evaluation process as described in 40 CFR §257.97(d); rather they are factors the owner or operator must consider as part of the schedule for remedy implementation.

- (d)(5)(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to CCR constituents.

Section 3 presents a summary of the groundwater risk evaluation that provides the basis for evaluating these risk-based balancing criteria in Section 5.

1.5 CMA AMENDMENTS

As additional information becomes available, including future groundwater monitoring results or other Site-specific or general information, or technological developments, this CMA is subject to change. N&E evaluations of Appendix IV constituents above the GWPS are still underway for the CCR System and may influence the information presented in this Report, including the potential corrective measures and the analysis of the potential corrective measures. To the extent material changes to the CMA become necessary, such revised versions of the CMA will be posted to the Evergy facility CCR public website.

2. Groundwater Conceptual Site Model

To evaluate potential remedy options, a Conceptual Site Model (CSM) was developed based on data collected at and near the CCR System. A groundwater CSM characterizes the subsurface conditions including Site geology and the groundwater flow regime within the uppermost aquifer at the Site. More specifically, the CSM is a tool used for analysis of groundwater conditions to understand how water and contaminants may migrate beneath an area, based on site-specific hydrogeologic data and information. The CSM for the CCR System is summarized below.

2.1 SITE SETTING

The LCGS is located outside the City of La Cygne in the northeast portion of Linn County, Kansas near the Kansas-Missouri border. The facility address is 25166 East 2200th Road, La Cygne, Kansas 66040. The Site location, CCR System boundaries, and Evergy property boundary are shown on Figure 1. The LCGS property, including the CCR System, is bordered to the north by timbered areas and farmland; to the east by the Kansas-Missouri border; to the south by County Road E2200 and farmland; and to the west by La Cygne Lake. A residential area partially abuts the LCGS property near the southeast corner. The ground surface elevation at the LCGS ranges from approximately 850 to 890 feet above mean sea level.

2.2 GEOLOGY AND HYDROGEOLOGY

The LCGS facility and the CCR System lie within an area of limited Pleistocene glacial activity in the Dissected Till Plains region of the Central Lowlands geomorphic province. The geologic units that underlie the Site are roughly horizontal with a slight regional dip to the northwest, and consist of poorly sorted terrace deposits of reworked glacial till material dominated by clay. The terrace deposits are underlain by interbedded shale and limestone strata representing near shore marine transgression and regression sequences. The uppermost aquifer beneath the Site consists of a heterogeneous interbedded shale and limestone bedrock.

2.2.1 Unsaturated Material Overlying the Uppermost Aquifer

The uppermost aquifer is overlaid by unsaturated soil and fill material and shale bedrock. The unsaturated soil above the uppermost aquifer is composed of primarily stiff to very stiff, low to high plastic clay, silty clays, and some clayey sand or sandy clay with some fill material encountered at several locations on the Site. The thickness of the clay observed at the Site vary from approximately 5 to 35 feet depending on the ground surface elevation and the thickness of the overlying fill. Thickness of the unsaturated, low yielding shale bedrock overlying the uppermost aquifer ranges from approximately 5 to 25 feet, depending on the depth of the overlying clay or fill.

The bedrock is predominantly heterogeneous shale with thin interbedded limestone and/or sandstone and/or coal at some locations. The shale is described as moderate to highly plastic with calcareous and sandy zones varying from brown and weathered to gray and unweathered. Haley & Aldrich made direct observations of the unsaturated material overlying the uppermost aquifer during monitoring well drilling conducted in March 2025.

2.2.2 Uppermost Aquifer

Section §257.53 of the CCR Rule defines an aquifer as the geologic formation, group of formations, or portion of a formation capable of yielding usable quantities of groundwater to wells or springs. The uppermost aquifer is defined in 40 CFR §257.53 of the CCR Rule as the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility boundary.

The water-bearing geologic formation nearest the natural ground surface at the CCR System is heterogeneous shale bedrock that has relatively higher permeability than the shale above and below it. It is likely that the relatively higher permeability zones consist of calcareous and sandy zones or undifferentiated limestone and sandstone interbeds that are the primary groundwater-bearing strata within the uppermost aquifer. The saturated thickness of the uppermost aquifer beneath the CCR System is approximately 5 to 10 feet. The uppermost aquifer is locally semi-confined to confined as a result of the overlying low permeability clay and shale and underlying low permeability shale, based on observations made during drilling at the CCR System. The difference in the hydraulic conductivities between the aquifer and the confining units is estimated to be approximately between two to seven orders of magnitude (SCS Engineers, 2023a).

Review of the Kansas Geological Survey (KGS) Water Well Completion Records (WWC5) Database does not indicate that the uppermost aquifer is used for water supply in the vicinity of the Site. The nearest well (well #86300; AO95879) listed in the Missouri Geological Survey GeoSTRAT database is a domestic well located approximately 1.7 miles to the east and is upgradient of the Site. Well #86300 (AO95879) is reported to be completed at a depth of 308 feet below ground surface (bgs) and is capable of producing groundwater at a reported rate of 12 gallons per minute. Well #86300 (AO95879) is screened at a depth interval below the uppermost aquifer and the lower confining unit.

The materials comprising the uppermost aquifer beneath the CCR System were observed directly during the 2015 drilling completed by SCS Engineers, and during the nature and extent drilling completed by Haley & Aldrich in 2025. The drilling, completion, and testing of these monitoring wells yielded site-specific geologic data that were used in combination with other site-specific data developed during previous characterization activities and well installation activities to determine the appropriate number, depth, and spacing of the monitoring wells at the CCR System. Site-specific aquifer property values describing the uppermost aquifer and associated confining units developed during past and recent characterization activities are provided below.

Based on groundwater elevations measured during groundwater sampling events, the groundwater gradient in the upper aquifer unit has ranged between approximately 0.01 to 0.005 feet per foot and is semi-confined to confined (SCS Engineers, 2023a). Groundwater flow direction is generally to the west as indicated in Figure 2, with minor variance depending on location and sampling event. The groundwater gradient is not controlled by proximity to a river and does not experience seasonal reversal. Rather, the groundwater gradient is controlled by upland recharge resulting groundwater flow toward La Cygne Lake.

Hydraulic conductivity of the uppermost aquifer was calculated using data generated from laboratory permeability tests and slug tests conducted on monitoring wells at the CCR System. The hydraulic conductivity of the overlying clay and fill deposits range from approximately 9.2×10^{-9} to 1.4×10^{-5} centimeters per second (cm/sec) and hydraulic conductivity within the uppermost bedrock aquifer range from approximately 6.3 x 10^{-5} to 1.0 x 10^{-4} cm/sec (SCS Engineers, 2023a). In comparison, the hydraulic conductivities of the upper and lower confining shale units range from approximately 1.0 x 10^{-11} to 2.0 x 10^{-7} cm/sec based on selected literature values (Domenico and Schwartz, 1990). The groundwater flow rate was calculated using hydraulic conductivity values and effective porosity obtained from published sources. Based on estimates for similar material, effective porosity of the overlying clay and fill deposits is estimated to be 1 to 20 percent. The effective porosity of the upper and lower confining shale units is estimated to be 0.5 to 5 percent with the effective porosity of the saturated relatively high-yielding shale bedrock aquifer to be greater than the upper and lower confining units (Walton, 1970; Walton, 1988; Domenico and Schwartz, 1990). The calculated groundwater flow velocity is estimated to range from 5.5 to 42.3 feet per year.

2.2.3 Confining Layer Below the Uppermost Aquifer

The confining unit underlying the uppermost aquifer at the CCR System is a shale unit with relatively lower permeability. The top of this member is approximately 30 to 60 feet bgs. The thickness of the shale unit is 15 to 20 feet, or more. Estimated hydraulic conductivity of this unit was obtained from literature values presented in Domenico and Schwartz, 1990, as described above. The effective porosity is estimated to be between 0.5 to 5 percent. Based on the estimated hydraulic conductivity, and Site observations, the lower confining shale unit acts as an aquitard.

2.3 GROUNDWATER PROTECTION STANDARDS

A statistical evaluation of groundwater quality data was completed using the methods and procedures outlined in the certification of statistical methods (SCS Engineers, 2023b) to develop the Site-specific GWPS for each Appendix IV constituent at the CCR System. Pursuant to 40 CFR §257.95(h), GWPS for each of the Appendix IV constituents have been set equal to the highest value of the maximum contaminant level (established under §§141.62 and 141.66), levels provided in 40 CFR §257.95(h)(2) (from regional screening levels), or background concentrations. Lithium at the CCR System is set equal to the background concentration at a concentration of 0.278 milligrams per liter.

Groundwater results were compared to the Site-specific GWPS values. Based on statistical evaluation of the May 2024 semiannual assessment monitoring groundwater quality data, an SSL above the GWPS was identified at downgradient monitoring well MW-707B for lithium[4] (SCS Engineers, 2024).

2.4 NATURE AND EXTENT OF GROUNDWATER IMPACTS

As outlined in Section 1.2 of this CMA, a SSL for lithium was identified in downgradient monitoring well MW-707B during assessment monitoring. As a result, Evergy initiated a N&E investigation for lithium in 2025, as required by the CCR Rule.

Seven additional N&E monitoring wells (B-1 through B-5, MW-10D, and MW-707B-D) were installed upgradient and downgradient of CCR units at the CCR System in February/March 2025 (Figure 2). Five N&E monitoring wells are screened in the shale bedrock uppermost aquifer at elevations similar to the compliance monitoring wells to support horizontal delineation of the lithium in groundwater (B-1

[4] The SSL notification submitted for the May 2024 analytical data included cobalt at MW-707B as an SSL. A revised statistical evaluation concluded that the calculated 95% Lower Confidence Limit of the mean of the last 13 sample concentrations does not exceed the GWPS for cobalt; therefore, cobalt at MW-707B is not an SSL and is not addressed further in this CMA (Haley & Aldrich, 2025).

through B-5). Two N&E monitoring wells are screened below the uppermost aquifer in the next water-bearing geologic unit beneath the uppermost aquifer to support vertical delineation of lithium in groundwater (MW-10D and MW-707B-D).

Groundwater sampling of the N&E monitoring wells was completed in April 2025, and laboratory analytical results are pending and will be provided when available, as required by 40 CFR §257.90-257.98. N&E groundwater analytical results will be used to supplement evaluation of the extent of groundwater impacts.

Monitoring well locations, including newly installed N&E monitoring wells, are shown on Figure 2.

3. Risk Assessment and Exposure Evaluation

A Groundwater Risk Evaluation report has been prepared by Haley & Aldrich, as a companion to this CMA document, and is provided in Appendix A. The purpose of the risk evaluation report is to provide information needed to interpret groundwater monitoring data collected and at the CCR System in compliance with the CCR Rule. Evergy has taken the additional step of analyzing potential groundwater-to-surface water transport and exposure pathways in the risk evaluation. Characterization of the N&E of constituent migration is ongoing at the Site. Newly developed data from this effort will be incorporated into the analysis of corrective measures and may necessitate a future update of this Report.

The risk evaluation was initiated by developing a CSM to identify the potential for human or ecological exposure to constituents that may have been released to the environment. CCR constituents present in the CCR System can be dissolved into infiltrating water (from precipitation) and those constituents may move through the subsurface and may potentially then be present in shallow groundwater. Constituents may move with groundwater as it flows west in the downgradient direction.

Groundwater moves slowly through the uppermost aquifer beneath the ground. Like surface water, it also moves from areas of high elevation to areas of low elevation and can discharge into adjacent surface water bodies. Any potential release of constituents to groundwater from the CCR System will be limited in extent by the proximity to La Cygne Lake (downgradient) and will not impact surrounding areas to the east, south, or north of the Site. Groundwater does not flow from the CCR System to the east or north of the multi-unit system because these areas are consistently upgradient of the Site.

There are no on-Site groundwater users at LCGS. Water for plant operations is obtained from La Cygne Lake. Potable water for the plant and surrounding areas is provided by the Linn County municipal water utility. The KGS WWC5 database indicates the nearest domestic wells are over a mile away from the CCR System boundary, and are either upgradient or side gradient from the CCR System (to the east or northeast), or are across La Cygne Lake. Because groundwater flows in a westerly direction toward the La Cygne Lake in the area of the Site and cannot move beyond the La Cygne Lake, groundwater does not flow from the Site towards the nearest identified wells. Thus, there are no downgradient groundwater users, and the only environmental medium of interest for the risk evaluation is La Cygne Lake surface water.

Aside from its use as a source of cooling water for the generating station, La Cygne Lake is used for fishing and as a habitat for aquatic species (i.e., fish, amphibians, etc.). According to Evergy, and the Kansas Department of Wildlife & Parks (2016), other lake recreational activities (such as pleasure boating, wind surfing, water skiing, and swimming) are prohibited. However, as access to the lake is not restricted (by fencing, gates, etc.) and there are locations around the lake (e.g., Linn County Park on the west side of the lake) where swimming or wading could take place, exposure to lake surface water by hypothetical swimmers or waders was evaluated as a health protective measure. There are no public water supply intakes in the lake nor in North Sugar Creek that the lake feeds into (to the south), nor are there any residences on the lake. Nevertheless, as a health protective measure, exposure to lake surface water as a potential source of drinking water was evaluated as if it were complete for nearby residents.

Exposure pathways through which receptors are considered to be potentially exposed to CCR constituents consist of the following, assuming CCR constituents in groundwater at the Site could potentially be introduced into La Cygne Lake:

- Consumption of fish from La Cygne Lake by recreational anglers;
- Aquatic receptor exposure to La Cygne Lake surface water;
- Consumption of La Cygne Lake surface water as drinking water (by offsite residents);[5] and
- Recreational exposure to La Cygne Lake surface water (dermal contact and incidental ingestion by hypothetical swimmers or waders, dermal contact by recreational anglers).

Screening levels were compiled from USEPA and KDHE sources (or derived using the USEPA Regional Screening Level calculator) protective of La Cygne Lake surface water for the types of potential exposures identified above as potentially complete. From the selected or derived surface water screening levels, target groundwater screening levels were then calculated from the lowest (i.e., most protective) surface water screening levels based upon the amount of dilution and attenuation estimated to occur as groundwater flows into La Cygne Lake.

Risks associated with the potential introduction of CCR constituents in groundwater to La Cygne Lake were evaluated by conservatively comparing maximum groundwater constituent concentrations from all CCR System monitoring wells, dating back to the initial CCR Rule groundwater monitoring event in June 2016, to the target screening levels for groundwater that are protective of La Cygne Lake surface water. The comparison demonstrates that detected concentrations do not pose an adverse impact to the lake. Detected concentrations would need to be 71 to 550,000 times higher than the highest measured levels before a potential adverse impact to the lake might occur. This means that the present concentrations of constituents in groundwater do not pose an unacceptable risk to human health or the environment, and even much higher concentrations in groundwater are unlikely to be harmful.

In conclusion, the completed groundwater risk evaluation demonstrates that there are no adverse impacts on human health or the environment from groundwater affected by the CCR System at the LCGS.

[5] Again for clarity, there are no public water supply intakes nor are there any residences on the lake. Nevertheless, as a conservative, health protective measure, exposure to lake surface water as a potential source of drinking water was evaluated as if it were complete for nearby residents.

4. Corrective Measures Alternatives

4.1 CORRECTIVE MEASURES ASSESSMENT GOALS

As noted in 40 CFR §257.96(a), within 90 days of detecting Appendix IV SSLs, “the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions.” The corrective measures evaluation that is discussed below and in subsequent sections provides an analysis of the effectiveness of four potential corrective measures in meeting the requirements and objectives of remedies as described under 40 CFR §257.97 (also shown graphically on Figure 5-1). Additional corrective measures were considered but were determined to not be viable for remediating groundwater beneath the CCR System. The assessment must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under 40 CFR §257.97 addressing at least the following:

- The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
- The time required to begin and complete the remedy; and
- The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

The criteria listed above are included in the balancing criteria considered during the corrective measures evaluation, described in Section 5.

4.2 GROUNDWATER FATE AND TRANSPORT MODELING

Groundwater at the LCGS was modeled using Groundwater Vistas Version 9 for flow and solute transport. The model was constructed, calibrated, and simulations were run to evaluate remedy alternatives for Appendix IV constituents above the GWPS. Site-specific parameters (such as groundwater elevations, recharge, and hydraulic conductivity) were used to develop the model. MODFLOW 2005, a finite difference, three-dimensional solver, was used for simulation of groundwater flow in steady state. Modeled groundwater elevations were compared to observed values from the on-Site monitoring well network to confirm model performance, which achieved calibration metric of less than 5 percent scaled root mean square differential of measured to simulated water levels, which is notably lower than typical standards value, 10 percent, for such models. Once groundwater flow was calibrated in the model, solute transport was simulated using MT3DMS, a three-dimensional solute transport modeling program for constituents above GWPS. Parameters affecting transport such as advection, diffusion, dispersion, and adsorption are applied within the MT3DMS package to estimate solute transport within the model domain.

The calibrated flow models were used to simulate performance of each remediation alternative and the effects each has on groundwater quality through time. These simulations are incorporated into the discussion of remediation alternatives provided below.

4.3 CORRECTIVE MEASURES ALTERNATIVES

Corrective measures can terminate when groundwater impacted by the CCR System no longer exceed the Appendix IV GWPS for three consecutive years of groundwater monitoring [40 CFR §257.98(c)(2)]. In accordance with 40 CFR §257.97(b), the groundwater corrective measures to be considered must meet, at a minimum, the following threshold criteria:

- Be protective of human health and the environment;
- Attain the GWPS as specified pursuant to §257.95(h);
- Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part into the environment;
- Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
- Comply with standards for management of wastes as specified in §257.98(d).

Each of the corrective measures alternatives evaluated as part of this CMA meet the requirements of the threshold criteria listed above. Also, each of the corrective measures alternatives presented below include source control via closure in place (CIP) of the CCR System. Evergy has begun and is actively implementing the CIP process for the UAQC and LAQC impoundments.

4.3.1 Alternative 1 – Closure in Place with Groundwater Intercept Trench and Ex-Situ Treatment

Under this alternative, lithium detected at the boundary of the CCR System at concentrations above the GWPS would be addressed using hydraulic containment through an intercept trench to hydraulically control the migration of residual constituents downgradient of the CCR units. Source control would be achieved by CIP of all three CCR units. Water pumped from the trench would be treated ex-situ, when needed, with an ion exchange, reverse osmosis (RO) treatment system, or other comparable treatment method which would be capable of treating lithium to acceptable levels. Both the trench and the treatment system would require ongoing operation and maintenance (O&M) effort, energy requirements which create a carbon footprint, and would generate a secondary waste stream – including regeneration/replacement of the ion exchange media or accumulation of reject water from the RO system.

If required, the design and construction of an ex-situ treatment system would likely require a treatment system enclosure, equipment and space that would be incorporated into the system design. Implementation of a large-scale hydraulic containment system would require detailed engineering design, pilot testing, and additional data collection to verify the hydraulic capture zone.

Following the installation of the intercept trench, and ex-situ treatment system, Evergy would implement post-closure care activities that include O&M of the hydraulic containment system and long-term groundwater sampling to monitor system performance. Once concentrations of Appendix IV constituents downgradient of the intercept trench, including wells within the contaminant plume and associated network compliance wells decrease to the GWPS, operation of the hydraulic containment system would cease.

4.3.2 Alternative 2 – Closure in Place with Groundwater Pumping and Ex-Situ Treatment

Under Alternative 2, lithium detected at the boundary of the CCR System at concentrations above the GWPS would be addressed with hydraulic containment through groundwater pumping to hydraulically control the migration of constituents downgradient. Source control would be achieved by CIP of all three CCR units. Pumping would be limited to the uppermost aquifer. Pumping well effluent would be treated ex-situ, when needed, with an ion exchange, RO treatment system, or other comparable treatment method, which would be capable of treating lithium to acceptable levels. The pumping and treatment systems would have ongoing O&M, energy requirements which create a carbon footprint, and would generate a secondary waste stream – including regeneration/replacement of the ion exchange media or accumulation of reject water from the RO system.

If required, the design and construction of an ex-situ treatment system would likely require a treatment system enclosure, equipment and space that would be incorporated into the system design. Implementation of a full-scale hydraulic containment system would require detailed engineering design, pilot testing, and additional data collection to verify the hydraulic capture zone.

Following installation of the groundwater pumping well network and ex-situ treatment system, Evergy would implement post-closure care activities that includes O&M of the hydraulic containment system and long-term groundwater sampling to monitor system performance. Once concentrations of Appendix IV constituents downgradient of the pumping well network, including wells within the contaminant plume and associated network compliance wells, decrease to the GWPS, operation of the hydraulic containment system would cease.

4.3.3 Alternative 3 – Closure in Place with In-Situ Groundwater Treatment (Permeable Reactive Barrier)

Under this alternative, lithium would be addressed through the installation and operation of an in-situ permeable reactive barrier downgradient of the CCR System with the objective of accelerating the time required to achieve the GWPS. Source control would be achieved by CIP of all three CCR units. Preliminary evaluation of lithium treatment technologies indicates that, while no in-situ treatment technology has been developed to treat lithium in groundwater, applying lithium selective adsorption media as an in situ permeable reactive barrier (PRB) to directly remove lithium from impacted groundwater may be feasible. Adsorption media that are highly selective to recover lithium from lithium-rich brine have been an active research topic associated with lithium battery production (Stringfellow and Dobson, 2021). The in-situ treatment train PRB for polyfluoroalkyl substances removal, described by Pourabadehei et al. (2025), is a newly innovative technology that may be used to conceptually design a site-specific PRB for lithium treatment.

Implementation of an in-situ PRB treatment system will require a detailed and lengthy design effort with additional bench scale testing to verify groundwater treatment. The bench scale testing will evaluate the efficacy of treating lithium under Site-specific conditions. Following the installation of the in-situ PRB treatment system, Evergy would implement post-closure care activities. Post-closure care would include operation of the in-situ PRB treatment system, and long-term groundwater sampling to monitor treatment system performance.

4.3.4 Alternative 4 – Closure in Place with Hydraulic Fracturing, Groundwater Pumping and Ex-Situ Treatment

Similar to Alternative 2, lithium detected at the boundary of the CCR System at concentrations above the GWPS would be addressed with hydraulic containment through groundwater pumping to hydraulically control the migration of those residual constituents downgradient. Source control would be achieved by CIP of all three CCR units. Under this alternative, hydraulic fracturing would be utilized to increase the yield of groundwater pumping. Pumping would be limited to the uppermost aquifer. Pumping well effluent would be treated ex-situ, when needed, with an ion exchange, RO treatment system, or other comparable treatment method, which would be capable of treating lithium to acceptable levels. Both the pumping and treatment systems would have ongoing O&M, energy requirements which create a carbon footprint, and would generate a secondary waste stream – including regeneration/replacement of the ion exchange media or accumulation of reject water from the RO system.

If required, the design and construction of an ex-situ treatment system would likely require a treatment system enclosure, equipment and space that would be incorporated into the system design. Implementation of a full-scale hydraulic containment system would require detailed engineering design, pilot testing, and additional data collection to verify the hydraulic capture zone.

Following the installation of the groundwater pumping well network enhanced by hydraulic fracturing and ex-situ treatment system, Evergy would implement post-closure care activities that include O&M of the hydraulic containment system and long-term groundwater sampling to monitor hydraulic containment system performance. Once concentrations of Appendix IV constituents downgradient of the pumping well network, including wells within the contaminant plume and associated network compliance wells, decrease to the GWPS, operation of the hydraulic containment system would cease.

5. Evaluation of Corrective Measures Alternatives

This section evaluates the four corrective measures alternatives using the balancing criteria described in 40 CFR §257.97.

5.1 EVALUATION CRITERIA

In accordance with 40 CFR §257.97(c), corrective measures that satisfy the threshold criteria are evaluated under the four balancing (evaluation) criteria categories. The balancing criteria allow for an analysis of each proposed corrective measure, thereby providing the basis for final corrective measures selection. The four balancing criteria categories include the following (provided in more detail in Section 1.3):

- The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful;
- The effectiveness of the remedy in controlling the source to reduce further releases;
- The ease or difficulty of implementing a potential remedy(s); and
- The degree to which community concerns are addressed by a potential remedy(s).

The degree to which community concerns are addressed by the potential remedies will be considered following a public meeting to discuss the results of the CMA with interested and affected parties and will be held at least 30 days prior to remedy selection in accordance with 40 CFR §257.96(e).

This assessment includes an analysis of the effectiveness of potential corrective measures in meeting the requirements and objectives of the remedy as described under 40 §CFR 257.97 while addressing the three criteria listed under 40 CFR §257.96(c). The balancing criteria listed in 40 §CFR 257.97 are evaluated in the referenced report sections below. The three summary criteria listed under 40 CFR §257.96(c) are addressed by the specific balancing criteria listed below and are summarized in Section 5.3.

40 CFR §257.96(c) Criteria	Associated 40 CFR § 257.97(c) Balancing Criteria	CMA Report Section
(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination	40 CFR §257.97(c)(1)(i)	Section 5.2.1.1.1
	40 CFR §257.97(c)(1)(ii)	Section 5.2.1.1.2
	40 CFR §257.97(c)(1)(iii)	Section 5.2.1.1.3
	40 CFR §257.97(c)(1)(iv)	Section 5.2.1.1.4
	40 CFR §257.97(c)(1)(vi)	Section 5.2.1.1.6
	40 CFR §257.97(c)(1)(vii)	Section 5.2.1.1.7
	40 CFR §257.97(c)(1)(viii)	Section 5.2.1.1.8
	40 CFR §257.97(c)(2)(i)	Section 5.2.1.2.1
	40 CFR §257.97(c)(2)(ii)	Section 5.2.1.2.2
	40 CFR §257.97(c)(3)(i)	Section 5.2.1.3.1
	40 CFR §257.97(c)(3)(ii)	Section 5.2.1.3.2
	40 CFR §257.97(c)(3)(iii)	Section 5.2.1.3.3
	40 CFR §257.97(c)(3)(iv)	Section 5.2.1.3.4
	40 CFR §257.97(c)(3)(v)	Section 5.2.1.3.5

(2) The time required to begin and complete the remedy	40 CFR §257.97(c)(1)(v)	Section 5.2.1.1.5
(3) The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s)	40 CFR §257.97(c)(3)(iii)	Section 5.2.1.3.3

5.2 POTENTIAL REMEDIAL ALTERNATIVES

5.2.1 Preliminary Evaluation of Potential Remedial Alternatives

This section provides a preliminary evaluation of the four potential corrective measure alternatives introduced in Section 4.3 based on the evaluation of the Balancing Criteria outlined in 40 CFR §257.97(c). The four primary Balancing Criteria and their respective sub-criteria are separated into individual evaluations in Section 5.2.1.1 through Section 5.2.1.4 below. A summary of this evaluation is provided in Table 2.

5.2.1.1 Balancing Criterion 1- The long- and Short-Term Effectiveness and Protectiveness of the Potential Remedy(S), Along with the Degree of Certainty that the Remedy will Prove Successful

Balancing Criterion 1 – Summary
Alternatives 1, 2, and 4 use hydraulic containment, which has been demonstrated to be effective and is expected to be effective in the long term. If ex-situ treatment of extracted groundwater is required, these alternatives produce a secondary waste stream (e.g., spent ion exchange media or reject water from an ex-situ treatment system) that would need to be handled and disposed of, creating a potential for exposure and additional long-term O&M. Alternative 3 includes in-situ treatment, which is anticipated to be effective at treating constituents. Bench-scale and pilot testing would be performed to evaluate potential in-situ treatment methods and their effectiveness.

5.2.1.1.1 Magnitude of Reduction of Existing Risks

The groundwater risk evaluation (included as Appendix A and summarized in Section 3) demonstrates that the CCR System does not pose an adverse risk to human health or the environment. Therefore, the corrective measures considered are not necessary to reduce potential risk posed by the Appendix IV constituents detected at an SSL in groundwater (lithium) because no adverse risk exists. Each of the remedial alternatives evaluated is protective of groundwater quality.

5.2.1.1.2 Magnitude of Residual Risks in Terms of Likelihood of Further Releases Due to CCR Remaining Following Implementation of a Remedy

Following implementation of the remedy, each alternative is projected to achieve a near equal magnitude of residual risks in terms of likelihood of further releases due to CCR remaining. This is because full remedy implementation, which includes CIP, would result in achieving the lithium GWPS value as a Threshold Criterion.

5.2.1.1.3 The Type and Degree of Long-Term Management Required, Including Monitoring, Operation, and Maintenance

A robust CCR Rule compliant groundwater monitoring system, including a combination of groundwater pumping system or in-situ treatment system and associated O&M, would be incorporated into Alternatives 1, 2, 3, and 4. Therefore, a moderate to high degree of long-term management would be required for each of these alternatives. Alternatives 1, 2, and 4, which include hydraulic containment, may also involve long-term management and O&M of an ex-situ groundwater treatment system if ex-situ treatment is required. Alternative 3 may need replacement of reactive material within a PRB over time but it does not require on-going maintenance of an active pumping/treatment system.

5.2.1.1.4 Short-Term Risks that Might be Posed to the Community or the Environment During Implementation of Such a Remedy

Groundwater-related risks are not expected for any of the alternatives because there are no downgradient groundwater users and therefore there are no adverse risks. If ex-situ treatment of extracted groundwater is required in Alternatives 1, 2, and 4, these alternatives produce a secondary waste stream (e.g., spent ion exchange media or reject water from an ex-situ treatment system) that would need to be handled and disposed of, creating a potential for exposure.

5.2.1.1.5 Time Until Full Protection is Achieved

As explained in the risk evaluation report (Appendix A), there is currently no adverse risk of exposure for potential human or environmental receptors to groundwater with an SSL of lithium originating at the CCR System. Therefore, protection of human and environmental receptors is already achieved. A groundwater flow and solute transport model was constructed as a tool to evaluate the anticipated effects of implementation of each potential corrective measure would have on constituent concentrations in groundwater. The time to achieve the GWPS for lithium will be evaluated utilizing the flow and transport model prior to remedy selection.

5.2.1.1.6 Potential for Exposure of Humans and Environmental Receptors to remaining Wastes, Considering the Potential Threat To Human Health and the Environment Associated with Excavation, Transportation, Re-Disposal, or Containment

Alternative 3 does not include treatment of extracted groundwater, and therefore does not generate a secondary waste stream, except when replacement of spent adsorption material is needed. If ex-situ treatment of extracted groundwater is required, Alternatives 1, 2, and 4 could result in a secondary waste stream generated from the groundwater treatment process (e.g., spent ion exchange media or reject water from an ex-situ treatment system). Thus, there could be potential for exposure to waste or wastewater associated with the groundwater treatment system. Any extracted groundwater would be characterized and appropriately managed (e.g., National Pollutant Discharge Elimination System [NPDES] discharge, offsite disposal). All of the alternatives will include CIP of remaining CCR at the UAQC, LAQC, and CCR Landfill, so an exposure will exist prior to a completed closure and during any mass balance of remaining CCR for the purpose of installing the final cover system.

5.2.1.1.7 Long-Term Reliability of the Engineering and Institutional Controls

Alternatives 1, 2, and 4 include a combination of hydraulic capture with ex-situ treatment, which is considered a reliable method of groundwater remediation. Treatment systems are generally highly adaptable, allowing operational modifications or system retrofits over time as necessary. Alternative 3 involves in-situ treatment through a permeable reactive barrier. The reliability of this alternative can be managed through proper monitoring of lithium concentrations in the PRB barrier to determine whether replacement of the adsorption media is needed. Therefore, all alternatives are considered reliable in the long term and would consist of institutional controls to check the systems and support any O&M activities necessary for successful operation of the alternative.

5.2.1.1.8 Potential Need for Replacement of the Remedy

Alternatives 1, 2, and 4 involve hydraulic capture. These alternatives could be supplemented with an ex-situ treatment system if deemed necessary. Although this potential future modification would not entail a replacement of the remedy, additional resources would be necessary to supplement the alternatives. If required, pilot testing for an ex-situ groundwater treatment system may be performed to support system design. Once operational, the ex-situ groundwater treatment system would be highly adaptable, allowing operational modifications or system retrofits over time if needed. Alternative 3 may need replacement of reactive material within a PRB over time.

5.2.1.2 Balancing Criterion 2 – The Effectiveness of the Remedy in Controlling the Source to Reduce Further Releases

Balancing Criterion 2 – Summary
Alternative 3 employs the use of in-situ treatment. Alternatives 1, 2, and 4, which include groundwater extraction, could also employ the use of treatment technologies for extracted groundwater, if required. These alternatives all provide a high degree of effectiveness in containing affected groundwater. The final cover system will provide source control, cutting off infiltration through the remaining CCR materials reducing further releases of constituents.

5.2.1.2.1 The Extent to which Containment Practices will Reduce Further Releases

The final cover system will provide source control for the remaining CCR materials, cutting off infiltration through the remaining CCR materials reducing further releases of constituents. Hydraulic containment of groundwater through use of an intercept trench or groundwater pumping (under Alternatives 1, 2, and 4) would be effective at containing impacted groundwater, and in-situ treatment (under Alternative 3) would limit the magnitude of potential further migration of constituents in affected groundwater.

5.2.1.2.2 The Extent to which Treatment Technologies may be Used

Alternative 3 includes in-situ treatment to address SSLs in groundwater near the CCR System. This in-situ system is passive in nature, relying on the chemical interaction of impacted groundwater with the barrier media. Alternatives 1, 2, and 4 may include ex-situ treatment of extracted groundwater pumped from extraction wells or collected through use of an intercept trench if required.

5.2.1.3 Balancing Criterion 3 – The Ease or Difficulty of Implementing a Potential Remedy

Balancing Criterion 3 – Summary
All alternatives implement the same final cover system which will provide source control using readily available materials and well understood industry standard methods of installation. Alternatives 1, 2, and 4 involve a combination of hydraulic containment and ex situ treatment, or in-situ treatment (PRB) which entail a moderate degree of difficulty.

5.2.1.3.1 Degree of Difficulty Associated with Constructing the Technology

All alternatives implement the same final cover system which will provide source control using readily available materials and well understood industry standard methods of installation. Alternatives 1, 2, and 4 include construction of a groundwater extraction system with either an intercept trench or pumping system. These alternatives would include construction of an ex-situ groundwater treatment system that would require treatment tanks, pumps, valves, piping, and other infrastructure necessary for conveying and treating the extracted groundwater. Alternative 4 includes an additional activity of performing hydraulic fracturing of the geologic formation to support increased flow rates. Alternative 3 would include construction activities for an in-situ PRB treatment system. All alternatives entail a moderate degree of difficulty.

5.2.1.3.2 Expected Operational Reliability of the Technologies

All alternatives implement the same final cover system with that technology having a well understood successful track record under the Resource Conservation and Recovery Act.

Alternatives 1, 2, 3, and 4 include a combination of groundwater pumping or in-situ treatment, each of which will have equipment that will be placed out of service for routine or non-routine maintenance, repair, or replacement of system components or treatment media.

Alternatives 1, 2, and 4 include groundwater extraction, which may include treatment of extracted groundwater, if required. The use of ex-situ treatment technologies would involve additional O&M requirements that could present increased operational and maintenance challenges (e.g., system downtime to perform routine or non-routine maintenance, repair, or replacement of system components or treatment media) that could affect system performance and effectiveness. Operational reliability for these three alternatives is considered moderate and comparable to typical ion exchange/RO treatment technologies. Alternative 3 is an emerging technology with limited operational reliability information for use of adsorption medium in-situ due to the innovative nature of lithium adsorption media. Therefore, there is greater uncertainty in the operational reliability for Alternative 3.

5.2.1.3.3 Need to Coordinate with and Obtain Necessary Approvals and Permits from Other Agencies

An injection permit may be required for in-situ treatment, which is included as part of Alternative 3. For Alternatives 1, 2, and 4, the potential addition of ex-situ groundwater treatment (if required) and related infrastructure may require building and electrical permits, permitting related to discharge, re-injection, or disposal of treated water, and/or permits or permit modifications related to stormwater pollution prevention control. An in-situ treatment, or ex-situ treatment system, would also require O&M plans and monitoring programs that may be subject to initial and routine regulatory review and approval. State regulatory agencies will have involvement for closure-related activities. Regulatory approvals or oversight of the system(s) may also be required during system testing and operations.

5.2.1.3.4 Availability of Necessary Equipment and Specialists

Each alternative requires equipment and specialists to complete CCR unit closure and to construct and operate the groundwater extraction, or in-situ treatment. The potential inclusion of groundwater treatment under Alternatives 1, 2, and 4 (if required) would require additional equipment and specialists to construct and operate the ex-situ treatment system. The availability of a large quantity of potential adsorption media that can be used for Alternative 3 is currently unknown due to its innovative nature.

5.2.1.3.5 Available Capacity and Location of Needed Treatment, Storage, and Disposal Services

Alternatives 1, 2, and 4 could require additional treatment of extracted groundwater (if required), which would require construction, operations, and maintenance of an on-Site treatment system and disposal of secondary waste streams (e.g., spent ion exchange media, reject water from an ex-situ treatment system) generated as a result of the treatment process. The in-situ treatment system included with Alternative 3 is not anticipated to include treatment, storage, or disposal services because the treatment or infiltration will occur in-situ, except when spent adsorption media are generated, which would require proper disposal (similar to the disposal of spent ion exchange media). The existing CCR Landfill does have capacity for additional CCR disposal.

5.2.1.4 Criterion 4 – the Degree to which Community Concerns are Addressed by a Potential Remedy

The fourth Balancing Criterion involves input from the community regarding the proposed corrective measures. This criterion will be addressed by presenting the results of the CMA at a public meeting and soliciting comments. In accordance with 40 CFR §257.96(e), that meeting will be held at least 30 days prior to remedy selection.

5.3 EVALUATION OF ALTERNATIVES

This section provides an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of each remedy as described under 40 CFR §257.97 (as evaluated in Section 5.2) addressing the items listed in 40 CFR §257.96(c). Each of the balancing criteria evaluated above consist of several sub criteria listed in the CCR Rule (provided in more detail in Section 1.3), which have been considered in this assessment. The goal of this analysis is to evaluate the alternatives based on whether each is technologically feasible, relevant, or readily implementable, provide adequate protection to human health and the environment, and minimizes impacts to the community. A summary of the corrective measures is provided in Table 3. The following subsections provide a breakdown of the 40 CFR §257.96(c) elements, provided again below, and summarize the evaluation of the balancing criteria as it relates to those summary criteria:

- The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
- The time required to begin and complete the remedy; and

- The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

5.3.1 Performance

This criterion pertains to the effectiveness of each alternative to reduce the potential for future release of CCR material into the environment and the ability of each of the groundwater measures to remediate Appendix IV constituent concentrations in groundwater to below GWPS beyond the waste boundary of the CCR unit(s).

- Alternative 1 – CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure would provide moderate performance for addressing the lithium SSL. An intercept trench is highly effective at controlling the migration of constituents in groundwater, removing constituent mass from groundwater, and reducing constituent concentrations in groundwater. Ex-situ treatment of extracted groundwater would further treat constituents in effluent prior to being discharged in accordance with a NPDES permit or off-site disposal.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure would provide moderate to high performance for addressing the lithium SSL. Because the representative hydraulic conductivity value for aquifer sediments is low, it is expected that many pumping wells are needed to achieve adequate hydraulic capture. Groundwater pumping is highly effective at controlling the migration of constituents in groundwater, removing constituent mass from groundwater, and reducing constituent concentrations in groundwater. Ex-situ treatment of extracted groundwater would further treat constituents in effluent prior to being discharged in accordance with a NPDES permit or offsite disposal.
- Alternative 3 – CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure would provide moderate performance for addressing the lithium SSL. Use of a PRB is anticipated to limit the migration and concentration of constituents in groundwater along targeted portions of the CCR System boundary, where concentrations are highest. Pilot and/or bench-scale laboratory testing would be required to identify suitable reagents and porous media, and evaluate treatment effectiveness based on CCR System conditions.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure would provide moderate to high performance for addressing the lithium SSL. Groundwater pumping with hydraulic fracturing enhancement is highly effective at controlling the migration of constituents in groundwater, removing constituent mass from groundwater, and reducing constituent concentrations in groundwater. Ex-situ treatment of extracted groundwater would further treat constituents in effluent prior to being discharged in accordance with a NPDES permit or off-Site disposal.

5.3.2 Reliability

This criterion evaluates the degree to which alternatives will consistently and reliably perform their intended functions over time. For source control measures, the time frame for evaluating reliability extends through the post-closure period and in the long term. For groundwater measures, the time frame for evaluating reliability extends from when the measures have been installed until Appendix IV GWPS values are achieved and applicable measures are removed from service.

- Alternative 1 – CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure would provide moderate to high reliability for addressing the lithium SSL until the GWPS value is achieved. A groundwater intercept trench and ex-situ treatment is expected to be an effective and reliable remedy, although both systems would require occasional O&M activities that involve temporary system shutoff and maintenance to ensure system operational efficiency and effectiveness.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure would provide moderate to high reliability for addressing the lithium SSL until the GWPS value is achieved. Groundwater pumping and ex-situ treatment is expected to be an effective and reliable remedy, although both systems would require occasional O&M activities that involve temporary system shutoff and maintenance to ensure system operational efficiency and effectiveness.
- Alternative 3 – CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure is expected to provide moderate to high reliability for addressing the lithium SSL. In-situ treatment with a PRB is expected to be a moderately effective and reliable remedy, although its reliability is dependent on both the extent of aquifer hydraulic heterogeneity and the long-term stability of reactive material to maintain stability of adsorbed constituents. Replacement of reactive material within a PRB may be necessary over time if absorption and/or passivation within the PRB renders it ineffective at treating affected groundwater.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure would provide moderate to high reliability for addressing the lithium SSL until the GWPS value is achieved. Groundwater pumping with hydraulic fracturing and ex-situ treatment is expected to be an effective and reliable remedy, although both systems would require occasional O&M activities that involve temporary system shutoff and maintenance to ensure system operational efficiency and effectiveness.

5.3.3 Ease of Implementation

This criterion evaluates the degree of difficulty in implementing the alternatives. For all alternatives, the installation of the final cover system will be completed in accordance with well understood practices and industry standard methods.

- Alternative 1 –- CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure is expected to require a moderate to high level of difficulty to implement in order to address the lithium SSL. The intercept trench would require construction to an appropriate depth to adequately capture groundwater flow. The ex-situ treatment system would be sized to manage potential treatment flow rates and would involve additional construction and O&M activities, likely within a more developed portion of the Site.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure is expected to require a moderate to high level of difficulty to implement in order to address the lithium SSL. The ex-situ treatment system would be sized to manage potential treatment flow rates and would involve additional construction and O&M activities, likely within a more developed portion of the Site.
- Alternative 3 – CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure is expected to require moderate to high level of difficulty to implement in order to address the lithium SSL. Initial pilot-scale construction and periodic post-construction effectiveness monitoring evaluation for a discrete portion of the CCR System boundary where constituent

concentrations are highest (pilot testing) would better inform the potential level of difficulty for full-scale implementation.

- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure is expected to require a moderate to high level of difficulty to implement in order to address the lithium SSL. The ex-situ treatment system would be sized to manage potential treatment flow rates and would involve additional construction and O&M activities, likely within a more developed portion of the Site.

5.3.4 Potential Safety Impacts

This criterion evaluates potential safety impacts that could result from the implementation of each alternative. The following evaluation assumes adherence to applicable health and safety regulations and requirements, including health and safety and closure/post-closure plans, as well as implementation of proper best management practices (BMPs) and personal protective equipment (PPE) to help mitigate the potential for safety impacts.

For all alternatives, the installation of the final cover system has inherent safety risks associated with personnel and equipment accessing areas with CCR material, earthmoving equipment operations, and other construction related safety risks.

- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure has moderate potential for safety impacts. Potential safety impacts associated with intercept trench and ex-situ treatment could result from clearing/grading, construction, and O&M of the groundwater extraction system and the ex-situ groundwater treatment system.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure has moderate potential for safety impacts. Potential safety impacts associated with groundwater pumping and ex-situ treatment could result from clearing/grading, construction, and O&M of the groundwater extraction system and the ex-situ groundwater treatment system.
- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure has a moderate potential for safety impacts. Potential safety impacts could result from trenching and construction of a PRB or series of PRBs along the downgradient boundary of the CCR System.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure has moderate to high potential for safety impacts. Potential safety impacts associated with formation fracturing include operation of high pressure pumping equipment and formation blow out. Potential safety impacts associated with groundwater pumping and ex-situ treatment could result from clearing/grading, construction, and O&M of the groundwater extraction system and the ex-situ groundwater treatment system.

5.3.5 Potential Cross-Media Impacts

This criterion evaluates potential impacts to other environmental media that could result from the implementation of each alternative. The following evaluation assumes adherence to applicable environmental regulations and requirements, including closure/post-closure and O&M plans, as well as implementation of proper BMPs to help mitigate the potential for cross-media impacts.

For all alternatives, the installation of the final cover system will include earthmoving equipment that has the potential for the creation of fugitive dust, so appropriate measures will be required to adequately mitigate fugitive dust development. Also, surface water management of disturbed materials prior to final cover system installation will need to include measures to meet applicable NPDES discharges and

- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure has moderate potential for cross-media impacts as a result of extracting affected groundwater from the subsurface, discharging or disposing the extracted groundwater, and generating a secondary waste stream (e.g., ion exchange media and RO reject water).
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure has moderate potential for cross-media impacts as a result of extracting affected groundwater from the subsurface, discharging or disposing the extracted groundwater, and generating a secondary waste stream (e.g., ion exchange media and RO reject water).
- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure has low to moderate potential for cross-media impacts because, although subsurface placement of reactive media is required, affected groundwater remains in-situ. If the lithium adsorption capacity of reactive media in the PRB is exhausted, replacement of reactive media will be needed and a secondary waste material will be generated.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure has moderate to high potential for cross-media impacts as a result of driving impacted groundwater into unimpacted formation or into surface water, extracting affected groundwater from the subsurface, discharging or disposing the extracted groundwater, and generating a secondary waste stream (e.g., ion exchange media and RO reject water).

5.3.6 Potential Exposure to Residual Contaminants

This criterion evaluates the potential for exposure to any remaining contamination after the alternatives have been implemented. The following evaluation assumes adherence to applicable environmental, health, and safety regulations and requirements, including health and safety and closure/post-closure plans, as well as implementation of proper BMPs and PPE to help mitigate the potential for exposure to residual contamination.

- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This groundwater measure has moderate potential for exposure to residual contamination due to the generation of a secondary waste stream (e.g., ion exchange media, RO reject water) if ex-situ treatment is required, in addition to the limited potential for exposure resulting from the captured groundwater. Also, hydraulically collecting affected groundwater from the intercept trench would introduce a limited potential for additional exposure to residual contamination because the affected groundwater in that area of the Site would be captured from the subsurface and conveyed through above ground piping where accidental release to the environment with potential for Site worker exposure could occur. However, direct exposure to affected groundwater would not be likely. Potential exposure pathways do not currently pose an adverse risk to human health or the environment (Appendix A), and potential future exposures would not be anticipated to present unacceptable risk.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. This groundwater measure has moderate potential for exposure to residual contamination due to the generation of a secondary waste stream (e.g., ion exchange media, RO reject water) if ex-situ treatment is required, in addition to the limited potential for exposure resulting from the extracted groundwater. Also, pumping affected groundwater from the extraction wells would introduce a

limited potential for additional exposure to residual contamination because the affected groundwater in that area of the CCR System would be pumped from the subsurface and conveyed by above ground piping where accidental release to the environment with potential for Site worker exposure could occur. However, direct exposure to affected groundwater would not be likely. Potential exposure pathways do not currently pose an adverse risk to human health or the environment (Appendix A), and potential future exposures would not be anticipated to present unacceptable risk.

- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). This groundwater measure has low to very low potential for exposure to residual contamination because the affected groundwater remains in-situ and no secondary waste streams would be generated during the treatment process except in the event that reactive media within a PRB requires excavation and replacement.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. This groundwater measure has moderate potential for exposure to residual contamination due to the generation of a secondary waste stream (e.g., ion exchange media, RO reject water) if ex-situ treatment is required, in addition to the limited potential for exposure resulting from the extracted groundwater. Pumping affected groundwater from the extraction wells would introduce a limited potential for additional exposure to residual contamination because the affected groundwater in that area of the Site would be pumped from the subsurface and conveyed by above ground piping where accidental release to the environment with potential for Site worker exposure could occur. However, direct exposure to affected groundwater would not be likely. Potential exposure pathways do not currently pose an adverse risk to human health or the environment (Appendix A), and potential future exposures would not be anticipated to present unacceptable risk.

5.3.7 Time Required to Begin the Remedy

This criterion evaluates the time required after the remedy is selected to initiate construction activities or to begin operation of groundwater measures. This includes the time to plan, design, permit, mobilize, install the system (if necessary), and perform testing (if necessary) prior to beginning initial operation of the system. This evaluation assumes that groundwater measures can be installed and begin operating independently of closure activities, unless otherwise noted in the descriptions below.

- Final cover installation has already commenced for the UAQC and will continue in a rolling fashion over the other CCR surface impoundment footprint.
- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This alternative would require an estimated one and one-half to three years to perform testing, prepare the design, receive approvals, install, and begin operating the extraction pumping system, ex-situ treatment system, and associated infrastructure.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. Groundwater pumping and ex-situ treatment would require an estimated one and one-half to three years to perform testing, prepare the design, receive approvals, install, and begin operating the extraction wells system, ex-situ treatment system, and associated infrastructure.
- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). In-situ treatment through installation of a PRB or series of PRBs would require an estimated two to three years to perform bench-scale and pilot testing, prepare the design, receive permits/approvals, install, and begin installation of a PRB to promote in-situ treatment.

- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. Groundwater pumping and ex-situ treatment would require an estimated one and one-half to three years to perform testing, prepare the design, receive approvals, install, begin operating the extraction wells system, ex-situ treatment system, and associated infrastructure.

5.3.8 Time Required to Complete the Remedy

This criterion evaluates the timing required to complete the implementation of the alternatives. This includes the time from when initial operation of the measure begins to when all Appendix IV constituent (lithium) concentrations have achieved GWPS values.

- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. The final cover system will be installed within the allowable timeframes under the CCR Rule closure timing. Timing to complete the groundwater remedy for all alternatives is reliant on the gradient of the aquifer and formation characteristics which influence the removal rate of lithium concentrations. Flow and transport modeling of the groundwater impacts will be completed and evaluated prior to remedy selection.
- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. The final cover system will be installed within the allowable timeframes under the CCR Rule closure timing. Timing to complete the groundwater remedy for all alternatives is reliant on the gradient of the aquifer and formation characteristics which influence the removal rate of lithium concentrations. Flow and transport modeling of the groundwater impacts will be completed and evaluated prior to remedy selection.
- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). The final cover system will be installed within the allowable timeframes under the CCR Rule closure timing. Timing to complete the groundwater remedy for all alternatives is reliant on the gradient of the aquifer and formation characteristics which influence the removal rate of lithium concentrations. Flow and transport modeling of the groundwater impacts will be completed and evaluated prior to remedy selection.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. The final cover system will be installed within the allowable timeframes under the CCR Rule closure timing. Timing to complete the groundwater remedy for all alternatives is reliant on the gradient of the aquifer and formation characteristics which influence the removal rate of lithium concentrations. Flow and transport modeling of the groundwater impacts will be completed and evaluated prior to remedy selection.

5.3.9 Institutional Requirements (State or Local Permit Requirements) or Other Environmental or Public Health Requirements that may Substantially Affect Implementation

This criterion evaluates the level of potential requirements associated with the alternatives, including the need to obtain permits and approvals that may affect implementation. This section provides a high-level review of potential requirements. Evergy would conduct a complete evaluation of the source control and groundwater measures based on project details and information prior to implementation to determine alternative specific requirements.

- Alternative 1 - CIP with Groundwater Intercept Trench and Ex-Situ Treatment. This alternative could require a construction permit, a stormwater construction permit, and a construction in floodway permit. It could also require a modification to the NPDES permit, depending on discharge factors.

- Alternative 2 – CIP with Groundwater Pumping and Ex-Situ Treatment. Groundwater pumping and ex-situ treatment could require an extraction well permit, a construction permit, or a stormwater construction permit. It could also require a modification to the NPDES permit, depending on discharge factors.
- Alternative 3 - CIP with In-Situ Groundwater Treatment (PRB). In-situ treatment through installation of a PRB or series of PRBs could require an injection permit, a stormwater construction permit, and a construction in floodway permit.
- Alternative 4 – CIP with Hydraulic Fracturing, Groundwater Pumping, and Ex-Situ Treatment. Hydraulic fracturing of the formation will require an underground injection control permit issued by the USEPA. Groundwater pumping and ex-situ treatment could require an extraction well permit, a construction permit, a stormwater construction permit, and a construction in floodway permit. It could also require a modification to the NPDES permit, depending on discharge factors.

6. Summary

This CMA has evaluated the following alternatives:

- Alternative 1: CIP with groundwater intercept trench and ex-situ treatment;
- Alternative 2: CIP with groundwater pumping and ex-situ treatment;
- Alternative 3: CIP with in-situ groundwater treatment via PRB; and
- Alternative 4: CIP with hydraulic fracturing, groundwater pumping and ex-situ treatment.

In accordance with 40 CFR §257.97(b), each of these alternatives has been confirmed to meet the following threshold criteria:

- Be protective of human health and the environment;
- Attain the GWPS as specified pursuant to §257.95(h);
- Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part into the environment;
- Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
- Comply with standards for management of wastes as specified in §257.98(d).

In addition, in accordance with 40 CFR §257.97(c), each of the alternatives has been evaluated in the context of the following balancing criteria:

- The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful;
- The effectiveness of the remedy in controlling the source to reduce further releases;
- The ease or difficulty of implementing a potential remedy(s); and
- The degree to which community concerns are addressed by a potential remedy(s).

This CMA, and the input received during the public meeting, and any additional N&E investigation work results will be used to identify a final corrective measure (remedy) for implementation at the Site. Title 40 CFR §257.97(a) requires that a semiannual report be prepared to document progress toward remedy selection and design. Once a remedy is selected, a final remedy selection report must be prepared to document details of the selected remedy and how the selected remedy meets 40 CFR §257.97(b) requirements. The final selected remedy report must also be certified by a professional engineer, placed in the operating record, and posted to the Evergy CCR website.

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TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-6	6/8/2016	1.18	112	216	0.545	7.19	181	1180	< 0.002	0.00721	0.204	< 0.002	< 0.001	< 0.002	< 0.002	0.545	< 0.002	0.0634	< 0.0002	< 0.005	< 0.002	< 0.002	0.385	-0.041	0.385
	8/10/2016	1.23	101	214	0.495	7.18	177	1280	< 0.002	0.0037	0.175	< 0.002	< 0.001	< 0.002	< 0.002	0.495	< 0.002	0.0482	< 0.0002	< 0.005	< 0.002	< 0.002	0.191	0.33	0.521
	10/13/2016	1.18	114	206	0.497	7.24	165	1140	< 0.002	0.00421	0.174	< 0.002	< 0.001	< 0.002	< 0.002	0.497	< 0.002	0.0507	< 0.0002	< 0.005	< 0.002	< 0.002	0.208	1.68	1.89
	12/12/2016	1.18	103	189	0.401	7.27	160	1220	< 0.002	0.00515	0.168	< 0.002	< 0.001	< 0.002	< 0.002	0.401	< 0.002	0.0456	< 0.0002	< 0.005	< 0.002	< 0.002	0.373	1	1.37
	2/9/2017	1.22	98.8	208	0.492	7.25	197	1180	< 0.002	< 0.002	0.141	< 0.002	< 0.001	< 0.002	< 0.002	0.492	< 0.002	0.0553	< 0.0002	< 0.005	< 0.002	< 0.002	0.255	0.176	0.431
	4/5/2017	1.19	97.9	227	0.447	7.3	167	1180	< 0.002	< 0.002	0.147	< 0.002	< 0.001	< 0.002	< 0.002	0.447	< 0.002	0.0521	< 0.0002	< 0.005	< 0.002	< 0.002	0.274	0.4	0.674
	6/15/2017	1.19	90.5	181	1.75	7.2	147	1120	< 0.002	0.00715	0.181	< 0.002	< 0.001	< 0.002	< 0.002	1.75	< 0.002	0.0538	< 0.0002	< 0.005	< 0.002	< 0.002	0.224	1.31	1.53
	8/9/2017	1.21	102	210	0.473	7.02	170	1280	< 0.002	0.0048	0.178	< 0.002	< 0.001	< 0.002	< 0.002	0.473	< 0.002	0.057	< 0.0002	< 0.005	< 0.002	< 0.002	0.456	1.52	1.98
	10/5/2017	1.11	105	208	0.464	7.11	165	1230	< 0.002	0.00475	0.185	< 0.002	< 0.001	< 0.002	< 0.002	0.464	< 0.002	0.0483	< 0.0002	< 0.005	< 0.002	< 0.002	0.428	0.954	1.38
	5/23/2018	1.23	85.6	197	0.595	7.26	151	1160	-	-	-	-	-	-	-	0.595	-	-	-	-	-	-	-	-	-
	12/4/2018	1.18	86.3	193	0.612	7.13	142	1150	-	-	-	-	-	-	-	0.612	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	-	7.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	1.19	83.7	204	0.467	7.17	154	1210	-	-	-	-	-	-	-	0.467	-	-	-	-	-	-	-	-	-
	11/7/2019	1.15	79.7	197	0.615	7.45	136	1090	-	-	-	-	-	-	-	0.615	-	-	-	-	-	-	-	-	-
	5/19/2020	1.11	78.8	191	0.541	7.31	133	1140	< 0.004	< 0.002	0.137	< 0.002	< 0.001	< 0.01	< 0.01	0.541	< 0.005	0.0432	< 0.0002	< 0.005	< 0.002	< 0.002	0.342	2.08	2.42
	11/12/2020	1.14	82.4	205	0.561	7.28	133	1130	-	-	-	-	-	-	-	0.561	-	-	-	-	-	-	-	-	-
	5/18/2021	1.14	73.2	193	0.522	7.62	123	1060	-	-	-	-	-	-	-	0.522	-	-	-	-	-	-	-	-	-
	11/18/2021	1.14	77.8	201	0.549	7.1	115	1090	-	-	-	-	-	-	-	0.549	-	-	-	-	-	-	-	-	-
	5/9/2022	1.09	68.2	189	0.543	-	110	1010	-	-	-	-	-	-	-	0.543	-	-	-	-	-	-	-	-	-
	11/9/2022	1.14	75.3	195	0.525	-	109	1000	-	-	-	-	-	-	-	0.525	-	-	-	-	-	-	-	-	-
	5/17/2023	1.13	69.2	189	0.606	-	114	1030	-	-	-	-	-	-	-	0.606	-	-	-	-	-	-	-	-	-
	11/17/2023	1.11	76.7	188	0.508	-	86.7	1040	-	-	-	-	-	-	-	0.508	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.637	-	-	-	< 0.004	0.00251	0.146	< 0.002	< 0.001	< 0.01	0.000111	0.637	< 0.002	0.0444	< 0.0002	0.00272	< 0.002	< 0.002	-0.0534	0.122	0.122
	5/17/2024	1.13	70.2	187	0.572	-	94.7	1050	< 0.004	0.00277	0.145	-	< 0.001	< 0.01	< 0.002	0.572	< 0.002	0.0469	< 0.0002	< 0.005	< 0.002	-	0.179	0.632	0.812
	11/25/2024	1.12	75.6	180	0.678	-	96.8	1110	< 0.004	0.00354	0.166	-	< 0.001	< 0.01	< 0.002	0.678	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	-	0.394	0.724	1.12
MW-7	6/8/2016	1.61	26.5	106	1.36	7.77	< 5	910	< 0.002	0.00393	0.611	< 0.002	< 0.001	< 0.002	< 0.002	1.36	< 0.002	0.0867	< 0.0002	< 0.005	< 0.002	< 0.002	1.06	0.601	1.66
	8/10/2016	1.71	21.2	103	1.27	7.83	< 5	946	< 0.002	0.00212	0.53	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0736	< 0.0002	< 0.005	< 0.002	< 0.002	1.4	0.395	1.795
	10/13/2016	1.64	24.2	99.9	1.28	8	< 5	938	< 0.002	0.00302	0.532	< 0.002	< 0.001	< 0.002	< 0.002	1.28	< 0.002	0.0759	< 0.0002	< 0.005	< 0.002	< 0.002	0.82	1	1.82
	12/12/2016	1.6	23.2	98	1.13	7.96	< 5	902	< 0.002	0.00278	0.552	< 0.002	< 0.001	< 0.002	< 0.002	1.13	< 0.002	0.0713	< 0.0002	< 0.005	< 0.002	< 0.002	0.747	0.804	1.55
	2/8/2017	1.65	26.6	100	1.2	7.79	< 5	890	< 0.002	< 0.002	0.509	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0773	0.00024	< 0.005	< 0.002	< 0.002	0.366	-0.405	0.366
	4/5/2017	1.61	26.8	102	1.28	7.89	< 5	916	< 0.002	< 0.002	0.497	< 0.002	< 0.001	< 0.002	< 0.002	1.28	< 0.002	0.0755	< 0.0002	< 0.005	< 0.002	< 0.002	0.627	0.606	1.23
	6/15/2017	1.64	22.4	81.2	1.27	7.75	< 5	890	< 0.002	0.00223	0.527	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0817	< 0.0002	< 0.005	< 0.002	< 0.002	1.2	0.182	1.38
	8/9/2017	1.65	25.2	111	1.2	7.62	< 5	968	< 0.002	0.00301	0.565	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0842	< 0.0002	< 0.005	< 0.002	< 0.002	1.53	1.4	2.93
	10/3/2017	1.59	23.4	105	1.19	7.74	< 5	944	< 0.002	0.0028	0.563	< 0.002	< 0.001	< 0.002	< 0.002	1.19	< 0.002	0.0759	< 0.0002	< 0.005	< 0.002	< 0.002	1.09	1	2.09
	5/23/2018	1.65	22.6	96.9	1.29	7.83	< 5	868	-	-	-	-	-	-	-	1.29	-	-	-	-	-	-	-	-	-
	12/4/2018	1.62	20.5	94.6	1.32	7.85	< 5	890	-	-	-	-	-	-	-	1.32	-	-	-	-	-	-	-	-	-
	5/23/2019	1.6	22.1	96.5	1.09	7.75	< 5	936	-	-	-	-	-	-	-	1.09	-	-	-	-	-	-	-	-	-
	11/7/2019	1.59	20	96.2	1.34	7.92	< 5	848	-	-	-	-	-	-	-	1.34	-	-	-	-	-	-	-	-	-
	5/19/2020	1.53	21.8	95.9	1.18	7.81	< 5	896	< 0.004	< 0.002	0.49	< 0.002	< 0.001	< 0.01	< 0.01	1.18	< 0.005	0.0683	< 0.0002	< 0.005	< 0.002	< 0.002	0.653	1.06	1.72
	11/12/2020	1.56	20.5	94.2	1.25	7.8	1.12	917	-	-	-	-	-	-	-	1.25	-	-	-	-	-	-	-	-	-
	5/18/2021	1.54	21	95.4	1.1	8.01	2.17	854	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
	11/18/2021	1.56	20.3	95.9	1.22	7.7	2.21	864	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	5/9/2022	1.49	20.7	97.3	1.17	-	1.98	816	-	-	-	-	-	-	-	1.17	-	-	-	-	-	-	-	-	-
	11/9/2022	1.56	20.2	94.7	1.14	-	2.29	882	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	5/17/2023	1.55	22	96.3	1.28	-	1.86	878	-	-	-	-	-	-	-	1.28	-	-	-	-	-	-	-	-	-
	11/17/2023	1.53	19.9	93.1	1.26	-	3.13	854	-	-	-	-	-	-	-	1.26	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.25	-	-	-	< 0.004	0.00138	0.467	< 0.002	< 0.001	< 0.01	< 0.002	1.25	< 0.002	0.0708	< 0.0002	0.0019	< 0.002	< 0.002	0.813	-0.286	0.813
	5/17/2024	1.53	20.6	95.4	1.37	-	< 5	850	< 0.004	< 0.002	0.478	-	< 0.001	< 0.01	< 0.002	1.37	< 0.002	0.0738	< 0.0002	< 0.005	< 0.002	-	0.518	0.681	1.2
	11/25/2024	1.54	19.7	96.5	1.33	-	< 5	946	< 0.004	0.00244	0.554	-	< 0.001	< 0.01	< 0.002	1.33	< 0.002	0.0694	< 0.0002	< 0.005	< 0.002	-	0.92	0.659	1.58
MW-10	6/6/2016	0.923	60.1	56.7	0.365	7.33	15.9	601	< 0.002	0.00771	0.337	< 0.002	< 0.001	< 0.002	< 0.002	0.365	< 0.002	0.0487	< 0.0002	< 0.005	< 0.002	< 0.002	0.394	3.11	3.5
	8/11/2016	0.966	58.7	60.2	0.38	7.26	19.9	649	< 0.002	0.00682	0.322	< 0.002	< 0.001	< 0.002	< 0.002	0.38	< 0.002	0.0415	< 0.0002	< 0.005	< 0.002	< 0.002	0.294	0.995	1.289
	10/12/2016	0.964	60.7	62.7	0.376	7.33	21.6	600	< 0.002	0.00603	0.324	< 0.002	< 0.001	< 0.002	< 0.002	0.376	< 0.002	0.0425	< 0.0002	< 0.005	< 0.002	< 0.002	0.401	-0.03	0.401
	12/9/2016	0.94	59	66.6	0.299	7.22	26.8	612	< 0.002	0.00326	0.312	< 0.002	< 0.001	< 0.002	< 0.002	0.299	< 0.002	0.0382	< 0.0002	< 0.005	< 0.002	< 0.002	0.507	1.29	1.8
	2/8/2017	0.966	58.8	67	0.362	7.21	30.7	587	< 0.002	0.00618	0.338	< 0.002	< 0.001	< 0.002	< 0.002	0.362	< 0.002	0.0422	0.0002	< 0.005	< 0.002	< 0.002	0.204	0.966	1.17
	4/6/2017	0.933	57.4	63.7	0.338	7.23	31.6	596	< 0.002	0.00302	0.28	< 0.002	< 0.001	< 0.002	< 0.002	0.338	< 0.002	0.0393	< 0.0002	< 0.005	< 0.002	< 0.002	0.202	1.37	1.4
	6/15/2017	0.942	55.5	63.6	0.401	7.31	31.1	625	< 0.002	0.00528	0.306	< 0.002	< 0.001	< 0.002	< 0.002	0.401	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	< 0.002	0.317	0.517	0.834
	8/10/2017	0.921	56.1	63.8	0.417	7.29	27.6	615	< 0.002	0.00946	0.309	< 0.002	< 0.001	< 0.002	< 0.002	0.417	< 0.002	0.0408	< 0.0002	< 0.005	< 0.002	< 0.002	0.695	-0.248	0.695
	10/4/2017	0.991	58.4	62.8	0.377	7.23	25.5	604	< 0.002	0.00508	0.289	< 0.002	< 0.001	< 0.002	< 0.002	0.377	< 0.002	0.046	< 0.0002	< 0.005	< 0.002	< 0.002	0.638	1.03	1.67

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-10	12/12/2017	0.961	-	-	-	7.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	0.91	54.1	57.9	0.414	7.32	26.7	589	-	-	-	-	-	-	-	0.414	-	-	-	-	-	-	-	-	-
	11/30/2018	0.914	57.5	55.5	0.3	7.23	17.8	588	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-
	5/23/2019	0.885	52.9	52.5	0.353	7.32	23.1	588	-	-	-	-	-	-	-	0.353	-	-	-	-	-	-	-	-	-
	11/7/2019	0.898	56.2	52.2	0.36	7.24	5.64	570	-	-	-	-	-	-	-	0.36	-	-	-	-	-	-	-	-	-
	5/19/2020	0.791	52.1	51.8	0.422	7.34	14.4	584	< 0.004	0.0115	0.32	< 0.002	< 0.001	< 0.01	< 0.01	0.422	< 0.005	0.0306	< 0.0002	< 0.005	< 0.002	< 0.002	0.425	-0.0592	0.425
	11/12/2020	0.845	52.5	51.5	0.375	7.34	9.92	571	-	-	-	-	-	-	-	0.375	-	-	-	-	-	-	-	-	-
	5/18/2021	0.839	51	50.6	0.419	7.34	14.7	559	-	-	-	-	-	-	-	0.419	-	-	-	-	-	-	-	-	-
	11/18/2021	0.781	48.6	50.3	0.327	7.22	7.03	542	-	-	-	-	-	-	-	0.327	-	-	-	-	-	-	-	-	-
	5/9/2022	0.787	48.3	49.2	0.386	7.32	13.6	540	-	-	-	-	-	-	-	0.386	-	-	-	-	-	-	-	-	-
	11/9/2022	0.818	47.7	47.6	0.4	-	10.7	533	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-
	5/17/2023	0.807	46.4	47.3	0.379	-	18.4	542	-	-	-	-	-	-	-	0.379	-	-	-	-	-	-	-	-	-
	11/17/2023	0.798	48.5	45.7	0.389	-	15.7	544	-	-	-	-	-	-	-	0.389	-	-	-	-	-	-	-	-	-
MW-11	6/6/2016	0.729	71	125	0.493	7.37	156	1000	< 0.002	< 0.002	0.0366	< 0.002	< 0.001	< 0.002	< 0.002	0.493	< 0.002	0.0659	< 0.0002	< 0.005	< 0.002	< 0.002	0.061	0.411	0.472
	8/11/2016	0.739	66.9	125	0.512	7.3	187	1100	< 0.002	< 0.002	0.0342	< 0.002	< 0.001	< 0.002	< 0.002	0.512	< 0.002	0.0594	< 0.0002	< 0.005	< 0.002	< 0.002	-0.039	1.07	1.07
	10/12/2016	0.73	69.2	123	0.504	7.33	212	1140	< 0.002	< 0.002	0.0324	< 0.002	< 0.001	< 0.002	< 0.002	0.504	< 0.002	0.0596	< 0.0002	< 0.005	< 0.002	< 0.002	0.136	-0.551	0.136
	12/9/2016	0.786	67.1	107	0.425	7.58	215	1100	< 0.002	< 0.002	0.0332	< 0.002	< 0.001	< 0.002	< 0.002	0.425	< 0.002	0.0577	< 0.0002	< 0.005	< 0.002	< 0.002	0.113	1.04	1.15
	2/9/2017	0.974	63.4	109	0.546	7.36	188	1010	< 0.002	< 0.002	0.0406	< 0.002	< 0.001	< 0.002	< 0.002	0.546	< 0.002	0.0686	< 0.0002	< 0.005	< 0.002	< 0.002	0.039	0.672	0.711
	4/6/2017	1.04	61.1	94.5	0.527	7.41	148	938	< 0.002	< 0.002	0.0358	< 0.002	< 0.001	< 0.002	< 0.002	0.527	< 0.002	0.0638	< 0.0002	< 0.005	< 0.002	< 0.002	0.236	1.3	1.54
	6/15/2017	1.02	58.2	89.7	0.452	7.5	145	984	< 0.002	< 0.002	0.0386	< 0.002	< 0.001	< 0.002	< 0.002	0.452	< 0.002	0.0665	< 0.0002	< 0.005	< 0.002	< 0.002	0.153	0.164	0.317
	8/10/2017	0.965	62.6	100	0.582	7.14	191	1020	< 0.002	< 0.002	0.035	< 0.002	< 0.001	< 0.002	< 0.002	0.582	< 0.002	0.0627	< 0.0002	< 0.005	< 0.002	< 0.002	-0.05	1.9	1.9
	10/5/2017	0.988	65.1	99.2	0.379	7.33	236	1040	< 0.002	< 0.002	0.0413	< 0.002	< 0.001	< 0.002	< 0.002	0.379	< 0.002	0.0669	< 0.0002	< 0.005	< 0.002	< 0.002	0.027	0.329	0.356
	5/23/2018	1.26	53.4	80.2	0.637	7.35	167	902	-	-	-	-	-	-	-	0.637	-	-	-	-	-	-	-	-	-
	7/11/2018	1.17	-	-	0.532	7.37	-	-	-	-	-	-	-	-	-	0.532	-	-	-	-	-	-	-	-	-
	12/3/2018	1.13	60.4	72.6	0.529	7.42	215	1030	-	-	-	-	-	-	-	0.529	-	-	-	-	-	-	-	-	-
	5/23/2019	0.819	65.4	121	0.454	7.52	142	1000	-	-	-	-	-	-	-	0.454	-	-	-	-	-	-	-	-	-
	11/7/2019	0.846	58.2	122	0.561	7.26	191	908	-	-	-	-	-	-	-	0.561	-	-	-	-	-	-	-	-	-
	5/19/2020	0.891	62.2	112	0.507	7.48	194	904	< 0.004	< 0.002	0.0323	< 0.002	< 0.001	< 0.01	< 0.01	0.507	< 0.005	0.059	< 0.0002	< 0.005	< 0.002	< 0.002	0.0343	2.5	2.54
	11/12/2020	1.19	54.2	84.1	0.573	7.24	179	920	-	-	-	-	-	-	-	0.573	-	-	-	-	-	-	-	-	-
	5/18/2021	1.18	51.8	76.3	0.53	7.55	176	900	-	-	-	-	-	-	-	0.53	-	-	-	-	-	-	-	-	-
	11/18/2021	1.05	60.3	80.9	0.514	7.23	240	946	-	-	-	-	-	-	-	0.514	-	-	-	-	-	-	-	-	-
	5/9/2022	1.16	54.3	70	0.505	-	196	848	-	-	-	-	-	-	-	0.505	-	-	-	-	-	-	-	-	-
	11/9/2022	1.12	55.5	68.5	0.479	-	208	918	-	-	-	-	-	-	-	0.479	-	-	-	-	-	-	-	-	-
	5/17/2023	1.13	55.9	64.4	0.457	-	226	942	-	-	-	-	-	-	-	0.457	-	-	-	-	-	-	-	-	-
	11/17/2023	1.11	59.3	63.4	0.532	-	229	986	-	-	-	-	-	-	-	0.532	-	-	-	-	-	-	-	-	-
MW-13	6/9/2016	0.375	363	18	0.17	6.88	1830	2490	< 0.002	< 0.002	0.036	< 0.002	< 0.001	0.00327	< 0.002	0.17	< 0.002	0.0608	< 0.0002	< 0.005	< 0.002	< 0.002	0.246	0.39	0.636
	8/11/2016	0.397	371	18.5	0.128	6.78	1730	2910	< 0.002	< 0.002	0.0235	< 0.002	< 0.001	< 0.002	< 0.002	0.128	< 0.002	0.0567	< 0.0002	< 0.005	< 0.002	< 0.002	0.158	0.51	0.668
	10/13/2016	0.381	395	19.2	0.171	6.95	1830	2640	< 0.002	< 0.002	0.0187	< 0.002	< 0.001	< 0.002	< 0.002	0.171	< 0.002	0.0568	< 0.0002	< 0.005	< 0.002	< 0.002	0.029	0.584	0.613
	12/13/2016	0.403	336	16.4	0.142	6.36	1270	2590	< 0.002	< 0.002	0.0181	< 0.002	< 0.001	< 0.002	< 0.002	0.142	< 0.002	0.0507	< 0.0002	< 0.005	< 0.002	< 0.002	-0.006	-0.155	< 0
	2/10/2017	0.483	297	15.6	0.167	7.08	1950	2220	< 0.002	< 0.002	0.0161	< 0.002	< 0.001	< 0.002	< 0.002	0.167	< 0.002	0.0644	< 0.0002	< 0.005	0.00039	< 0.002	-0.041	0.354	0.354
	4/6/2017	0.449	320	16.8	0.171	6.86	1480	6050	< 0.002	< 0.002	0.016	< 0.002	< 0.001	< 0.002	< 0.002	0.171	< 0.002	0.0554	< 0.0002	< 0.005	< 0.002	< 0.002	0.212	0.128	0.34
	6/15/2017	0.368	339	17.2	0.137	6.8	1630	2350	< 0.002	< 0.002	0.0162	< 0.002	< 0.001	< 0.002	< 0.002	0.137	< 0.002	0.0565	< 0.0002	< 0.005	< 0.002	< 0.002	0.082	1.25	1.33
	8/8/2017	0.422	319	16.2	0.139	6.74	1410	2380	< 0.002	< 0.002	0.0159	< 0.002	< 0.001	< 0.002	< 0.002	0.139	< 0.002	0.062	< 0.0002	< 0.005	< 0.002	< 0.002	0.075	-0.355	0.075
	10/5/2017	0.47	274	13.6	0.138	6.9	1330	2140	< 0.002	< 0.002	0.0192	< 0.002	< 0.001	< 0.002	< 0.002	0.138	< 0.002	0.0556	< 0.0002	< 0.005	< 0.002	< 0.002	0.141	-1.17	0.141
	5/23/2018	0.57	248	14.3	0.227	7.05	1070	1860	-	-	-	-	-	-	-	0.227	-	-	-	-	-	-	-	-	-
	7/11/2018	0.533	-	-	0.181	7.02	-	-	-	-	-	-	-	-	-	0.181	-	-	-	-	-	-	-	-	-
	8/16/2018	0.513	-	-	-	7.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	0.698	209	12.8	0.191	6.99	978	1760	-	-	-	-	-	-	-	0.191	-	-	-	-	-	-	-	-	-
	1/14/2019	0.539	-	-	0.208	6.87	-	-	-	-	-	-	-	-	-	0.208	-	-	-	-	-	-	-	-	-
	3/11/2019	0.47	-	-	0.194	7.07	-	-	-	-	-	-	-	-	-	0.194	-	-	-	-	-	-	-	-	-
	5/23/2019	0.401	355	16.2	0.176	7.03	1520	2460	-	-	-	-	-	-	-	0.176	-	-	-	-	-	-	-	-	-
	11/7/2019	0.458	340	15.7	0.182	6.79	1450	2430	-	-	-	-	-	-	-	0.182	-	-	-	-	-	-	-	-	-
	5/19/2020	0.324	382	19.5	0.169	6.81	1700	2710	< 0.004	< 0.002	0.0166	< 0.002	< 0.001	< 0.01	< 0.01	0.169	< 0.005	0.05	< 0.0002	< 0.005	< 0.002	< 0.002	0.161	2.09	2.25
	11/12/2020	0.456	331	17.1	0.165	7.01	1500	2420	-	-	-	-	-	-	-	0.165	-	-	-	-	-	-	-	-	-
	5/18/2021	0.345	385	19	< 0.64	6.7	1810	2640	-	-	-	-	-	-	-	< 0.64	-	-	-	-	-	-	-	-	-
	11/18/2021	0.348	403	16.1	0.132	6.9	1710	2480	-	-	-	-	-	-	-	0.132	-	-	-	-	-	-	-	-	-
	5/9/2022	0.25	357	48.3	0.16	6.52	1460	2330	-	-	-	-	-	-	-	0.16	-	-	-	-	-	-	-	-	-
	7/19/2022	-	-	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Monitoring Well	Sample Date	Appendix III Constituents							Appendix IV Constituents																
		Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-13	8/17/2022	-	339	53.8	-	-	1440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	0.335	339	46.1	0.14	-	1430	1880	-	-	-	-	-	-	-	0.14	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	41.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	319	35.1	-	-	1210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	0.353	303	31.7	0.148	-	1280	2170	-	-	-	-	-	-	-	0.148	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	24.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	266	26.3	-	-	1010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.413	272	25.5	0.176	-	1110	1960	-	-	-	-	-	-	-	0.176	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.154	-	-	-	< 0.004	< 0.002	0.0173	< 0.002	< 0.001	< 0.01	< 0.002	0.154	< 0.002	0.0534	< 0.0002	< 0.005	< 0.002	< 0.002	0.232	-0.341	0.232
	5/17/2024	0.334	348	28.9	0.179	-	1420	2320	< 0.004	< 0.002	0.0168	-	< 0.001	< 0.01	< 0.002	0.179	< 0.002	0.0571	< 0.0002	< 0.005	< 0.002	-	0.464	0.196	0.66
	11/25/2024	0.378	334	26.3	0.214	-	1460	2370	< 0.004	< 0.002	0.0169	-	< 0.001	< 0.01	< 0.002	0.214	< 0.002	0.0525	< 0.0002	< 0.005	< 0.002	-	-	-	-
MW-14R	6/9/2016	0.629	63.4	4.95	0.265	7.42	75.8	559	< 0.002	< 0.002	0.0448	< 0.002	< 0.001	< 0.002	< 0.002	0.265	< 0.002	0.0429	< 0.0002	< 0.005	< 0.002	< 0.002	0.109	1.4	1.51
	8/11/2016	0.63	60	5.05	0.299	7.26	74.2	607	< 0.002	< 0.002	0.0411	< 0.002	< 0.001	< 0.002	< 0.002	0.299	< 0.002	0.0449	< 0.0002	< 0.005	< 0.002	< 0.002	0.993	0.231	1.224
	10/13/2016	0.463	59.1	4.22	0.215	7.51	40.1	545	< 0.002	< 0.002	0.037	< 0.002	< 0.001	< 0.002	< 0.002	0.215	< 0.002	0.0347	< 0.0002	< 0.005	< 0.002	< 0.002	0.081	1.22	1.3
	12/9/2016	0.427	56.4	3.86	0.178	7.42	34.9	533	< 0.002	< 0.002	0.0374	< 0.002	< 0.001	< 0.002	< 0.002	0.178	< 0.002	0.0326	< 0.0002	< 0.005	< 0.002	< 0.002	0.286	0.348	0.634
	2/9/2017	0.566	57.2	3.98	0.211	7.92	50.4	536	< 0.002	< 0.002	0.041	< 0.002	< 0.001	< 0.002	< 0.002	0.211	< 0.002	0.0421	< 0.0002	< 0.005	< 0.002	< 0.002	0.229	0.05	0.279
	4/7/2017	0.526	57.4	4.11	0.201	7.34	44.3	530	< 0.002	< 0.002	0.0376	< 0.002	< 0.001	< 0.002	< 0.002	0.201	< 0.002	0.0393	< 0.0002	< 0.005	< 0.002	< 0.002	-0.027	0.762	0.762
	6/15/2017	0.488	57	4.25	0.237	7.19	44.2	499	< 0.002	< 0.002	0.0411	< 0.002	< 0.001	< 0.002	< 0.002	0.237	< 0.002	0.0401	< 0.0002	< 0.005	< 0.002	< 0.002	0.198	0.375	0.573
	8/10/2017	0.537	58	4.38	0.239	7.01	44	521	< 0.002	< 0.002	0.0394	< 0.002	< 0.001	< 0.002	< 0.002	0.239	< 0.002	0.0372	< 0.0002	< 0.005	< 0.002	< 0.002	0.413	1.13	1.54
	10/5/2017	0.42	61.5	4.12	0.169	7.63	40.7	529	< 0.002	< 0.002	0.0436	< 0.002	< 0.001	< 0.002	< 0.002	0.169	< 0.002	0.0346	< 0.0002	< 0.005	< 0.002	< 0.002	0.061	1.06	1.12
	5/23/2018	0.682	56.9	5.17	0.287	7.45	54.5	548	-	-	-	-	-	-	-	0.287	-	-	-	-	-	-	-	-	-
	11/30/2018	0.812	59	5.69	0.231	7.18	65.4	563	-	-	-	-	-	-	-	0.231	-	-	-	-	-	-	-	-	-
	1/14/2019	0.859	-	5.96	-	7.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	0.591	-	4.44	-	7.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.669	55.2	5.33	0.265	7.35	54.5	563	-	-	-	-	-	-	-	0.265	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	6.14	-	7.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	6.08	-	7.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	0.807	55.8	5.77	0.303	7.2	59.7	509	-	-	-	-	-	-	-	0.303	-	-	-	-	-	-	-	-	-
	5/19/2020	0.688	53.9	6.21	0.329	7.35	60.5	579	< 0.002	< 0.002	0.0423	< 0.002	< 0.001	< 0.01	< 0.01	0.329	< 0.005	0.0385	< 0.0002	< 0.005	< 0.002	< 0.002	0.0956	0.849	0.945
	7/14/2020	-	-	6.38	0.336	7.54	-	-	-	-	-	-	-	-	-	0.336	-	-	-	-	-	-	-	-	-
	8/27/2020	-	-	6.25	0.312	7.07	-	-	-	-	-	-	-	-	-	0.312	-	-	-	-	-	-	-	-	-
	11/12/2020	0.805	52.7	6.69	0.316	7.01	61.6	555	-	-	-	-	-	-	-	0.316	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	6.56	0.291	-	-	-	-	-	-	-	-	-	-	0.291	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	5.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	0.746	54.7	6.47	0.33	7.42	60.8	543	-	-	-	-	-	-	-	0.33	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	6.15	0.302	-	-	-	-	-	-	-	-	-	-	0.302	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	6.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	0.81	52.2	7.04	0.294	7.39	63.1	535	-	-	-	-	-	-	-	0.294	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	6.39	-	7.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	5.97	-	7.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	0.73	52	6.43	0.313	7.28	61.7	532	-	-	-	-	-	-	-	0.313	-	-	-	-	-	-	-	-	-
	11/9/2022	0.832	48.3	6.68	0.373	-	68.5	543	-	-	-	-	-	-	-	0.373	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	-	0.342	-	-	-	-	-	-	-	-	-	-	0.342	-	-	-	-	-	-	-	-	-
	5/17/2023	0.851	50.5	7.13	0.308	-	66.1	530	-	-	-	-	-	-	-	0.308	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	6.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	49.3	6.67	-	-	56.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.829	51.1	7.11	0.312	-	63.3	559	-	-	-	-	-	-	-	0.312	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.38	-	-	-	< 0.004	0.000329	0.0401	< 0.002	< 0.001	< 0.01	0.0000814	0.38	< 0.002	0.0458	< 0.0002	0.00191	< 0.002	< 0.002	0.226	0.736	0.961
	5/17/2024	0.754	50.2	6.6	0.397	-	57.4	550	< 0.004	< 0.002	0.0403	-	< 0.001	< 0.01	< 0.002	0.397	< 0.002	0.0419	< 0.0002	< 0.005	< 0.002	-	0.345	0.26	0.605
	11/25/2024	0.826	50.6	7.46	0.402	-	64.8	578	< 0.004	< 0.002	0.0383	-	< 0.001	< 0.01	< 0.002	0.402	< 0.002	0.0395	< 0.0002	< 0.005	< 0.002	-	0.18	0.555	0.735
MW-15	6/9/2016	0.282	106	14.4	0.257	7.31	200	751	< 0.002	< 0.002	0.0472	< 0.002	< 0.001	< 0.002	< 0.002	0.257	< 0.002	0.0271	< 0.0002	< 0.005	< 0.002	< 0.002	0.185	1.61	1.8
	8/9/2016	0.255	95.2	15.8	0.22	7.23	219	777	< 0.002	< 0.002	0.0476	< 0.002	< 0.001	< 0.002	< 0.002	0.22	< 0.002	0.0231	< 0.0002	< 0.005	< 0.002	< 0.002	0.47	0.521	0.991
	10/12/2016	0.252	103	12.9	0.232	7.28	200	772	< 0.002	< 0.002	0.0466	< 0.002	< 0.001	< 0.002	< 0.002	0.232	< 0.002	0.0263	< 0.0002	< 0.005	< 0.002	< 0.002	0.289	1.68	1.97
	12/7/2016	0.237	105	16.5	0.262	7.02	224	767	< 0.002	< 0.002	0.0556	< 0.002	< 0.001	< 0.002	< 0.002	0.262	< 0.002	0.0242	< 0.0002	< 0.005	< 0.002	< 0.002	0.112	1.65	1.76
	2/7/2017	0.285	109	20.2	0.258	7.28	270	2310	< 0.002	< 0.002	0.0527	< 0.002	< 0.001	< 0.002	< 0.002	0.258	< 0.002	0.0269	< 0.0002	< 0.005	< 0.002	< 0.002	0.775	1.66	1.6
	4/5/2017	0.261	98.9	19.3	0.235	11.38	221	803	< 0.002	< 0.002	0.05	< 0.002	< 0.001	< 0.002	< 0.002	0.235	< 0.002	0.0237	< 0.0002	< 0.005	< 0.002	< 0.002	0.072	2.05	2.12
	6/14/2017	0.24	105	18.5	0.304	7.34	212	808	< 0.002	< 0.002	0.0546	< 0.002	< 0.001	< 0.002	< 0.002	0.304	< 0.002	0.0211	< 0.0002	< 0.005	< 0.002	< 0.002	0.056	0.946	1
	8/10/2017	0.251	102	17.4	0.28	7.02	228	775	< 0.002	< 0.002	0.0515	< 0.002	< 0.001	< 0.002	< 0.002	0.28	< 0.002	< 0.015	< 0.0002	0.00876	< 0.002	< 0.002	0.168	0.016	0.184

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-15	10/3/2017	0.225	108	17.5	0.244	6.95	222	815	< 0.002	< 0.002	0.0541	< 0.002	< 0.001	< 0.002	< 0.002	0.244	< 0.002	0.0209	< 0.0002	< 0.005	< 0.002	< 0.002	0.172	1.47	1.64
	1/9/2018	-	-	-	-	7.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	0.27	105	15.2	0.283	7.1	209	757	-	-	-	-	-	-	-	0.283	-	-	-	-	-	-	-	-	-
	11/30/2018	0.305	105	12.9	0.206	7.05	191	709	-	-	-	-	-	-	-	0.206	-	-	-	-	-	-	-	-	-
	1/14/2019	0.288	-	-	-	7.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.228	102	12	0.251	7.14	189	748	-	-	-	-	-	-	-	0.251	-	-	-	-	-	-	-	-	-
	11/7/2019	0.282	104	11.3	0.25	7.03	175	692	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-
	5/19/2020	0.209	99.3	10.8	0.284	7.25	182	734	< 0.004	< 0.002	0.0425	< 0.002	< 0.001	< 0.01	< 0.01	0.284	< 0.005	0.021	< 0.0002	< 0.005	< 0.002	< 0.002	0.56	1.18	1.74
	11/12/2020	0.235	102	10.8	0.248	6.95	191	713	-	-	-	-	-	-	-	0.248	-	-	-	-	-	-	-	-	-
	5/18/2021	0.237	102	12.6	0.285	7.32	203	740	-	-	-	-	-	-	-	0.285	-	-	-	-	-	-	-	-	-
	11/18/2021	0.245	104	11.7	0.22	7.25	193	740	-	-	-	-	-	-	-	0.22	-	-	-	-	-	-	-	-	-
	5/9/2022	0.225	95.6	10.9	0.267	7.06	189	688	-	-	-	-	-	-	-	0.267	-	-	-	-	-	-	-	-	-
	11/9/2022	0.255	97.4	10.2	0.297	-	200	703	-	-	-	-	-	-	-	0.297	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	-	0.267	-	-	-	-	-	-	-	-	-	-	0.267	-	-	-	-	-	-	-	-	-
	5/17/2023	0.228	100	10.8	0.249	-	188	705	-	-	-	-	-	-	-	0.249	-	-	-	-	-	-	-	-	-
	11/17/2023	0.246	102	10.5	0.25	-	186	716	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.306	-	-	-	< 0.004	0.00024	0.0437	< 0.002	< 0.001	< 0.01	< 0.002	0.306	< 0.002	0.0261	< 0.0002	0.00143	< 0.002	< 0.002	0.172	0.622	0.795
	5/17/2024	0.221	96.9	10.8	0.296	-	189	732	< 0.004	< 0.002	0.0449	-	< 0.001	< 0.01	< 0.002	0.296	< 0.002	0.0254	< 0.0002	< 0.005	< 0.002	-	0.235	0.861	1.1
	11/25/2024	0.235	105	10.7	0.314	-	207	772	< 0.004	< 0.002	0.0408	-	< 0.001	< 0.01	< 0.002	0.314	< 0.002	0.0208	< 0.0002	< 0.005	< 0.002	-	0.336	0.616	0.951
MW-601	6/9/2016	1.79	21.7	161	1.63	7.66	< 5	956	< 0.002	< 0.002	0.134	< 0.002	< 0.001	< 0.002	< 0.002	1.63	< 0.002	0.0712	< 0.0002	< 0.005	< 0.002	< 0.002	0.199	0.368	0.567
	8/9/2016	1.91	20.3	161	1.69	7.72	< 5	922	< 0.002	< 0.002	0.12	< 0.002	< 0.001	< 0.002	< 0.002	1.69	< 0.002	0.0727	< 0.0002	< 0.005	< 0.002	< 0.002	0.115	0.345	0.46
	10/13/2016	1.81	23.9	201	1.68	7.71	< 5	1000	< 0.002	< 0.002	0.117	< 0.002	< 0.001	< 0.002	< 0.002	1.68	< 0.002	0.0725	< 0.0002	< 0.005	< 0.002	< 0.002	0.255	0.443	0.698
	12/7/2016	1.92	22.5	169	1.81	7.61	< 5	908	< 0.002	< 0.002	0.13	< 0.002	< 0.001	< 0.002	< 0.002	1.81	< 0.002	0.0747	< 0.0002	< 0.005	< 0.002	< 0.002	0.16	-0.116	0.16
	2/8/2017	1.88	20.1	168	1.75	8.6	< 5	974	< 0.002	< 0.002	0.135	< 0.002	< 0.001	< 0.002	< 0.002	1.75	< 0.002	0.0782	0.00024	< 0.005	< 0.002	< 0.002	0.216	-0.051	0.944
	4/6/2017	1.89	21.3	156	1.59	7.61	< 5	890	< 0.002	< 0.002	0.122	< 0.002	< 0.001	< 0.002	< 0.002	1.59	< 0.002	0.0746	< 0.0002	< 0.005	< 0.002	< 0.002	0.205	0.762	0.967
	6/15/2017	1.85	22	167	1.63	7.62	< 5	916	< 0.002	< 0.002	0.123	< 0.002	< 0.001	< 0.002	< 0.002	1.63	< 0.002	0.0778	< 0.0002	< 0.005	< 0.002	< 0.002	0.088	-0.071	0.088
	8/9/2017	1.9	20.9	168	1.8	7.72	< 5	1040	< 0.002	< 0.002	0.125	< 0.002	< 0.001	< 0.002	< 0.002	1.8	< 0.002	0.083	< 0.0002	< 0.005	< 0.002	< 0.002	0.279	0.568	0.847
	10/6/2017	1.83	21.1	166	1.26	7.53	< 5	948	< 0.002	< 0.002	0.132	< 0.002	< 0.001	< 0.002	< 0.002	1.26	< 0.002	0.0737	< 0.0002	< 0.005	< 0.002	< 0.002	0.099	0.244	0.343
	1/9/2018	-	-	-	-	7.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	1.88	17.6	160	1.73	7.56	< 5	894	-	-	-	-	-	-	-	1.73	-	-	-	-	-	-	-	-	-
	7/11/2018	-	-	-	-	7.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	-	-	-	-	7.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	1.85	17.5	160	1.54	7.58	5.98	924	-	-	-	-	-	-	-	1.54	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	-	7.63	5.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	-	-	-	7.64	5.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	1.85	17.7	162	1.48	7.65	6.76	1000	-	-	-	-	-	-	-	1.48	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	7.95	5.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	-	-	7.66	6.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	1.82	17.2	164	1.55	7.72	6.33	900	-	-	-	-	-	-	-	1.55	-	-	-	-	-	-	-	-	-
	5/19/2020	1.8	17.1	161	1.72	7.63	6.07	986	< 0.004	< 0.002	0.136	< 0.002	0.00146	< 0.01	< 0.01	1.72	< 0.005	0.0598	< 0.0002	< 0.005	< 0.002	< 0.002	0.216	0.113	0.329
	11/12/2020	1.82	17.7	172	1.67	7.29	8.78	960	-	-	-	-	-	-	-	1.67	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	8.14	9.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	6.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	1.83	16.7	169	1.73	7.66	7.04	952	-	-	-	-	-	-	-	1.73	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	7.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	4.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	1.83	17.2	166	1.61	7.5	6.77	890	-	-	-	-	-	-	-	1.61	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	7.63	7.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	-	-	7.6	6.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	1.85	16.6	167	1.64	7.57	6.41	882	-	-	-	-	-	-	-	1.64	-	-	-	-	-	-	-	-	-
	11/9/2022	1.83	16.8	169	1.41	-	7.35	902	-	-	-	-	-	-	-	1.41	-	-	-	-	-	-	-	-	-
	5/17/2023	1.88	15.9	163	1.61	-	8.77	940	-	-	-	-	-	-	-	1.61	-	-	-	-	-	-	-	-	-
	11/17/2023	1.86	16	168	1.71	-	7.24	926	-	-	-	-	-	-	-	1.71	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.0669	-	-	-	< 0.004	0.000215	0.132	< 0.002	< 0.001	< 0.01	0.00021	0.0669	< 0.002	0.0701	< 0.0002	0.002	< 0.002	< 0.002	0.103	0.3	0.403
	5/17/2024	1.85	14.3	165	1.6	-	6.04	926	< 0.004	< 0.002	0.128	-	< 0.001	< 0.01	< 0.002	1.6	< 0.002	0.0691	< 0.0002	< 0.005	< 0.002	-	0.217	0.389	0.606
	11/25/2024	1.85	15.1	323	1.78	-	6.43	994	< 0.004	< 0.002	0.13	-	< 0.001	< 0.01	< 0.002	1.78	< 0.002	0.0649	< 0.0002	< 0.005	< 0.002	-	0.127	0.395	0.522
MW-602	6/10/2016	2.28	24.7	16.9	1.21	7.01	25.1	618	< 0.002	< 0.002	0.101	< 0.002	< 0.001	< 0.002	< 0.002	1.21	< 0.002	0.0628	< 0.0002	< 0.005	< 0.002	< 0.002	-0.02	0.014	0.014
	8/9/2016	2.39	23.3	17.3	1.27	7.64	25.2	600	< 0.002	< 0.002	0.0927	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0587	< 0.0002	< 0.005	< 0.002	< 0.002	0.123	-0.234	0.123

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
	10/13/2016	2.39	25.7	16.8	1.3	7.34	23.4	667	< 0.002	< 0.002	0.0906	< 0.002	< 0.001	< 0.002	< 0.002	1.3	< 0.002	0.0615	< 0.0002	< 0.005	< 0.002	< 0.002	0.125	0.771	0.896
	12/9/2016	2.34	25.3	16.4	1.16	8.15	24.2	614	< 0.002	< 0.002	0.0913	< 0.002	< 0.001	< 0.002	< 0.002	1.16	< 0.002	0.0533	< 0.0002	< 0.005	< 0.002	< 0.002	-0.169	0.65	0.65
	2/8/2017	2.41	24	17.6	1.24	8.36	27.5	606	< 0.002	< 0.002	0.0956	< 0.002	< 0.001	< 0.002	< 0.002	1.24	< 0.002	0.063	< 0.0002	< 0.005	< 0.002	< 0.002	0.105	-0.223	0.936
	4/7/2017	2.44	24.9	17.2	1.18	7.51	23.8	555	< 0.002	< 0.002	0.0921	< 0.002	< 0.001	< 0.002	< 0.002	1.18	< 0.002	0.0624	< 0.0002	< 0.005	< 0.002	< 0.002	0.715	0.549	1.26
	6/15/2017	2.41	23.2	17.2	1.2	7.77	24.4	607	< 0.002	< 0.002	0.094	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0652	< 0.0002	< 0.005	< 0.002	< 0.002	-0.008	-0.105	0
	8/10/2017	2.45	23.3	17.8	1.36	7.56	24.8	604	< 0.002	< 0.002	0.0883	< 0.002	< 0.001	< 0.002	< 0.002	1.36	< 0.002	0.0662	< 0.0002	< 0.005	< 0.002	< 0.002	-0.008	-0.061	0
	10/5/2017	2.31	25.3	17.9	0.972	7.78	26.9	607	< 0.002	< 0.002	0.101	< 0.002	< 0.001	< 0.002	< 0.002	0.972	< 0.002	0.0612	< 0.0002	< 0.005	< 0.002	< 0.002	-0.244	1.77	1.77
	5/23/2018	2.39	22.9	17.6	1.27	7.54	23.9	592	-	-	-	-	-	-	-	1.27	-	-	-	-	-	-	-	-	-
	11/30/2018	2.32	23.7	16.5	1.09	7.42	24.2	579	-	-	-	-	-	-	-	1.09	-	-	-	-	-	-	-	-	-
	5/23/2019	2.35	23.1	16.9	1.06	7.45	24.2	615	-	-	-	-	-	-	-	1.06	-	-	-	-	-	-	-	-	-
	11/7/2019	2.3	24.9	16.6	1.07	7.44	24.5	569	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
MW-602	5/19/2020	2.28	23.8	17.1	1.24	7.6	25.7	611	< 0.004	< 0.002	0.105	< 0.002	< 0.001	< 0.01	< 0.01	1.24	< 0.005	0.0523	< 0.0002	< 0.005	< 0.002	< 0.002	-0.079	-0.644	< 0
	11/12/2020	2.29	23.4	17.7	1.25	7.13	28.1	593	-	-	-	-	-	-	-	1.25	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	2.27	23.5	16.8	1.23	7.66	26.2	578	-	-	-	-	-	-	-	1.23	-	-	-	-	-	-	-	-	-
	11/18/2021	2.29	23.2	17.1	1.14	7.27	25.9	592	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	5/9/2022	2.22	21.6	16.5	1.14	7.5	26.6	< 10	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	11/9/2022	2.27	22.2	15.8	1.1	-	26.8	571	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
	5/17/2023	2.32	22.6	16.4	1.22	-	26.9	579	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	11/17/2023	2.27	22	16.8	1.22	-	25.9	577	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.18	-	-	-	< 0.004	0.000194	0.101	< 0.002	< 0.001	0.00176	0.000227	1.18	< 0.002	0.0561	< 0.0002	0.00181	< 0.002	< 0.002	0.567	0.133	0.7
	5/17/2024	2.24	21.4	15.7	1.35	-	25.5	578	< 0.004	< 0.002	0.0994	-	< 0.001	< 0.01	< 0.002	1.35	< 0.002	0.0569	< 0.0002	< 0.005	< 0.002	-	0.0798	0.835	0.914
	11/25/2024	2.24	22.2	16.5	1.29	-	27.3	606	< 0.004	< 0.002	0.098	-	< 0.001	< 0.01	< 0.002	1.29	< 0.002	0.0535	< 0.0002	< 0.005	< 0.002	-	0.0957	0.0504	0.146
	6/7/2016	1.07	39.6	56.5	0.717	7.63	76.9	595	< 0.002	< 0.002	0.149	< 0.002	< 0.001	< 0.002	< 0.002	0.717	< 0.002	0.0375	< 0.0002	0.00519	< 0.002	< 0.002	0.227	0.018	0.245
	8/9/2016	1.06	35.3	50.6	0.719	7.54	81.1	587	< 0.002	< 0.002	0.144	< 0.002	< 0.001	< 0.002	< 0.002	0.719	< 0.002	0.0314	< 0.0002	< 0.005	< 0.002	< 0.002	0.206	0.009	0.215
	10/11/2016	1.04	37.2	49.1	0.751	7.67	80.3	619	< 0.002	< 0.002	0.159	< 0.002	< 0.001	< 0.002	< 0.002	0.751	< 0.002	0.0374	< 0.0002	< 0.005	< 0.002	< 0.002	0.152	1.24	1.39
	12/9/2016	1.07	37.2	52.2	0.816	7.63	80.9	658	< 0.002	< 0.002	0.168	< 0.002	< 0.001	< 0.002	< 0.002	0.816	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	< 0.002	0.248	0.486	0.734
	2/7/2017	1.05	37.4	49.2	0.679	7.94	89.8	631	< 0.002	< 0.002	0.181	< 0.002	< 0.001	< 0.002	< 0.002	0.679	< 0.002	0.0397	< 0.0002	< 0.005	< 0.002	< 0.002	0.209	0.075	0.284
	4/4/2017	1.06	36.3	55.3	0.79	7.62	83.8	607	< 0.002	< 0.002	0.186	< 0.002	< 0.001	< 0.002	< 0.002	0.79	< 0.002	0.0399	< 0.0002	< 0.005	< 0.002	< 0.002	0.268	0.103	0.371
	6/13/2017	1.01	36.1	54.1	0.692	7.07	80.6	612	< 0.002	< 0.002	0.172	< 0.002	< 0.001	< 0.002	< 0.002	0.692	< 0.002	0.0403	< 0.0002	< 0.005	< 0.002	< 0.002	0.206	0.75	0.956
	8/9/2017	1.07	36.3	53.5	0.857	7.97	80.8	613	< 0.002	< 0.002	0.19	< 0.002	< 0.001	< 0.002	< 0.002	0.857	0.00209	0.0451	< 0.0002	< 0.005	< 0.002	< 0.002	0.178	2.11	2.29
	10/3/2017	1.09	36.1	51.5	0.798	7.49	80.6	595	< 0.002	< 0.002	0.19	< 0.002	< 0.001	< 0.002	< 0.002	0.798	< 0.002	0.0429	< 0.0002	< 0.005	< 0.002	< 0.002	0.303	0.944	1.25
	5/24/2018	1.06	39.5	53	0.785	7.6	78.6	599	-	-	1.06	-	-	-	-	0.785	-	-	-	-	-	-	-	-	-
	12/3/2018	0.979	44.8	49.4	0.642	7.52	79.1	569	-	-	-	-	-	-	-	0.642	-	-	-	-	-	-	-	-	-
	1/15/2019	-	40.2	-	-	7.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	44.2	-	-	7.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.992	41.6	48.6	0.603	7.12	78.8	582	-	-	-	-	-	-	-	0.603	-	-	-	-	-	-	-	-	-
	7/17/2019	-	45	-	-	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	39.9	-	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	0.952	40.4	46.2	0.703	7.45	83.7	521	-	-	-	-	-	-	-	0.703	-	-	-	-	-	-	-	-	-
MW-701	5/19/2020	0.913	44.7	48.3	0.63	7.53	84	545	< 0.004	< 0.002	0.201	< 0.002	< 0.001	< 0.01	< 0.01	0.63	< 0.005	0.0362	< 0.0002	< 0.005	< 0.002	< 0.002	0.4	1.68	2.08
	7/14/2020	-	41.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	0.92	45.4	49.1	0.607	7.65	86.2	569	-	-	-	-	-	-	-	0.607	-	-	-	-	-	-	-	-	-
	2/4/2021	-	43.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	0.931	43	48.2	0.641	7.83	86.2	561	-	-	-	-	-	-	-	0.641	-	-	-	-	-	-	-	-	-
	11/18/2021	0.907	45.3	47.4	0.589	7.45	86.3	534	-	-	-	-	-	-	-	0.589	-	-	-	-	-	-	-	-	-
	1/27/2022	-	42.9	-	-	7.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	0.883	41.6	48.5	0.574	-	89.1	542	-	-	-	-	-	-	-	0.574	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	-	-	-	90.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	42	48.6	-	-	84.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	0.905	42.4	46.4	0.594	-	87.8	545	-	-	-	-	-	-	-	0.594	-	-	-	-	-	-	-	-	-
	2/8/2023	-	45.4	45.7	-	-	83.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	0.883	43.5	45.5	0.528	-	92.2	559	-	-	-	-	-	-	-	0.528	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	-	-	-	78.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.927	45.3	48.7	0.64	-	83	576	-	-	-	-	-	-	-	0.64	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.666	-	-	-	< 0.004	0.000744	0.209	< 0.002	< 0.001	< 0.01	0.000147	0.666	< 0.002	0.0422	< 0.0002	0.00272	< 0.002	< 0.002	0.448	0.41	0.857
	5/17/2024	0.902	42.1	45.5	0.612	-	80	571	< 0.004	< 0.002	0.211	-	< 0.001	< 0.01	< 0.002	0.612	< 0.002	0.0438	< 0.0002	< 0.005	< 0.002	-	0.605	1.17	1.77
	11/25/2024	0.886	45.4	45.8	0.651	-	88.9	578	< 0.004	< 0.002	0.189	-	< 0.001	< 0.01	< 0.002	0.651	< 0.002	0.0417	< 0.0002	< 0.005	< 0.002	-	0.706	0.564	1.27

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-702	6/8/2016	**1.67**	**17.3**	**44.9**	**1.6**	**8.86**	**5.73**	**629**	< 0.002	< 0.002	**0.242**	< 0.002	< 0.001	< 0.002	< 0.002	**1.6**	< 0.002	**0.213**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.414**	**0.51**	**0.924**
	8/9/2016	**1.62**	**11.2**	**41.7**	**1.44**	**9.12**	**5.46**	**619**	< 0.002	< 0.002	**0.232**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.251**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.462**	**1.23**	**1.692**
	10/11/2016	**1.64**	**14.9**	**41.8**	**1.37**	**8.25**	< 5	**747**	< 0.002	< 0.002	**0.199**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.278**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.346**	**0.713**	**1.06**
	12/8/2016	**1.81**	**19.4**	**46.7**	**1.39**	**8.07**	< 5	**783**	< 0.002	< 0.002	**0.376**	< 0.002	< 0.001	< 0.002	< 0.002	**1.39**	< 0.002	**0.0671**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.522**	**-0.369**	**0.522**
	2/8/2017	**1.87**	**18.1**	**48.4**	**1.46**	**8.09**	< 5	**657**	< 0.002	< 0.002	**0.396**	< 0.002	< 0.001	< 0.002	< 0.002	**1.46**	< 0.002	**0.0655**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.261**	**0.762**	**1.02**
	4/5/2017	**1.95**	**18.5**	**48.4**	**1.5**	**8.52**	< 5	**680**	< 0.002	< 0.002	**0.373**	< 0.002	< 0.001	< 0.002	< 0.002	**1.5**	< 0.002	**0.0841**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.331**	**-0.525**	**0.331**
	6/15/2017	**1.8**	**15.1**	**46.2**	**1.32**	**7.84**	< 5	**648**	< 0.002	< 0.002	**0.302**	< 0.002	< 0.001	< 0.002	< 0.002	**1.32**	< 0.002	**0.174**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.441**	**0.164**	**0.605**
	8/9/2017	**1.87**	**20.3**	**48.1**	**1.41**	**7.87**	< 5	**692**	< 0.002	< 0.002	**0.403**	< 0.002	< 0.001	< 0.002	< 0.002	**1.41**	< 0.002	**0.097**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.368**	**1.09**	**1.46**
	10/3/2017	**1.94**	**18.3**	**48.5**	**1.53**	**7.6**	< 5	**680**	< 0.002	< 0.002	**0.408**	< 0.002	< 0.001	< 0.002	< 0.002	**1.53**	< 0.002	**0.0735**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.337**	**0.602**	**0.939**
	5/24/2018	**1.74**	**7.13**	**45.8**	**1.5**	**8.26**	< 5	**590**	-	-	-	-	-	-	-	**1.5**	-	-	-	-	-	-	-	-	-
	12/3/2018	**1.47**	**3.24**	**40.9**	**1.63**	**8.49**	< 5	**423**	-	-	-	-	-	-	-	**1.63**	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	**1.2**	**7.95**	-	-	-	-	-	-	-	-	-	**1.2**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.55**	**5.7**	**41.8**	**1.21**	**8.82**	< 5	**530**	-	-	-	-	-	-	-	**1.21**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.41**	**2.73**	**40.7**	**1.58**	**8.75**	< 5	**193**	-	-	-	-	-	-	-	**1.58**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.34**	**3.33**	**38**	**1.19**	**8.92**	< 5	**406**	< 0.004	< 0.002	**0.133**	< 0.002	< 0.001	< 0.01	< 0.01	**1.19**	< 0.005	**0.118**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.5**	**-0.673**	**0.5**
	11/12/2020	**1.53**	**3.6**	**39.4**	**1.19**	**8.95**	**1.64**	**563**	-	-	-	-	-	-	-	**1.19**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.58**	**5.07**	**41**	**1.09**	**9.51**	**1.85**	**527**	-	-	-	-	-	-	-	**1.09**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.53**	**4.61**	**42.2**	**1.19**	**8.15**	**1.97**	**541**	-	-	-	-	-	-	-	**1.19**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.74**	**12.1**	**47.8**	**1.27**	-	**0.808**	**601**	-	-	-	-	-	-	-	**1.27**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.79**	**14.6**	**47.2**	**1.26**	-	**1.47**	**620**	-	-	-	-	-	-	-	**1.26**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.82**	**18.3**	**45.7**	**1.16**	-	< 5	**643**	-	-	-	-	-	-	-	**1.16**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.8**	**16.6**	**47.7**	**1.48**	-	**2.34**	**652**	-	-	-	-	-	-	-	**1.48**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.42**	-	-	-	< 0.004	**0.00082**	**0.59**	< 0.002	< 0.001	< 0.01	**0.0000889**	**1.42**	< 0.002	**0.0618**	< 0.0002	**0.00135**	< 0.002	< 0.002	**0.602**	**0.412**	**1.01**
	5/17/2024	**1.82**	**16**	**47.2**	**1.42**	-	< 5	**653**	< 0.004	< 0.002	**0.529**	-	< 0.001	< 0.01	< 0.002	**1.42**	< 0.002	**0.0597**	< 0.0002	< 0.005	< 0.002	-	**0.945**	**1.79**	**2.73**
	11/25/2024	**1.81**	**16.9**	**47.7**	**1.55**	-	< 5	**679**	< 0.004	< 0.002	**0.551**	-	< 0.001	< 0.01	< 0.002	**1.55**	< 0.002	**0.0573**	< 0.0002	< 0.005	< 0.002	-	**0.618**	**0.323**	**0.941**
MW-703	6/7/2016	**1.86**	**22**	**103**	**1.37**	**7.63**	< 5	**952**	< 0.002	**0.00301**	**0.292**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.0718**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.36**	**-0.212**	**1.36**
	8/9/2016	**1.93**	**17.9**	**106**	**1.44**	**7.65**	< 5	**890**	< 0.002	< 0.002	**0.273**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.0623**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.37**	**0.533**	**1.903**
	10/11/2016	**1.88**	**20.5**	**105**	**1.45**	**7.59**	< 5	**902**	< 0.002	< 0.002	**0.259**	< 0.002	< 0.001	< 0.002	< 0.002	**1.45**	< 0.002	**0.0656**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.19**	**-0.038**	**1.19**
	12/9/2016	**1.93**	**19.8**	**107**	**1.55**	**8**	< 5	**982**	< 0.002	< 0.002	**0.27**	< 0.002	< 0.001	< 0.002	< 0.002	**1.55**	< 0.002	**0.0671**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.16**	**3.32**	**4.48**
	2/7/2017	**1.91**	**17.7**	**109**	**1.44**	**7.76**	< 5	**918**	< 0.002	< 0.002	**0.271**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.0721**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.88**	**-0.175**	**2.11**
	4/4/2017	**1.9**	**22.4**	**115**	**1.4**	**7.64**	< 5	**926**	< 0.002	< 0.002	**0.299**	< 0.002	< 0.001	< 0.002	< 0.002	**1.4**	< 0.002	**0.0626**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.16**	**0.142**	**1.3**
	6/14/2017	**1.81**	**17.4**	**102**	**1.45**	**7.62**	< 5	**908**	< 0.002	< 0.002	**0.255**	< 0.002	< 0.001	< 0.002	< 0.002	**1.45**	< 0.002	**0.0742**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.971**	**0.08**	**1.05**
	8/10/2017	**1.87**	**17.5**	**22.3**	**1.58**	**7.47**	< 5	**982**	< 0.002	< 0.002	**0.251**	< 0.002	< 0.001	< 0.002	< 0.002	**1.58**	< 0.002	**0.0684**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.47**	**0.412**	**1.88**
	10/5/2017	**1.88**	**21.6**	**111**	**1.37**	**7.58**	< 5	**930**	< 0.002	< 0.002	**0.29**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.0689**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.09**	**1.5**	**2.59**
	5/24/2018	**1.9**	**21.8**	**108**	**1.49**	**7.6**	< 5	**918**	-	-	-	-	-	-	-	**1.49**	-	-	-	-	-	-	-	-	-
	12/3/2018	**1.87**	**17.7**	**106**	**1.52**	**7.46**	< 5	**892**	-	-	-	-	-	-	-	**1.52**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.86**	**19.3**	**109**	**1.34**	**7.5**	< 5	**910**	-	-	-	-	-	-	-	**1.34**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.82**	**17.6**	**111**	**1.56**	**7.63**	< 5	**866**	-	-	-	-	-	-	-	**1.56**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.78**	**18.5**	**107**	**1.41**	**7.44**	< 5	**823**	< 0.004	< 0.002	**0.275**	< 0.002	< 0.001	< 0.01	< 0.01	**1.41**	< 0.005	**0.0596**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.33**	**-1.18**	**1.33**
	11/12/2020	**1.83**	**18.4**	**109**	**1.61**	**7.27**	< 5	**934**	-	-	-	-	-	-	-	**1.61**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	**1.51**	**7.37**	-	-	-	-	-	-	-	-	-	**1.51**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.79**	**19**	**108**	**1.3**	**7.87**	**0.657**	**870**	-	-	-	-	-	-	-	**1.3**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.79**	**17.8**	**114**	**1.46**	**7.38**	< 5	**840**	-	-	-	-	-	-	-	**1.46**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.79**	**19.8**	**111**	**1.42**	-	**0.784**	**865**	-	-	-	-	-	-	-	**1.42**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.81**	**18.6**	**111**	**1.31**	-	**1.24**	**870**	-	-	-	-	-	-	-	**1.31**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.81**	**17.9**	**109**	**1.2**	-	< 5	**876**	-	-	-	-	-	-	-	**1.2**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.74**	**18**	**90.6**	**1.41**	-	**25**	**856**	-	-	-	-	-	-	-	**1.41**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.32**	-	-	-	< 0.004	**0.000404**	**0.262**	< 0.002	< 0.001	< 0.01	**0.0000658**	**1.32**	< 0.002	**0.0606**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.91**	**0.579**	**2.49**
	5/17/2024	**1.62**	**19.1**	**72.4**	**1.2**	-	**48.4**	**854**	< 0.004	< 0.002	**0.264**	-	< 0.001	< 0.01	< 0.002	**1.2**	< 0.002	**0.0582**	< 0.0002	< 0.005	< 0.002	-	**1.22**	**0.652**	**1.87**
	11/25/2024	**1.48**	**26.5**	**54.6**	**1.15**	-	**56.5**	**866**	< 0.004	< 0.002	**0.295**	-	< 0.001	< 0.01	< 0.002	**1.15**	< 0.002	**0.0518**	< 0.0002	< 0.005	< 0.002	-	**2.08**	**0.907**	**2.98**
MW-704	6/7/2016	**2.03**	**35.1**	**82.5**	**0.852**	**7.74**	**203**	**1250**	**0.012**	**0.00301**	**0.113**	< 0.002	< 0.001	< 0.002	< 0.002	**0.852**	< 0.002	**0.0938**	< 0.0002	**0.0191**	< 0.002	< 0.002	**0.443**	**0.543**	**0.986**
	8/9/2016	**2.13**	**28.9**	**83.4**	**0.874**	**7.65**	**194**	**1220**	**0.0115**	< 0.002	**0.104**	< 0.002	< 0.001	< 0.002	< 0.002	**0.874**	< 0.002	**0.0867**	< 0.0002	**0.0143**	< 0.002	< 0.002	**0.27**	**0.554**	**0.824**
	10/11/2016	**2.08**	**32.9**	**80.8**	**0.865**	**7.71**	**180**	**1240**	**0.0112**	< 0.002	**0.0776**	< 0.002	< 0.001	< 0.002	< 0.002	**0.865**	< 0.002	**0.0953**	< 0.0002	**0.0128**	< 0.002	< 0.002	**0.208**	**1.24**	**1.45**
	12/6/2016	**2.09**	**32**	**82.9**	**0.939**	**7.66**	**185**	**1210**	**0.00867**	< 0.002	**0.0844**	< 0.002	< 0.001	< 0.002	< 0.002	**0.939**	< 0.002	**0.0974**	< 0.0002	**0.0124**	< 0.002	< 0.002	**0.314**	**0.643**	**0.957**
	2/7/2017	**2.09**	**29**	**82**	**0.825**	**7.83**	**196**	**1210**	**0.00769**	**0.00205**	**0.0847**	< 0.002	< 0.001	< 0.002	< 0.002	**0.825**	< 0.002	**0.101**	**0.00025**	**0.0112**	< 0.002	< 0.002	**0.256**	**0.738**	**0.994**
	4/4/2017	**2.09**	**29.8**	**84.7**	**0.882**	**7.75**	**176**	**1150**	**0.00719**	< 0.002	**0.0747**	< 0.002	< 0.001	< 0.002	< 0.002	**0.882**	< 0.002	**0.101**	< 0.0002	**0.0102**	< 0.002	< 0.002	**-0.011**	**0.505**	**0.505**
	6/13/2017	**2.04**	**26.6**	**81.8**	**0.74**	**7.07**	**151**	**1310**	**0.00488**	< 0.002	**0.0774**	< 0.002	< 0.001	< 0.002	< 0.002	**0.74**	< 0.002	**0.106**	< 0.0002	**0.00858**	< 0.002	< 0.002	**0.25**	**1.02**	**1.27**
	8/8/2017	**2.09**	**30.6**	**82.1**	**0.783**	**7.71**	**189**	**1190**	**0.00423**	< 0.002	**0.0799**	< 0.002	< 0.001	< 0.002	< 0.002	**0.783**	< 0.002	**0.109**	< 0.0002	**0.00876**	< 0.002	< 0.002	**0.221**	**0.945**	**1.17**

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-704	10/3/2017	2.12	30.3	85	0.917	7.58	168	1250	0.00521	< 0.002	0.0842	< 0.002	< 0.001	< 0.002	< 0.002	0.917	< 0.002	0.107	< 0.0002	0.008	< 0.002	< 0.002	0.141	2.04	2.18
MW-704	5/24/2018	2.14	22.7	85.9	0.943	7.74	166	1230	-	-	-	-	-	-	-	0.943	-	-	-	-	-	-	-	-	-
MW-704	7/11/2018	-	-	87.1	-	7.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	8/16/2018	-	-	83.3	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	12/3/2018	2.02	24	82.2	0.918	7.49	168	1130	-	-	-	-	-	-	-	0.918	-	-	-	-	-	-	-	-	-
MW-704	5/23/2019	2.03	21.9	87.2	0.828	7.53	153	1230	-	-	-	-	-	-	-	0.828	-	-	-	-	-	-	-	-	-
MW-704	7/17/2019	-	-	89.7	-	7.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	8/23/2019	-	-	89.2	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	11/7/2019	1.97	21	84.5	0.953	7.45	163	1110	-	-	-	-	-	-	-	0.953	-	-	-	-	-	-	-	-	-
MW-704	5/19/2020	1.87	20.9	93	0.857	7.53	148	1050	< 0.004	< 0.002	0.0726	< 0.002	< 0.001	< 0.01	< 0.01	0.857	< 0.005	0.0921	< 0.0002	0.00509	< 0.002	< 0.002	0.201	3.32	3.52
MW-704	7/14/2020	-	-	90.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	8/27/2020	-	-	92.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	11/12/2020	1.97	21.5	90.2	0.885	7.56	171	1200	-	-	-	-	-	-	-	0.885	-	-	-	-	-	-	-	-	-
MW-704	2/4/2021	-	-	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	3/3/2021	-	-	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	5/18/2021	2.07	21.1	91.9	0.781	7.75	154	1180	-	-	-	-	-	-	-	0.781	-	-	-	-	-	-	-	-	-
MW-704	7/21/2021	-	-	91.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	8/30/2021	-	-	90.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	11/18/2021	2	21.9	88.1	0.834	7.36	170	1230	-	-	-	-	-	-	-	0.834	-	-	-	-	-	-	-	-	-
MW-704	5/9/2022	1.97	20.6	94.5	0.815	-	154	1110	-	-	-	-	-	-	-	0.815	-	-	-	-	-	-	-	-	-
MW-704	7/15/2022	-	-	95.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	8/17/2022	-	19.8	93.9	-	-	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-704	11/9/2022	2.02	22	91.1	0.742	-	163	1090	-	-	-	-	-	-	-	0.742	-	-	-	-	-	-	-	-	-
MW-704	5/17/2023	1.97	21.5	90.3	0.723	-	167	1240	-	-	-	-	-	-	-	0.723	-	-	-	-	-	-	-	-	-
MW-704	11/17/2023	1.95	21.8	88.3	0.905	-	159	1150	-	-	-	-	-	-	-	0.905	-	-	-	-	-	-	-	-	-
MW-704	4/3/2024	-	-	-	0.897	-	-	-	< 0.004	0.000319	0.0626	< 0.002	< 0.001	< 0.01	0.00017	0.897	< 0.002	0.101	< 0.0002	0.00476	< 0.002	< 0.002	0.307	0.649	0.955
MW-704	5/17/2024	1.99	20.9	87.7	0.822	-	154	1170	< 0.004	< 0.002	0.0563	-	< 0.001	< 0.01	< 0.002	0.822	< 0.002	0.0998	< 0.0002	< 0.005	< 0.002	-	0.212	0.861	1.07
MW-704	11/25/2024	1.95	22	86.2	0.968	-	167	1240	< 0.004	< 0.002	0.0539	-	< 0.001	< 0.01	< 0.002	0.968	< 0.002	0.0959	< 0.0002	< 0.005	< 0.002	-	0.448	0.901	1.35
MW-705	6/7/2016	2.19	41	142	0.944	7.3	39.6	960	< 0.002	< 0.002	0.0918	< 0.002	< 0.001	< 0.002	< 0.002	0.944	< 0.002	0.133	< 0.0002	< 0.005	< 0.002	< 0.002	0.184	0.417	0.601
MW-705	8/9/2016	2.22	33.5	136	0.985	7.35	40.7	992	< 0.002	< 0.002	0.0892	< 0.002	< 0.001	< 0.002	< 0.002	0.985	< 0.002	0.113	< 0.0002	< 0.005	< 0.002	< 0.002	0.153	0.105	0.258
MW-705	10/11/2016	2.21	39.6	138	0.998	7.21	39.2	1130	< 0.002	< 0.002	0.0881	< 0.002	< 0.001	< 0.002	< 0.002	0.998	< 0.002	0.119	< 0.0002	< 0.005	< 0.002	< 0.002	0.186	1.2	1.39
MW-705	12/7/2016	2.3	39.5	134	1.07	6.5	41.7	958	< 0.002	< 0.002	0.093	< 0.002	< 0.001	< 0.002	< 0.002	1.07	< 0.002	0.125	< 0.0002	< 0.005	< 0.002	< 0.002	0.281	0.327	0.608
MW-705	2/9/2017	2.25	38.8	135	1.04	7.33	45.5	968	< 0.002	< 0.002	0.089	< 0.002	< 0.001	< 0.002	< 0.002	1.04	< 0.002	0.13	< 0.0002	< 0.005	< 0.002	< 0.002	0.273	0.282	0.555
MW-705	4/6/2017	2.23	37.5	131	0.905	7.14	41.9	932	< 0.002	< 0.002	0.0873	< 0.002	< 0.001	< 0.002	< 0.002	0.905	< 0.002	0.121	< 0.0002	< 0.005	< 0.002	< 0.002	0.264	-0.039	0.264
MW-705	6/13/2017	2.09	35.4	136	0.924	7.18	42.2	1020	< 0.002	< 0.002	0.0837	< 0.002	< 0.001	< 0.002	< 0.002	0.924	< 0.002	0.129	< 0.0002	< 0.005	< 0.002	< 0.002	0.278	-0.182	0.278
MW-705	8/9/2017	2.21	38.7	139	0.92	7.29	43.5	1040	< 0.002	< 0.002	0.0938	< 0.002	< 0.001	< 0.002	< 0.002	0.92	< 0.002	0.134	< 0.0002	< 0.005	< 0.002	< 0.002	0.33	0.501	0.831
MW-705	10/3/2017	2.13	36.1	138	1.04	7.21	41.3	1020	< 0.002	< 0.002	0.0873	< 0.002	< 0.001	< 0.002	< 0.002	1.04	< 0.002	0.115	< 0.0002	< 0.005	< 0.002	< 0.002	0.306	0.262	0.568
MW-705	5/24/2018	2.3	28.9	135	1.07	7.29	41	912	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
MW-705	12/4/2018	2.19	30.3	132	1.07	7.32	38.9	994	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
MW-705	5/23/2019	2.18	28.5	135	0.852	7.33	37	980	-	-	-	-	-	-	-	0.852	-	-	-	-	-	-	-	-	-
MW-705	11/7/2019	2.11	26.7	134	1.05	7.38	37.9	914	-	-	-	-	-	-	-	1.05	-	-	-	-	-	-	-	-	-
MW-705	1/14/2020	-	-	-	-	7.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-705	5/19/2020	2.1	29.4	132	0.955	7.3	39.3	822	< 0.004	< 0.002	0.0887	< 0.002	< 0.001	< 0.01	< 0.01	0.955	< 0.005	0.113	< 0.0002	< 0.005	< 0.002	< 0.002	0.343	-0.385	0.343
MW-705	11/12/2020	2.07	28.8	141	1.02	6.92	40.1	1000	-	-	-	-	-	-	-	1.02	-	-	-	-	-	-	-	-	-
MW-705	5/18/2021	2.17	28.6	139	0.887	7.53	38.6	932	-	-	-	-	-	-	-	0.887	-	-	-	-	-	-	-	-	-
MW-705	11/18/2021	2.12	28.7	141	0.966	7.16	38.6	1000	-	-	-	-	-	-	-	0.966	-	-	-	-	-	-	-	-	-
MW-705	5/9/2022	2	27.6	136	0.939	-	40.7	917	-	-	-	-	-	-	-	0.939	-	-	-	-	-	-	-	-	-
MW-705	11/9/2022	2.11	26.9	138	0.878	-	39	930	-	-	-	-	-	-	-	0.878	-	-	-	-	-	-	-	-	-
MW-705	5/17/2023	2.14	27.7	133	0.799	-	40.7	1010	-	-	-	-	-	-	-	0.799	-	-	-	-	-	-	-	-	-
MW-705	11/17/2023	2.12	29.9	132	1.01	-	40.6	958	-	-	-	-	-	-	-	1.01	-	-	-	-	-	-	-	-	-
MW-705	4/3/2024	-	-	-	1.01	-	-	-	< 0.004	< 0.002	0.0918	< 0.002	< 0.001	< 0.01	< 0.002	1.01	< 0.002	0.118	< 0.0002	< 0.005	< 0.002	< 0.002	0.19	0.594	0.784
MW-705	5/17/2024	2.11	27.2	135	0.992	-	37.5	968	< 0.004	< 0.002	0.0887	-	< 0.001	< 0.01	< 0.002	0.992	< 0.002	0.117	< 0.0002	< 0.005	< 0.002	-	0.297	0.499	0.796
MW-705	11/25/2024	2.11	28.1	130	1.11	-	38.1	998	< 0.004	< 0.002	0.091	-	< 0.001	< 0.01	< 0.002	1.11	< 0.002	0.115	< 0.0002	< 0.005	< 0.002	-	0.361	0.689	1.05
MW-706	6/8/2016	2.14	35.8	270	1.22	7.54	< 5	1270	< 0.002	< 0.002	< 0.002	2.14	< 0.001	< 0.002	< 0.002	1.22	< 0.002	0.146	< 0.0002	< 0.005	< 0.002	< 0.002	0.578	0.681	1.26
MW-706	8/9/2016	2.19	29	269	1.12	7.55	< 5	1250	< 0.002	< 0.002	< 0.002	2.19	< 0.001	< 0.002	< 0.002	1.12	< 0.002	0.126	< 0.0002	< 0.005	< 0.002	< 0.002	0.532	0.172	0.704
MW-706	10/11/2016	2.17	33.1	274	1.21	8.14	< 5	1560	< 0.002	< 0.002	< 0.002	2.17	< 0.001	< 0.002	< 0.002	1.21	< 0.002	0.136	< 0.0002	< 0.005	< 0.002	< 0.002	0.379	0.998	1.38
MW-706	12/6/2016	2.25	32.9	272	1.25	7.6	< 5	1300	< 0.002	< 0.002	< 0.002	2.25	< 0.001	< 0.002	< 0.002	1.25	< 0.002	0.141	< 0.0002	< 0.005	< 0.002	< 0.002	0.325	4.41	4.74
MW-706	2/7/2017	2.18	29.2	309	1.12	7.84	< 5	1270	< 0.002	< 0.002	< 0.002	2.18	< 0.001	< 0.002	< 0.002	1.12	< 0.002	0.14	0.00025	< 0.005	< 0.002	< 0.002	0.328	0.831	1.16

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
	4/4/2017	**2.13**	**30.8**	**282**	**1.2**	**7.67**	< 5	**1230**	< 0.002	< 0.002	< 0.002	**2.13**	< 0.001	< 0.002	< 0.002	**1.2**	< 0.002	**0.138**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.628**	**-0.275**	**0.628**
	6/13/2017	**2.05**	**28**	**274**	**1.09**	**7.53**	< 5	**1300**	< 0.002	< 0.002	< 0.002	**2.05**	< 0.001	< 0.002	< 0.002	**1.09**	< 0.002	**0.146**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.273**	**0.539**	**0.812**
	8/9/2017	**2.18**	**31.5**	**282**	**1.14**	**7.37**	< 5	**1320**	< 0.002	< 0.002	< 0.002	**2.18**	< 0.001	< 0.002	< 0.002	**1.14**	< 0.002	**0.152**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.619**	**0.925**	**1.54**
	10/4/2017	**2.23**	**31.1**	**276**	**1.11**	**7.05**	< 5	**1240**	< 0.002	< 0.002	< 0.002	**2.23**	< 0.001	< 0.002	< 0.002	**1.11**	< 0.002	**0.146**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.51**	**-0.296**	**0.51**
	1/9/2018	-	-	-	-	**7.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/24/2018	**2.18**	**23.8**	**252**	**1.2**	**7.44**	< 5	**1170**	-	-	-	**2.18**	-	-	-	**1.2**	-	-	-	-	-	-	-	-	-
	12/4/2018	**2.09**	**24.7**	**241**	**1.15**	**7.42**	**7.69**	**1200**	-	-	-	**2.09**	-	-	-	**1.15**	-	-	-	-	-	-	-	-	-
	1/15/2019	-	-	-	-	**7.49**	**7.73**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	-	-	-	**7.55**	**6.96**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.09**	**23.2**	**253**	**0.985**	**7.61**	**5.78**	**1230**	-	-	-	**2.09**	-	-	-	**0.985**	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	**7.58**	**8.27**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	-	-	**7.48**	**8.79**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.09**	**22.5**	**240**	**1.18**	**7.72**	**9.68**	**1160**	-	-	-	**2.09**	-	-	-	**1.18**	-	-	-	-	-	-	-	-	-
	1/14/2020	-	-	-	-	**7.79**	**9.78**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/3/2020	-	-	-	-	-	**32.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.94**	**24.8**	**225**	**1.03**	**7.55**	**24.6**	**952**	< 0.004	< 0.002	**0.199**	< 0.002	< 0.001	< 0.01	< 0.01	**1.03**	< 0.005	**0.116**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.122**	**1.4**	**1.52**
	7/14/2020	-	-	-	-	-	**21.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-706	8/27/2020	-	-	-	-	-	**20.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	**1.98**	**24.4**	**244**	**1.05**	**7.11**	**20**	**1180**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	**7.25**	**23.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	**29.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	**2.04**	**24.1**	**236**	**0.946**	**7.69**	**19.2**	**1160**	-	-	-	-	-	-	-	**0.946**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	**17.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	**17**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.05**	**24.6**	**245**	**1.05**	**7.23**	**16.8**	**1170**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	**7.43**	**16.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2022	-	-	-	-	**7.64**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/8/2022	-	-	-	-	-	**16.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.98**	**23.7**	**255**	**1.01**	-	**11.7**	**1190**	-	-	-	-	-	-	-	**1.01**	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.08**	**23.2**	**250**	**0.923**	-	**12.7**	**1060**	-	-	-	-	-	-	-	**0.923**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.98**	**23.6**	**218**	**0.858**	-	**20.7**	**1100**	-	-	-	-	-	-	-	**0.858**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2**	**25.4**	**214**	**1.09**	-	**20**	**1120**	-	-	-	-	-	-	-	**1.09**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.07**	-	-	-	< 0.004	**0.000611**	**0.193**	< 0.002	< 0.001	< 0.01	**0.000118**	**1.07**	< 0.002	**0.126**	< 0.0002	**0.00179**	< 0.002	< 0.002	**0.598**	**1.03**	**1.63**
	5/17/2024	**1.99**	**22.6**	**223**	**1.06**	-	**15.7**	**1170**	< 0.004	< 0.002	**0.193**	-	< 0.001	< 0.01	< 0.002	**1.06**	< 0.002	**0.127**	< 0.0002	< 0.005	< 0.002	-	**1.39**	**0.577**	**1.97**
	11/25/2024	**2**	**24**	**228**	**1.14**	-	**14.2**	**1210**	< 0.004	< 0.002	**0.197**	-	< 0.001	< 0.01	< 0.002	**1.14**	< 0.002	**0.124**	< 0.0002	< 0.005	< 0.002	-	**0.403**	**0.55**	**0.953**
	6/23/2016	**1.38**	**371**	**200**	**0.386**	**7.03**	**5010**	**770**	< 0.002	**0.00584**	< 0.005	< 0.002	< 0.001	**0.00225**	**0.00548**	**0.386**	**0.00333**	**0.445**	< 0.0002	< 0.005	**0.00337**	< 0.002	**0.95**	**2.64**	**3.59**
	8/9/2016	**1.94**	**412**	**235**	**0.347**	**6.81**	**4320**	**8420**	< 0.002	< 0.002	**0.0315**	< 0.002	< 0.001	< 0.002	**0.00347**	**0.347**	< 0.002	**0.623**	< 0.0002	< 0.005	**0.00422**	< 0.002	**0.404**	**0.209**	**0.613**
	10/11/2016	**1.88**	**408**	**211**	**0.382**	**6.95**	**4860**	**6160**	**0.00235**	< 0.002	**0.0347**	< 0.002	< 0.001	**0.00684**	**0.0234**	**0.382**	< 0.002	**0.715**	< 0.0002	< 0.005	**0.00326**	< 0.002	**0.546**	**0.86**	**1.41**
	12/6/2016	**1.98**	**410**	**220**	**0.353**	**6.92**	**4920**	**5370**	< 0.002	< 0.002	**0.0215**	< 0.002	< 0.001	**0.00254**	**0.00543**	**0.353**	< 0.002	**0.737**	< 0.0002	< 0.005	**0.00233**	< 0.002	**0.332**	**0.921**	**1.25**
	2/7/2017	**1.97**	**398**	**207**	**0.293**	**6.95**	**5280**	**6070**	< 0.002	< 0.002	**0.0198**	< 0.002	< 0.001	**0.00252**	**0.00288**	**0.293**	**0.00267**	**0.78**	**0.00024**	< 0.005	< 0.002	< 0.002	**0.214**	**0.226**	**0.44**
	4/4/2017	**1.93**	**382**	**242**	**0.323**	**7.12**	**4940**	**7890**	< 0.002	< 0.002	**0.0133**	< 0.002	< 0.001	< 0.002	**0.00506**	**0.323**	< 0.002	**0.821**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.331**	**0.37**	**0.701**
	6/13/2017	**1.95**	**374**	**209**	**0.613**	**7.06**	**4600**	**6910**	< 0.002	< 0.002	**0.0143**	< 0.002	< 0.001	< 0.002	**0.00542**	**0.613**	< 0.002	**0.976**	< 0.0002	< 0.005	**0.00218**	< 0.002	**0.161**	**0.841**	**1**
	8/8/2017	**2.02**	**378**	**193**	**0.402**	**7.04**	**4790**	**7640**	< 0.002	< 0.002	**0.0134**	< 0.002	< 0.001	< 0.002	**0.00492**	**0.402**	< 0.002	**0.993**	< 0.0002	< 0.005	**0.00223**	< 0.002	**0.211**	**0.099**	**0.31**
	10/3/2017	**2.02**	**382**	**214**	**0.391**	**6.88**	**4800**	**7690**	< 0.002	< 0.002	**0.0244**	< 0.002	< 0.001	< 0.002	**0.00467**	**0.391**	< 0.002	**0.974**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.235**	**0.735**	**0.97**
	5/24/2018	**2.04**	**396**	**197**	**0.392**	**6.92**	**4650**	**7260**	-	-	-	-	-	-	-	**0.392**	-	-	-	-	-	-	-	-	-
	12/4/2018	**1.95**	**381**	**205**	**0.328**	**6.84**	**4490**	**8080**	-	-	-	-	-	-	-	**0.328**	-	-	-	-	-	-	-	-	-
MW-707B	5/23/2019	**1.96**	**418**	**194**	**0.276**	**6.83**	**5530**	**8310**	-	-	-	-	-	-	-	**0.276**	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	**6.8**	**4920**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.86**	**386**	**169**	**0.442**	**7.14**	**5330**	**7920**	-	-	-	-	-	-	-	**0.442**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.81**	**424**	**172**	**0.325**	**6.78**	**5310**	**5810**	< 0.004	< 0.002	**0.0241**	< 0.002	< 0.001	< 0.01	**0.0121**	**0.325**	< 0.005	**1.01**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.21**	**-0.218**	**0.21**
	11/12/2020	**1.83**	**404**	**267**	**0.196**	**7.15**	**5250**	**8180**	-	-	-	-	-	-	-	**0.196**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	**168**	-	**6.89**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.88**	**412**	**170**	**0.281**	**6.94**	**5480**	**6860**	-	-	-	-	-	-	-	**0.281**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	**5070**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.94**	**431**	**199**	**0.25**	**6.84**	**6500**	**6140**	-	-	-	-	-	-	-	**0.25**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	**408**	-	-	**6.75**	**4890**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.86**	**438**	**163**	< 1.5	-	**5870**	**5460**	-	-	-	-	-	-	-	< 1.5	-	-	-	-	-	-	-	-	-
	7/15/2022	-	**399**	-	**0.328**	-	**5390**	-	-	-	-	-	-	-	-	**0.328**	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-707B	8/17/2022	-	**285**	**194**	-	-	**4440**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.88**	**377**	**161**	**1.31**	-	**5060**	**6160**	-	-	-	-	-	-	-	**1.31**	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**398**	**172**	< 1.5	-	**4980**	-	-	-	-	-	-	-	-	< 1.5	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.87**	**391**	**172**	**0.372**	-	**4840**	**9880**	-	-	-	-	-	-	-	**0.372**	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	-	-	-	-	**7920**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.87**	**403**	**167**	**0.388**	-	**5010**	**6930**	-	-	-	-	-	-	-	**0.388**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.0874**	-	-	-	< 0.004	**0.000415**	**0.0205**	< 0.002	**0.000294**	**0.00262**	**0.0144**	**0.0874**	< 0.002	**1.29**	< 0.0002	**0.00593**	**0.000448**	< 0.002	**0.261**	**0.515**	**0.776**
	5/16/2024	**1.87**	**392**	**159**	**0.368**	-	**4880**	**5720**	< 0.004	< 0.002	**0.017**	-	< 0.001	< 0.01	**0.00849**	**0.368**	< 0.002	**1.27**	**0.000238**	< 0.005	< 0.002	-	**0.369**	**0.361**	**0.73**
	11/25/2024	**1.79**	**404**	**167**	**0.486**	-	**5040**	**8990**	< 0.004	< 0.002	**0.0187**	-	< 0.001	< 0.01	**0.00809**	**0.486**	< 0.002	**1.25**	< 0.0002	< 0.005	< 0.002	-	**0.258**	**0.861**	**1.12**
MW-708	6/7/2016	**1.37**	**35.2**	**46.2**	**0.569**	**7.43**	**8.99**	**651**	< 0.002	< 0.002	**0.212**	< 0.002	< 0.001	< 0.002	< 0.002	**0.569**	< 0.002	**0.078**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.221**	**1.61**	**1.83**
	8/10/2016	**1.44**	**30.2**	**47**	**0.619**	**7.48**	**8.98**	**881**	< 0.002	< 0.002	**0.24**	< 0.002	< 0.001	< 0.002	< 0.002	**0.619**	< 0.002	**0.0673**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.194**	**1.35**	**1.544**
	10/12/2016	**1.47**	**32.2**	**46.5**	**0.632**	**7.46**	**8.24**	**684**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.632**	< 0.002	**0.0731**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.168**	**1.35**	**1.52**
	12/9/2016	**1.44**	**30.7**	**44.4**	**0.548**	**7.32**	**8.72**	**639**	< 0.002	< 0.002	**0.257**	< 0.002	< 0.001	< 0.002	< 0.002	**0.548**	< 0.002	**0.0687**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.365**	**0.922**	**1.29**
	2/9/2017	**1.51**	**32**	**48**	**0.695**	**7.32**	**9.59**	**679**	< 0.002	< 0.002	**0.255**	< 0.002	< 0.001	< 0.002	< 0.002	**0.695**	< 0.002	**0.0843**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.189**	**0.313**	**0.502**
	4/6/2017	**1.48**	**31.4**	**47.7**	**0.612**	**7.12**	**8.36**	**623**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.612**	< 0.002	**0.0762**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.33**	**1.29**	**1.62**
	6/14/2017	**1.36**	**30.2**	**46**	**0.624**	**7.33**	**9.38**	**653**	< 0.002	< 0.002	**0.222**	< 0.002	< 0.001	< 0.002	< 0.002	**0.624**	< 0.002	**0.0792**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.063**	**0.113**	**0.176**
	8/8/2017	**1.44**	**31.7**	**47.1**	**0.705**	**7.71**	**9.36**	**649**	< 0.002	< 0.002	**0.229**	< 0.002	< 0.001	< 0.002	< 0.002	**0.705**	< 0.002	**0.0822**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.16**	**0.706**	**0.866**
	10/4/2017	**1.49**	**32.7**	**48**	**0.642**	**7.27**	**9.09**	**645**	< 0.002	< 0.002	**0.277**	< 0.002	< 0.001	< 0.002	< 0.002	**0.642**	< 0.002	**0.0816**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.149**	**-0.688**	**0.149**
	5/23/2018	**1.45**	**29.2**	**46.3**	**0.653**	**7.39**	**9.25**	**639**	-	-	-	-	-	-	-	**0.653**	-	-	-	-	-	-	-	-	-
	12/4/2018	**1.41**	**30.1**	**46**	**0.618**	**7.31**	**9.24**	**633**	-	-	-	-	-	-	-	**0.618**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.31**	**28.6**	**43.4**	**0.495**	**7.36**	**9.18**	**651**	-	-	-	-	-	-	-	**0.495**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.34**	**27.7**	**45**	**0.601**	**7.53**	**10.1**	**607**	-	-	-	-	-	-	-	**0.601**	-	-	-	-	-	-	-	-	-
	1/14/2020	-	-	-	-	**7.58**	**9.45**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.26**	**30.2**	**43.6**	**0.502**	**7.48**	**9.42**	**586**	< 0.004	< 0.002	**0.202**	< 0.002	< 0.001	< 0.01	< 0.01	**0.502**	< 0.005	**0.0691**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.123**	**-0.182**	**0.123**
	11/12/2020	**1.32**	**30.1**	**45.5**	**0.59**	**7.52**	**9.88**	**632**	-	-	-	-	-	-	-	**0.59**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	**9.54**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.36**	**29.6**	**45**	**0.545**	**7.73**	**8.64**	**624**	-	-	-	-	-	-	-	**0.545**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.37**	**30.9**	**46.2**	**0.567**	**7.23**	**12.7**	**641**	-	-	-	-	-	-	-	**0.567**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	**7.49**	**9.26**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.27**	**28.6**	**46.7**	**0.53**	-	**9.34**	**628**	-	-	-	-	-	-	-	**0.53**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.39**	**28.3**	**46.4**	**0.595**	-	**9.47**	**1590**	-	-	-	-	-	-	-	**0.595**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.36**	**29.1**	**46.5**	**0.631**	-	**9.31**	**652**	-	-	-	-	-	-	-	**0.631**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.43**	**30.4**	**47.8**	**0.654**	-	**11.2**	**615**	-	-	-	-	-	-	-	**0.654**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.705**	-	-	-	< 0.004	< 0.002	**0.234**	< 0.002	< 0.001	< 0.01	< 0.002	**0.705**	< 0.002	**0.0776**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.319**	**0.273**	**0.592**
	5/16/2024	**1.42**	**27.9**	**48.2**	**0.686**	-	**9.6**	**620**	< 0.004	< 0.002	**0.234**	-	< 0.001	< 0.01	< 0.002	**0.686**	< 0.002	**0.0793**	< 0.0002	< 0.005	< 0.002	-	**0.367**	**0.0408**	**0.408**
	11/25/2024	**1.43**	**28.1**	**50.1**	**0.754**	-	**11.1**	**645**	< 0.004	< 0.002	**0.268**	-	< 0.001	< 0.01	< 0.002	**0.754**	< 0.002	**0.0748**	< 0.0002	< 0.005	< 0.002	-	**0.21**	**0.604**	**0.814**
MW-801	6/7/2016	**2.34**	**37.6**	**118**	**1.08**	**7.47**	< 5	**930**	< 0.002	< 0.002	**0.638**	< 0.002	< 0.001	< 0.002	< 0.002	**1.08**	< 0.002	**0.119**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.506**	**0.647**	**1.15**
	8/9/2016	**2.39**	**30.9**	**111**	**1.11**	**7.48**	< 5	**888**	< 0.002	< 0.002	**0.592**	< 0.002	< 0.001	< 0.002	< 0.002	**1.11**	< 0.002	**0.0957**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.423**	**0.447**	**0.87**
	10/11/2016	**2.32**	**33.5**	**117**	**1.11**	**7.32**	< 5	**970**	< 0.002	< 0.002	**0.573**	< 0.002	< 0.001	< 0.002	< 0.002	**1.11**	< 0.002	**0.102**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.437**	**0.812**	**1.25**
	12/6/2016	**2.33**	**33.6**	**116**	**1.19**	**7.14**	< 5	**880**	< 0.002	< 0.002	**0.589**	< 0.002	< 0.001	< 0.002	< 0.002	**1.19**	< 0.002	**0.0994**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.351**	**1.53**	**1.88**
	2/7/2017	**2.34**	**30.9**	**113**	**1.14**	**7.58**	< 5	**900**	< 0.002	< 0.002	**0.604**	< 0.002	< 0.001	< 0.002	< 0.002	**1.14**	< 0.002	**0.104**	**0.00025**	< 0.005	< 0.002	< 0.002	**0.378**	**0.56**	**0.955**
	4/6/2017	**2.34**	**32.5**	**111**	**1.03**	**7.26**	< 5	**826**	< 0.002	< 0.002	**0.56**	< 0.002	< 0.001	< 0.002	< 0.002	**1.03**	**0.00296**	**0.101**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.37**	**0.902**	**1.27**
	6/14/2017	**2.27**	**28.8**	**103**	**1.12**	**6.95**	< 5	**862**	< 0.002	< 0.002	**0.565**	< 0.002	< 0.001	< 0.002	< 0.002	**1.12**	**0.00212**	**0.114**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.526**	**0.447**	**0.973**
	8/9/2017	**2.34**	**30.9**	**116**	**1.05**	**7.51**	< 5	**1050**	< 0.002	< 0.002	**0.562**	< 0.002	< 0.001	< 0.002	< 0.002	**1.05**	**0.00326**	**0.114**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.536**	**0.436**	**0.972**
	10/4/2017	**2.3**	**31.4**	**118**	**1.16**	**7.58**	< 5	**916**	< 0.002	< 0.002	**0.588**	< 0.002	< 0.001	< 0.002	< 0.002	**1.16**	**0.00708**	**0.0981**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.511**	**0.634**	**1.15**
	5/23/2018	**2.17**	**25.6**	**97.1**	**1.13**	**7.42**	< 5	**828**	-	-	-	-	-	-	-	**1.13**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.21**	**26.8**	**92.9**	**0.984**	**7.34**	< 5	**832**	-	-	-	-	-	-	-	**0.984**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.22**	**25.1**	**89.4**	**0.922**	**7.4**	< 5	**852**	-	-	-	-	-	-	-	**0.922**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.19**	**27.5**	**92**	**0.951**	**7.63**	< 5	**785**	-	-	-	-	-	-	-	**0.951**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.14**	**26.2**	**91.4**	**1.09**	**7.52**	< 5	**860**	< 0.004	< 0.002	**0.509**	< 0.002	< 0.001	< 0.01	< 0.01	**1.09**	**0.00779**	**0.0842**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.344**	**0.289**	**0.632**
	11/12/2020	**2.2**	**26.4**	**95.2**	**1.05**	**7.65**	**3.25**	**832**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2.21**	**24.8**	**98.7**	**1.09**	**7.66**	**2.36**	**843**	-	-	-	-	-	-	-	**1.09**	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.21**	**25.6**	**96.2**	**0.997**	**7.51**	**2.82**	**805**	-	-	-	-	-	-	-	**0.997**	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.1**	**22.1**	**95.7**	**1.01**	**7.64**	**3.25**	**788**	-	-	-	-	-	-	-	**1.01**	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.09**	**23.2**	**94.7**	**0.932**	-	**4.12**	**746**	-	-	-	-	-	-	-	**0.932**	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.17**	**24.6**	**93.6**	**1.06**	-	**2.62**	**792**	-	-	-	-	-	-	-	**1.06**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2.2**	**24.6**	**93.6**	**1.11**	-	**2.07**	**800**	-	-	-	-	-	-	-	**1.11**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.08**	-	-	-	< 0.004	**0.000488**	**0.5**	< 0.002	< 0.001	< 0.01	< 0.002	**1.08**	**0.0017**	**0.0902**	< 0.0002	**0.00702**	< 0.002	< 0.002	**0.259**	**0.336**	**0.594**

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																	
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-801	5/16/2024	**2.21**	**23.8**	**89.1**	**1.08**	-	< 5	**726**	< 0.004	< 0.002	**0.495**	-	< 0.001	< 0.01	< 0.002	**1.08**	< 0.002	**0.0912**	< 0.0002	**0.00508**	< 0.002	-	**0.307**	**0.391**	**0.698**
	11/25/2024	**2.19**	**25.2**	**90.9**	**1.13**	-	< 5	**818**	< 0.004	< 0.002	**0.507**	-	< 0.001	< 0.01	< 0.002	**1.13**	< 0.002	**0.0862**	< 0.0002	< 0.005	< 0.002	-	**0.234**	**1.27**	**1.5**
MW-802	6/7/2016	**2.51**	**42.6**	**37.9**	**0.92**	**7.46**	< 5	**695**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.92**	< 0.002	**0.105**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.519**	**1.67**	**2.19**
	8/10/2016	**2.59**	**32.2**	**37.5**	**0.972**	**7.52**	< 5	**681**	< 0.002	< 0.002	**0.878**	< 0.002	< 0.001	< 0.002	< 0.002	**0.972**	< 0.002	**0.087**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.488**	**1.74**	**2.228**
	10/11/2016	**2.5**	**37.2**	**36.3**	**0.986**	**7.34**	< 5	**713**	< 0.002	< 0.002	**0.868**	< 0.002	< 0.001	< 0.002	< 0.002	**0.986**	< 0.002	**0.0908**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.659**	**1.33**	**1.99**
	12/6/2016	**2.57**	**37.2**	**37.4**	**1.04**	**7.48**	< 5	**659**	< 0.002	< 0.002	**0.889**	< 0.002	< 0.001	< 0.002	< 0.002	**1.04**	< 0.002	**0.0925**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.337**	**0.826**	**1.16**
	2/7/2017	**2.51**	**33.7**	**37.1**	**1.01**	**7.67**	< 5	**683**	< 0.002	< 0.002	**0.908**	< 0.002	< 0.001	< 0.002	< 0.002	**1.01**	< 0.002	**0.0931**	**0.00021**	< 0.005	< 0.002	< 0.002	**0.559**	**0.179**	**0.559**
	4/5/2017	**2.48**	**35**	**37.4**	**0.947**	**8.72**	< 5	**693**	< 0.002	< 0.002	**0.861**	< 0.002	< 0.001	< 0.002	< 0.002	**0.947**	< 0.002	**0.0919**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.996**	**0.78**	**1.78**
	6/13/2017	**2.41**	**31.6**	**36.4**	**0.995**	**7.6**	< 5	**709**	< 0.002	< 0.002	**0.86**	< 0.002	< 0.001	< 0.002	< 0.002	**0.995**	< 0.002	**0.0971**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.494**	**1.77**	**2.26**
	8/7/2017	**2.5**	**32.4**	**35.6**	**1.09**	**7.29**	< 5	**653**	< 0.002	< 0.002	**0.855**	< 0.002	< 0.001	< 0.002	< 0.002	**1.09**	< 0.002	**0.0999**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.641**	**0.58**	**1.22**
	10/4/2017	**2.48**	**34.1**	**36.4**	**1.07**	**7.58**	< 5	**684**	< 0.002	< 0.002	**0.883**	< 0.002	< 0.001	< 0.002	< 0.002	**1.07**	< 0.002	**0.089**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.633**	**1.27**	**1.9**
	5/23/2018	**2.5**	**27.5**	**37.5**	**1.05**	**7.34**	< 5	**683**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.49**	**27.8**	**35.9**	**0.932**	**7.38**	< 5	**663**	-	-	-	-	-	-	-	**0.932**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.47**	**26.4**	**34.2**	**0.816**	**7.3**	< 5	**688**	-	-	-	-	-	-	-	**0.816**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.44**	**28**	**33.8**	**0.952**	**7.58**	< 5	**627**	-	-	-	-	-	-	-	**0.952**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.41**	**27.8**	**36.2**	**1.07**	**7.44**	< 5	**685**	< 0.004	< 0.002	**0.939**	< 0.002	< 0.001	< 0.01	< 0.01	**1.07**	< 0.005	**0.085**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.753**	**0.128**	**0.881**
	11/12/2020	**2.45**	**27.1**	**34.5**	**1.02**	**7.96**	< 5	**646**	-	-	-	-	-	-	-	**1.02**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2.44**	**28**	**37.7**	**1.12**	**7.64**	< 0.594	**684**	-	-	-	-	-	-	-	**1.12**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	**39.7**	**1.04**	-	-	-	-	-	-	-	-	-	-	**1.04**	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.46**	**28**	**39.6**	**0.904**	**7.42**	< 5	**652**	-	-	-	-	-	-	-	**0.904**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	**36.3**	-	**7.46**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.36**	**28.4**	**38.5**	**0.949**	**7.71**	**0.946**	**646**	-	-	-	-	-	-	-	**0.949**	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.47**	**26.9**	**40.6**	**0.936**	-	**1.07**	**667**	-	-	-	-	-	-	-	**0.936**	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	**40**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**29.1**	**39.4**	-	-	< 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.44**	**28.8**	**38.4**	**0.972**	-	**0.757**	**656**	-	-	-	-	-	-	-	**0.972**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2.45**	**28.6**	**41.2**	**0.97**	-	< 5	**664**	-	-	-	-	-	-	-	**0.97**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.987**	-	-	-	< 0.004	**0.00242**	**0.981**	< 0.002	< 0.001	< 0.01	**0.0000905**	**0.987**	**0.00331**	**0.0912**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.981**	**0.57**	**1.55**
	5/15/2024	**2.37**	**28.4**	**38.1**	**0.918**	-	< 5	**668**	< 0.004	< 0.002	**0.916**	-	< 0.001	< 0.01	< 0.002	**0.918**	< 0.002	**0.0869**	< 0.0002	< 0.005	< 0.002	-	**0.324**	**0.654**	**0.978**
	11/25/2024	**2.46**	**28.6**	**41.9**	**1.08**	-	< 5	**680**	< 0.004	< 0.002	**0.949**	-	< 0.001	< 0.01	< 0.002	**1.08**	**0.0026**	**0.0859**	< 0.0002	< 0.005	< 0.002	-	**0.72**	**0.98**	**1.7**
MW-803	6/9/2016	**2.04**	**47.6**	**48.1**	**0.636**	**7.48**	**15**	**594**	**0.00256**	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.636**	< 0.002	**0.0649**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.512**	**0.48**	**0.992**
	8/11/2016	**2.15**	**46.2**	**48.8**	**0.653**	**7.51**	**16.2**	**591**	**0.0025**	< 0.002	**0.224**	< 0.002	< 0.001	< 0.002	< 0.002	**0.653**	< 0.002	**0.065**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.41**	**0.246**	**1.656**
	10/13/2016	**2.12**	**49.7**	**48.4**	**0.645**	**6.99**	**17.9**	**592**	< 0.002	< 0.002	**0.22**	< 0.002	< 0.001	< 0.002	< 0.002	**0.645**	< 0.002	**0.0686**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.281**	**1.65**	**1.93**
	12/6/2016	**2.13**	**48.3**	**49.9**	**0.696**	**7.48**	**21.9**	**603**	< 0.002	< 0.002	**0.242**	< 0.002	< 0.001	< 0.002	< 0.002	**0.696**	< 0.002	**0.0915**	< 0.0002	**0.00593**	< 0.002	< 0.002	**0.385**	**1.16**	**1.55**
	2/8/2017	**2.14**	**44.8**	**49.3**	**0.607**	**8.12**	**22.4**	**599**	< 0.002	< 0.002	**0.239**	< 0.002	< 0.001	< 0.002	< 0.002	**0.607**	< 0.002	**0.0779**	**0.00021**	< 0.005	< 0.002	< 0.002	**0.85**	**0.768**	**1.62**
	4/7/2017	**2.14**	**46.7**	**49.5**	**0.586**	**7.36**	**17.8**	**605**	< 0.002	< 0.002	**0.217**	< 0.002	< 0.001	< 0.002	< 0.002	**0.586**	< 0.002	**0.069**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.362**	**0.626**	**0.988**
	6/13/2017	**1.97**	**44.1**	**49.2**	**0.665**	**7.98**	**21.2**	**627**	< 0.002	< 0.002	**0.234**	< 0.002	< 0.001	< 0.002	< 0.002	**0.665**	< 0.002	**0.0968**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.428**	**0.667**	**1.1**
	8/8/2017	**2.12**	**46.1**	**49.5**	**0.693**	**7.52**	**23.2**	**709**	< 0.002	< 0.002	**0.234**	< 0.002	< 0.001	< 0.002	< 0.002	**0.693**	< 0.002	**0.0898**	< 0.0002	**0.00521**	< 0.002	< 0.002	**0.759**	**1.08**	**1.84**
	10/4/2017	**2.07**	**46.1**	**49.3**	**0.594**	**7.55**	**23.2**	**625**	< 0.002	< 0.002	**0.24**	< 0.002	< 0.001	< 0.002	< 0.002	**0.594**	< 0.002	**0.0909**	< 0.0002	**0.00549**	< 0.002	< 0.002	**0.292**	**3.09**	**3.38**
	5/23/2018	**2.1**	**42.9**	**48.9**	**0.649**	**7.46**	**24.4**	**606**	-	-	-	-	-	-	-	**0.649**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.09**	**44.2**	**48.7**	**0.566**	**7.33**	**24.5**	**601**	-	-	-	-	-	-	-	**0.566**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.12**	**41.1**	**49.2**	**0.551**	**7.26**	**24.1**	**621**	-	-	-	-	-	-	-	**0.551**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.07**	**43.1**	**49.4**	**0.563**	**7.26**	**24**	**563**	-	-	-	-	-	-	-	**0.563**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.03**	**38.7**	**49.8**	**0.647**	**7.41**	**25.2**	**603**	< 0.004	< 0.002	**0.231**	< 0.002	< 0.001	< 0.01	< 0.01	**0.647**	< 0.005	**0.0672**	< 0.0002	**0.005**	< 0.002	< 0.002	**0.585**	**0.173**	**0.758**
	11/12/2020	**2.08**	**38.4**	**49.6**	**0.568**	**7.95**	**25.2**	**593**	-	-	-	-	-	-	-	**0.568**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2**	**37.9**	**50.2**	**0.614**	**7.78**	**25.2**	**571**	-	-	-	-	-	-	-	**0.614**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	**51.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	**50.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.07**	**40**	**51**	**0.531**	**7.42**	**27.2**	**594**	-	-	-	-	-	-	-	**0.531**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	**49**	-	**7.39**	**30**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	-	-	**7.43**	**27.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.01**	**41**	**51.1**	**0.617**	**7.73**	**32.1**	**580**	-	-	-	-	-	-	-	**0.617**	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	**51.2**	-	-	**31.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	**37.9**	**51.5**	-	-	**32.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.06**	**37.9**	**50.8**	**0.641**	-	**33.1**	**564**	-	-	-	-	-	-	-	**0.641**	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	**50.2**	-	-	**35.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**40.2**	**50.5**	-	-	**34.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.05**	**42.6**	**51.1**	**0.698**	-	**38.9**	**591**	-	-	-	-	-	-	-	**0.698**	-	-	-	-	-	-	-	-	-

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SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-803	7/12/2023	-	-	**51.2**	**1.1**	-	**31.9**	-	-	-	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-
	8/15/2023	-	**39.7**	**50.5**	**0.599**	-	**36.4**	-	-	-	-	-	-	-	-	**0.599**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2.05**	**41.8**	**53.6**	**0.562**	-	**36.1**	**589**	-	-	-	-	-	-	-	**0.562**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.702**	-	-	-	< 0.004	**0.000329**	**0.196**	< 0.002	< 0.001	< 0.01	**0.000109**	**0.702**	< 0.002	**0.0618**	< 0.0002	**0.00593**	< 0.002	< 0.002	**0.531**	**0.875**	**1.41**
	5/15/2024	**2.02**	**40.2**	**50.2**	**0.722**	-	**37**	**575**	< 0.004	< 0.002	**0.189**	-	< 0.001	< 0.01	< 0.002	**0.722**	< 0.002	**0.0618**	< 0.0002	< 0.005	< 0.002	-	**0.735**	**1**	**1.74**
	11/25/2024	**2.05**	**45.2**	**52.4**	**0.73**	-	**43.3**	**620**	< 0.004	< 0.002	**0.24**	-	< 0.001	< 0.01	< 0.002	**0.73**	< 0.002	**0.061**	< 0.0002	< 0.005	< 0.002	-	**0.311**	**0.636**	**0.946**
MW-804	6/8/2016	**1.65**	**68.5**	**32.8**	**0.491**	**7.13**	**27.2**	**562**	< 0.002	< 0.002	**0.178**	< 0.002	< 0.001	< 0.002	< 0.002	**0.491**	< 0.002	**0.0453**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.207**	**0.646**	**0.853**
	8/10/2016	**1.58**	**63.7**	**26.1**	**0.443**	**7.32**	**20.9**	**554**	< 0.002	< 0.002	**0.147**	< 0.002	< 0.001	< 0.002	< 0.002	**0.443**	< 0.002	**0.0382**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.537**	**0.393**	**0.93**
	10/11/2016	**1.59**	**65.1**	**26.3**	**0.448**	**7.2**	**20.9**	**577**	< 0.002	< 0.002	**0.146**	< 0.002	< 0.001	< 0.002	< 0.002	**0.448**	< 0.002	**0.0408**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.344**	**-0.215**	**0.344**
	12/7/2016	**1.62**	**65.7**	**25.5**	**0.441**	**6.93**	**21**	**518**	< 0.002	< 0.002	**0.151**	< 0.002	< 0.001	< 0.002	< 0.002	**0.441**	< 0.002	**0.0421**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.313**	**1.5**	**1.81**
	2/7/2017	**1.59**	**63.5**	**25.3**	**0.453**	**7.41**	**23.2**	**559**	< 0.002	< 0.002	**0.153**	< 0.002	< 0.001	< 0.002	< 0.002	**0.453**	< 0.002	**0.0421**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.317**	**0.822**	**0.317**
	4/5/2017	**1.59**	**65.1**	**26**	**0.429**	**7.65**	**21.4**	**555**	< 0.002	< 0.002	**0.147**	< 0.002	< 0.001	< 0.002	< 0.002	**0.429**	< 0.002	**0.0414**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.43**	**0.395**	**0.825**
	6/13/2017	**1.57**	**63.2**	**26**	**0.474**	**7.22**	**21.5**	**575**	< 0.002	< 0.002	**0.15**	< 0.002	< 0.001	< 0.002	< 0.002	**0.474**	< 0.002	**0.0422**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.376**	**1.23**	**1.61**
	8/8/2017	**1.61**	**63.8**	**26.3**	**0.476**	**7.06**	**20.7**	**548**	< 0.002	< 0.002	**0.143**	< 0.002	< 0.001	< 0.002	< 0.002	**0.476**	< 0.002	**0.0444**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.241**	**0.949**	**1.19**
	10/5/2017	**1.53**	**65.9**	**26.9**	**0.327**	**6.93**	**21.9**	**577**	< 0.002	< 0.002	**0.162**	< 0.002	< 0.001	< 0.002	< 0.002	**0.327**	< 0.002	**0.0397**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.398**	**0.785**	**1.18**
	5/23/2018	**1.72**	**67.8**	**30.4**	**0.501**	**7.17**	**21.5**	**551**	-	-	-	-	-	-	-	**0.501**	-	-	-	-	-	-	-	-	-
	7/11/2018	**1.67**	-	-	**0.449**	**7.21**	-	-	-	-	-	-	-	-	-	**0.449**	-	-	-	-	-	-	-	-	-
	8/16/2018	**1.76**	-	-	-	**7.06**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	**1.75**	**67.6**	**32.2**	**0.378**	**7.02**	**19.4**	**550**	-	-	-	-	-	-	-	**0.378**	-	-	-	-	-	-	-	-	-
	1/14/2019	**1.73**	-	-	-	**7.07**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	**1.74**	-	-	-	**7.38**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.69**	**66.8**	**31.7**	**0.445**	**7.15**	**23.2**	**558**	-	-	-	-	-	-	-	**0.445**	-	-	-	-	-	-	-	-	-
	7/17/2019	**1.71**	-	-	-	**7.31**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	**1.63**	-	-	-	**7.16**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.63**	**68.2**	**29**	**0.43**	**7.34**	**21.9**	**501**	-	-	-	-	-	-	-	**0.43**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.56**	**66.7**	**29.1**	**0.489**	**7.28**	**25.2**	**553**	< 0.004	< 0.002	**0.147**	< 0.002	< 0.001	< 0.01	< 0.01	**0.489**	< 0.005	**0.0342**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.304**	**-0.0906**	**0.304**
	11/12/2020	**1.58**	**66.2**	**26.7**	**0.401**	**7.38**	**24.4**	**528**	-	-	-	-	-	-	-	**0.401**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.57**	**65.1**	**28.8**	**0.465**	**7.39**	**25.9**	**537**	-	-	-	-	-	-	-	**0.465**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	**26**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	**24.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.56**	**66.8**	**29.3**	**0.465**	**7.19**	**24.6**	**539**	-	-	-	-	-	-	-	**0.465**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.52**	**62.3**	**29.3**	**0.453**	**7.7**	**26.4**	**536**	-	-	-	-	-	-	-	**0.453**	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	-	-	-	**27.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	**59.9**	**30**	-	-	**26.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.57**	**62.7**	**27.9**	**0.489**	-	**25**	**521**	-	-	-	-	-	-	-	**0.489**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.53**	**63.3**	**33**	**0.457**	-	**25.6**	**540**	-	-	-	-	-	-	-	**0.457**	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	**33**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	**63.1**	**33.1**	-	-	**22.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.59**	**67.9**	**32.4**	**0.45**	-	**22.8**	**554**	-	-	-	-	-	-	-	**0.45**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.517**	-	-	-	< 0.004	**0.000452**	**0.147**	< 0.002	< 0.001	< 0.01	< 0.002	**0.517**	< 0.002	**0.0394**	< 0.0002	**0.00162**	**0.000533**	< 0.002	**0.861**	**0.783**	**1.64**
	5/15/2024	**1.56**	**66.5**	**32.7**	**0.433**	-	**25.5**	**541**	< 0.004	< 0.002	**0.149**	-	< 0.001	< 0.01	< 0.002	**0.433**	< 0.002	**0.041**	< 0.0002	< 0.005	< 0.002	-	**1.95**	**1.86**	**3.81**
	11/25/2024	**1.65**	**74.1**	**48.6**	**0.564**	-	**26**	**572**	< 0.004	< 0.002	**0.191**	-	< 0.001	< 0.01	< 0.002	**0.564**	< 0.002	**0.0373**	< 0.0002	< 0.005	< 0.002	-	**0.382**	**0.996**	**1.38**
MW-805	6/7/2016	**0.51**	**422**	**520**	**0.122**	**6.52**	**829**	**2070**	< 0.002	< 0.002	**0.0387**	< 0.002	< 0.001	< 0.002	< 0.002	**0.122**	< 0.002	**0.053**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.158**	**-0.253**	**0.158**
	8/10/2016	**0.415**	**437**	**491**	**0.126**	**6.35**	**776**	**2440**	< 0.002	< 0.002	**0.0471**	< 0.002	< 0.001	**0.00284**	< 0.002	**0.126**	< 0.002	**0.0217**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.319**	**0.609**	**0.928**
	10/11/2016	**0.462**	**422**	**466**	**0.136**	**6.36**	**726**	**1820**	< 0.002	**0.00267**	**0.0401**	< 0.002	< 0.001	< 0.002	**0.0079**	**0.136**	< 0.002	**0.0234**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.211**	**0.487**	**0.698**
	12/6/2016	**0.507**	**422**	**464**	**0.181**	**6.36**	**742**	**2420**	< 0.002	< 0.002	**0.0356**	< 0.002	< 0.001	< 0.002	**0.00431**	**0.181**	< 0.002	**0.0277**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.228**	**0.536**	**0.764**
	2/6/2017	**0.456**	**435**	**467**	**0.145**	**6.62**	**846**	**2140**	< 0.002	< 0.002	**0.034**	< 0.002	< 0.001	< 0.002	**0.00218**	**0.145**	< 0.002	< 0.015	< 0.0002	< 0.005	< 0.002	< 0.002	**0.146**	**0.882**	**1.81**
	4/5/2017	**0.444**	**444**	**504**	**0.142**	**6.9**	**836**	**2270**	< 0.002	< 0.002	**0.0334**	< 0.002	< 0.001	< 0.002	< 0.002	**0.142**	< 0.002	**0.0178**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.018**	**-0.03**	**0.018**
	6/13/2017	**0.468**	**430**	**459**	**0.214**	**6.43**	**742**	**2420**	< 0.002	< 0.002	**0.0337**	< 0.002	< 0.001	< 0.002	< 0.002	**0.214**	< 0.002	< 0.015	< 0.0002	< 0.005	< 0.002	< 0.002	**0.05**	**0.01**	**0.06**
	8/8/2017	**0.518**	**414**	**470**	**0.143**	**6.49**	**737**	**2150**	< 0.002	< 0.002	**0.0327**	< 0.002	< 0.001	< 0.002	< 0.002	**0.143**	< 0.002	**0.0272**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.175**	**-0.444**	**0.175**
	10/5/2017	**0.406**	**467**	**505**	< 0.1	**5.99**	**914**	**2110**	< 0.002	< 0.002	**0.0344**	< 0.002	< 0.001	< 0.002	< 0.002	< 0.1	< 0.002	**0.0173**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.123**	**-0.427**	**0.123**
	12/11/2017	-	**525**	-	-	**6.35**	**753**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/9/2018	-	**439**	-	-	**6.76**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	**0.517**	**434**	**424**	**0.191**	**6.52**	**660**	**1810**	-	-	-	-	-	-	-	**0.191**	-	-	-	-	-	-	-	-	-
	11/30/2018	**0.525**	**455**	**471**	**0.124**	**6.31**	**722**	**2070**	-	-	-	-	-	-	-	**0.124**	-	-	-	-	-	-	-	-	-
	1/14/2019	-	**473**	-	-	**6.32**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	**468**	-	-	**6.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	**0.582**	**442**	**455**	**0.173**	**6.44**	**666**	**2180**	-	-	-	-	-	-	-	**0.173**	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-805	7/17/2019	**0.55**	-	-	-	**6.48**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	**0.537**	-	-	-	**6.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	**0.525**	**475**	**492**	**0.13**	**6.52**	**730**	**2070**	-	-	-	-	-	-	-	**0.13**	-	-	-	-	-	-	-	-	-
	5/19/2020	**0.503**	**450**	**472**	**0.176**	**6.52**	**713**	**2220**	< 0.004	< 0.002	**0.035**	< 0.002	< 0.001	< 0.01	< 0.01	**0.176**	< 0.005	**0.024**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.0441**	**1.2**	**1.24**
	11/12/2020	**0.495**	**464**	**454**	**0.129**	**6.42**	**736**	**2210**	-	-	-	-	-	-	-	**0.129**	-	-	-	-	-	-	-	-	-
	5/18/2021	**0.55**	**443**	**509**	**0.197**	**6.58**	**724**	**2020**	-	-	-	-	-	-	-	**0.197**	-	-	-	-	-	-	-	-	-
	11/18/2021	**0.546**	**452**	**472**	**0.175**	**6.44**	**702**	**2010**	-	-	-	-	-	-	-	**0.175**	-	-	-	-	-	-	-	-	-
	5/9/2022	**0.519**	**433**	**501**	**0.187**	**6.94**	**721**	**1980**	-	-	-	-	-	-	-	**0.187**	-	-	-	-	-	-	-	-	-
	11/9/2022	**0.515**	**440**	**502**	**0.144**	-	**723**	**619**	-	-	-	-	-	-	-	**0.144**	-	-	-	-	-	-	-	-	-
	5/17/2023	**0.531**	**447**	**484**	**0.191**	-	**717**	**2270**	-	-	-	-	-	-	-	**0.191**	-	-	-	-	-	-	-	-	-
	11/17/2023	**0.496**	**459**	**464**	**0.143**	-	**629**	**1890**	-	-	-	-	-	-	-	**0.143**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.155**	-	-	-	< 0.004	**0.000396**	**0.0364**	< 0.002	< 0.001	**0.00229**	**0.000814**	**0.155**	< 0.002	**0.026**	< 0.0002	**0.0024**	< 0.002	< 0.002	**0.183**	**0.831**	**1.01**
	5/15/2024	**0.494**	**466**	**497**	**0.165**	-	**711**	**2280**	< 0.004	< 0.002	**0.0302**	-	< 0.001	< 0.01	< 0.002	**0.165**	< 0.002	**0.0253**	**0.000213**	< 0.005	< 0.002	-	**0.665**	**0.0559**	**0.721**
	11/25/2024	**0.471**	**482**	**502**	**0.205**	-	**763**	**2100**	< 0.004	< 0.002	**0.0316**	-	< 0.001	< 0.01	< 0.002	**0.205**	< 0.002	**0.0191**	< 0.0002	< 0.005	< 0.002	-	**0.378**	**0.431**	**0.809**
TW-1	6/9/2016	**1.47**	**31**	**41.5**	**0.404**	**7.83**	**63.4**	**1010**	< 0.002	< 0.002	**0.0671**	< 0.002	< 0.001	< 0.002	< 0.002	**0.404**	< 0.002	**0.136**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.21**	**1.67**	**1.88**
	8/9/2016	**1.54**	**29.9**	**42.9**	**0.431**	**7.54**	**60.9**	**976**	< 0.002	< 0.002	**0.0686**	< 0.002	< 0.001	< 0.002	< 0.002	**0.431**	< 0.002	**0.127**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.035**	**0.491**	**0.526**
	10/11/2016	**1.6**	**35.3**	**43.4**	**0.431**	**7.69**	**58.8**	**1050**	< 0.002	< 0.002	**0.0701**	< 0.002	< 0.001	< 0.002	< 0.002	**0.431**	< 0.002	**0.137**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.208**	**1.06**	**1.27**
	12/6/2016	**1.67**	**35.9**	**45.1**	**0.459**	**7.53**	**59.3**	**1080**	< 0.002	< 0.002	**0.0823**	< 0.002	< 0.001	< 0.002	< 0.002	**0.459**	< 0.002	**0.14**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.066**	**1.53**	**1.6**
	2/7/2017	**1.64**	**31.7**	**44.5**	**0.399**	**7.89**	**66.7**	**1120**	< 0.002	< 0.002	**0.0733**	< 0.002	< 0.001	< 0.002	< 0.002	**0.399**	< 0.002	**0.145**	**0.00026**	< 0.005	< 0.002	< 0.002	**0.253**	**0.728**	**0.328**
	4/4/2017	**1.68**	**33**	**45.7**	**0.42**	**7.78**	**63.4**	**1020**	< 0.002	< 0.002	**0.0706**	< 0.002	< 0.001	< 0.002	< 0.002	**0.42**	< 0.002	**0.147**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.055**	**0.32**	**0.375**
	6/13/2017	**1.53**	**29.6**	**44.3**	**0.384**	**7.67**	**62.7**	**1030**	< 0.002	< 0.002	**0.0711**	< 0.002	< 0.001	< 0.002	< 0.002	**0.384**	< 0.002	**0.151**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.185**	**2.45**	**2.64**
	8/8/2017	**1.6**	**35.1**	**43.5**	**0.461**	**7.65**	**63.9**	**1010**	< 0.002	< 0.002	**0.0737**	< 0.002	< 0.001	< 0.002	< 0.002	**0.461**	< 0.002	**0.155**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.302**	**0.743**	**1.05**
	10/3/2017	**1.65**	**33.4**	**44.9**	**0.403**	**7.48**	**59**	**1050**	< 0.002	< 0.002	**0.0829**	< 0.002	< 0.001	< 0.002	< 0.002	**0.403**	< 0.002	**0.151**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.348**	**0.818**	**1.17**
	5/24/2018	**1.67**	**25.7**	**44.5**	**0.463**	**7.6**	**61.1**	**1000**	-	-	-	-	-	-	-	**0.463**	-	-	-	-	-	-	-	-	-
	12/4/2018	**1.48**	**26.8**	**41.4**	**0.39**	**7.55**	**66.4**	**962**	-	-	-	-	-	-	-	**0.39**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.47**	**24.1**	**41.8**	**0.365**	**7.72**	**62.9**	**1050**	-	-	-	-	-	-	-	**0.365**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.42**	**23.3**	**40.1**	**0.411**	**7.71**	**61.9**	**956**	-	-	-	-	-	-	-	**0.411**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.37**	**25**	**40.5**	**0.405**	**7.71**	**69.1**	**864**	< 0.004	< 0.002	**0.0656**	< 0.002	< 0.001	< 0.01	< 0.01	**0.405**	< 0.005	**0.127**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.213**	**0.97**	**1.18**
	7/14/2020	-	-	-	-	-	**69.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/27/2020	-	-	-	-	-	**72.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	**1.38**	**24.6**	**40.5**	**0.384**	**7.72**	**73.8**	**1050**	-	-	-	-	-	-	-	**0.384**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	**68.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	**74.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.42**	**24.5**	**40.8**	**0.412**	**7.52**	**68.5**	**1030**	-	-	-	-	-	-	-	**0.412**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	**68.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	**70.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.45**	**25.5**	**40.2**	**0.404**	**7.5**	**70.4**	**994**	-	-	-	-	-	-	-	**0.404**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	**7.53**	**62.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.37**	**24.3**	**41.2**	**0.355**	-	**72.9**	**951**	-	-	-	-	-	-	-	**0.355**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.42**	**23.8**	**40.3**	**0.377**	-	**72.2**	**908**	-	-	-	-	-	-	-	**0.377**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.41**	**23.9**	**39**	**0.389**	-	**66.5**	**974**	-	-	-	-	-	-	-	**0.389**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.4**	**25.8**	**39.5**	**0.4**	-	**73**	**960**	-	-	-	-	-	-	-	**0.4**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.337**	-	-	-	< 0.004	**0.000366**	**0.0628**	< 0.002	< 0.001	< 0.01	< 0.002	**0.337**	< 0.002	**0.137**	< 0.0002	**0.00147**	< 0.002	< 0.002	**0.453**	**1.5**	**1.95**
	5/15/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.3**	**1.49**	**2.79**
	5/16/2024	**1.3**	**22.9**	**39.3**	**0.326**	-	**71.5**	**1040**	< 0.004	< 0.002	**0.0586**	-	< 0.001	< 0.01	< 0.002	**0.326**	< 0.002	**0.129**	< 0.0002	< 0.005	< 0.002	-	-	-	-
	11/25/2024	**1.36**	**23.5**	**40.5**	**0.365**	-	**74.3**	**984**	< 0.004	< 0.002	**0.0619**	-	< 0.001	< 0.01	< 0.002	**0.365**	< 0.002	**0.137**	< 0.0002	< 0.005	< 0.002	-	< 0.00	**1.01**	**1.01**
Maximum concentration, all wells		**2.59**	**525**	**520**	**1.81**	**11.38**	**6500**	**9880**	**0.012**	**0.0115**	**1.06**	**2.25**	**0.00146**	**0.00684**	**0.0234**	**1.81**	**0.00779**	**1.29**	**0.00026**	**0.0191**	**0.00422**	0.002 U	**2.08**	**4.41**	**4.74**

Notes:
-: Not analyzed for
<: Not detected, value is the reporting limit
mg/L: milligram per liter
pCi/L: picocuries per liter
SU: pH standard units
U: Not detected, value is the lowest reporting limit

TABLE 2
SUMMARY OF PRELIMINARY EVALUATION OF CORRECTIVE MEASURES - 40 CFR §257.97(c) REQUIREMENTS
LA CYGNE GENERATING STATION
LA CYGNE KANSAS

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Source Control Measures: Closure in Place (CIP) **Groundwater Measures**: Groundwater Intercept Trench with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: In- Situ Treatment via Permeable Reactive Barrier (PRB)	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Hydraulic Fracturing and Ex-Situ Treatment
§257.97(c)(1) The long- and short-term effectiveness and protectiveness of the remedy(s), along with the degree of certainty that the remedy will prove successful				
(i) Magnitude of reduction of existing risk	The risk evaluation concluded that no adverse risk currently exists for human health or the environment. The alternative results in the long-term management of the consolidated CCR within an engineered capping solution, constituent mass removal through hydraulic containment downgradient of the CCR System, and near MW-707B.	The risk evaluation concluded that no adverse risk currently exists for human health or the environment. The alternative results in the long-term management of the consolidated CCR within an engineered capping solution, constituent mass removal through hydraulic containment downgradient of the CCR System, and near MW-707B.	The risk evaluation concluded that no adverse risk currently exists for human health or the environment. The alternative results in the long-term management of the consolidated CCR within an engineered capping solution, and constituent immobilization through IST downgradient of the CCR System near MW-707B.	The risk evaluation concluded that no adverse risk currently exists for human health or the environment. The alternative results in the long-term management of the consolidated CCR within an engineered capping solution, constituent mass removal through hydraulic containment downgradient of the CCR System, and near MW-707B
(ii) Magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following implementation of a remedy	CIP would result in CCR managed on site above the seasonal high groundwater table within the existing boundaries of the CCR System. The magnitude of residual risk of potential further releases associated with CCR materials remaining on site is considered low. Full remedy implementation would result in achieving the GWPS.	CIP would result in CCR managed on site above the seasonal high groundwater table within the existing boundaries of the CCR System. The magnitude of residual risk of potential further releases associated with CCR materials remaining on site is considered low. Full remedy implementation would result in achieving the GWPS.	CIP would result in CCR managed on site above the seasonal high groundwater table within the existing boundaries of the CCR System. The magnitude of residual risk of potential further releases associated with CCR materials remaining on site is considered low. Full remedy implementation would result in achieving the GWPS.	CIP would result in CCR managed on site above the seasonal high groundwater table within the existing boundaries of the CCR System. The magnitude of residual risk of potential further releases associated with CCR materials remaining on site is considered low. Full remedy implementation would result in achieving the GWPS.
(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance (O&M)	A moderate to high degree of long-term management would be required. Long-term management would be necessary for a groundwater monitoring system, groundwater treatment system, and associated O&M. Additionally, ongoing maintenance for the post-closure engineered cap system would be required with closure methods, and ongoing O&M of an ex-situ groundwater treatment system may be necessary depending on discharge requirements.	A moderate to high degree of long-term management would be required. Long-term management would be necessary for a groundwater monitoring system, groundwater pumping system, and groundwater treatment system, and associated O&M. Additionally, ongoing maintenance for the post-closure engineered cap system would be required with closure methods, and ongoing O&M of an ex-situ groundwater treatment system may be necessary depending on discharge requirements.	A moderate to high degree of long-term management would be required. Long-term management would be necessary for a groundwater monitoring system, IST system and associated O&M. The adsorption material in the PRB will require monitoring and replacement as needed. Additionally, ongoing maintenance for the post-closure engineered cap system would be required with CIP closure methods.	A moderate to high degree of long-term management would be required. Long-term management would be necessary for a groundwater monitoring system, groundwater pumping system, and groundwater treatment system, and associated O&M. Additionally, ongoing maintenance for the post-closure engineered cap system would be required with closure methods, and ongoing O&M of an ex-situ groundwater treatment system may be necessary depending on discharge requirements
(iv) Short-term risks that might be posed to the community or the environment during implementation of such a remedy	The potential for risk to the community or environment would be limited given the limited potential off-site traffic and lack of off-site CCR transportation. If ex-situ treatment of extracted groundwater is required, a secondary waste stream (e.g., spent ion exchange media or reject water from an ex-situ treatment system) would need to be handled and disposed of, creating a potential for exposure.	The potential for risk to the community or environment would be limited given the limited potential off-site traffic and lack of off-site CCR transportation. If ex-situ treatment of extracted groundwater is required, a secondary waste stream (e.g., spent ion exchange media or reject water from an ex-situ treatment system) would need to be handled and disposed of, creating a potential for exposure.	The potential for risk to the community or environment would be limited given the limited potential off-site traffic and lack of off-site CCR transportation.	The potential for risk to the community or environment would be limited given the limited potential off-site traffic and lack of off-site CCR transportation. If ex-situ treatment of extracted groundwater is required, a secondary waste stream (e.g., spent ion exchange media or reject water from an ex-situ treatment system) would need to be handled and disposed of, creating a potential for exposure.
(v) Time until full protection is achieved	The risk evaluation concluded no adverse risk of exposure for potential human or environmental receptors to groundwater with SSLs of lithium associated with the CCR System. As such, full protection of human health and the environment is already achieved.	The risk evaluation concluded no adverse risk of exposure for potential human or environmental receptors to groundwater with SSLs of lithium associated with the CCR System. As such, full protection of human health and the environment is already achieved.	The risk evaluation concluded no adverse risk of exposure for potential human or environmental receptors to groundwater with SSLs of lithium associated with the CCR System. As such, full protection of human health and the environment is already achieved.	The risk evaluation concluded no adverse risk of exposure for potential human or environmental receptors to groundwater with SSLs of lithium associated with the CCR System. As such, full protection of human health and the environment is already achieved.

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Source Control Measures: Closure in Place (CIP) **Groundwater Measures**: Groundwater Intercept Trench with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: In- Situ Treatment via Permeable Reactive Barrier (PRB)	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Hydraulic Fracturing and Ex-Situ Treatment
(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment	The potentials for exposure are limited because CCR handling would remain on site. If groundwater treatment is necessary, a secondary waste stream (e.g., spent resins or reject water) would be generated that could introduce additional potential for exposure.	The potentials for exposure are limited because CCR handling would remain on site. If groundwater treatment is necessary, a secondary waste stream (e.g., spent resins or reject water) would be generated that could introduce additional potential for exposure	The potentials for exposure are limited because CCR handling would remain on site. This alternative does not include treatment of groundwater and therefore does not generate a secondary waste stream, except when replacement of spent adsorption material is needed.	The potentials for exposure are limited because CCR handling would remain on site. If groundwater treatment is necessary, a secondary waste stream (e.g., spent resins or reject water) would be generated that could introduce additional potential for exposure
(vii) Long-term reliability of the engineering and institutional controls	The closure-related and groundwater-related components of the alternative are proven reliable and provide a high degree of certainty that the remedy would be effective in the long term. Institutional controls would be implemented to check the systems and support any ongoing O&M required.	The closure-related and groundwater-related components of the alternative are proven reliable and provide a high degree of certainty that the remedy would be effective in the long term. Institutional controls would be implemented to check the systems and support any ongoing O&M required.	The closure-related and groundwater-related components of the alternative provide a high degree of certainty that the remedy would be effective in the long term. The reliability of this alternative can be managed through monitoring the PRB to determine whether replacement of adsorption material is needed. Institutional controls would be implemented to check the systems and support any ongoing O&M required.	The closure-related and groundwater-related components of the alternative are proven reliable and provide a high degree of certainty that the remedy would be effective in the long term. Institutional controls would be implemented to check the systems and support any ongoing O&M required.
(viii) Potential need for replacement of the remedy	Replacement of the closure-related and groundwater-related components of the alternative is unlikely.	Replacement of the closure-related and groundwater-related components of the alternative is unlikely.	Replacement of the closure-related and groundwater-related components of the alternative is unlikely. Replacement of the reactive material may be required over time, but this does not consist of a replacement of the remedy.	Replacement of the closure-related and groundwater-related components of the alternative is unlikely.
§257.97(c)(2) The Effectiveness of the Remedy in Controlling the Source to Reduce Further Releases				
(i) The extent to which containment practices will reduce further releases	CIP would effectively isolate the CCR by managing the CCR within the existing boundaries and installing an engineered cover system over the closed ponds. Hydraulic containment is effective at containing affected groundwater. Therefore, the likelihood for further releases is limited.	CIP would effectively isolate the CCR by managing the CCR within the existing boundaries and installing an engineered cover system over the closed ponds. Hydraulic containment is effective at containing affected groundwater. Therefore, the likelihood for further releases is limited.	CIP would effectively isolate the CCR by managing the CCR within the existing boundaries and installing an engineered cover system over the closed ponds. In-situ treatment would limit the magnitude of potential further migration. Therefore, the likelihood for further releases is limited.	CIP would effectively isolate the CCR by managing the CCR within the existing boundaries and installing an engineered cover system over the closed ponds. Hydraulic containment is effective at containing affected groundwater. Therefore, the likelihood for further releases is limited.
(ii) The extent to which treatment technologies may be used	Ex-situ treatment of extracted groundwater may be considered to treat groundwater pumped from extraction wells.	Ex-situ treatment of extracted groundwater may be considered to treat groundwater pumped from extraction wells.	In-situ treatment would be implemented for the area of affected groundwater.	Ex-situ treatment of extracted groundwater may be considered to treat groundwater pumped from extraction wells.
§257.97(c)(3) The Ease or Difficulty of Implementing a Potential Remedy				
(i) Degree of difficulty associated with constructing the technology	Construction activities include installation of the engineered cover system using readily available materials and industry standard methods of installation and construction of a groundwater extraction system, and potential ex-situ groundwater treatment system, which entail a moderate degree of difficulty.	Construction activities include installation of the engineered cover system using readily available materials and industry standard methods of installation and construction of a groundwater extraction system, and potential ex-situ groundwater treatment system, which entail a moderate degree of difficulty.	Construction activities include installation of the engineered cover system using readily available materials and industry standard methods of installation and construction of an In-situ treatment system which entails a moderate degree of difficulty.	Construction activities include installation of the engineered cover system using readily available materials and industry standard methods of installation and construction of a groundwater extraction system, and potential ex-situ groundwater treatment system, which entail a moderate degree of difficulty.

TABLE 2
SUMMARY OF PRELIMINARY EVALUATION OF CORRECTIVE MEASURES - 40 CFR §257.97(c) REQUIREMENTS
LA CYGNE GENERATING STATION
LA CYGNE KANSAS

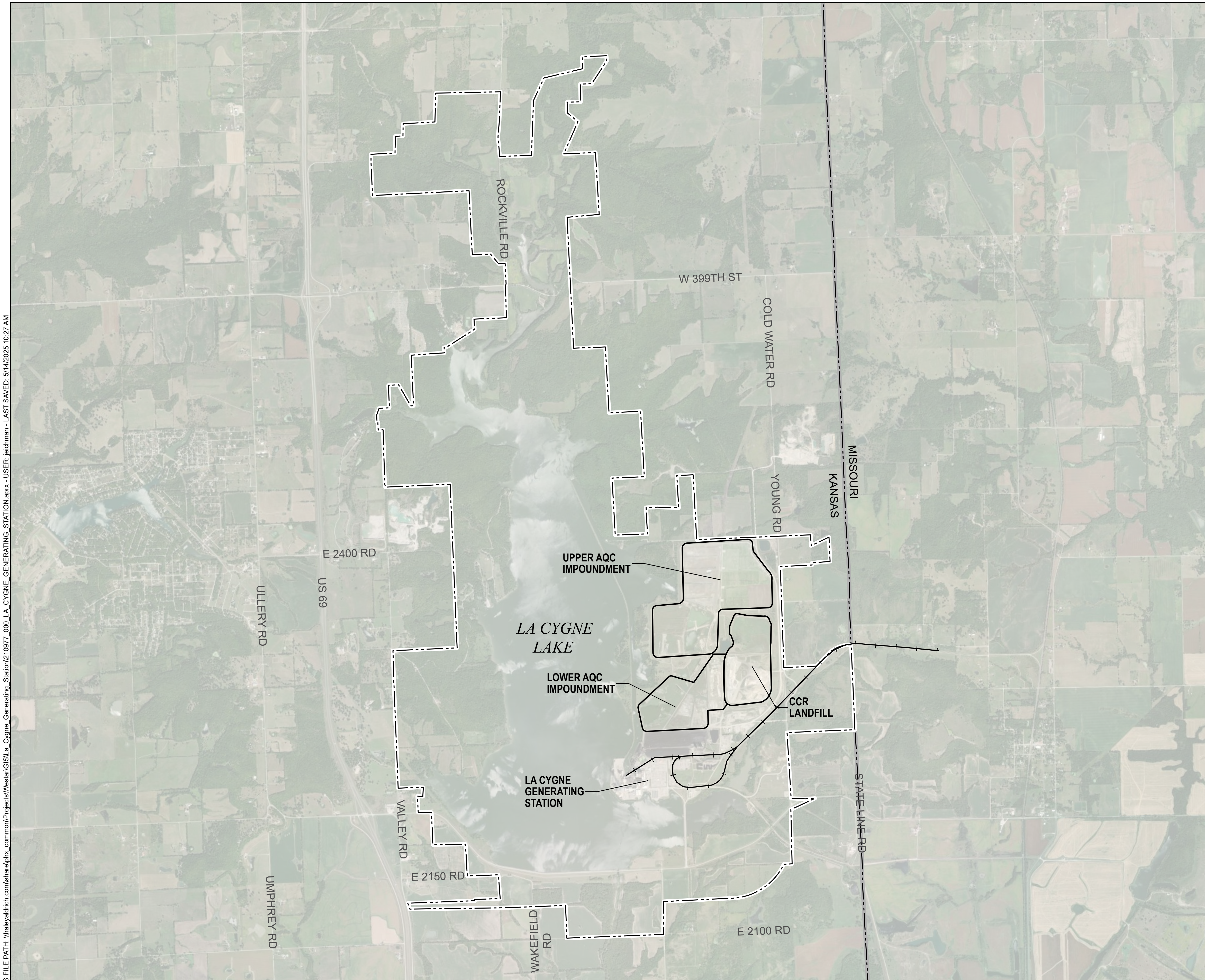
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Source Control Measures: Closure in Place (CIP) **Groundwater Measures**: Groundwater Intercept Trench with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Ex-Situ Treatment	**Source Control Measures**: CIP **Groundwater Measures**: In- Situ Treatment via Permeable Reactive Barrier (PRB)	**Source Control Measures**: CIP **Groundwater Measures**: Groundwater Pumping with Hydraulic Fracturing and Ex-Situ Treatment
(ii) Expected operational reliability of the technologies	Closure and groundwater pumping related operations are generally reliable, with temporary shutdowns for routine or non-routine maintenance, repair, or replacement, or for inclement weather or other adverse conditions. Also, a potential ex-situ groundwater treatment system could present increased O&M requirements.	Closure and groundwater pumping related operations are generally reliable, with temporary shutdowns for routine or non-routine maintenance, repair, or replacement or for inclement weather or other adverse conditions. Also, a potential ex-situ groundwater treatment system could present increased O&M requirements.	Closure related operations are generally reliable, with temporary shutdowns for routine or non-routine maintenance, repair, or replacement or for inclement weather or other adverse conditions. The operational reliability of this alternative is uncertain due to the innovative nature of the treatment.	Closure and groundwater pumping related operations are generally reliable, with temporary shutdowns for routine or non-routine maintenance, repair, or replacement or for inclement weather or other adverse conditions. Also, a potential treatment system for water infiltration could present increased O&M requirements.
(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies	Various permits and approvals would be anticipated to implement onsite CIP with closure construction (e.g., state closure/post-closure plan approval, construction in floodway permit, stormwater construction permit, county drainage permit, and potential NPDES permit modifications). Groundwater-related permitting and approvals would be required for constructing an intercept trench. Additionally, permitting and approvals would be required if an ex-situ groundwater treatment system is implemented.	Various permits and approvals would be anticipated to implement onsite CIP with closure construction (e.g., state closure/post-closure plan approval, construction in floodway permit, stormwater construction permit, county drainage permit, and potential NPDES permit modifications). Groundwater-related permitting and approvals would be required for installing extraction wells. Additionally, permitting and approvals would be required if an ex-situ groundwater treatment system is implemented.	Various permits and approvals would be anticipated to implement on-site CIP closure construction (e.g., state closure/post-closure plan approval, construction in floodway permit, stormwater construction permit, county drainage permit, and potential NPDES permit modifications). Injection permits would also be required for the IST system.	Various permits and approvals would be anticipated to implement onsite CIP with closure construction (e.g., state closure/post-closure plan approval, construction in floodway permit, stormwater construction permit, county drainage permit, and potential NPDES permit modifications). Groundwater-related permitting and approvals would be required for installing extraction wells. Additionally, permitting and approvals would be required if an ex-situ groundwater treatment system is implemented.
(iv) Availability of necessary equipment and specialists	A significant amount of equipment and specialists would be needed to complete closure and construct and operate the groundwater extraction. Additional equipment and specialists may be required to construct and operate a potential ex-situ groundwater treatment system.	A significant amount of equipment and specialists would be needed to complete closure and construct and operate the groundwater extraction. Additional equipment and specialists may be required to construct and operate a potential ex-situ groundwater treatment system.	A significant amount of equipment and specialists would be needed to complete closure and construct and operate the IST. The availability of the necessary quantities of adsorption material is uncertain due to its innovative nature.	A significant amount of equipment and specialists would be needed to complete closure and construct and operate the groundwater extraction. Additional equipment and specialists may be required to construct and operate a potential ex-situ groundwater treatment system.
(v) Available capacity and location of needed treatment, storage, and disposal services	CIP involves final CCR material placement onsite within the current boundary of the CCR System. Extracted groundwater may need to be treated for this alternative depending on discharge requirements, which could require construction and O&M of an on-site treatment system and disposal of secondary waste streams generated as a result of the treatment process.	CIP involves final CCR material placement onsite within the current boundary of the CCR System. Extracted groundwater may need to be treated for this alternative depending on discharge requirements, which could require construction and O&M of an onsite treatment system and disposal of secondary waste streams generated as a result of the treatment process.	CIP involves final CCR material placement on site within the current boundary of the CCR System. Treatment, storage or disposal would not be required for the IST system, except when spent adsorption media are generated.	CIP involves final CCR material placement onsite within the current boundary of the CCR System. Extracted groundwater may need to be treated for this alternative depending on discharge requirements, which could require construction and O&M of an on-site treatment system and disposal of secondary waste streams generated as a result of the treatment process.

Notes:
CCR = coal combustion residuals
IST = in-situ treatment
NPDES = National Pollutant Discharge Elimination System
SSL = statistically significant level

TABLE 3
SUMMARY OF CORRECTIVE MEASURES
LA CYGNE GENERATING STATION
LA CYGNE KANSAS

Alternative Number	Remedial Alternative Description	Source Control (Closure Method) Description	Groundwater Measures
1	Closure in Place (CIP) with Groundwater Intercept Trench and Ex-Situ Treatment	Closure in Place with consolidation of Lower Air Quality Control Impoundment footprint	Groundwater Intercept Trench with Ex-Situ Treatment
2	CIP with Groundwater Pumping and Ex-Situ Treatment		Groundwater Pumping with Ex-Situ Treatment
3	CIP with In-Situ Groundwater Treatment via Permeable Reactive Barrier (PRB)		In-Situ Treatment via PRB
4	CIP with Hydraulic Fracturing, Groundwater Pumping and Ex-Situ Treatment		Groundwater Pumping with Hydraulic Fracturing and Ex-Situ Treatment

FIGURES



LEGEND

RAILROAD

CCR UNIT BOUNDARIES

EVERGY PROPERTY BOUNDARY

STATE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

0 4,000 8,000
SCALE IN FEET

HALEY ALDRICH

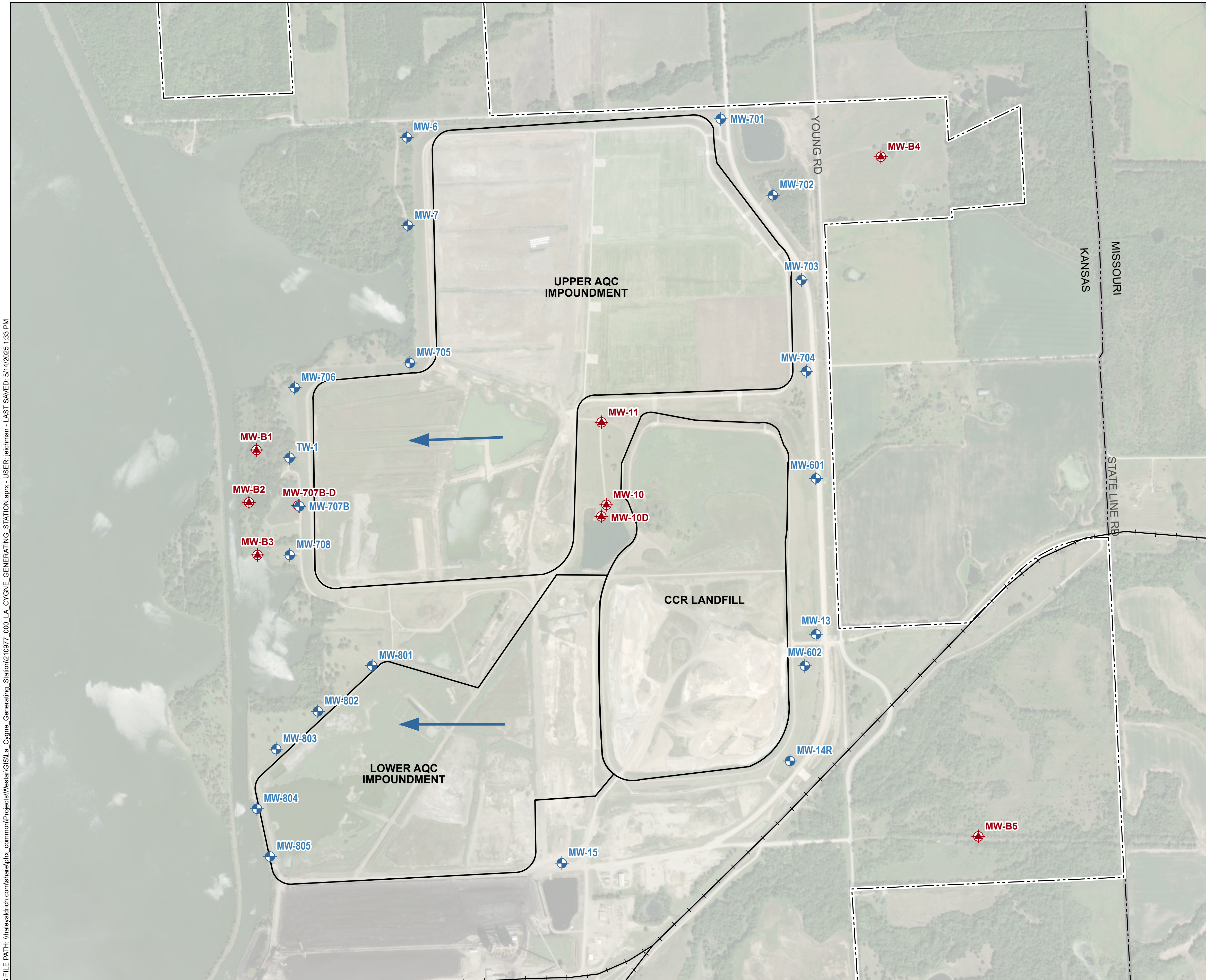
EVERGY METRO INC.
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SITE LOCATION AND FEATURES

MAY 2025

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\La_Cygne_Generating_Station\210977_000_LA_CYGNE_GENERATING_STATION.aprx - USER: jeichman - LAST SAVED: 5/14/2025 10:27 AM



LEGEND

- COMPLIANCE WELL
- NATURE AND EXTENT MONITORING WELL
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- CCR UNIT BOUNDARY
- SITE BOUNDARY
- RAILROAD
- STATE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

EVERGY METRO, INC.
LA CYGNE GENERATING STATION
LA, CYGNE, KANSAS

MONITORING WELL LOCATION MAP

MAY 2025

FIGURE 2

GIS FILE PATH: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\La_Cygne_Generating_Station\210977_000_LA_CYGNE_GENERATING_STATION.aprx - USER: jeichman - LAST SAVED: 5/14/2025 1:33 PM

APPENDIX A
Groundwater Risk Evaluation

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GROUNDWATER RISK EVALUATION
UPPER AIR QUALITY CONTROL IMPOUNDMENT, LOWER AIR QUALITY CONTROL IMPOUNDMENT, AND DRY ASH LANDFILL
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Evergy Metro, Inc.
Kansas City, Kansas

File No. 0210977-002
May 2025

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List of Attachments

Attachment	Title
A	Derivation of Risk-Based Screening Levels for Recreational Use of Surface Water
B	Dilution Attenuation Factor Calculations

List of Abbreviations

Abbreviation	Definition
CCR	coal combustion residual
CCR LF	Dry Ash Landfill
CFR	Code of Federal Regulation
CSM	conceptual site model
DAF	dilution attenuation factor
Evergy	Evergy Metro, Inc. (f/k/a/ Westar Energy, Inc.)
GWPS	groundwater protection standard
Haley & Aldrich	Haley & Aldrich, Inc.
HHRA	human health risk assessment
KDHE	Kansas Department of Health & Environment
KGS	Kansas Geological Survey
LAQC	Lower Air Quality Control Impoundment
LCGS	La Cygne Generating Station
MCL	Maximum Contaminant Level
mg/L	milligram per liter
RBSL	risk-based screening level
RSL	Regional Screening Level
Site	La Cygne Generating Station
SSI	statistically significant increase
UAQC	Upper Air Quality Control Impoundment
USEPA	U.S. Environmental Protection Agency
USGS	United States Geological Survey
WWC5	Kansas Water Well Completion Records database

1. Introduction

The La Cygne Generating Station (LCGS) is an active electricity generating facility that generates electricity through coal combustion, located near La Cygne, Kansas in the northeast portion of Linn County, Kansas near the Kansas-Missouri border (Site). Evergy Metro, Inc. (Evergy; f/k/a/ Westar Energy, Inc.) owns and operates the facility for supplying electric power to industrial, commercial, and residential customers in its service territory. The LCGS has three coal combustion residual (CCR) units containing CCR materials from their air quality control systems at the station. These are referred to as Air Quality Control (AQC) impoundments, consisting of the Lower Air Quality Control Impoundment (LAQC), Upper Air Quality Control Impoundment (UAQC), and the Dry Ash Landfill (CCR LF), herein referred to as the "CCR System." Both the LAQC and UAQC are bounded by earth fill embankments which provide containment of the CCR materials. The area in between and around the LAQC and UAQC consist of access roads and lower elevation flatland covered with vegetation. Figure 1 shows the location of the power plant facility and the CCR System. The LCGS property, including the CCR System, is bordered to the north by timbered areas and farmland; to the east by the Kansas-Missouri border; to the south by County Road E2200 and farmland; and to the west by La Cygne Lake.

U.S. Environmental Protection Agency's (USEPA) final rule for *Disposal of Coal Combustion Residuals from Electric Utilities* (CCR Rule; USEPA, 2015) requires the evaluation of groundwater monitoring data from CCR units using groundwater protection standards (GWPSs), which are derived from federal primary drinking water standards, also known as Maximum Contaminant Levels or MCLs (USEPA, 2024d),[1] or site-specific background concentrations. Analyses of groundwater results against GWPSs are presented in annual groundwater monitoring and corrective action reports required by the CCR Rule.[2] This Groundwater Risk Evaluation report has been prepared by Haley & Aldrich, Inc. (Haley & Aldrich) to provide a risk-based analysis of the groundwater results, identifying the pathways by which human and ecological receptors could potentially contact groundwater, and evaluating if the pathways could pose an adverse human health or ecological effect. As discussed in this report, groundwater is not used as a source of drinking water at the Site or Site vicinity. Potential exposures to groundwater are limited to surface water, assuming CCR constituents in groundwater could be introduced into the La Cygne Lake. While a risk-based evaluation of such exposures is not required by the CCR Rule, the risk-based analysis provides relevant context for the groundwater monitoring results.

[1] MCLs are enforceable for municipal drinking water supplies.
[2] Evergy has been conducting groundwater monitoring, and reporting the monitoring data publicly as required by the CCR Rule. Evergy has posted the required information in annual groundwater monitoring and corrective action reports on the publicly available website: https://www.evergy.com/ccr.

2. Approach

The analysis presented in this report was conducted by evaluating the environmental setting of the Site vicinity, including the CCR System where CCR management has occurred at the facility. The analysis included review and assessment of information describing where groundwater is located at the facility, the rate(s) and direction(s) of groundwater flow, and where waterbodies may intercept groundwater flow.

A conceptual site model (CSM) was developed based on the environmental setting, and the CSM was used to identify human populations that could come in contact with groundwater and/or surface water at the Site or Site vicinity. This information was also used to identify where ecological populations could come into contact with nearby surface water.

Based on the CSM, the human health risk assessment (HHRA) process was used to estimate the potential that contact with constituents in the environment may result in harm to people. Generally, there are four components to the HHRA process (USEPA, 1989): (1) Hazard Identification/Data Evaluation, (2) Toxicity Assessment, (3) Exposure Assessment, and (4) Risk Characterization. In support of this process, the USEPA and other regulatory agencies, including the Kansas Department of Health and Environment (KDHE), develop “screening levels” of constituent concentrations in groundwater (and other media) that are considered protective of specific human exposures. In developing screening levels, USEPA uses a specific target risk level (component 4 of the HHRA process) combined with an assumed exposure scenario (component 3) and toxicity information (component 2) to derive an estimate of a concentration of a constituent in an environmental medium. For example, groundwater (component 1) that is protective of a person in that exposure scenario (for example, drinking water). Similarly, ecological screening levels for surface water are developed by USEPA and KDHE to be protective of the wide range of potential aquatic ecological resources, or receptors.

Analytical results from the groundwater monitoring events completed at the Site and Site vicinity were then compared to screening levels developed by USEPA and KDHE, or Site-specific risk-based screening levels (RBSLs) derived by Haley & Aldrich (further discussion of the RBSLs is provided in Section 5.1.3). Screening levels are designed to provide a conservative estimate of the concentration to which a receptor (human or ecological) can be exposed without experiencing adverse health effects. Due to the conservative methods used to derive screening levels, exposures to concentrations below screening levels will not result in adverse health effects, and no further evaluation is necessary. Due to the conservative nature of screening levels, concentrations above screening levels do not necessarily indicate that a potential risk exists, but rather, indicate that further evaluation may be warranted. Human health and ecological screening levels are used to determine if the concentrations of constituents in groundwater could pose a risk to human health or the environment that warrants further evaluation

2.1 REPORT ORGANIZATION

The remaining sections of this Groundwater Risk Evaluation report are organized according to the typical steps in a risk assessment, as outlined below.

- Section 3 summarizes the analytical groundwater data included in the risk evaluation;

- Section 4 presents the exposure assessment, including the sources and migration pathways for CCR constituents in groundwater, identification of potentially exposed populations, and specific pathways through which populations could become exposed to CCR constituents in groundwater;
- Section 5 presents the screening levels used to evaluate the constituent concentrations for potential risks to human health or the environment;
- Section 6 presents the results of the evaluation; and,
- Section 7 presents a summary of the evaluation.

The following attachments are included in the evaluation:

- Attachment A – Derivation of RBSLs for recreational use of surface water; and
- Attachment B – Dilution attenuation factor (DAF) calculations.

3. Available Site Data

Groundwater data collected in accordance with the CCR Rule provides the basis for the risk evaluation dataset. Sections 3.1 and 3.2 provide an overview of monitoring well installation and sampling events for the different phases of groundwater monitoring at the facility. The data from these groundwater monitoring events are provided in the attached Table 1. The locations of monitoring wells from which analytical data have been collected are presented in Figure 2.

3.1 MONITORING WELLS

Groundwater monitoring under the CCR Rule occurs through a phased approach to allow for a graduated response (i.e., baseline, detection, and assessment monitoring as applicable) and evaluation of steps to address groundwater quality. SCS Engineers prepared a sampling and analysis plan (SCS Engineers, 2023a), certification of statistical methods (SCS Engineers, 2023b), and groundwater monitoring system certification (SCS Engineers, 2023c) as required by the CCR Rule. The documents outline the design of the groundwater monitoring system, groundwater sampling and analytical procedures, and groundwater statistical analysis methods.

The current certified multi-unit groundwater monitoring network for the LAQC, UAQC, and CCR LF was installed by Evergy in 2015. The monitoring network includes eight upgradient monitoring wells (MW-13, MW-14R, MW-601, MW-602, MW-701, MW-702, MW-703, and MW-704), and 13 downgradient monitoring wells (MW-6, MW-7, MW-15, MW-705, MW-706, MW-707B, MW-708, MW-801, MW-802, MW-803, MW-804, MW-805, and TW-1).[3] This groundwater monitoring network meets the requirement criteria in Title 40 Code of Federal Regulations (CFR) §257.91(c)(1) defining a groundwater monitoring system with a minimum of one upgradient and three downgradient monitoring wells.

Monitoring wells MW-10 and MW-11 were included in the certified groundwater monitoring networks for the UAQC and CCR LF-LAQC, respectively, from June 2016 through November 2023, and were subsequently removed when the multi-unit groundwater monitoring system was certified in December 2023.

3.2 MONITORING EVENTS

Baseline and detection groundwater monitoring occurred between 2016 and 2023. Samples collected from the CCR monitoring wells were analyzed for the constituents listed in Table 3-1 below, as required by the CCR Rule.

[3] There are 11 additional wells and piezometers at the CCR System used to monitor groundwater elevation and flow (MW-10, MW-11, MW-12, MW-601D, MW-2, MW-3, MW-4, MW-5, MW-702A, MW-702B, and MW-702C) – these monitoring devices are not part of the certified CCR groundwater compliance monitoring network.

Table 3-1: 40 CFR §257 Appendix III and Appendix IV Constituents

Appendix III		Appendix IV		
Boron	Sulfate	Antimony	Chromium	Mercury
Calcium	Total dissolved solids	Arsenic	Cobalt	Molybdenum
Chloride		Barium	Fluoride	Selenium
Fluoride		Beryllium	Lead	Thallium
pH		Cadmium	Lithium	Radium 226/228

Analytical results obtained from these sampling events were compared to background/upgradient concentrations and natural groundwater values, and USEPA- and KDHE-approved statistical methods were used to determine whether a statistically significant increase (SSI) of Appendix III constituent concentrations occurred downgradient of the CCR System at concentrations above background. The results of statistical evaluations completed in November 2023 identified SSIs of Appendix III constituents in multiple downgradient monitoring wells relative to concentrations observed at background concentrations. Accordingly, an assessment monitoring program was initiated in March 2024 and respective notification of establishment of an assessment monitoring program was completed on March 1, 2024.

The first annual assessment monitoring sampling event was completed in April 2024 for all Appendix IV constituents in accordance with 40 CFR §257.95(b). Semiannual assessment monitoring was completed in May 2024 for Appendix III and Appendix IV constituents detected during the April 2024 annual assessment monitoring sampling event as defined in 40 CFR §257.95(d)(1). The statistical evaluation completed for the May 2024 analytical data indicated that lithium was present in groundwater at a statistically significant level above the GWPS in downgradient monitoring well MW-707B (SCS Engineers, 2024).

4. Exposure Assessment

Exposure assessment is the process of describing, measuring, or estimating the intensity, frequency, and duration of potential exposure to chemicals of potential concern in environmental media (e.g., groundwater, surface water, etc.). This section discusses the mechanisms by which human or ecological receptors might come in contact with the CCR constituents present in groundwater, concluding with the identification of potentially complete and incomplete exposure pathways.

An exposure assessment is best conducted within the context of a risk-based CSM. A CSM is used to show the relationships between a chemical source, exposure pathway, and potential receptor. The CSM identifies chemical sources, potentially impacted media, migration pathways, exposure routes, and possible exposure scenarios (USEPA, 1988). These source-pathway-receptor relationships provide the basis for the quantitative exposure assessment. Only potentially complete source-pathway-receptor relationships are included in the risk evaluation.

4.1 CHEMICAL SOURCES, POTENTIAL RELEASE MECHANISMS, AND ENVIRONMENTAL MEDIA OF INTEREST

For the CSM, the CCR that is stored in the CCR System is the source. CCR constituents present in the CCR System can be dissolved into infiltrating water (from precipitation), and those constituents may move through the subsurface and may potentially then be present in shallow groundwater. Constituents may move with groundwater as it flows in the downgradient direction, which is generally west toward La Cygne Lake, as shown on Figure 3. Any potential release of constituents to groundwater from the CCR System will be limited in extent by the proximity to La Cygne Lake (downgradient) and will not impact surrounding areas to the north, east, or south (up or side gradient), meaning that groundwater does not flow from the CCR System to the north, east, or south. Environmental media of interest for the risk evaluation include groundwater as well as La Cygne Lake surface water, assuming CCR constituents could potentially be introduced into this neighboring surface water body with groundwater flow. Figure 1 shows the facility location and layout and adjacent La Cygne Lake.

4.2 POTENTIAL RECEPTORS

Populations identified in this risk evaluation include those who could potentially be exposed to CCR constituents present in groundwater. As discussed above in Section 1, Evergy currently owns and operates the LCGS for supplying electric power to industrial, commercial, and residential customers in its service territory. The LCGS, including the CCR System, is bounded to the north by timbered areas and farmland, to the east by the Kansas-Missouri border, to the south by County Road E2200 and farmland, and to the west by La Cygne Lake.

Based on this setting and the groundwater flow patterns discussed above in Section 4.1, potential receptors identified for this risk evaluation include:

- On-site workers;
- Recreational users of La Cygne Lake;
- Aquatic ecological receptors in La Cygne Lake; and,
- Off-site residents (assuming lake surface water is a potential source of drinking water, as discussed further below).

4.3 POTENTIALLY COMPLETE AND INCOMPLETE EXPOSURE PATHWAYS

The Kansas Geological Survey (KGS) Water Well Completion Records (WWC5) Database (KGS, 2025) was used to search for water supply wells in the vicinity of the Site, the results of which are provided on Figure 4. As presented in this figure, the nearest domestic wells were identified over a mile away from (but within two miles of) the CCR System boundary, one to the east (well #86300), one to the northeast (well #317248), and two to the west across La Cygne Lake (well #s 317012 and 317049). The domestic wells east/northeast of the CCR System (well #s 86300 and 317248) are not impacted by affected groundwater as they are located hydraulically upgradient or side gradient from the CCR System. The domestic wells west of the system across the lake are also not impacted as the lake serves as a hydraulic divide. Thus, there is no potential for exposure to CCR constituents in groundwater via the use of domestic water wells.

Water for plant operations is obtained from La Cygne Lake. Potable water for the plant and surrounding areas is provided by the Linn County municipal water utility. Depth to groundwater on the facility property is greater than 10 feet, and it is therefore unlikely that construction workers at the Site performing intrusive excavation activities could potentially contact groundwater during a short-term construction/excavation event. Therefore, there is no potential for groundwater exposure by on-site workers.

Aside from its use as a source of water for plant operations, La Cygne Lake is used for fishing and as a habitat for aquatic species (i.e., fish, amphibians, etc.). According to Evergy, and the Kansas Department of Wildlife & Parks (2016), other lake recreational activities (such as pleasure boating, wind surfing, water skiing, and swimming) are prohibited. However, as access to the lake is not restricted (by fencing, gates, etc.) and there are locations around the lake (e.g., Linn County Park on the west side of the lake) where swimming or wading could take place, exposure to lake surface water by hypothetical swimmers or waders was evaluated as a health protective measure. There are no public water supply intakes in the lake nor in North Sugar Creek that the lake feeds into (to the south), nor are there any residences on the lake. Nevertheless, as a health protective measure, exposure to lake surface water as a potential source of drinking water was evaluated as if it were complete for nearby residents.

In summary, exposure pathways through which receptors are considered to be potentially exposed to CCR constituents consist of the following, assuming CCR constituents in groundwater at the Site could potentially be introduced into La Cygne Lake:

- Consumption of fish from La Cygne Lake by recreational anglers;
- Aquatic receptor exposure to La Cygne Lake surface water;
- Consumption of La Cygne Lake surface water as drinking water (by off-site residents); and,
- Recreational exposure to La Cygne Lake surface water (dermal contact and incidental ingestion by hypothetical swimmers or waders, dermal contact by recreational anglers).

A depiction of the CSM illustrating the identified chemical source(s), release mechanisms/migration pathways, exposure media, potential receptors, and the potentially complete exposure pathways listed above is shown in Figure 5.

5. Screening Levels

A comprehensive set of RBSLs have been compiled for this evaluation for the four types of potential exposures identified in the CSM discussion above:

- Drinking water consumption;
- Recreational exposure to surface water (by hypothetical swimmers or waders, or recreational anglers);
- Consumption of fish (from La Cygne Lake); and
- Aquatic receptor exposure to surface water.

5.1 SCREENING LEVELS FOR THE PROTECTION OF SURFACE WATER

This section outlines the human health and ecological screening levels that are protective of La Cygne Lake surface water in accordance with the CSM presented in Section 4 and on Figure 5. For Appendix III and Appendix IV constituents detected in groundwater, Table 2 provides in addition to MCLs, published human health screening levels for drinking water and surface water available from KDHE and USEPA sources; Table 3 provides Site-specific RBSLs derived for recreational angler exposure to surface water; and Table 4 provides published ecological screening levels for surface water from USEPA and KDHE sources.

Human health screening levels for surface water are identified for the following exposure settings: 1) use of surface water as a drinking water source, 2) the consumption of fish from a surface water body, and 3) recreational uses of surface water.

5.1.1 Drinking Water Screening Levels

The human health screening levels for drinking water are from KDHE and USEPA sources and address the drinking water exposure pathway. The KDHE criteria for domestic water supply are the same as the federal primary drinking water standards (MCLs). USEPA Regional Screening Levels (RSLs; USEPA, 2024b) for tap water (drinking water, or untreated groundwater used as potable water) have also been included for constituents which do not have promulgated KDHE/MCL criteria. The tap water RSLs are based on USEPA default assumptions for residential exposure to tap water.

These sources, in the order in which they were used, are:

- USEPA MCLs (USEPA, 2024d).
- USEPA RSLs, November 2024. Values for tap water (USEPA, 2024b).
- Kansas Surface Water Quality Standards. KDHE, Bureau of Water. April 2025. Article 16. Surface Water Quality Standards - Tables of Numeric Criteria. Table 1a. Aquatic Life, Agriculture, and Public Health Designated Uses Numeric Criteria. Values for Domestic Water Supply (KDHE, 2025).

Human health screening levels for drinking water are provided in Table 2.

5.1.2 Published Recreational Screening Levels

Published human health screening levels for surface water are derived to be protective of the use of surface water as a drinking water source and the consumption of fish from a surface water body. The drinking water screening levels are also protective of, but highly conservative for, recreational uses of a surface water body (such as fishing) because drinking water exposure is of a higher magnitude and frequency than incidental water consumption exposures which may occur during recreational use.

The human health screening levels for surface water are from state and federal sources. Values that address use of surface water as drinking water are the values for drinking water provided in Table 2**.** Values that address the fish consumption pathway are KDHE surface water quality standards for "food procurement use," and USEPA values for human health for "the consumption of organism only."

These screening level sources for the fish consumption pathway, in the order in which they were used, are:

- USEPA Ambient Water Quality Criteria for Human Health Consumption of Organisms (USEPA, 2024e).
- Kansas Surface Water Quality Standards. KDHE, Bureau of Water. April 2025. Article 16. Surface Water Quality Standards - Tables of Numeric Criteria. Table 1a. Aquatic Life, Agriculture, and Public Health Designated Uses Numeric Criteria. Values for "Food procurement," which are for the use of surface waters for obtaining edible forms of aquatic or semiaquatic life for human consumption (KDHE, 2025).

The published human health screening levels for surface water are provided in Table 2.

5.1.3 Calculated Risk-Based Screening Levels for Recreational Use

In accordance with USEPA and KDHE guidance (USEPA, 1989, USEPA, 2024c; KDHE, 2021), Site-specific information may warrant the development of Site-specific RBSLs, which are refined values from RBSLs for default exposure scenarios that account for Site-specific receptor population characteristics and exposure pathways. Site-specific RBSLs are more representative of Site-specific conditions than published RBSLs based on default assumptions, and therefore are useful for evaluating whether constituents may have the potential to pose adverse health effects. For example, whereas surface water that is used as a recreational body of water for swimming could be evaluated using drinking water standards which assumes that people are drinking and bathing in the water daily, Site-specific RBSLs for surface water will reflect incidental ingestion and dermal contact at an exposure rate and magnitude commensurate with swimming activities.

Potential exposures to constituents in surface water could, in general, occur through ingestion and dermal contact. However, the specific nature of the potential exposures is dependent on the type of activity. Specifically:

- It is assumed incidental ingestion and dermal contact with surface water could occur during wading in near-shore or shallow water areas (e.g., less than 2 feet in depth) or during swimming in deeper water areas (e.g., more than 3 feet in depth) of La Cygne Lake.
- It is assumed dermal contact with surface water could occur during recreational fishing activities in La Cygne Lake. Since these types of activities are not associated with intense exposures to water (such as is the case with swimming), incidental ingestion of surface water would be insignificant.

Site-specific RBSLs derived for recreational exposure to La Cygne Lake surface water for a hypothetical recreational swimmer, hypothetical recreational wader, and recreational angler are presented in Table 3. The RBSLs were calculated using USEPA-derived exposure factors and equations, as well as Site-specific inputs where appropriate, using the USEPA RSL calculator (USEPA, 2025b). For each CCR constituent, the RBSLs presented are the lower of the noncancer RBSL at a target noncancer hazard index of 1, and the RBSL calculated for a target cancer-based risk of 1 in 100,000, in accordance with KDHE guidance (KDHE, 2021). The target risk range is a 1 in 100,000 chance of developing cancer as the result of a specific exposure. The RSL calculator output, including the exposure parameters used, is provided in Attachment A.

5.1.4 Ecological Screening Levels

Ecological screening levels for surface water are published to provide a conservative estimate of the concentration to which an ecological receptor can be exposed without experiencing adverse effects. Due to the conservative methods used to derive published reference screening levels, it can be assumed with reasonable certainty that concentrations at or below screening levels will not result in adverse effects to survival, growth and/or reproduction. Concentrations above published ecological screening levels for surface water, however, do not necessarily indicate that a potential ecological risk exists, but rather that further evaluation may be warranted.

Table 4 presents the published ecological RBSLs for surface water. Some of the screening levels are based on the hardness of the water, specifically the criteria for cadmium, chromium, and lead. Values presented in Table 4 for these constituents are based on a Site-specific hardness value of 130 milligrams per liter (mg/L), derived from hardness data collected by the USEPA (2025a).

Water quality criteria are concentrations calculated from controlled laboratory tests on fresh water or marine organisms that are protective of the most sensitive organism (often zooplankton such as daphnids) for the most sensitive life stage (typically reproduction).

The screening level sources, in the order in which they were used, are:

- USEPA National Recommended Water Quality Criteria, Freshwater Chronic and Acute (USEPA, 2024a).
- Kansas Surface Water Quality Standards. KDHE, Bureau of Water. April 2025. Article 16. Surface Water Quality Standards - Tables of Numeric Criteria. Tables 1a and 1b. Surface Water Quality Standards for metals apply to total recoverable concentrations (KDHE, 2025).

5.1.5 Selected Screening Levels

Table 5 presents a summary of the selected screening levels for La Cygne Lake surface water, selected from Tables 2, 3, and 4 as the lowest selected screening levels for: 1) the use of La Cygne Lake surface water as a drinking water source, 2) the consumption of fish from La Cygne Lake, 3) Site-specific recreational uses of La Cygne Lake, and 4) potential ecological exposure scenarios.

5.2 TARGET SCREENING LEVELS FOR GROUNDWATER (PROTECTIVE OF LA CYGNE LAKE SURFACE WATER)

Impacts to groundwater do not mean that La Cygne Lake surface waters are impaired. The degree to which groundwater may interact with the lake is variable and complex, and dependent upon a variety of factors including gradient and flow rates. It is possible, however, to determine the maximum concentration levels in on-site groundwater that would be sufficiently protective of the La Cygne Lake surface water environment, assuming gradient and flow rates are such that groundwater flows into the lake and concentrations are then diluted. At La Cygne Lake specifically, shallow groundwater that flows west from the CCR System migrates into the generating station's discharge canal on the eastern shore of the lake. Surface water elevation within the canal is regulated by a weir structure at its northern end (north of the CCR System), and surface water flow is controlled by the discharge rate from the plant. The discharge rate is reported to range from 100,000 to 300,000 gallons per minute (19,250,000 to 57,750,000 cubic feet per day), depending on the number of pumps in service. Meanwhile, groundwater flux at the Site into the canal is estimated at a rate between approximately 311 and 470 cubic feet per day, and thus, dilution can be considerable. As depicted in Attachment B, as groundwater flows into the discharge canal, it is diluted by approximately 41,000 to 62,000 times. Groundwater is diluted even more as the discharge canal water flows into and mixes with the lake water.

Based upon the amount of dilution and attenuation estimated to occur as groundwater flows into the discharge canal, target screening levels for groundwater were calculated. The target screening levels for groundwater identify the concentrations at which groundwater entering the discharge canal may pose an adverse human health or ecological effect.

Table 5 shows the application of the minimum DAF of 41,000 to the lowest surface water screening levels selected for La Cygne Lake surface water (as described in Section 5.1) to calculate target screening levels for groundwater, which are protective of La Cygne Lake surface water for detected Appendix III and Appendix IV constituents.

6. Results

6.1 COMPARISON OF GROUNDWATER CONCENTRATIONS AGAINST TARGET SCREENING LEVELS (PROTECTIVE OF LA CYGNE LAKE SURFACE WATER)

Table 6-1 below presents a comparison of the maximum groundwater constituent concentrations from all CCR System monitoring wells (dating back to the initial sampling event from June 2016) to the target screening levels for groundwater that are protective of La Cygne Lake surface water. The comparison demonstrates that groundwater concentrations (conservatively, maximum concentrations) do not pose an adverse impact to La Cygne Lake. In fact, there is a wide margin of safety between the screening levels and detected concentrations, which is shown in the last column of the table. To illustrate, concentrations of lithium would need to be more than 1,200 times higher than currently measured levels before a potential adverse impact to the surface water body might occur.

Table 6-1: Comparison of Maximum Groundwater Concentrations Against Target Screening Levels (Protective of La Cygne Lake Surface Water)

Constituents	Target Groundwater Screening Level – La Cygne Lake (a) (mg/L)	Maximum Groundwater Concentration (mg/L)		Ratio Between Target Groundwater Screening Level and the Maximum Groundwater Concentration
Detection Monitoring - USEPA Appendix III Constituents (b)				
Boron	164,000	2.59	MW-802	>63,000
Fluoride	164,000	1.81	MW-601	>90,000
Assessment Monitoring - USEPA Appendix IV Constituents				
Antimony	250	0.012	MW-704	>20,000
Arsenic	57	0.0115	MW-10	>4,900
Barium	82,000	1.06	MW-701	>77,000
Beryllium	160	2.25	MW-706	>71
Cadmium	13	0.00146	MW-601	>8,900
Chromium (Total)	3,800	0.00684	MW-707B	>550,000
Cobalt	250	0.0234	MW-707B	>10,000
Lead	140	0.00779	MW-801	>17,000
Lithium	1,600	1.29	MW-707B	>1,200
Mercury	6.0	0.00026	TW-1	>23,000
Molybdenum	4,100	0.0191	MW-704	>210,000
Selenium	130	0.00422	MW-707B	>30,000
Radiological Constituent (picocuries/liter)				
Radium	205,000	4.74	MW-706	>43,000

Notes:

(a) Target groundwater screening levels calculated as presented in Table 5.

(b) Detection Monitoring - USEPA Appendix III Constituents without screening levels are not included.

This means that the present concentrations of constituents in groundwater do not pose an unacceptable risk to human health or the environment and even much higher concentrations in groundwater are unlikely to be harmful. The results of this comparison demonstrate that detected concentrations of CCR constituents in groundwater do not pose an adverse impact to La Cygne Lake and do not pose an unacceptable risk to human health or ecological receptors.

7. Summary

This comprehensive evaluation demonstrates that there are no adverse impacts on human health or the environment from groundwater affected by the CCR System at the LCGS.

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TABLES

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-6	6/8/2016	1.18	112	216	0.545	7.19	181	1180	< 0.002	0.00721	0.204	< 0.002	< 0.001	< 0.002	< 0.002	0.545	< 0.002	0.0634	< 0.0002	< 0.005	< 0.002	< 0.002	0.385	-0.041	0.385
	8/10/2016	1.23	101	214	0.495	7.18	177	1280	< 0.002	0.0037	0.175	< 0.002	< 0.001	< 0.002	< 0.002	0.495	< 0.002	0.0482	< 0.0002	< 0.005	< 0.002	< 0.002	0.191	0.33	0.521
	10/13/2016	1.18	114	206	0.497	7.24	165	1140	< 0.002	0.00421	0.174	< 0.002	< 0.001	< 0.002	< 0.002	0.497	< 0.002	0.0507	< 0.0002	< 0.005	< 0.002	< 0.002	0.208	1.68	1.89
	12/12/2016	1.18	103	189	0.401	7.27	160	1220	< 0.002	0.00515	0.168	< 0.002	< 0.001	< 0.002	< 0.002	0.401	< 0.002	0.0456	< 0.0002	< 0.005	< 0.002	< 0.002	0.373	1	1.37
	2/9/2017	1.22	98.8	208	0.492	7.25	197	1180	< 0.002	< 0.002	0.141	< 0.002	< 0.001	< 0.002	< 0.002	0.492	< 0.002	0.0553	< 0.0002	< 0.005	< 0.002	< 0.002	0.255	0.176	0.431
	4/5/2017	1.19	97.9	227	0.447	7.3	167	1180	< 0.002	< 0.002	0.147	< 0.002	< 0.001	< 0.002	< 0.002	0.447	< 0.002	0.0521	< 0.0002	< 0.005	< 0.002	< 0.002	0.274	0.4	0.674
	6/15/2017	1.19	90.5	181	1.75	7.2	147	1120	< 0.002	0.00715	0.181	< 0.002	< 0.001	< 0.002	< 0.002	1.75	< 0.002	0.0538	< 0.0002	< 0.005	< 0.002	< 0.002	0.224	1.31	1.53
	8/9/2017	1.21	102	210	0.473	7.02	170	1280	< 0.002	0.0048	0.178	< 0.002	< 0.001	< 0.002	< 0.002	0.473	< 0.002	0.057	< 0.0002	< 0.005	< 0.002	< 0.002	0.456	1.52	1.98
	10/5/2017	1.11	105	208	0.464	7.11	165	1230	< 0.002	0.00475	0.185	< 0.002	< 0.001	< 0.002	< 0.002	0.464	< 0.002	0.0483	< 0.0002	< 0.005	< 0.002	< 0.002	0.428	0.954	1.38
	5/23/2018	1.23	85.6	197	0.595	7.26	151	1160	-	-	-	-	-	-	-	0.595	-	-	-	-	-	-	-	-	-
	12/4/2018	1.18	86.3	193	0.612	7.13	142	1150	-	-	-	-	-	-	-	0.612	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	-	7.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	1.19	83.7	204	0.467	7.17	154	1210	-	-	-	-	-	-	-	0.467	-	-	-	-	-	-	-	-	-
	11/7/2019	1.15	79.7	197	0.615	7.45	136	1090	-	-	-	-	-	-	-	0.615	-	-	-	-	-	-	-	-	-
	5/19/2020	1.11	78.8	191	0.541	7.31	133	1140	< 0.004	< 0.002	0.137	< 0.002	< 0.001	< 0.01	< 0.01	0.541	< 0.005	0.0432	< 0.0002	< 0.005	< 0.002	< 0.002	0.342	2.08	2.42
	11/12/2020	1.14	82.4	205	0.561	7.28	133	1130	-	-	-	-	-	-	-	0.561	-	-	-	-	-	-	-	-	-
	5/18/2021	1.14	73.2	193	0.522	7.62	123	1060	-	-	-	-	-	-	-	0.522	-	-	-	-	-	-	-	-	-
	11/18/2021	1.14	77.8	201	0.549	7.1	115	1090	-	-	-	-	-	-	-	0.549	-	-	-	-	-	-	-	-	-
	5/9/2022	1.09	68.2	189	0.543	-	110	1010	-	-	-	-	-	-	-	0.543	-	-	-	-	-	-	-	-	-
	11/9/2022	1.14	75.3	195	0.525	-	109	1000	-	-	-	-	-	-	-	0.525	-	-	-	-	-	-	-	-	-
	5/17/2023	1.13	69.2	189	0.606	-	114	1030	-	-	-	-	-	-	-	0.606	-	-	-	-	-	-	-	-	-
	11/17/2023	1.11	76.7	188	0.508	-	86.7	1040	-	-	-	-	-	-	-	0.508	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.637	-	-	-	< 0.004	0.00251	0.146	< 0.002	< 0.001	< 0.01	0.000111	0.637	< 0.002	0.0444	< 0.0002	0.00272	< 0.002	< 0.002	-0.0534	0.122	0.122
	5/17/2024	1.13	70.2	187	0.572	-	94.7	1050	< 0.004	0.00277	0.145	-	< 0.001	< 0.01	< 0.002	0.572	< 0.002	0.0469	< 0.0002	< 0.005	< 0.002	-	0.179	0.632	0.812
	11/25/2024	1.12	75.6	180	0.678	-	96.8	1110	< 0.004	0.00354	0.166	-	< 0.001	< 0.01	< 0.002	0.678	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	-	0.394	0.724	1.12
MW-7	6/8/2016	1.61	26.5	106	1.36	7.77	< 5	910	< 0.002	0.00393	0.611	< 0.002	< 0.001	< 0.002	< 0.002	1.36	< 0.002	0.0867	< 0.0002	< 0.005	< 0.002	< 0.002	1.06	0.601	1.66
	8/10/2016	1.71	21.2	103	1.27	7.83	< 5	946	< 0.002	0.00212	0.53	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0736	< 0.0002	< 0.005	< 0.002	< 0.002	1.4	0.395	1.795
	10/13/2016	1.64	24.2	99.9	1.28	8	< 5	938	< 0.002	0.00302	0.532	< 0.002	< 0.001	< 0.002	< 0.002	1.28	< 0.002	0.0759	< 0.0002	< 0.005	< 0.002	< 0.002	0.82	1	1.82
	12/12/2016	1.6	23.2	98	1.13	7.96	< 5	902	< 0.002	0.00278	0.552	< 0.002	< 0.001	< 0.002	< 0.002	1.13	< 0.002	0.0713	< 0.0002	< 0.005	< 0.002	< 0.002	0.747	0.804	1.55
	2/8/2017	1.65	26.6	100	1.2	7.79	< 5	890	< 0.002	< 0.002	0.509	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0773	0.00024	< 0.005	< 0.002	< 0.002	0.366	-0.405	0.366
	4/5/2017	1.61	26.8	102	1.28	7.89	< 5	916	< 0.002	< 0.002	0.497	< 0.002	< 0.001	< 0.002	< 0.002	1.28	< 0.002	0.0755	< 0.0002	< 0.005	< 0.002	< 0.002	0.627	0.606	1.23
	6/15/2017	1.64	22.4	81.2	1.27	7.75	< 5	890	< 0.002	0.00223	0.527	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0817	< 0.0002	< 0.005	< 0.002	< 0.002	1.2	0.182	1.38
	8/9/2017	1.65	25.2	111	1.2	7.62	< 5	968	< 0.002	0.00301	0.565	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0842	< 0.0002	< 0.005	< 0.002	< 0.002	1.53	1.4	2.93
	10/3/2017	1.59	23.4	105	1.19	7.74	< 5	944	< 0.002	0.0028	0.563	< 0.002	< 0.001	< 0.002	< 0.002	1.19	< 0.002	0.0759	< 0.0002	< 0.005	< 0.002	< 0.002	1.09	1	2.09
	5/23/2018	1.65	22.6	96.9	1.29	7.83	< 5	868	-	-	-	-	-	-	-	1.29	-	-	-	-	-	-	-	-	-
	12/4/2018	1.62	20.5	94.6	1.32	7.85	< 5	890	-	-	-	-	-	-	-	1.32	-	-	-	-	-	-	-	-	-
	5/23/2019	1.6	22.1	96.5	1.09	7.75	< 5	936	-	-	-	-	-	-	-	1.09	-	-	-	-	-	-	-	-	-
	11/7/2019	1.59	20	96.2	1.34	7.92	< 5	848	-	-	-	-	-	-	-	1.34	-	-	-	-	-	-	-	-	-
	5/19/2020	1.53	21.8	95.9	1.18	7.81	< 5	896	< 0.004	< 0.002	0.49	< 0.002	< 0.001	< 0.01	< 0.01	1.18	< 0.005	0.0683	< 0.0002	< 0.005	< 0.002	< 0.002	0.653	1.06	1.72
	11/12/2020	1.56	20.5	94.2	1.25	7.8	1.12	917	-	-	-	-	-	-	-	1.25	-	-	-	-	-	-	-	-	-
	5/18/2021	1.54	21	95.4	1.1	8.01	2.17	854	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
	11/18/2021	1.56	20.3	95.9	1.22	7.7	2.21	864	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	5/9/2022	1.49	20.7	97.3	1.17	-	1.98	816	-	-	-	-	-	-	-	1.17	-	-	-	-	-	-	-	-	-
	11/9/2022	1.56	20.2	94.7	1.14	-	2.29	882	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	5/17/2023	1.55	22	96.3	1.28	-	1.86	878	-	-	-	-	-	-	-	1.28	-	-	-	-	-	-	-	-	-
	11/17/2023	1.53	19.9	93.1	1.26	-	3.13	854	-	-	-	-	-	-	-	1.26	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.25	-	-	-	< 0.004	0.00138	0.467	< 0.002	< 0.001	< 0.01	< 0.002	1.25	< 0.002	0.0708	< 0.0002	0.0019	< 0.002	< 0.002	0.813	-0.286	0.813
	5/17/2024	1.53	20.6	95.4	1.37	-	< 5	850	< 0.004	< 0.002	0.478	-	< 0.001	< 0.01	< 0.002	1.37	< 0.002	0.0738	< 0.0002	< 0.005	< 0.002	-	0.518	0.681	1.2
	11/25/2024	1.54	19.7	96.5	1.33	-	< 5	946	< 0.004	0.00244	0.554	-	< 0.001	< 0.01	< 0.002	1.33	< 0.002	0.0694	< 0.0002	< 0.005	< 0.002	-	0.92	0.659	1.58
MW-10	6/6/2016	0.923	60.1	56.7	0.365	7.33	15.9	601	< 0.002	0.00771	0.337	< 0.002	< 0.001	< 0.002	< 0.002	0.365	< 0.002	0.0487	< 0.0002	< 0.005	< 0.002	< 0.002	0.394	3.11	3.5
	8/11/2016	0.966	58.7	60.2	0.38	7.26	19.9	649	< 0.002	0.00682	0.322	< 0.002	< 0.001	< 0.002	< 0.002	0.38	< 0.002	0.0415	< 0.0002	< 0.005	< 0.002	< 0.002	0.294	0.995	1.289
	10/12/2016	0.964	60.7	62.7	0.376	7.33	21.6	600	< 0.002	0.00603	0.324	< 0.002	< 0.001	< 0.002	< 0.002	0.376	< 0.002	0.0425	< 0.0002	< 0.005	< 0.002	< 0.002	0.401	-0.03	0.401
	12/9/2016	0.94	59	66.6	0.299	7.22	26.8	612	< 0.002	0.00326	0.312	< 0.002	< 0.001	< 0.002	< 0.002	0.299	< 0.002	0.0382	< 0.0002	< 0.005	< 0.002	< 0.002	0.507	1.29	1.8
	2/8/2017	0.966	58.8	67	0.362	7.21	30.7	587	< 0.002	0.00618	0.338	< 0.002	< 0.001	< 0.002	< 0.002	0.362	< 0.002	0.0422	0.0002	< 0.005	< 0.002	< 0.002	0.204	0.966	1.17
	4/6/2017	0.933	57.4	63.7	0.338	7.23	31.6	596	< 0.002	0.00302	0.28	< 0.002	< 0.001	< 0.002	< 0.002	0.338	< 0.002	0.0393	< 0.0002	< 0.005	< 0.002	< 0.002	0.202	1.37	1.4
	6/15/2017	0.942	55.5	63.6	0.401	7.31	31.1	625	< 0.002	0.00528	0.306	< 0.002	< 0.001	< 0.002	< 0.002	0.401	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	< 0.002	0.317	0.517	0.834
	8/10/2017	0.921	56.1	63.8	0.417	7.29	27.6	615	< 0.002	0.00946	0.309	< 0.002	< 0.001	< 0.002	< 0.002	0.417	< 0.002	0.0408	< 0.0002	< 0.005	< 0.002	< 0.002	0.695	-0.248	0.695
	10/4/2017	0.991	58.4	62.8	0.377	7.23	25.5	604	< 0.002	0.00508	0.289	< 0.002	< 0.001	< 0.002	< 0.002	0.377	< 0.002	0.046	< 0.0002	< 0.005	< 0.002	< 0.002	0.638	1.03	1.67

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-10	12/12/2017	**0.961**	-	-	-	**7.19**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	**0.91**	**54.1**	**57.9**	**0.414**	**7.32**	**26.7**	**589**	-	-	-	-	-	-	-	**0.414**	-	-	-	-	-	-	-	-	-
	11/30/2018	**0.914**	**57.5**	**55.5**	**0.3**	**7.23**	**17.8**	**588**	-	-	-	-	-	-	-	**0.3**	-	-	-	-	-	-	-	-	-
	5/23/2019	**0.885**	**52.9**	**52.5**	**0.353**	**7.32**	**23.1**	**588**	-	-	-	-	-	-	-	**0.353**	-	-	-	-	-	-	-	-	-
	11/7/2019	**0.898**	**56.2**	**52.2**	**0.36**	**7.24**	**5.64**	**570**	-	-	-	-	-	-	-	**0.36**	-	-	-	-	-	-	-	-	-
	5/19/2020	**0.791**	**52.1**	**51.8**	**0.422**	**7.34**	**14.4**	**584**	< 0.004	**0.0115**	**0.32**	< 0.002	< 0.001	< 0.01	< 0.01	**0.422**	< 0.005	**0.0306**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.425**	**-0.0592**	**0.425**
	11/12/2020	**0.845**	**52.5**	**51.5**	**0.375**	**7.34**	**9.92**	**571**	-	-	-	-	-	-	-	**0.375**	-	-	-	-	-	-	-	-	-
	5/18/2021	**0.839**	**51**	**50.6**	**0.419**	**7.34**	**14.7**	**559**	-	-	-	-	-	-	-	**0.419**	-	-	-	-	-	-	-	-	-
	11/18/2021	**0.781**	**48.6**	**50.3**	**0.327**	**7.22**	**7.03**	**542**	-	-	-	-	-	-	-	**0.327**	-	-	-	-	-	-	-	-	-
	5/9/2022	**0.787**	**48.3**	**49.2**	**0.386**	**7.32**	**13.6**	**540**	-	-	-	-	-	-	-	**0.386**	-	-	-	-	-	-	-	-	-
	11/9/2022	**0.818**	**47.7**	**47.6**	**0.4**	-	**10.7**	**533**	-	-	-	-	-	-	-	**0.4**	-	-	-	-	-	-	-	-	-
	5/17/2023	**0.807**	**46.4**	**47.3**	**0.379**	-	**18.4**	**542**	-	-	-	-	-	-	-	**0.379**	-	-	-	-	-	-	-	-	-
	11/17/2023	**0.798**	**48.5**	**45.7**	**0.389**	-	**15.7**	**544**	-	-	-	-	-	-	-	**0.389**	-	-	-	-	-	-	-	-	-
MW-11	6/6/2016	**0.729**	**71**	**125**	**0.493**	**7.37**	**156**	**1000**	< 0.002	< 0.002	**0.0366**	< 0.002	< 0.001	< 0.002	< 0.002	**0.493**	< 0.002	**0.0659**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.061**	**0.411**	**0.472**
	8/11/2016	**0.739**	**66.9**	**125**	**0.512**	**7.3**	**187**	**1100**	< 0.002	< 0.002	**0.0342**	< 0.002	< 0.001	< 0.002	< 0.002	**0.512**	< 0.002	**0.0594**	< 0.0002	< 0.005	< 0.002	< 0.002	**-0.039**	**1.07**	**1.07**
	10/12/2016	**0.73**	**69.2**	**123**	**0.504**	**7.33**	**212**	**1140**	< 0.002	< 0.002	**0.0324**	< 0.002	< 0.001	< 0.002	< 0.002	**0.504**	< 0.002	**0.0596**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.136**	**-0.551**	**0.136**
	12/9/2016	**0.786**	**67.1**	**107**	**0.425**	**7.58**	**215**	**1100**	< 0.002	< 0.002	**0.0332**	< 0.002	< 0.001	< 0.002	< 0.002	**0.425**	< 0.002	**0.0577**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.113**	**1.04**	**1.15**
	2/9/2017	**0.974**	**63.4**	**109**	**0.546**	**7.36**	**188**	**1010**	< 0.002	< 0.002	**0.0406**	< 0.002	< 0.001	< 0.002	< 0.002	**0.546**	< 0.002	**0.0686**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.039**	**0.672**	**0.711**
	4/6/2017	**1.04**	**61.1**	**94.5**	**0.527**	**7.41**	**148**	**938**	< 0.002	< 0.002	**0.0358**	< 0.002	< 0.001	< 0.002	< 0.002	**0.527**	< 0.002	**0.0638**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.236**	**1.3**	**1.54**
	6/15/2017	**1.02**	**58.2**	**89.7**	**0.452**	**7.5**	**145**	**984**	< 0.002	< 0.002	**0.0386**	< 0.002	< 0.001	< 0.002	< 0.002	**0.452**	< 0.002	**0.0665**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.153**	**0.164**	**0.317**
	8/10/2017	**0.965**	**62.6**	**100**	**0.582**	**7.14**	**191**	**1020**	< 0.002	< 0.002	**0.035**	< 0.002	< 0.001	< 0.002	< 0.002	**0.582**	< 0.002	**0.0627**	< 0.0002	< 0.005	< 0.002	< 0.002	**-0.05**	**1.9**	**1.9**
	10/5/2017	**0.988**	**65.1**	**99.2**	**0.379**	**7.33**	**236**	**1040**	< 0.002	< 0.002	**0.0413**	< 0.002	< 0.001	< 0.002	< 0.002	**0.379**	< 0.002	**0.0669**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.027**	**0.329**	**0.356**
	5/23/2018	**1.26**	**53.4**	**80.2**	**0.637**	**7.35**	**167**	**902**	-	-	-	-	-	-	-	**0.637**	-	-	-	-	-	-	-	-	-
	7/11/2018	**1.17**	-	-	**0.532**	**7.37**	-	-	-	-	-	-	-	-	-	**0.532**	-	-	-	-	-	-	-	-	-
	12/3/2018	**1.13**	**60.4**	**72.6**	**0.529**	**7.42**	**215**	**1030**	-	-	-	-	-	-	-	**0.529**	-	-	-	-	-	-	-	-	-
	5/23/2019	**0.819**	**65.4**	**121**	**0.454**	**7.52**	**142**	**1000**	-	-	-	-	-	-	-	**0.454**	-	-	-	-	-	-	-	-	-
	11/7/2019	**0.846**	**58.2**	**122**	**0.561**	**7.26**	**191**	**908**	-	-	-	-	-	-	-	**0.561**	-	-	-	-	-	-	-	-	-
	5/19/2020	**0.891**	**62.2**	**112**	**0.507**	**7.48**	**194**	**904**	< 0.004	< 0.002	**0.0323**	< 0.002	< 0.001	< 0.01	< 0.01	**0.507**	< 0.005	**0.059**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.0343**	**2.5**	**2.54**
	11/12/2020	**1.19**	**54.2**	**84.1**	**0.573**	**7.24**	**179**	**920**	-	-	-	-	-	-	-	**0.573**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.18**	**51.8**	**76.3**	**0.53**	**7.55**	**176**	**900**	-	-	-	-	-	-	-	**0.53**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.05**	**60.3**	**80.9**	**0.514**	**7.23**	**240**	**946**	-	-	-	-	-	-	-	**0.514**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.16**	**54.3**	**70**	**0.505**	-	**196**	**848**	-	-	-	-	-	-	-	**0.505**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.12**	**55.5**	**68.5**	**0.479**	-	**208**	**918**	-	-	-	-	-	-	-	**0.479**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.13**	**55.9**	**64.4**	**0.457**	-	**226**	**942**	-	-	-	-	-	-	-	**0.457**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.11**	**59.3**	**63.4**	**0.532**	-	**229**	**986**	-	-	-	-	-	-	-	**0.532**	-	-	-	-	-	-	-	-	-
MW-13	6/9/2016	**0.375**	**363**	**18**	**0.17**	**6.88**	**1830**	**2490**	< 0.002	< 0.002	**0.036**	< 0.002	< 0.001	**0.00327**	< 0.002	**0.17**	< 0.002	**0.0608**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.246**	**0.39**	**0.636**
	8/11/2016	**0.397**	**371**	**18.5**	**0.128**	**6.78**	**1730**	**2910**	< 0.002	< 0.002	**0.0235**	< 0.002	< 0.001	< 0.002	< 0.002	**0.128**	< 0.002	**0.0567**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.158**	**0.51**	**0.668**
	10/13/2016	**0.381**	**395**	**19.2**	**0.171**	**6.95**	**1830**	**2640**	< 0.002	< 0.002	**0.0187**	< 0.002	< 0.001	< 0.002	< 0.002	**0.171**	< 0.002	**0.0568**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.029**	**0.584**	**0.613**
	12/13/2016	**0.403**	**336**	**16.4**	**0.142**	**6.36**	**1270**	**2590**	< 0.002	< 0.002	**0.0181**	< 0.002	< 0.001	< 0.002	< 0.002	**0.142**	< 0.002	**0.0507**	< 0.0002	< 0.005	< 0.002	< 0.002	**-0.006**	**-0.155**	< 0
	2/10/2017	**0.483**	**297**	**15.6**	**0.167**	**7.08**	**1950**	**2220**	< 0.002	< 0.002	**0.0161**	< 0.002	< 0.001	< 0.002	< 0.002	**0.167**	< 0.002	**0.0644**	< 0.0002	< 0.005	**0.00039**	< 0.002	**-0.041**	**0.354**	**0.354**
	4/6/2017	**0.449**	**320**	**16.8**	**0.171**	**6.86**	**1480**	**6050**	< 0.002	< 0.002	**0.016**	< 0.002	< 0.001	< 0.002	< 0.002	**0.171**	< 0.002	**0.0554**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.212**	**0.128**	**0.34**
	6/15/2017	**0.368**	**339**	**17.2**	**0.137**	**6.8**	**1630**	**2350**	< 0.002	< 0.002	**0.0162**	< 0.002	< 0.001	< 0.002	< 0.002	**0.137**	< 0.002	**0.0565**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.082**	**1.25**	**1.33**
	8/8/2017	**0.422**	**319**	**16.2**	**0.139**	**6.74**	**1410**	**2380**	< 0.002	< 0.002	**0.0159**	< 0.002	< 0.001	< 0.002	< 0.002	**0.139**	< 0.002	**0.062**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.075**	**-0.355**	**0.075**
	10/5/2017	**0.47**	**274**	**13.6**	**0.138**	**6.9**	**1330**	**2140**	< 0.002	< 0.002	**0.0192**	< 0.002	< 0.001	< 0.002	< 0.002	**0.138**	< 0.002	**0.0556**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.141**	**-1.17**	**0.141**
	5/23/2018	**0.57**	**248**	**14.3**	**0.227**	**7.05**	**1070**	**1860**	-	-	-	-	-	-	-	**0.227**	-	-	-	-	-	-	-	-	-
	7/11/2018	**0.533**	-	-	**0.181**	**7.02**	-	-	-	-	-	-	-	-	-	**0.181**	-	-	-	-	-	-	-	-	-
	8/16/2018	**0.513**	-	-	-	**7.05**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	**0.698**	**209**	**12.8**	**0.191**	**6.99**	**978**	**1760**	-	-	-	-	-	-	-	**0.191**	-	-	-	-	-	-	-	-	-
	1/14/2019	**0.539**	-	-	**0.208**	**6.87**	-	-	-	-	-	-	-	-	-	**0.208**	-	-	-	-	-	-	-	-	-
	3/11/2019	**0.47**	-	-	**0.194**	**7.07**	-	-	-	-	-	-	-	-	-	**0.194**	-	-	-	-	-	-	-	-	-
	5/23/2019	**0.401**	**355**	**16.2**	**0.176**	**7.03**	**1520**	**2460**	-	-	-	-	-	-	-	**0.176**	-	-	-	-	-	-	-	-	-
	11/7/2019	**0.458**	**340**	**15.7**	**0.182**	**6.79**	**1450**	**2430**	-	-	-	-	-	-	-	**0.182**	-	-	-	-	-	-	-	-	-
	5/19/2020	**0.324**	**382**	**19.5**	**0.169**	**6.81**	**1700**	**2710**	< 0.004	< 0.002	**0.0166**	< 0.002	< 0.001	< 0.01	< 0.01	**0.169**	< 0.005	**0.05**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.161**	**2.09**	**2.25**
	11/12/2020	**0.456**	**331**	**17.1**	**0.165**	**7.01**	**1500**	**2420**	-	-	-	-	-	-	-	**0.165**	-	-	-	-	-	-	-	-	-
	5/18/2021	**0.345**	**385**	**19**	< 0.64	**6.7**	**1810**	**2640**	-	-	-	-	-	-	-	< 0.64	-	-	-	-	-	-	-	-	-
	11/18/2021	**0.348**	**403**	**16.1**	**0.132**	**6.9**	**1710**	**2480**	-	-	-	-	-	-	-	**0.132**	-	-	-	-	-	-	-	-	-
	5/9/2022	**0.25**	**357**	**48.3**	**0.16**	**6.52**	**1460**	**2330**	-	-	-	-	-	-	-	**0.16**	-	-	-	-	-	-	-	-	-
	7/19/2022	-	-	**52.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-13	8/17/2022	-	339	53.8	-	-	1440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	0.335	339	46.1	0.14	-	1430	1880	-	-	-	-	-	-	-	0.14	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	41.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	319	35.1	-	-	1210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	0.353	303	31.7	0.148	-	1280	2170	-	-	-	-	-	-	-	0.148	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	24.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	266	26.3	-	-	1010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.413	272	25.5	0.176	-	1110	1960	-	-	-	-	-	-	-	0.176	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.154	-	-	-	< 0.004	< 0.002	0.0173	< 0.002	< 0.001	< 0.01	< 0.002	0.154	< 0.002	0.0534	< 0.0002	< 0.005	< 0.002	< 0.002	0.232	-0.341	0.232
	5/17/2024	0.334	348	28.9	0.179	-	1420	2320	< 0.004	< 0.002	0.0168	-	< 0.001	< 0.01	< 0.002	0.179	< 0.002	0.0571	< 0.0002	< 0.005	< 0.002	-	0.464	0.196	0.66
	11/25/2024	0.378	334	26.3	0.214	-	1460	2370	< 0.004	< 0.002	0.0169	-	< 0.001	< 0.01	< 0.002	0.214	< 0.002	0.0525	< 0.0002	< 0.005	< 0.002	-	-	-	-
MW-14R	6/9/2016	0.629	63.4	4.95	0.265	7.42	75.8	559	< 0.002	< 0.002	0.0448	< 0.002	< 0.001	< 0.002	< 0.002	0.265	< 0.002	0.0429	< 0.0002	< 0.005	< 0.002	< 0.002	0.109	1.4	1.51
	8/11/2016	0.63	60	5.05	0.299	7.26	74.2	607	< 0.002	< 0.002	0.0411	< 0.002	< 0.001	< 0.002	< 0.002	0.299	< 0.002	0.0449	< 0.0002	< 0.005	< 0.002	< 0.002	0.993	0.231	1.224
	10/13/2016	0.463	59.1	4.22	0.215	7.51	40.1	545	< 0.002	< 0.002	0.037	< 0.002	< 0.001	< 0.002	< 0.002	0.215	< 0.002	0.0347	< 0.0002	< 0.005	< 0.002	< 0.002	0.081	1.22	1.3
	12/9/2016	0.427	56.4	3.86	0.178	7.42	34.9	533	< 0.002	< 0.002	0.0374	< 0.002	< 0.001	< 0.002	< 0.002	0.178	< 0.002	0.0326	< 0.0002	< 0.005	< 0.002	< 0.002	0.286	0.348	0.634
	2/9/2017	0.566	57.2	3.98	0.211	7.92	50.4	536	< 0.002	< 0.002	0.041	< 0.002	< 0.001	< 0.002	< 0.002	0.211	< 0.002	0.0421	< 0.0002	< 0.005	< 0.002	< 0.002	0.229	0.05	0.279
	4/7/2017	0.526	57.4	4.11	0.201	7.34	44.3	530	< 0.002	< 0.002	0.0376	< 0.002	< 0.001	< 0.002	< 0.002	0.201	< 0.002	0.0393	< 0.0002	< 0.005	< 0.002	< 0.002	-0.027	0.762	0.762
	6/15/2017	0.488	57	4.25	0.237	7.19	44.2	499	< 0.002	< 0.002	0.0411	< 0.002	< 0.001	< 0.002	< 0.002	0.237	< 0.002	0.0401	< 0.0002	< 0.005	< 0.002	< 0.002	0.198	0.375	0.573
	8/10/2017	0.537	58	4.38	0.239	7.01	44	521	< 0.002	< 0.002	0.0394	< 0.002	< 0.001	< 0.002	< 0.002	0.239	< 0.002	0.0372	< 0.0002	< 0.005	< 0.002	< 0.002	0.413	1.13	1.54
	10/5/2017	0.42	61.5	4.12	0.169	7.63	40.7	529	< 0.002	< 0.002	0.0436	< 0.002	< 0.001	< 0.002	< 0.002	0.169	< 0.002	0.0346	< 0.0002	< 0.005	< 0.002	< 0.002	0.061	1.06	1.12
	5/23/2018	0.682	56.9	5.17	0.287	7.45	54.5	548	-	-	-	-	-	-	-	0.287	-	-	-	-	-	-	-	-	-
	11/30/2018	0.812	59	5.69	0.231	7.18	65.4	563	-	-	-	-	-	-	-	0.231	-	-	-	-	-	-	-	-	-
	1/14/2019	0.859	-	5.96	-	7.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	0.591	-	4.44	-	7.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.669	55.2	5.33	0.265	7.35	54.5	563	-	-	-	-	-	-	-	0.265	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	6.14	-	7.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	6.08	-	7.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	0.807	55.8	5.77	0.303	7.2	59.7	509	-	-	-	-	-	-	-	0.303	-	-	-	-	-	-	-	-	-
	5/19/2020	0.688	53.9	6.21	0.329	7.35	60.5	579	< 0.002	< 0.002	0.0423	< 0.002	< 0.001	< 0.01	< 0.01	0.329	< 0.005	0.0385	< 0.0002	< 0.005	< 0.002	< 0.002	0.0956	0.849	0.945
	7/14/2020	-	-	6.38	0.336	7.54	-	-	-	-	-	-	-	-	-	0.336	-	-	-	-	-	-	-	-	-
	8/27/2020	-	-	6.25	0.312	7.07	-	-	-	-	-	-	-	-	-	0.312	-	-	-	-	-	-	-	-	-
	11/12/2020	0.805	52.7	6.69	0.316	7.01	61.6	555	-	-	-	-	-	-	-	0.316	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	6.56	0.291	-	-	-	-	-	-	-	-	-	-	0.291	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	5.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	0.746	54.7	6.47	0.33	7.42	60.8	543	-	-	-	-	-	-	-	0.33	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	6.15	0.302	-	-	-	-	-	-	-	-	-	-	0.302	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	6.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	0.81	52.2	7.04	0.294	7.39	63.1	535	-	-	-	-	-	-	-	0.294	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	6.39	-	7.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	5.97	-	7.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	0.73	52	6.43	0.313	7.28	61.7	532	-	-	-	-	-	-	-	0.313	-	-	-	-	-	-	-	-	-
	11/9/2022	0.832	48.3	6.68	0.373	-	68.5	543	-	-	-	-	-	-	-	0.373	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	-	0.342	-	-	-	-	-	-	-	-	-	-	0.342	-	-	-	-	-	-	-	-	-
	5/17/2023	0.851	50.5	7.13	0.308	-	66.1	530	-	-	-	-	-	-	-	0.308	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	6.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	49.3	6.67	-	-	56.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.829	51.1	7.11	0.312	-	63.3	559	-	-	-	-	-	-	-	0.312	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.38	-	-	-	< 0.004	0.000329	0.0401	< 0.002	< 0.001	< 0.01	0.0000814	0.38	< 0.002	0.0458	< 0.0002	0.00191	< 0.002	< 0.002	0.226	0.736	0.961
	5/17/2024	0.754	50.2	6.6	0.397	-	57.4	550	< 0.004	< 0.002	0.0403	-	< 0.001	< 0.01	< 0.002	0.397	< 0.002	0.0419	< 0.0002	< 0.005	< 0.002	-	0.345	0.26	0.605
	11/25/2024	0.826	50.6	7.46	0.402	-	64.8	578	< 0.004	< 0.002	0.0383	-	< 0.001	< 0.01	< 0.002	0.402	< 0.002	0.0395	< 0.0002	< 0.005	< 0.002	-	0.18	0.555	0.735
MW-15	6/9/2016	0.282	106	14.4	0.257	7.31	200	751	< 0.002	< 0.002	0.0472	< 0.002	< 0.001	< 0.002	< 0.002	0.257	< 0.002	0.0271	< 0.0002	< 0.005	< 0.002	< 0.002	0.185	1.61	1.8
	8/9/2016	0.255	95.2	15.8	0.22	7.23	219	777	< 0.002	< 0.002	0.0476	< 0.002	< 0.001	< 0.002	< 0.002	0.22	< 0.002	0.0231	< 0.0002	< 0.005	< 0.002	< 0.002	0.47	0.521	0.991
	10/12/2016	0.252	103	12.9	0.232	7.28	200	772	< 0.002	< 0.002	0.0466	< 0.002	< 0.001	< 0.002	< 0.002	0.232	< 0.002	0.0263	< 0.0002	< 0.005	< 0.002	< 0.002	0.289	1.68	1.97
	12/7/2016	0.237	105	16.5	0.262	7.02	224	767	< 0.002	< 0.002	0.0556	< 0.002	< 0.001	< 0.002	< 0.002	0.262	< 0.002	0.0242	< 0.0002	< 0.005	< 0.002	< 0.002	0.112	1.65	1.76
	2/7/2017	0.285	109	20.2	0.258	7.28	270	2310	< 0.002	< 0.002	0.0527	< 0.002	< 0.001	< 0.002	< 0.002	0.258	< 0.002	0.0269	< 0.0002	< 0.005	< 0.002	< 0.002	0.775	1.66	1.6
	4/5/2017	0.261	98.9	19.3	0.235	11.38	221	803	< 0.002	< 0.002	0.05	< 0.002	< 0.001	< 0.002	< 0.002	0.235	< 0.002	0.0237	< 0.0002	< 0.005	< 0.002	< 0.002	0.072	2.05	2.12
	6/14/2017	0.24	105	18.5	0.304	7.34	212	808	< 0.002	< 0.002	0.0546	< 0.002	< 0.001	< 0.002	< 0.002	0.304	< 0.002	0.0211	< 0.0002	< 0.005	< 0.002	< 0.002	0.056	0.946	1
	8/10/2017	0.251	102	17.4	0.28	7.02	228	775	< 0.002	< 0.002	0.0515	< 0.002	< 0.001	< 0.002	< 0.002	0.28	< 0.002	< 0.015	< 0.0002	0.00876	< 0.002	< 0.002	0.168	0.016	0.184

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-15	10/3/2017	0.225	108	17.5	0.244	6.95	222	815	< 0.002	< 0.002	0.0541	< 0.002	< 0.001	< 0.002	< 0.002	0.244	< 0.002	0.0209	< 0.0002	< 0.005	< 0.002	< 0.002	0.172	1.47	1.64
	1/9/2018	-	-	-	-	7.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	0.27	105	15.2	0.283	7.1	209	757	-	-	-	-	-	-	-	0.283	-	-	-	-	-	-	-	-	-
	11/30/2018	0.305	105	12.9	0.206	7.05	191	709	-	-	-	-	-	-	-	0.206	-	-	-	-	-	-	-	-	-
	1/14/2019	0.288	-	-	-	7.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.228	102	12	0.251	7.14	189	748	-	-	-	-	-	-	-	0.251	-	-	-	-	-	-	-	-	-
	11/7/2019	0.282	104	11.3	0.25	7.03	175	692	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-
	5/19/2020	0.209	99.3	10.8	0.284	7.25	182	734	< 0.004	< 0.002	0.0425	< 0.002	< 0.001	< 0.01	< 0.01	0.284	< 0.005	0.021	< 0.0002	< 0.005	< 0.002	< 0.002	0.56	1.18	1.74
	11/12/2020	0.235	102	10.8	0.248	6.95	191	713	-	-	-	-	-	-	-	0.248	-	-	-	-	-	-	-	-	-
	5/18/2021	0.237	102	12.6	0.285	7.32	203	740	-	-	-	-	-	-	-	0.285	-	-	-	-	-	-	-	-	-
	11/18/2021	0.245	104	11.7	0.22	7.25	193	740	-	-	-	-	-	-	-	0.22	-	-	-	-	-	-	-	-	-
	5/9/2022	0.225	95.6	10.9	0.267	7.06	189	688	-	-	-	-	-	-	-	0.267	-	-	-	-	-	-	-	-	-
	11/9/2022	0.255	97.4	10.2	0.297	-	200	703	-	-	-	-	-	-	-	0.297	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	-	0.267	-	-	-	-	-	-	-	-	-	-	0.267	-	-	-	-	-	-	-	-	-
	5/17/2023	0.228	100	10.8	0.249	-	188	705	-	-	-	-	-	-	-	0.249	-	-	-	-	-	-	-	-	-
	11/17/2023	0.246	102	10.5	0.25	-	186	716	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.306	-	-	-	< 0.004	0.00024	0.0437	< 0.002	< 0.001	< 0.01	< 0.002	0.306	< 0.002	0.0261	< 0.0002	0.00143	< 0.002	< 0.002	0.172	0.622	0.795
	5/17/2024	0.221	96.9	10.8	0.296	-	189	732	< 0.004	< 0.002	0.0449	-	< 0.001	< 0.01	< 0.002	0.296	< 0.002	0.0254	< 0.0002	< 0.005	< 0.002	-	0.235	0.861	1.1
	11/25/2024	0.235	105	10.7	0.314	-	207	772	< 0.004	< 0.002	0.0408	-	< 0.001	< 0.01	< 0.002	0.314	< 0.002	0.0208	< 0.0002	< 0.005	< 0.002	-	0.336	0.616	0.951
MW-601	6/9/2016	1.79	21.7	161	1.63	7.66	< 5	956	< 0.002	< 0.002	0.134	< 0.002	< 0.001	< 0.002	< 0.002	1.63	< 0.002	0.0712	< 0.0002	< 0.005	< 0.002	< 0.002	0.199	0.368	0.567
	8/9/2016	1.91	20.3	161	1.69	7.72	< 5	922	< 0.002	< 0.002	0.12	< 0.002	< 0.001	< 0.002	< 0.002	1.69	< 0.002	0.0727	< 0.0002	< 0.005	< 0.002	< 0.002	0.115	0.345	0.46
	10/13/2016	1.81	23.9	201	1.68	7.71	< 5	1000	< 0.002	< 0.002	0.117	< 0.002	< 0.001	< 0.002	< 0.002	1.68	< 0.002	0.0725	< 0.0002	< 0.005	< 0.002	< 0.002	0.255	0.443	0.698
	12/7/2016	1.92	22.5	169	1.81	7.61	< 5	908	< 0.002	< 0.002	0.13	< 0.002	< 0.001	< 0.002	< 0.002	1.81	< 0.002	0.0747	< 0.0002	< 0.005	< 0.002	< 0.002	0.16	-0.116	0.16
	2/8/2017	1.88	20.1	168	1.75	8.6	< 5	974	< 0.002	< 0.002	0.135	< 0.002	< 0.001	< 0.002	< 0.002	1.75	< 0.002	0.0782	0.00024	< 0.005	< 0.002	< 0.002	0.216	-0.051	0.944
	4/6/2017	1.89	21.3	156	1.59	7.61	< 5	890	< 0.002	< 0.002	0.122	< 0.002	< 0.001	< 0.002	< 0.002	1.59	< 0.002	0.0746	< 0.0002	< 0.005	< 0.002	< 0.002	0.205	0.762	0.967
	6/15/2017	1.85	22	167	1.63	7.62	< 5	916	< 0.002	< 0.002	0.123	< 0.002	< 0.001	< 0.002	< 0.002	1.63	< 0.002	0.0778	< 0.0002	< 0.005	< 0.002	< 0.002	0.088	-0.071	0.088
	8/9/2017	1.9	20.9	168	1.8	7.72	< 5	1040	< 0.002	< 0.002	0.125	< 0.002	< 0.001	< 0.002	< 0.002	1.8	< 0.002	0.083	< 0.0002	< 0.005	< 0.002	< 0.002	0.279	0.568	0.847
	10/6/2017	1.83	21.1	166	1.26	7.53	< 5	948	< 0.002	< 0.002	0.132	< 0.002	< 0.001	< 0.002	< 0.002	1.26	< 0.002	0.0737	< 0.0002	< 0.005	< 0.002	< 0.002	0.099	0.244	0.343
	1/9/2018	-	-	-	-	7.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	1.88	17.6	160	1.73	7.56	< 5	894	-	-	-	-	-	-	-	1.73	-	-	-	-	-	-	-	-	-
	7/11/2018	-	-	-	-	7.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	-	-	-	-	7.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	1.85	17.5	160	1.54	7.58	5.98	924	-	-	-	-	-	-	-	1.54	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	-	7.63	5.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	-	-	-	7.64	5.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	1.85	17.7	162	1.48	7.65	6.76	1000	-	-	-	-	-	-	-	1.48	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	7.95	5.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	-	-	7.66	6.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	1.82	17.2	164	1.55	7.72	6.33	900	-	-	-	-	-	-	-	1.55	-	-	-	-	-	-	-	-	-
	5/19/2020	1.8	17.1	161	1.72	7.63	6.07	986	< 0.004	< 0.002	0.136	< 0.002	0.00146	< 0.01	< 0.01	1.72	< 0.005	0.0598	< 0.0002	< 0.005	< 0.002	< 0.002	0.216	0.113	0.329
	11/12/2020	1.82	17.7	172	1.67	7.29	8.78	960	-	-	-	-	-	-	-	1.67	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	8.14	9.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	6.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	1.83	16.7	169	1.73	7.66	7.04	952	-	-	-	-	-	-	-	1.73	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	7.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	4.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	1.83	17.2	166	1.61	7.5	6.77	890	-	-	-	-	-	-	-	1.61	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	7.63	7.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	-	-	7.6	6.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	1.85	16.6	167	1.64	7.57	6.41	882	-	-	-	-	-	-	-	1.64	-	-	-	-	-	-	-	-	-
	11/9/2022	1.83	16.8	169	1.41	-	7.35	902	-	-	-	-	-	-	-	1.41	-	-	-	-	-	-	-	-	-
	5/17/2023	1.88	15.9	163	1.61	-	8.77	940	-	-	-	-	-	-	-	1.61	-	-	-	-	-	-	-	-	-
	11/17/2023	1.86	16	168	1.71	-	7.24	926	-	-	-	-	-	-	-	1.71	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.0669	-	-	-	< 0.004	0.000215	0.132	< 0.002	< 0.001	< 0.01	0.00021	0.0669	< 0.002	0.0701	< 0.0002	0.002	< 0.002	< 0.002	0.103	0.3	0.403
	5/17/2024	1.85	14.3	165	1.6	-	6.04	926	< 0.004	< 0.002	0.128	-	< 0.001	< 0.01	< 0.002	1.6	< 0.002	0.0691	< 0.0002	< 0.005	< 0.002	-	0.217	0.389	0.606
	11/25/2024	1.85	15.1	323	1.78	-	6.43	994	< 0.004	< 0.002	0.13	-	< 0.001	< 0.01	< 0.002	1.78	< 0.002	0.0649	< 0.0002	< 0.005	< 0.002	-	0.127	0.395	0.522
MW-602	6/10/2016	2.28	24.7	16.9	1.21	7.01	25.1	618	< 0.002	< 0.002	0.101	< 0.002	< 0.001	< 0.002	< 0.002	1.21	< 0.002	0.0628	< 0.0002	< 0.005	< 0.002	< 0.002	-0.02	0.014	0.014
	8/9/2016	2.39	23.3	17.3	1.27	7.64	25.2	600	< 0.002	< 0.002	0.0927	< 0.002	< 0.001	< 0.002	< 0.002	1.27	< 0.002	0.0587	< 0.0002	< 0.005	< 0.002	< 0.002	0.123	-0.234	0.123

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
	10/13/2016	2.39	25.7	16.8	1.3	7.34	23.4	667	< 0.002	< 0.002	0.0906	< 0.002	< 0.001	< 0.002	< 0.002	1.3	< 0.002	0.0615	< 0.0002	< 0.005	< 0.002	< 0.002	0.125	0.771	0.896
	12/9/2016	2.34	25.3	16.4	1.16	8.15	24.2	614	< 0.002	< 0.002	0.0913	< 0.002	< 0.001	< 0.002	< 0.002	1.16	< 0.002	0.0533	< 0.0002	< 0.005	< 0.002	< 0.002	-0.169	0.65	0.65
	2/8/2017	2.41	24	17.6	1.24	8.36	27.5	606	< 0.002	< 0.002	0.0956	< 0.002	< 0.001	< 0.002	< 0.002	1.24	< 0.002	0.063	< 0.0002	< 0.005	< 0.002	< 0.002	0.105	-0.223	0.936
	4/7/2017	2.44	24.9	17.2	1.18	7.51	23.8	555	< 0.002	< 0.002	0.0921	< 0.002	< 0.001	< 0.002	< 0.002	1.18	< 0.002	0.0624	< 0.0002	< 0.005	< 0.002	< 0.002	0.715	0.549	1.26
	6/15/2017	2.41	23.2	17.2	1.2	7.77	24.4	607	< 0.002	< 0.002	0.094	< 0.002	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.0652	< 0.0002	< 0.005	< 0.002	< 0.002	-0.008	-0.105	0
	8/10/2017	2.45	23.3	17.8	1.36	7.56	24.8	604	< 0.002	< 0.002	0.0883	< 0.002	< 0.001	< 0.002	< 0.002	1.36	< 0.002	0.0662	< 0.0002	< 0.005	< 0.002	< 0.002	-0.008	-0.061	0
	10/5/2017	2.31	25.3	17.9	0.972	7.78	26.9	607	< 0.002	< 0.002	0.101	< 0.002	< 0.001	< 0.002	< 0.002	0.972	< 0.002	0.0612	< 0.0002	< 0.005	< 0.002	< 0.002	-0.244	1.77	1.77
	5/23/2018	2.39	22.9	17.6	1.27	7.54	23.9	592	-	-	-	-	-	-	-	1.27	-	-	-	-	-	-	-	-	-
	11/30/2018	2.32	23.7	16.5	1.09	7.42	24.2	579	-	-	-	-	-	-	-	1.09	-	-	-	-	-	-	-	-	-
	5/23/2019	2.35	23.1	16.9	1.06	7.45	24.2	615	-	-	-	-	-	-	-	1.06	-	-	-	-	-	-	-	-	-
	11/7/2019	2.3	24.9	16.6	1.07	7.44	24.5	569	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
MW-602	5/19/2020	2.28	23.8	17.1	1.24	7.6	25.7	611	< 0.004	< 0.002	0.105	< 0.002	< 0.001	< 0.01	< 0.01	1.24	< 0.005	0.0523	< 0.0002	< 0.005	< 0.002	< 0.002	-0.079	-0.644	< 0
	11/12/2020	2.29	23.4	17.7	1.25	7.13	28.1	593	-	-	-	-	-	-	-	1.25	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	2.27	23.5	16.8	1.23	7.66	26.2	578	-	-	-	-	-	-	-	1.23	-	-	-	-	-	-	-	-	-
	11/18/2021	2.29	23.2	17.1	1.14	7.27	25.9	592	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	5/9/2022	2.22	21.6	16.5	1.14	7.5	26.6	< 10	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-
	11/9/2022	2.27	22.2	15.8	1.1	-	26.8	571	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
	5/17/2023	2.32	22.6	16.4	1.22	-	26.9	579	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	11/17/2023	2.27	22	16.8	1.22	-	25.9	577	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.18	-	-	-	< 0.004	0.000194	0.101	< 0.002	< 0.001	0.00176	0.000227	1.18	< 0.002	0.0561	< 0.0002	0.00181	< 0.002	< 0.002	0.567	0.133	0.7
	5/17/2024	2.24	21.4	15.7	1.35	-	25.5	578	< 0.004	< 0.002	0.0994	-	< 0.001	< 0.01	< 0.002	1.35	< 0.002	0.0569	< 0.0002	< 0.005	< 0.002	-	0.0798	0.835	0.914
	11/25/2024	2.24	22.2	16.5	1.29	-	27.3	606	< 0.004	< 0.002	0.098	-	< 0.001	< 0.01	< 0.002	1.29	< 0.002	0.0535	< 0.0002	< 0.005	< 0.002	-	0.0957	0.0504	0.146
	6/7/2016	1.07	39.6	56.5	0.717	7.63	76.9	595	< 0.002	< 0.002	0.149	< 0.002	< 0.001	< 0.002	< 0.002	0.717	< 0.002	0.0375	< 0.0002	0.00519	< 0.002	< 0.002	0.227	0.018	0.245
	8/9/2016	1.06	35.3	50.6	0.719	7.54	81.1	587	< 0.002	< 0.002	0.144	< 0.002	< 0.001	< 0.002	< 0.002	0.719	< 0.002	0.0314	< 0.0002	< 0.005	< 0.002	< 0.002	0.206	0.009	0.215
	10/11/2016	1.04	37.2	49.1	0.751	7.67	80.3	619	< 0.002	< 0.002	0.159	< 0.002	< 0.001	< 0.002	< 0.002	0.751	< 0.002	0.0374	< 0.0002	< 0.005	< 0.002	< 0.002	0.152	1.24	1.39
	12/9/2016	1.07	37.2	52.2	0.816	7.63	80.9	658	< 0.002	< 0.002	0.168	< 0.002	< 0.001	< 0.002	< 0.002	0.816	< 0.002	0.0409	< 0.0002	< 0.005	< 0.002	< 0.002	0.248	0.486	0.734
	2/7/2017	1.05	37.4	49.2	0.679	7.94	89.8	631	< 0.002	< 0.002	0.181	< 0.002	< 0.001	< 0.002	< 0.002	0.679	< 0.002	0.0397	< 0.0002	< 0.005	< 0.002	< 0.002	0.209	0.075	0.284
	4/4/2017	1.06	36.3	55.3	0.79	7.62	83.8	607	< 0.002	< 0.002	0.186	< 0.002	< 0.001	< 0.002	< 0.002	0.79	< 0.002	0.0399	< 0.0002	< 0.005	< 0.002	< 0.002	0.268	0.103	0.371
	6/13/2017	1.01	36.1	54.1	0.692	7.07	80.6	612	< 0.002	< 0.002	0.172	< 0.002	< 0.001	< 0.002	< 0.002	0.692	< 0.002	0.0403	< 0.0002	< 0.005	< 0.002	< 0.002	0.206	0.75	0.956
	8/9/2017	1.07	36.3	53.5	0.857	7.97	80.8	613	< 0.002	< 0.002	0.19	< 0.002	< 0.001	< 0.002	< 0.002	0.857	0.00209	0.0451	< 0.0002	< 0.005	< 0.002	< 0.002	0.178	2.11	2.29
	10/3/2017	1.09	36.1	51.5	0.798	7.49	80.6	595	< 0.002	< 0.002	0.19	< 0.002	< 0.001	< 0.002	< 0.002	0.798	< 0.002	0.0429	< 0.0002	< 0.005	< 0.002	< 0.002	0.303	0.944	1.25
	5/24/2018	1.06	39.5	53	0.785	7.6	78.6	599	-	-	1.06	-	-	-	-	0.785	-	-	-	-	-	-	-	-	-
	12/3/2018	0.979	44.8	49.4	0.642	7.52	79.1	569	-	-	-	-	-	-	-	0.642	-	-	-	-	-	-	-	-	-
	1/15/2019	-	40.2	-	-	7.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	44.2	-	-	7.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.992	41.6	48.6	0.603	7.12	78.8	582	-	-	-	-	-	-	-	0.603	-	-	-	-	-	-	-	-	-
	7/17/2019	-	45	-	-	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	39.9	-	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	0.952	40.4	46.2	0.703	7.45	83.7	521	-	-	-	-	-	-	-	0.703	-	-	-	-	-	-	-	-	-
MW-701	5/19/2020	0.913	44.7	48.3	0.63	7.53	84	545	< 0.004	< 0.002	0.201	< 0.002	< 0.001	< 0.01	< 0.01	0.63	< 0.005	0.0362	< 0.0002	< 0.005	< 0.002	< 0.002	0.4	1.68	2.08
	7/14/2020	-	41.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	0.92	45.4	49.1	0.607	7.65	86.2	569	-	-	-	-	-	-	-	0.607	-	-	-	-	-	-	-	-	-
	2/4/2021	-	43.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	0.931	43	48.2	0.641	7.83	86.2	561	-	-	-	-	-	-	-	0.641	-	-	-	-	-	-	-	-	-
	11/18/2021	0.907	45.3	47.4	0.589	7.45	86.3	534	-	-	-	-	-	-	-	0.589	-	-	-	-	-	-	-	-	-
	1/27/2022	-	42.9	-	-	7.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	0.883	41.6	48.5	0.574	-	89.1	542	-	-	-	-	-	-	-	0.574	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	-	-	-	90.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	42	48.6	-	-	84.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	0.905	42.4	46.4	0.594	-	87.8	545	-	-	-	-	-	-	-	0.594	-	-	-	-	-	-	-	-	-
	2/8/2023	-	45.4	45.7	-	-	83.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	0.883	43.5	45.5	0.528	-	92.2	559	-	-	-	-	-	-	-	0.528	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	-	-	-	78.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	0.927	45.3	48.7	0.64	-	83	576	-	-	-	-	-	-	-	0.64	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.666	-	-	-	< 0.004	0.000744	0.209	< 0.002	< 0.001	< 0.01	0.000147	0.666	< 0.002	0.0422	< 0.0002	0.00272	< 0.002	< 0.002	0.448	0.41	0.857
	5/17/2024	0.902	42.1	45.5	0.612	-	80	571	< 0.004	< 0.002	0.211	-	< 0.001	< 0.01	< 0.002	0.612	< 0.002	0.0438	< 0.0002	< 0.005	< 0.002	-	0.605	1.17	1.77
	11/25/2024	0.886	45.4	45.8	0.651	-	88.9	578	< 0.004	< 0.002	0.189	-	< 0.001	< 0.01	< 0.002	0.651	< 0.002	0.0417	< 0.0002	< 0.005	< 0.002	-	0.706	0.564	1.27

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-702	6/8/2016	**1.67**	**17.3**	**44.9**	**1.6**	**8.86**	**5.73**	**629**	< 0.002	< 0.002	**0.242**	< 0.002	< 0.001	< 0.002	< 0.002	**1.6**	< 0.002	**0.213**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.414**	**0.51**	**0.924**
	8/9/2016	**1.62**	**11.2**	**41.7**	**1.44**	**9.12**	**5.46**	**619**	< 0.002	< 0.002	**0.232**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.251**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.462**	**1.23**	**1.692**
	10/11/2016	**1.64**	**14.9**	**41.8**	**1.37**	**8.25**	< 5	**747**	< 0.002	< 0.002	**0.199**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.278**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.346**	**0.713**	**1.06**
	12/8/2016	**1.81**	**19.4**	**46.7**	**1.39**	**8.07**	< 5	**783**	< 0.002	< 0.002	**0.376**	< 0.002	< 0.001	< 0.002	< 0.002	**1.39**	< 0.002	**0.0671**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.522**	**-0.369**	**0.522**
	2/8/2017	**1.87**	**18.1**	**48.4**	**1.46**	**8.09**	< 5	**657**	< 0.002	< 0.002	**0.396**	< 0.002	< 0.001	< 0.002	< 0.002	**1.46**	< 0.002	**0.0655**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.261**	**0.762**	**1.02**
	4/5/2017	**1.95**	**18.5**	**48.4**	**1.5**	**8.52**	< 5	**680**	< 0.002	< 0.002	**0.373**	< 0.002	< 0.001	< 0.002	< 0.002	**1.5**	< 0.002	**0.0841**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.331**	**-0.525**	**0.331**
	6/15/2017	**1.8**	**15.1**	**46.2**	**1.32**	**7.84**	< 5	**648**	< 0.002	< 0.002	**0.302**	< 0.002	< 0.001	< 0.002	< 0.002	**1.32**	< 0.002	**0.174**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.441**	**0.164**	**0.605**
	8/9/2017	**1.87**	**20.3**	**48.1**	**1.41**	**7.87**	< 5	**692**	< 0.002	< 0.002	**0.403**	< 0.002	< 0.001	< 0.002	< 0.002	**1.41**	< 0.002	**0.097**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.368**	**1.09**	**1.46**
	10/3/2017	**1.94**	**18.3**	**48.5**	**1.53**	**7.6**	< 5	**680**	< 0.002	< 0.002	**0.408**	< 0.002	< 0.001	< 0.002	< 0.002	**1.53**	< 0.002	**0.0735**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.337**	**0.602**	**0.939**
	5/24/2018	**1.74**	**7.13**	**45.8**	**1.5**	**8.26**	< 5	**590**	-	-	-	-	-	-	-	**1.5**	-	-	-	-	-	-	-	-	-
	12/3/2018	**1.47**	**3.24**	**40.9**	**1.63**	**8.49**	< 5	**423**	-	-	-	-	-	-	-	**1.63**	-	-	-	-	-	-	-	-	-
	1/14/2019	-	-	-	**1.2**	**7.95**	-	-	-	-	-	-	-	-	-	**1.2**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.55**	**5.7**	**41.8**	**1.21**	**8.82**	< 5	**530**	-	-	-	-	-	-	-	**1.21**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.41**	**2.73**	**40.7**	**1.58**	**8.75**	< 5	**193**	-	-	-	-	-	-	-	**1.58**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.34**	**3.33**	**38**	**1.19**	**8.92**	< 5	**406**	< 0.004	< 0.002	**0.133**	< 0.002	< 0.001	< 0.01	< 0.01	**1.19**	< 0.005	**0.118**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.5**	**-0.673**	**0.5**
	11/12/2020	**1.53**	**3.6**	**39.4**	**1.19**	**8.95**	**1.64**	**563**	-	-	-	-	-	-	-	**1.19**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.58**	**5.07**	**41**	**1.09**	**9.51**	**1.85**	**527**	-	-	-	-	-	-	-	**1.09**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.53**	**4.61**	**42.2**	**1.19**	**8.15**	**1.97**	**541**	-	-	-	-	-	-	-	**1.19**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.74**	**12.1**	**47.8**	**1.27**	-	**0.808**	**601**	-	-	-	-	-	-	-	**1.27**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.79**	**14.6**	**47.2**	**1.26**	-	**1.47**	**620**	-	-	-	-	-	-	-	**1.26**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.82**	**18.3**	**45.7**	**1.16**	-	< 5	**643**	-	-	-	-	-	-	-	**1.16**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.8**	**16.6**	**47.7**	**1.48**	-	**2.34**	**652**	-	-	-	-	-	-	-	**1.48**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.42**	-	-	-	< 0.004	**0.00082**	**0.59**	< 0.002	< 0.001	< 0.01	**0.0000889**	**1.42**	< 0.002	**0.0618**	< 0.0002	**0.00135**	< 0.002	< 0.002	**0.602**	**0.412**	**1.01**
	5/17/2024	**1.82**	**16**	**47.2**	**1.42**	-	< 5	**653**	< 0.004	< 0.002	**0.529**	-	< 0.001	< 0.01	< 0.002	**1.42**	< 0.002	**0.0597**	< 0.0002	< 0.005	< 0.002	-	**0.945**	**1.79**	**2.73**
	11/25/2024	**1.81**	**16.9**	**47.7**	**1.55**	-	< 5	**679**	< 0.004	< 0.002	**0.551**	-	< 0.001	< 0.01	< 0.002	**1.55**	< 0.002	**0.0573**	< 0.0002	< 0.005	< 0.002	-	**0.618**	**0.323**	**0.941**
MW-703	6/7/2016	**1.86**	**22**	**103**	**1.37**	**7.63**	< 5	**952**	< 0.002	**0.00301**	**0.292**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.0718**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.36**	**-0.212**	**1.36**
	8/9/2016	**1.93**	**17.9**	**106**	**1.44**	**7.65**	< 5	**890**	< 0.002	< 0.002	**0.273**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.0623**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.37**	**0.533**	**1.903**
	10/11/2016	**1.88**	**20.5**	**105**	**1.45**	**7.59**	< 5	**902**	< 0.002	< 0.002	**0.259**	< 0.002	< 0.001	< 0.002	< 0.002	**1.45**	< 0.002	**0.0656**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.19**	**-0.038**	**1.19**
	12/9/2016	**1.93**	**19.8**	**107**	**1.55**	**8**	< 5	**982**	< 0.002	< 0.002	**0.27**	< 0.002	< 0.001	< 0.002	< 0.002	**1.55**	< 0.002	**0.0671**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.16**	**3.32**	**4.48**
	2/7/2017	**1.91**	**17.7**	**109**	**1.44**	**7.76**	< 5	**918**	< 0.002	< 0.002	**0.271**	< 0.002	< 0.001	< 0.002	< 0.002	**1.44**	< 0.002	**0.0721**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.88**	**-0.175**	**2.11**
	4/4/2017	**1.9**	**22.4**	**115**	**1.4**	**7.64**	< 5	**926**	< 0.002	< 0.002	**0.299**	< 0.002	< 0.001	< 0.002	< 0.002	**1.4**	< 0.002	**0.0626**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.16**	**0.142**	**1.3**
	6/14/2017	**1.81**	**17.4**	**102**	**1.45**	**7.62**	< 5	**908**	< 0.002	< 0.002	**0.255**	< 0.002	< 0.001	< 0.002	< 0.002	**1.45**	< 0.002	**0.0742**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.971**	**0.08**	**1.05**
	8/10/2017	**1.87**	**17.5**	**22.3**	**1.58**	**7.47**	< 5	**982**	< 0.002	< 0.002	**0.251**	< 0.002	< 0.001	< 0.002	< 0.002	**1.58**	< 0.002	**0.0684**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.47**	**0.412**	**1.88**
	10/5/2017	**1.88**	**21.6**	**111**	**1.37**	**7.58**	< 5	**930**	< 0.002	< 0.002	**0.29**	< 0.002	< 0.001	< 0.002	< 0.002	**1.37**	< 0.002	**0.0689**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.09**	**1.5**	**2.59**
	5/24/2018	**1.9**	**21.8**	**108**	**1.49**	**7.6**	< 5	**918**	-	-	-	-	-	-	-	**1.49**	-	-	-	-	-	-	-	-	-
	12/3/2018	**1.87**	**17.7**	**106**	**1.52**	**7.46**	< 5	**892**	-	-	-	-	-	-	-	**1.52**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.86**	**19.3**	**109**	**1.34**	**7.5**	< 5	**910**	-	-	-	-	-	-	-	**1.34**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.82**	**17.6**	**111**	**1.56**	**7.63**	< 5	**866**	-	-	-	-	-	-	-	**1.56**	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.78**	**18.5**	**107**	**1.41**	**7.44**	< 5	**823**	< 0.004	< 0.002	**0.275**	< 0.002	< 0.001	< 0.01	< 0.01	**1.41**	< 0.005	**0.0596**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.33**	**-1.18**	**1.33**
	11/12/2020	**1.83**	**18.4**	**109**	**1.61**	**7.27**	< 5	**934**	-	-	-	-	-	-	-	**1.61**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	**1.51**	**7.37**	-	-	-	-	-	-	-	-	-	**1.51**	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.79**	**19**	**108**	**1.3**	**7.87**	**0.657**	**870**	-	-	-	-	-	-	-	**1.3**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.79**	**17.8**	**114**	**1.46**	**7.38**	< 5	**840**	-	-	-	-	-	-	-	**1.46**	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.79**	**19.8**	**111**	**1.42**	-	**0.784**	**865**	-	-	-	-	-	-	-	**1.42**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.81**	**18.6**	**111**	**1.31**	-	**1.24**	**870**	-	-	-	-	-	-	-	**1.31**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.81**	**17.9**	**109**	**1.2**	-	< 5	**876**	-	-	-	-	-	-	-	**1.2**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.74**	**18**	**90.6**	**1.41**	-	**25**	**856**	-	-	-	-	-	-	-	**1.41**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.32**	-	-	-	< 0.004	**0.000404**	**0.262**	< 0.002	< 0.001	< 0.01	**0.0000658**	**1.32**	< 0.002	**0.0606**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.91**	**0.579**	**2.49**
	5/17/2024	**1.62**	**19.1**	**72.4**	**1.2**	-	**48.4**	**854**	< 0.004	< 0.002	**0.264**	-	< 0.001	< 0.01	< 0.002	**1.2**	< 0.002	**0.0582**	< 0.0002	< 0.005	< 0.002	-	**1.22**	**0.652**	**1.87**
	11/25/2024	**1.48**	**26.5**	**54.6**	**1.15**	-	**56.5**	**866**	< 0.004	< 0.002	**0.295**	-	< 0.001	< 0.01	< 0.002	**1.15**	< 0.002	**0.0518**	< 0.0002	< 0.005	< 0.002	-	**2.08**	**0.907**	**2.98**
MW-704	6/7/2016	**2.03**	**35.1**	**82.5**	**0.852**	**7.74**	**203**	**1250**	**0.012**	**0.00301**	**0.113**	< 0.002	< 0.001	< 0.002	< 0.002	**0.852**	< 0.002	**0.0938**	< 0.0002	**0.0191**	< 0.002	< 0.002	**0.443**	**0.543**	**0.986**
	8/9/2016	**2.13**	**28.9**	**83.4**	**0.874**	**7.65**	**194**	**1220**	**0.0115**	< 0.002	**0.104**	< 0.002	< 0.001	< 0.002	< 0.002	**0.874**	< 0.002	**0.0867**	< 0.0002	**0.0143**	< 0.002	< 0.002	**0.27**	**0.554**	**0.824**
	10/11/2016	**2.08**	**32.9**	**80.8**	**0.865**	**7.71**	**180**	**1240**	**0.0112**	< 0.002	**0.0776**	< 0.002	< 0.001	< 0.002	< 0.002	**0.865**	< 0.002	**0.0953**	< 0.0002	**0.0128**	< 0.002	< 0.002	**0.208**	**1.24**	**1.45**
	12/6/2016	**2.09**	**32**	**82.9**	**0.939**	**7.66**	**185**	**1210**	**0.00867**	< 0.002	**0.0844**	< 0.002	< 0.001	< 0.002	< 0.002	**0.939**	< 0.002	**0.0974**	< 0.0002	**0.0124**	< 0.002	< 0.002	**0.314**	**0.643**	**0.957**
	2/7/2017	**2.09**	**29**	**82**	**0.825**	**7.83**	**196**	**1210**	**0.00769**	**0.00205**	**0.0847**	< 0.002	< 0.001	< 0.002	< 0.002	**0.825**	< 0.002	**0.101**	**0.00025**	**0.0112**	< 0.002	< 0.002	**0.256**	**0.738**	**0.994**
	4/4/2017	**2.09**	**29.8**	**84.7**	**0.882**	**7.75**	**176**	**1150**	**0.00719**	< 0.002	**0.0747**	< 0.002	< 0.001	< 0.002	< 0.002	**0.882**	< 0.002	**0.101**	< 0.0002	**0.0102**	< 0.002	< 0.002	**-0.011**	**0.505**	**0.505**
	6/13/2017	**2.04**	**26.6**	**81.8**	**0.74**	**7.07**	**151**	**1310**	**0.00488**	< 0.002	**0.0774**	< 0.002	< 0.001	< 0.002	< 0.002	**0.74**	< 0.002	**0.106**	< 0.0002	**0.00858**	< 0.002	< 0.002	**0.25**	**1.02**	**1.27**
	8/8/2017	**2.09**	**30.6**	**82.1**	**0.783**	**7.71**	**189**	**1190**	**0.00423**	< 0.002	**0.0799**	< 0.002	< 0.001	< 0.002	< 0.002	**0.783**	< 0.002	**0.109**	< 0.0002	**0.00876**	< 0.002	< 0.002	**0.221**	**0.945**	**1.17**

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-704	10/3/2017	2.12	30.3	85	0.917	7.58	168	1250	0.00521	< 0.002	0.0842	< 0.002	< 0.001	< 0.002	< 0.002	0.917	< 0.002	0.107	< 0.0002	0.008	< 0.002	< 0.002	0.141	2.04	2.18
	5/24/2018	2.14	22.7	85.9	0.943	7.74	166	1230	-	-	-	-	-	-	-	0.943	-	-	-	-	-	-	-	-	-
	7/11/2018	-	-	87.1	-	7.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/16/2018	-	-	83.3	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/3/2018	2.02	24	82.2	0.918	7.49	168	1130	-	-	-	-	-	-	-	0.918	-	-	-	-	-	-	-	-	-
	5/23/2019	2.03	21.9	87.2	0.828	7.53	153	1230	-	-	-	-	-	-	-	0.828	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	89.7	-	7.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	89.2	-	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	1.97	21	84.5	0.953	7.45	163	1110	-	-	-	-	-	-	-	0.953	-	-	-	-	-	-	-	-	-
	5/19/2020	1.87	20.9	93	0.857	7.53	148	1050	< 0.004	< 0.002	0.0726	< 0.002	< 0.001	< 0.01	< 0.01	0.857	< 0.005	0.0921	< 0.0002	0.00509	< 0.002	< 0.002	0.201	3.32	3.52
	7/14/2020	-	-	90.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/27/2020	-	-	92.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	1.97	21.5	90.2	0.885	7.56	171	1200	-	-	-	-	-	-	-	0.885	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	2.07	21.1	91.9	0.781	7.75	154	1180	-	-	-	-	-	-	-	0.781	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	91.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	90.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	2	21.9	88.1	0.834	7.36	170	1230	-	-	-	-	-	-	-	0.834	-	-	-	-	-	-	-	-	-
	5/9/2022	1.97	20.6	94.5	0.815	-	154	1110	-	-	-	-	-	-	-	0.815	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	95.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	19.8	93.9	-	-	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	2.02	22	91.1	0.742	-	163	1090	-	-	-	-	-	-	-	0.742	-	-	-	-	-	-	-	-	-
	5/17/2023	1.97	21.5	90.3	0.723	-	167	1240	-	-	-	-	-	-	-	0.723	-	-	-	-	-	-	-	-	-
	11/17/2023	1.95	21.8	88.3	0.905	-	159	1150	-	-	-	-	-	-	-	0.905	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.897	-	-	-	< 0.004	0.000319	0.0626	< 0.002	< 0.001	< 0.01	0.00017	0.897	< 0.002	0.101	< 0.0002	0.00476	< 0.002	< 0.002	0.307	0.649	0.955
	5/17/2024	1.99	20.9	87.7	0.822	-	154	1170	< 0.004	< 0.002	0.0563	-	< 0.001	< 0.01	< 0.002	0.822	< 0.002	0.0998	< 0.0002	< 0.005	< 0.002	-	0.212	0.861	1.07
	11/25/2024	1.95	22	86.2	0.968	-	167	1240	< 0.004	< 0.002	0.0539	-	< 0.001	< 0.01	< 0.002	0.968	< 0.002	0.0959	< 0.0002	< 0.005	< 0.002	-	0.448	0.901	1.35
MW-705	6/7/2016	2.19	41	142	0.944	7.3	39.6	960	< 0.002	< 0.002	0.0918	< 0.002	< 0.001	< 0.002	< 0.002	0.944	< 0.002	0.133	< 0.0002	< 0.005	< 0.002	< 0.002	0.184	0.417	0.601
	8/9/2016	2.22	33.5	136	0.985	7.35	40.7	992	< 0.002	< 0.002	0.0892	< 0.002	< 0.001	< 0.002	< 0.002	0.985	< 0.002	0.113	< 0.0002	< 0.005	< 0.002	< 0.002	0.153	0.105	0.258
	10/11/2016	2.21	39.6	138	0.998	7.21	39.2	1130	< 0.002	< 0.002	0.0881	< 0.002	< 0.001	< 0.002	< 0.002	0.998	< 0.002	0.119	< 0.0002	< 0.005	< 0.002	< 0.002	0.186	1.2	1.39
	12/7/2016	2.3	39.5	134	1.07	6.5	41.7	958	< 0.002	< 0.002	0.093	< 0.002	< 0.001	< 0.002	< 0.002	1.07	< 0.002	0.125	< 0.0002	< 0.005	< 0.002	< 0.002	0.281	0.327	0.608
	2/9/2017	2.25	38.8	135	1.04	7.33	45.5	968	< 0.002	< 0.002	0.089	< 0.002	< 0.001	< 0.002	< 0.002	1.04	< 0.002	0.13	< 0.0002	< 0.005	< 0.002	< 0.002	0.273	0.282	0.555
	4/6/2017	2.23	37.5	131	0.905	7.14	41.9	932	< 0.002	< 0.002	0.0873	< 0.002	< 0.001	< 0.002	< 0.002	0.905	< 0.002	0.121	< 0.0002	< 0.005	< 0.002	< 0.002	0.264	-0.039	0.264
	6/13/2017	2.09	35.4	136	0.924	7.18	42.2	1020	< 0.002	< 0.002	0.0837	< 0.002	< 0.001	< 0.002	< 0.002	0.924	< 0.002	0.129	< 0.0002	< 0.005	< 0.002	< 0.002	0.278	-0.182	0.278
	8/9/2017	2.21	38.7	139	0.92	7.29	43.5	1040	< 0.002	< 0.002	0.0938	< 0.002	< 0.001	< 0.002	< 0.002	0.92	< 0.002	0.134	< 0.0002	< 0.005	< 0.002	< 0.002	0.33	0.501	0.831
	10/3/2017	2.13	36.1	138	1.04	7.21	41.3	1020	< 0.002	< 0.002	0.0873	< 0.002	< 0.001	< 0.002	< 0.002	1.04	< 0.002	0.115	< 0.0002	< 0.005	< 0.002	< 0.002	0.306	0.262	0.568
	5/24/2018	2.3	28.9	135	1.07	7.29	41	912	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
	12/4/2018	2.19	30.3	132	1.07	7.32	38.9	994	-	-	-	-	-	-	-	1.07	-	-	-	-	-	-	-	-	-
	5/23/2019	2.18	28.5	135	0.852	7.33	37	980	-	-	-	-	-	-	-	0.852	-	-	-	-	-	-	-	-	-
	11/7/2019	2.11	26.7	134	1.05	7.38	37.9	914	-	-	-	-	-	-	-	1.05	-	-	-	-	-	-	-	-	-
	1/14/2020	-	-	-	-	7.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/19/2020	2.1	29.4	132	0.955	7.3	39.3	822	< 0.004	< 0.002	0.0887	< 0.002	< 0.001	< 0.01	< 0.01	0.955	< 0.005	0.113	< 0.0002	< 0.005	< 0.002	< 0.002	0.343	-0.385	0.343
	11/12/2020	2.07	28.8	141	1.02	6.92	40.1	1000	-	-	-	-	-	-	-	1.02	-	-	-	-	-	-	-	-	-
	5/18/2021	2.17	28.6	139	0.887	7.53	38.6	932	-	-	-	-	-	-	-	0.887	-	-	-	-	-	-	-	-	-
	11/18/2021	2.12	28.7	141	0.966	7.16	38.6	1000	-	-	-	-	-	-	-	0.966	-	-	-	-	-	-	-	-	-
	5/9/2022	2	27.6	136	0.939	-	40.7	917	-	-	-	-	-	-	-	0.939	-	-	-	-	-	-	-	-	-
	11/9/2022	2.11	26.9	138	0.878	-	39	930	-	-	-	-	-	-	-	0.878	-	-	-	-	-	-	-	-	-
	5/17/2023	2.14	27.7	133	0.799	-	40.7	1010	-	-	-	-	-	-	-	0.799	-	-	-	-	-	-	-	-	-
	11/17/2023	2.12	29.9	132	1.01	-	40.6	958	-	-	-	-	-	-	-	1.01	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.01	-	-	-	< 0.004	< 0.002	0.0918	< 0.002	< 0.001	< 0.01	< 0.002	1.01	< 0.002	0.118	< 0.0002	< 0.005	< 0.002	< 0.002	0.19	0.594	0.784
	5/17/2024	2.11	27.2	135	0.992	-	37.5	968	< 0.004	< 0.002	0.0887	-	< 0.001	< 0.01	< 0.002	0.992	< 0.002	0.117	< 0.0002	< 0.005	< 0.002	-	0.297	0.499	0.796
	11/25/2024	2.11	28.1	130	1.11	-	38.1	998	< 0.004	< 0.002	0.091	-	< 0.001	< 0.01	< 0.002	1.11	< 0.002	0.115	< 0.0002	< 0.005	< 0.002	-	0.361	0.689	1.05
MW-706	6/8/2016	2.14	35.8	270	1.22	7.54	< 5	1270	< 0.002	< 0.002	< 0.002	2.14	< 0.001	< 0.002	< 0.002	1.22	< 0.002	0.146	< 0.0002	< 0.005	< 0.002	< 0.002	0.578	0.681	1.26
	8/9/2016	2.19	29	269	1.12	7.55	< 5	1250	< 0.002	< 0.002	< 0.002	2.19	< 0.001	< 0.002	< 0.002	1.12	< 0.002	0.126	< 0.0002	< 0.005	< 0.002	< 0.002	0.532	0.172	0.704
	10/11/2016	2.17	33.1	274	1.21	8.14	< 5	1560	< 0.002	< 0.002	< 0.002	2.17	< 0.001	< 0.002	< 0.002	1.21	< 0.002	0.136	< 0.0002	< 0.005	< 0.002	< 0.002	0.379	0.998	1.38
	12/6/2016	2.25	32.9	272	1.25	7.6	< 5	1300	< 0.002	< 0.002	< 0.002	2.25	< 0.001	< 0.002	< 0.002	1.25	< 0.002	0.141	< 0.0002	< 0.005	< 0.002	< 0.002	0.325	4.41	4.74
	2/7/2017	2.18	29.2	309	1.12	7.84	< 5	1270	< 0.002	< 0.002	< 0.002	2.18	< 0.001	< 0.002	< 0.002	1.12	< 0.002	0.14	0.00025	< 0.005	< 0.002	< 0.002	0.328	0.831	1.16

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Monitoring Well	Sample Date	Appendix III Constituents							Appendix IV Constituents																
		Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
	4/4/2017	2.13	30.8	282	1.2	7.67	< 5	1230	< 0.002	< 0.002	< 0.002	2.13	< 0.001	< 0.002	< 0.002	1.2	< 0.002	0.138	< 0.0002	< 0.005	< 0.002	< 0.002	0.628	-0.275	0.628
	6/13/2017	2.05	28	274	1.09	7.53	< 5	1300	< 0.002	< 0.002	< 0.002	2.05	< 0.001	< 0.002	< 0.002	1.09	< 0.002	0.146	< 0.0002	< 0.005	< 0.002	< 0.002	0.273	0.539	0.812
	8/9/2017	2.18	31.5	282	1.14	7.37	< 5	1320	< 0.002	< 0.002	< 0.002	2.18	< 0.001	< 0.002	< 0.002	1.14	< 0.002	0.152	< 0.0002	< 0.005	< 0.002	< 0.002	0.619	0.925	1.54
	10/4/2017	2.23	31.1	276	1.11	7.05	< 5	1240	< 0.002	< 0.002	< 0.002	2.23	< 0.001	< 0.002	< 0.002	1.11	< 0.002	0.146	< 0.0002	< 0.005	< 0.002	< 0.002	0.51	-0.296	0.51
	1/9/2018	-	-	-	-	7.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/24/2018	2.18	23.8	252	1.2	7.44	< 5	1170	-	-	-	2.18	-	-	-	1.2	-	-	-	-	-	-	-	-	-
	12/4/2018	2.09	24.7	241	1.15	7.42	7.69	1200	-	-	-	2.09	-	-	-	1.15	-	-	-	-	-	-	-	-	-
	1/15/2019	-	-	-	-	7.49	7.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	-	-	-	7.55	6.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	2.09	23.2	253	0.985	7.61	5.78	1230	-	-	-	2.09	-	-	-	0.985	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	7.58	8.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	-	-	-	-	7.48	8.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	2.09	22.5	240	1.18	7.72	9.68	1160	-	-	-	2.09	-	-	-	1.18	-	-	-	-	-	-	-	-	-
	1/14/2020	-	-	-	-	7.79	9.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/3/2020	-	-	-	-	-	32.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/19/2020	1.94	24.8	225	1.03	7.55	24.6	952	< 0.004	< 0.002	0.199	< 0.002	< 0.001	< 0.01	< 0.01	1.03	< 0.005	0.116	< 0.0002	< 0.005	< 0.002	< 0.002	0.122	1.4	1.52
	7/14/2020	-	-	-	-	-	21.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-706	8/27/2020	-	-	-	-	-	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	1.98	24.4	244	1.05	7.11	20	1180	-	-	-	-	-	-	-	1.05	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	7.25	23.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	2.04	24.1	236	0.946	7.69	19.2	1160	-	-	-	-	-	-	-	0.946	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	2.05	24.6	245	1.05	7.23	16.8	1170	-	-	-	-	-	-	-	1.05	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	7.43	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2022	-	-	-	-	7.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/8/2022	-	-	-	-	-	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	1.98	23.7	255	1.01	-	11.7	1190	-	-	-	-	-	-	-	1.01	-	-	-	-	-	-	-	-	-
	11/9/2022	2.08	23.2	250	0.923	-	12.7	1060	-	-	-	-	-	-	-	0.923	-	-	-	-	-	-	-	-	-
	5/17/2023	1.98	23.6	218	0.858	-	20.7	1100	-	-	-	-	-	-	-	0.858	-	-	-	-	-	-	-	-	-
	11/17/2023	2	25.4	214	1.09	-	20	1120	-	-	-	-	-	-	-	1.09	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	1.07	-	-	-	< 0.004	0.000611	0.193	< 0.002	< 0.001	< 0.01	0.000118	1.07	< 0.002	0.126	< 0.0002	0.00179	< 0.002	< 0.002	0.598	1.03	1.63
	5/17/2024	1.99	22.6	223	1.06	-	15.7	1170	< 0.004	< 0.002	0.193	-	< 0.001	< 0.01	< 0.002	1.06	< 0.002	0.127	< 0.0002	< 0.005	< 0.002	-	1.39	0.577	1.97
	11/25/2024	2	24	228	1.14	-	14.2	1210	< 0.004	< 0.002	0.197	-	< 0.001	< 0.01	< 0.002	1.14	< 0.002	0.124	< 0.0002	< 0.005	< 0.002	-	0.403	0.55	0.953
	6/23/2016	1.38	371	200	0.386	7.03	5010	770	< 0.002	0.00584	< 0.005	< 0.002	< 0.001	0.00225	0.00548	0.386	0.00333	0.445	< 0.0002	< 0.005	0.00337	< 0.002	0.95	2.64	3.59
	8/9/2016	1.94	412	235	0.347	6.81	4320	8420	< 0.002	< 0.002	0.0315	< 0.002	< 0.001	< 0.002	0.00347	0.347	< 0.002	0.623	< 0.0002	< 0.005	0.00422	< 0.002	0.404	0.209	0.613
	10/11/2016	1.88	408	211	0.382	6.95	4860	6160	0.00235	< 0.002	0.0347	< 0.002	< 0.001	0.00684	0.0234	0.382	< 0.002	0.715	< 0.0002	< 0.005	0.00326	< 0.002	0.546	0.86	1.41
	12/6/2016	1.98	410	220	0.353	6.92	4920	5370	< 0.002	< 0.002	0.0215	< 0.002	< 0.001	0.00254	0.00543	0.353	< 0.002	0.737	< 0.0002	< 0.005	0.00233	< 0.002	0.332	0.921	1.25
	2/7/2017	1.97	398	207	0.293	6.95	5280	6070	< 0.002	< 0.002	0.0198	< 0.002	< 0.001	0.00252	0.00288	0.293	0.00267	0.78	0.00024	< 0.005	< 0.002	< 0.002	0.214	0.226	0.44
	4/4/2017	1.93	382	242	0.323	7.12	4940	7890	< 0.002	< 0.002	0.0133	< 0.002	< 0.001	< 0.002	0.00506	0.323	< 0.002	0.821	< 0.0002	< 0.005	< 0.002	< 0.002	0.331	0.37	0.701
	6/13/2017	1.95	374	209	0.613	7.06	4600	6910	< 0.002	< 0.002	0.0143	< 0.002	< 0.001	< 0.002	0.00542	0.613	< 0.002	0.976	< 0.0002	< 0.005	0.00218	< 0.002	0.161	0.841	1
	8/8/2017	2.02	378	193	0.402	7.04	4790	7640	< 0.002	< 0.002	0.0134	< 0.002	< 0.001	< 0.002	0.00492	0.402	< 0.002	0.993	< 0.0002	< 0.005	0.00223	< 0.002	0.211	0.099	0.31
	10/3/2017	2.02	382	214	0.391	6.88	4800	7690	< 0.002	< 0.002	0.0244	< 0.002	< 0.001	< 0.002	0.00467	0.391	< 0.002	0.974	< 0.0002	< 0.005	< 0.002	< 0.002	0.235	0.735	0.97
	5/24/2018	2.04	396	197	0.392	6.92	4650	7260	-	-	-	-	-	-	-	0.392	-	-	-	-	-	-	-	-	-
	12/4/2018	1.95	381	205	0.328	6.84	4490	8080	-	-	-	-	-	-	-	0.328	-	-	-	-	-	-	-	-	-
MW-707B	5/23/2019	1.96	418	194	0.276	6.83	5530	8310	-	-	-	-	-	-	-	0.276	-	-	-	-	-	-	-	-	-
	7/17/2019	-	-	-	-	6.8	4920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	1.86	386	169	0.442	7.14	5330	7920	-	-	-	-	-	-	-	0.442	-	-	-	-	-	-	-	-	-
	5/19/2020	1.81	424	172	0.325	6.78	5310	5810	< 0.004	< 0.002	0.0241	< 0.002	< 0.001	< 0.01	0.0121	0.325	< 0.005	1.01	< 0.0002	< 0.005	< 0.002	< 0.002	0.21	-0.218	0.21
	11/12/2020	1.83	404	267	0.196	7.15	5250	8180	-	-	-	-	-	-	-	0.196	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	168	-	6.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	1.88	412	170	0.281	6.94	5480	6860	-	-	-	-	-	-	-	0.281	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	5070	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	1.94	431	199	0.25	6.84	6500	6140	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-
	1/27/2022	-	408	-	-	6.75	4890	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	1.86	438	163	< 1.5	-	5870	5460	-	-	-	-	-	-	-	< 1.5	-	-	-	-	-	-	-	-	-
	7/15/2022	-	399	-	0.328	-	5390	-	-	-	-	-	-	-	-	0.328	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-707B	8/17/2022	-	**285**	**194**	-	-	**4440**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.88**	**377**	**161**	**1.31**	-	**5060**	**6160**	-	-	-	-	-	-	-	**1.31**	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**398**	**172**	< 1.5	-	**4980**	-	-	-	-	-	-	-	-	< 1.5	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.87**	**391**	**172**	**0.372**	-	**4840**	**9880**	-	-	-	-	-	-	-	**0.372**	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	-	-	-	-	**7920**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.87**	**403**	**167**	**0.388**	-	**5010**	**6930**	-	-	-	-	-	-	-	**0.388**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.0874**	-	-	-	< 0.004	**0.000415**	**0.0205**	< 0.002	**0.000294**	**0.00262**	**0.0144**	**0.0874**	< 0.002	**1.29**	< 0.0002	**0.00593**	**0.000448**	< 0.002	**0.261**	**0.515**	**0.776**
	5/16/2024	**1.87**	**392**	**159**	**0.368**	-	**4880**	**5720**	< 0.004	< 0.002	**0.017**	-	< 0.001	< 0.01	**0.00849**	**0.368**	< 0.002	**1.27**	**0.000238**	< 0.005	< 0.002	-	**0.369**	**0.361**	**0.73**
	11/25/2024	**1.79**	**404**	**167**	**0.486**	-	**5040**	**8990**	< 0.004	< 0.002	**0.0187**	-	< 0.001	< 0.01	**0.00809**	**0.486**	< 0.002	**1.25**	< 0.0002	< 0.005	< 0.002	-	**0.258**	**0.861**	**1.12**
MW-708	6/7/2016	**1.37**	**35.2**	**46.2**	**0.569**	**7.43**	**8.99**	**651**	< 0.002	< 0.002	**0.212**	< 0.002	< 0.001	< 0.002	< 0.002	**0.569**	< 0.002	**0.078**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.221**	**1.61**	**1.83**
	8/10/2016	**1.44**	**30.2**	**47**	**0.619**	**7.48**	**8.98**	**881**	< 0.002	< 0.002	**0.24**	< 0.002	< 0.001	< 0.002	< 0.002	**0.619**	< 0.002	**0.0673**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.194**	**1.35**	**1.544**
	10/12/2016	**1.47**	**32.2**	**46.5**	**0.632**	**7.46**	**8.24**	**684**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.632**	< 0.002	**0.0731**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.168**	**1.35**	**1.52**
	12/9/2016	**1.44**	**30.7**	**44.4**	**0.548**	**7.32**	**8.72**	**639**	< 0.002	< 0.002	**0.257**	< 0.002	< 0.001	< 0.002	< 0.002	**0.548**	< 0.002	**0.0687**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.365**	**0.922**	**1.29**
	2/9/2017	**1.51**	**32**	**48**	**0.695**	**7.32**	**9.59**	**679**	< 0.002	< 0.002	**0.255**	< 0.002	< 0.001	< 0.002	< 0.002	**0.695**	< 0.002	**0.0843**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.189**	**0.313**	**0.502**
	4/6/2017	**1.48**	**31.4**	**47.7**	**0.612**	**7.12**	**8.36**	**623**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.612**	< 0.002	**0.0762**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.33**	**1.29**	**1.62**
	6/14/2017	**1.36**	**30.2**	**46**	**0.624**	**7.33**	**9.38**	**653**	< 0.002	< 0.002	**0.222**	< 0.002	< 0.001	< 0.002	< 0.002	**0.624**	< 0.002	**0.0792**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.063**	**0.113**	**0.176**
	8/8/2017	**1.44**	**31.7**	**47.1**	**0.705**	**7.71**	**9.36**	**649**	< 0.002	< 0.002	**0.229**	< 0.002	< 0.001	< 0.002	< 0.002	**0.705**	< 0.002	**0.0822**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.16**	**0.706**	**0.866**
	10/4/2017	**1.49**	**32.7**	**48**	**0.642**	**7.27**	**9.09**	**645**	< 0.002	< 0.002	**0.277**	< 0.002	< 0.001	< 0.002	< 0.002	**0.642**	< 0.002	**0.0816**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.149**	**-0.688**	**0.149**
	5/23/2018	**1.45**	**29.2**	**46.3**	**0.653**	**7.39**	**9.25**	**639**	-	-	-	-	-	-	-	**0.653**	-	-	-	-	-	-	-	-	-
	12/4/2018	**1.41**	**30.1**	**46**	**0.618**	**7.31**	**9.24**	**633**	-	-	-	-	-	-	-	**0.618**	-	-	-	-	-	-	-	-	-
	5/23/2019	**1.31**	**28.6**	**43.4**	**0.495**	**7.36**	**9.18**	**651**	-	-	-	-	-	-	-	**0.495**	-	-	-	-	-	-	-	-	-
	11/7/2019	**1.34**	**27.7**	**45**	**0.601**	**7.53**	**10.1**	**607**	-	-	-	-	-	-	-	**0.601**	-	-	-	-	-	-	-	-	-
	1/14/2020	-	-	-	-	**7.58**	**9.45**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/19/2020	**1.26**	**30.2**	**43.6**	**0.502**	**7.48**	**9.42**	**586**	< 0.004	< 0.002	**0.202**	< 0.002	< 0.001	< 0.01	< 0.01	**0.502**	< 0.005	**0.0691**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.123**	**-0.182**	**0.123**
	11/12/2020	**1.32**	**30.1**	**45.5**	**0.59**	**7.52**	**9.88**	**632**	-	-	-	-	-	-	-	**0.59**	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	**9.54**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	**1.36**	**29.6**	**45**	**0.545**	**7.73**	**8.64**	**624**	-	-	-	-	-	-	-	**0.545**	-	-	-	-	-	-	-	-	-
	11/18/2021	**1.37**	**30.9**	**46.2**	**0.567**	**7.23**	**12.7**	**641**	-	-	-	-	-	-	-	**0.567**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	**7.49**	**9.26**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**1.27**	**28.6**	**46.7**	**0.53**	-	**9.34**	**628**	-	-	-	-	-	-	-	**0.53**	-	-	-	-	-	-	-	-	-
	11/9/2022	**1.39**	**28.3**	**46.4**	**0.595**	-	**9.47**	**1590**	-	-	-	-	-	-	-	**0.595**	-	-	-	-	-	-	-	-	-
	5/17/2023	**1.36**	**29.1**	**46.5**	**0.631**	-	**9.31**	**652**	-	-	-	-	-	-	-	**0.631**	-	-	-	-	-	-	-	-	-
	11/17/2023	**1.43**	**30.4**	**47.8**	**0.654**	-	**11.2**	**615**	-	-	-	-	-	-	-	**0.654**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.705**	-	-	-	< 0.004	< 0.002	**0.234**	< 0.002	< 0.001	< 0.01	< 0.002	**0.705**	< 0.002	**0.0776**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.319**	**0.273**	**0.592**
	5/16/2024	**1.42**	**27.9**	**48.2**	**0.686**	-	**9.6**	**620**	< 0.004	< 0.002	**0.234**	-	< 0.001	< 0.01	< 0.002	**0.686**	< 0.002	**0.0793**	< 0.0002	< 0.005	< 0.002	-	**0.367**	**0.0408**	**0.408**
	11/25/2024	**1.43**	**28.1**	**50.1**	**0.754**	-	**11.1**	**645**	< 0.004	< 0.002	**0.268**	-	< 0.001	< 0.01	< 0.002	**0.754**	< 0.002	**0.0748**	< 0.0002	< 0.005	< 0.002	-	**0.21**	**0.604**	**0.814**
MW-801	6/7/2016	**2.34**	**37.6**	**118**	**1.08**	**7.47**	< 5	**930**	< 0.002	< 0.002	**0.638**	< 0.002	< 0.001	< 0.002	< 0.002	**1.08**	< 0.002	**0.119**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.506**	**0.647**	**1.15**
	8/9/2016	**2.39**	**30.9**	**111**	**1.11**	**7.48**	< 5	**888**	< 0.002	< 0.002	**0.592**	< 0.002	< 0.001	< 0.002	< 0.002	**1.11**	< 0.002	**0.0957**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.423**	**0.447**	**0.87**
	10/11/2016	**2.32**	**33.5**	**117**	**1.11**	**7.32**	< 5	**970**	< 0.002	< 0.002	**0.573**	< 0.002	< 0.001	< 0.002	< 0.002	**1.11**	< 0.002	**0.102**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.437**	**0.812**	**1.25**
	12/6/2016	**2.33**	**33.6**	**116**	**1.19**	**7.14**	< 5	**880**	< 0.002	< 0.002	**0.589**	< 0.002	< 0.001	< 0.002	< 0.002	**1.19**	< 0.002	**0.0994**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.351**	**1.53**	**1.88**
	2/7/2017	**2.34**	**30.9**	**113**	**1.14**	**7.58**	< 5	**900**	< 0.002	< 0.002	**0.604**	< 0.002	< 0.001	< 0.002	< 0.002	**1.14**	< 0.002	**0.104**	**0.00025**	< 0.005	< 0.002	< 0.002	**0.378**	**0.56**	**0.955**
	4/6/2017	**2.34**	**32.5**	**111**	**1.03**	**7.26**	< 5	**826**	< 0.002	< 0.002	**0.56**	< 0.002	< 0.001	< 0.002	< 0.002	**1.03**	**0.00296**	**0.101**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.37**	**0.902**	**1.27**
	6/14/2017	**2.27**	**28.8**	**103**	**1.12**	**6.95**	< 5	**862**	< 0.002	< 0.002	**0.565**	< 0.002	< 0.001	< 0.002	< 0.002	**1.12**	**0.00212**	**0.114**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.526**	**0.447**	**0.973**
	8/9/2017	**2.34**	**30.9**	**116**	**1.05**	**7.51**	< 5	**1050**	< 0.002	< 0.002	**0.562**	< 0.002	< 0.001	< 0.002	< 0.002	**1.05**	**0.00326**	**0.114**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.536**	**0.436**	**0.972**
	10/4/2017	**2.3**	**31.4**	**118**	**1.16**	**7.58**	< 5	**916**	< 0.002	< 0.002	**0.588**	< 0.002	< 0.001	< 0.002	< 0.002	**1.16**	**0.00708**	**0.0981**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.511**	**0.634**	**1.15**
	5/23/2018	**2.17**	**25.6**	**97.1**	**1.13**	**7.42**	< 5	**828**	-	-	-	-	-	-	-	**1.13**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.21**	**26.8**	**92.9**	**0.984**	**7.34**	< 5	**832**	-	-	-	-	-	-	-	**0.984**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.22**	**25.1**	**89.4**	**0.922**	**7.4**	< 5	**852**	-	-	-	-	-	-	-	**0.922**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.19**	**27.5**	**92**	**0.951**	**7.63**	< 5	**785**	-	-	-	-	-	-	-	**0.951**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.14**	**26.2**	**91.4**	**1.09**	**7.52**	< 5	**860**	< 0.004	< 0.002	**0.509**	< 0.002	< 0.001	< 0.01	< 0.01	**1.09**	**0.00779**	**0.0842**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.344**	**0.289**	**0.632**
	11/12/2020	**2.2**	**26.4**	**95.2**	**1.05**	**7.65**	**3.25**	**832**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2.21**	**24.8**	**98.7**	**1.09**	**7.66**	**2.36**	**843**	-	-	-	-	-	-	-	**1.09**	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.21**	**25.6**	**96.2**	**0.997**	**7.51**	**2.82**	**805**	-	-	-	-	-	-	-	**0.997**	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.1**	**22.1**	**95.7**	**1.01**	**7.64**	**3.25**	**788**	-	-	-	-	-	-	-	**1.01**	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.09**	**23.2**	**94.7**	**0.932**	-	**4.12**	**746**	-	-	-	-	-	-	-	**0.932**	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.17**	**24.6**	**93.6**	**1.06**	-	**2.62**	**792**	-	-	-	-	-	-	-	**1.06**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2.2**	**24.6**	**93.6**	**1.11**	-	**2.07**	**800**	-	-	-	-	-	-	-	**1.11**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**1.08**	-	-	-	< 0.004	**0.000488**	**0.5**	< 0.002	< 0.001	< 0.01	< 0.002	**1.08**	**0.0017**	**0.0902**	< 0.0002	**0.00702**	< 0.002	< 0.002	**0.259**	**0.336**	**0.594**

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-801	5/16/2024	**2.21**	**23.8**	**89.1**	**1.08**	-	< 5	**726**	< 0.004	< 0.002	**0.495**	-	< 0.001	< 0.01	< 0.002	**1.08**	< 0.002	**0.0912**	< 0.0002	**0.00508**	< 0.002	-	**0.307**	**0.391**	**0.698**
	11/25/2024	**2.19**	**25.2**	**90.9**	**1.13**	-	< 5	**818**	< 0.004	< 0.002	**0.507**	-	< 0.001	< 0.01	< 0.002	**1.13**	< 0.002	**0.0862**	< 0.0002	< 0.005	< 0.002	-	**0.234**	**1.27**	**1.5**
MW-802	6/7/2016	**2.51**	**42.6**	**37.9**	**0.92**	**7.46**	< 5	**695**	< 0.002	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.92**	< 0.002	**0.105**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.519**	**1.67**	**2.19**
	8/10/2016	**2.59**	**32.2**	**37.5**	**0.972**	**7.52**	< 5	**681**	< 0.002	< 0.002	**0.878**	< 0.002	< 0.001	< 0.002	< 0.002	**0.972**	< 0.002	**0.087**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.488**	**1.74**	**2.228**
	10/11/2016	**2.5**	**37.2**	**36.3**	**0.986**	**7.34**	< 5	**713**	< 0.002	< 0.002	**0.868**	< 0.002	< 0.001	< 0.002	< 0.002	**0.986**	< 0.002	**0.0908**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.659**	**1.33**	**1.99**
	12/6/2016	**2.57**	**37.2**	**37.4**	**1.04**	**7.48**	< 5	**659**	< 0.002	< 0.002	**0.889**	< 0.002	< 0.001	< 0.002	< 0.002	**1.04**	< 0.002	**0.0925**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.337**	**0.826**	**1.16**
	2/7/2017	**2.51**	**33.7**	**37.1**	**1.01**	**7.67**	< 5	**683**	< 0.002	< 0.002	**0.908**	< 0.002	< 0.001	< 0.002	< 0.002	**1.01**	< 0.002	**0.0931**	**0.00021**	< 0.005	< 0.002	< 0.002	**0.559**	**0.179**	**0.559**
	4/5/2017	**2.48**	**35**	**37.4**	**0.947**	**8.72**	< 5	**693**	< 0.002	< 0.002	**0.861**	< 0.002	< 0.001	< 0.002	< 0.002	**0.947**	< 0.002	**0.0919**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.996**	**0.78**	**1.78**
	6/13/2017	**2.41**	**31.6**	**36.4**	**0.995**	**7.6**	< 5	**709**	< 0.002	< 0.002	**0.86**	< 0.002	< 0.001	< 0.002	< 0.002	**0.995**	< 0.002	**0.0971**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.494**	**1.77**	**2.26**
	8/7/2017	**2.5**	**32.4**	**35.6**	**1.09**	**7.29**	< 5	**653**	< 0.002	< 0.002	**0.855**	< 0.002	< 0.001	< 0.002	< 0.002	**1.09**	< 0.002	**0.0999**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.641**	**0.58**	**1.22**
	10/4/2017	**2.48**	**34.1**	**36.4**	**1.07**	**7.58**	< 5	**684**	< 0.002	< 0.002	**0.883**	< 0.002	< 0.001	< 0.002	< 0.002	**1.07**	< 0.002	**0.089**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.633**	**1.27**	**1.9**
	5/23/2018	**2.5**	**27.5**	**37.5**	**1.05**	**7.34**	< 5	**683**	-	-	-	-	-	-	-	**1.05**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.49**	**27.8**	**35.9**	**0.932**	**7.38**	< 5	**663**	-	-	-	-	-	-	-	**0.932**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.47**	**26.4**	**34.2**	**0.816**	**7.3**	< 5	**688**	-	-	-	-	-	-	-	**0.816**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.44**	**28**	**33.8**	**0.952**	**7.58**	< 5	**627**	-	-	-	-	-	-	-	**0.952**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.41**	**27.8**	**36.2**	**1.07**	**7.44**	< 5	**685**	< 0.004	< 0.002	**0.939**	< 0.002	< 0.001	< 0.01	< 0.01	**1.07**	< 0.005	**0.085**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.753**	**0.128**	**0.881**
	11/12/2020	**2.45**	**27.1**	**34.5**	**1.02**	**7.96**	< 5	**646**	-	-	-	-	-	-	-	**1.02**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2.44**	**28**	**37.7**	**1.12**	**7.64**	< 0.594	**684**	-	-	-	-	-	-	-	**1.12**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	**39.7**	**1.04**	-	-	-	-	-	-	-	-	-	-	**1.04**	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.46**	**28**	**39.6**	**0.904**	**7.42**	< 5	**652**	-	-	-	-	-	-	-	**0.904**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	**36.3**	-	**7.46**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.36**	**28.4**	**38.5**	**0.949**	**7.71**	**0.946**	**646**	-	-	-	-	-	-	-	**0.949**	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.47**	**26.9**	**40.6**	**0.936**	-	**1.07**	**667**	-	-	-	-	-	-	-	**0.936**	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	**40**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**29.1**	**39.4**	-	-	< 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.44**	**28.8**	**38.4**	**0.972**	-	**0.757**	**656**	-	-	-	-	-	-	-	**0.972**	-	-	-	-	-	-	-	-	-
	11/17/2023	**2.45**	**28.6**	**41.2**	**0.97**	-	< 5	**664**	-	-	-	-	-	-	-	**0.97**	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	**0.987**	-	-	-	< 0.004	**0.00242**	**0.981**	< 0.002	< 0.001	< 0.01	**0.0000905**	**0.987**	**0.00331**	**0.0912**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.981**	**0.57**	**1.55**
	5/15/2024	**2.37**	**28.4**	**38.1**	**0.918**	-	< 5	**668**	< 0.004	< 0.002	**0.916**	-	< 0.001	< 0.01	< 0.002	**0.918**	< 0.002	**0.0869**	< 0.0002	< 0.005	< 0.002	-	**0.324**	**0.654**	**0.978**
	11/25/2024	**2.46**	**28.6**	**41.9**	**1.08**	-	< 5	**680**	< 0.004	< 0.002	**0.949**	-	< 0.001	< 0.01	< 0.002	**1.08**	**0.0026**	**0.0859**	< 0.0002	< 0.005	< 0.002	-	**0.72**	**0.98**	**1.7**
MW-803	6/9/2016	**2.04**	**47.6**	**48.1**	**0.636**	**7.48**	**15**	**594**	**0.00256**	< 0.002	**0.244**	< 0.002	< 0.001	< 0.002	< 0.002	**0.636**	< 0.002	**0.0649**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.512**	**0.48**	**0.992**
	8/11/2016	**2.15**	**46.2**	**48.8**	**0.653**	**7.51**	**16.2**	**591**	**0.0025**	< 0.002	**0.224**	< 0.002	< 0.001	< 0.002	< 0.002	**0.653**	< 0.002	**0.065**	< 0.0002	< 0.005	< 0.002	< 0.002	**1.41**	**0.246**	**1.656**
	10/13/2016	**2.12**	**49.7**	**48.4**	**0.645**	**6.99**	**17.9**	**592**	< 0.002	< 0.002	**0.22**	< 0.002	< 0.001	< 0.002	< 0.002	**0.645**	< 0.002	**0.0686**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.281**	**1.65**	**1.93**
	12/6/2016	**2.13**	**48.3**	**49.9**	**0.696**	**7.48**	**21.9**	**603**	< 0.002	< 0.002	**0.242**	< 0.002	< 0.001	< 0.002	< 0.002	**0.696**	< 0.002	**0.0915**	< 0.0002	**0.00593**	< 0.002	< 0.002	**0.385**	**1.16**	**1.55**
	2/8/2017	**2.14**	**44.8**	**49.3**	**0.607**	**8.12**	**22.4**	**599**	< 0.002	< 0.002	**0.239**	< 0.002	< 0.001	< 0.002	< 0.002	**0.607**	< 0.002	**0.0779**	**0.00021**	< 0.005	< 0.002	< 0.002	**0.85**	**0.768**	**1.62**
	4/7/2017	**2.14**	**46.7**	**49.5**	**0.586**	**7.36**	**17.8**	**605**	< 0.002	< 0.002	**0.217**	< 0.002	< 0.001	< 0.002	< 0.002	**0.586**	< 0.002	**0.069**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.362**	**0.626**	**0.988**
	6/13/2017	**1.97**	**44.1**	**49.2**	**0.665**	**7.98**	**21.2**	**627**	< 0.002	< 0.002	**0.234**	< 0.002	< 0.001	< 0.002	< 0.002	**0.665**	< 0.002	**0.0968**	< 0.0002	< 0.005	< 0.002	< 0.002	**0.428**	**0.667**	**1.1**
	8/8/2017	**2.12**	**46.1**	**49.5**	**0.693**	**7.52**	**23.2**	**709**	< 0.002	< 0.002	**0.234**	< 0.002	< 0.001	< 0.002	< 0.002	**0.693**	< 0.002	**0.0898**	< 0.0002	**0.00521**	< 0.002	< 0.002	**0.759**	**1.08**	**1.84**
	10/4/2017	**2.07**	**46.1**	**49.3**	**0.594**	**7.55**	**23.2**	**625**	< 0.002	< 0.002	**0.24**	< 0.002	< 0.001	< 0.002	< 0.002	**0.594**	< 0.002	**0.0909**	< 0.0002	**0.00549**	< 0.002	< 0.002	**0.292**	**3.09**	**3.38**
	5/23/2018	**2.1**	**42.9**	**48.9**	**0.649**	**7.46**	**24.4**	**606**	-	-	-	-	-	-	-	**0.649**	-	-	-	-	-	-	-	-	-
	11/30/2018	**2.09**	**44.2**	**48.7**	**0.566**	**7.33**	**24.5**	**601**	-	-	-	-	-	-	-	**0.566**	-	-	-	-	-	-	-	-	-
	5/23/2019	**2.12**	**41.1**	**49.2**	**0.551**	**7.26**	**24.1**	**621**	-	-	-	-	-	-	-	**0.551**	-	-	-	-	-	-	-	-	-
	11/7/2019	**2.07**	**43.1**	**49.4**	**0.563**	**7.26**	**24**	**563**	-	-	-	-	-	-	-	**0.563**	-	-	-	-	-	-	-	-	-
	5/19/2020	**2.03**	**38.7**	**49.8**	**0.647**	**7.41**	**25.2**	**603**	< 0.004	< 0.002	**0.231**	< 0.002	< 0.001	< 0.01	< 0.01	**0.647**	< 0.005	**0.0672**	< 0.0002	**0.005**	< 0.002	< 0.002	**0.585**	**0.173**	**0.758**
	11/12/2020	**2.08**	**38.4**	**49.6**	**0.568**	**7.95**	**25.2**	**593**	-	-	-	-	-	-	-	**0.568**	-	-	-	-	-	-	-	-	-
	5/18/2021	**2**	**37.9**	**50.2**	**0.614**	**7.78**	**25.2**	**571**	-	-	-	-	-	-	-	**0.614**	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	**51.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	**50.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	**2.07**	**40**	**51**	**0.531**	**7.42**	**27.2**	**594**	-	-	-	-	-	-	-	**0.531**	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	**49**	-	**7.39**	**30**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/6/2022	-	-	-	-	**7.43**	**27.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	**2.01**	**41**	**51.1**	**0.617**	**7.73**	**32.1**	**580**	-	-	-	-	-	-	-	**0.617**	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	**51.2**	-	-	**31.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	**37.9**	**51.5**	-	-	**32.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	**2.06**	**37.9**	**50.8**	**0.641**	-	**33.1**	**564**	-	-	-	-	-	-	-	**0.641**	-	-	-	-	-	-	-	-	-
	1/12/2023	-	-	**50.2**	-	-	**35.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/8/2023	-	**40.2**	**50.5**	-	-	**34.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/17/2023	**2.05**	**42.6**	**51.1**	**0.698**	-	**38.9**	**591**	-	-	-	-	-	-	-	**0.698**	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-803	7/12/2023	-	-	51.2	1.1	-	31.9	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
	8/15/2023	-	39.7	50.5	0.599	-	36.4	-	-	-	-	-	-	-	-	0.599	-	-	-	-	-	-	-	-	-
	11/17/2023	2.05	41.8	53.6	0.562	-	36.1	589	-	-	-	-	-	-	-	0.562	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.702	-	-	-	< 0.004	0.000329	0.196	< 0.002	< 0.001	< 0.01	0.000109	0.702	< 0.002	0.0618	< 0.0002	0.00593	< 0.002	< 0.002	0.531	0.875	1.41
	5/15/2024	2.02	40.2	50.2	0.722	-	37	575	< 0.004	< 0.002	0.189	-	< 0.001	< 0.01	< 0.002	0.722	< 0.002	0.0618	< 0.0002	< 0.005	< 0.002	-	0.735	1	1.74
	11/25/2024	2.05	45.2	52.4	0.73	-	43.3	620	< 0.004	< 0.002	0.24	-	< 0.001	< 0.01	< 0.002	0.73	< 0.002	0.061	< 0.0002	< 0.005	< 0.002	-	0.311	0.636	0.946
MW-804	6/8/2016	1.65	68.5	32.8	0.491	7.13	27.2	562	< 0.002	< 0.002	0.178	< 0.002	< 0.001	< 0.002	< 0.002	0.491	< 0.002	0.0453	< 0.0002	< 0.005	< 0.002	< 0.002	0.207	0.646	0.853
	8/10/2016	1.58	63.7	26.1	0.443	7.32	20.9	554	< 0.002	< 0.002	0.147	< 0.002	< 0.001	< 0.002	< 0.002	0.443	< 0.002	0.0382	< 0.0002	< 0.005	< 0.002	< 0.002	0.537	0.393	0.93
	10/11/2016	1.59	65.1	26.3	0.448	7.2	20.9	577	< 0.002	< 0.002	0.146	< 0.002	< 0.001	< 0.002	< 0.002	0.448	< 0.002	0.0408	< 0.0002	< 0.005	< 0.002	< 0.002	0.344	-0.215	0.344
	12/7/2016	1.62	65.7	25.5	0.441	6.93	21	518	< 0.002	< 0.002	0.151	< 0.002	< 0.001	< 0.002	< 0.002	0.441	< 0.002	0.0421	< 0.0002	< 0.005	< 0.002	< 0.002	0.313	1.5	1.81
	2/7/2017	1.59	63.5	25.3	0.453	7.41	23.2	559	< 0.002	< 0.002	0.153	< 0.002	< 0.001	< 0.002	< 0.002	0.453	< 0.002	0.0421	< 0.0002	< 0.005	< 0.002	< 0.002	0.317	0.822	0.317
	4/5/2017	1.59	65.1	26	0.429	7.65	21.4	555	< 0.002	< 0.002	0.147	< 0.002	< 0.001	< 0.002	< 0.002	0.429	< 0.002	0.0414	< 0.0002	< 0.005	< 0.002	< 0.002	0.43	0.395	0.825
	6/13/2017	1.57	63.2	26	0.474	7.22	21.5	575	< 0.002	< 0.002	0.15	< 0.002	< 0.001	< 0.002	< 0.002	0.474	< 0.002	0.0422	< 0.0002	< 0.005	< 0.002	< 0.002	0.376	1.23	1.61
	8/8/2017	1.61	63.8	26.3	0.476	7.06	20.7	548	< 0.002	< 0.002	0.143	< 0.002	< 0.001	< 0.002	< 0.002	0.476	< 0.002	0.0444	< 0.0002	< 0.005	< 0.002	< 0.002	0.241	0.949	1.19
	10/5/2017	1.53	65.9	26.9	0.327	6.93	21.9	577	< 0.002	< 0.002	0.162	< 0.002	< 0.001	< 0.002	< 0.002	0.327	< 0.002	0.0397	< 0.0002	< 0.005	< 0.002	< 0.002	0.398	0.785	1.18
	5/23/2018	1.72	67.8	30.4	0.501	7.17	21.5	551	-	-	-	-	-	-	-	0.501	-	-	-	-	-	-	-	-	-
	7/11/2018	1.67	-	-	0.449	7.21	-	-	-	-	-	-	-	-	-	0.449	-	-	-	-	-	-	-	-	-
	8/16/2018	1.76	-	-	-	7.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/30/2018	1.75	67.6	32.2	0.378	7.02	19.4	550	-	-	-	-	-	-	-	0.378	-	-	-	-	-	-	-	-	-
	1/14/2019	1.73	-	-	-	7.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	1.74	-	-	-	7.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	1.69	66.8	31.7	0.445	7.15	23.2	558	-	-	-	-	-	-	-	0.445	-	-	-	-	-	-	-	-	-
	7/17/2019	1.71	-	-	-	7.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	1.63	-	-	-	7.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	1.63	68.2	29	0.43	7.34	21.9	501	-	-	-	-	-	-	-	0.43	-	-	-	-	-	-	-	-	-
	5/19/2020	1.56	66.7	29.1	0.489	7.28	25.2	553	< 0.004	< 0.002	0.147	< 0.002	< 0.001	< 0.01	< 0.01	0.489	< 0.005	0.0342	< 0.0002	< 0.005	< 0.002	< 0.002	0.304	-0.0906	0.304
	11/12/2020	1.58	66.2	26.7	0.401	7.38	24.4	528	-	-	-	-	-	-	-	0.401	-	-	-	-	-	-	-	-	-
	5/18/2021	1.57	65.1	28.8	0.465	7.39	25.9	537	-	-	-	-	-	-	-	0.465	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	24.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	1.56	66.8	29.3	0.465	7.19	24.6	539	-	-	-	-	-	-	-	0.465	-	-	-	-	-	-	-	-	-
	5/9/2022	1.52	62.3	29.3	0.453	7.7	26.4	536	-	-	-	-	-	-	-	0.453	-	-	-	-	-	-	-	-	-
	7/15/2022	-	-	-	-	-	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/17/2022	-	59.9	30	-	-	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/9/2022	1.57	62.7	27.9	0.489	-	25	521	-	-	-	-	-	-	-	0.489	-	-	-	-	-	-	-	-	-
	5/17/2023	1.53	63.3	33	0.457	-	25.6	540	-	-	-	-	-	-	-	0.457	-	-	-	-	-	-	-	-	-
	7/12/2023	-	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/15/2023	-	63.1	33.1	-	-	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2023	1.59	67.9	32.4	0.45	-	22.8	554	-	-	-	-	-	-	-	0.45	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.517	-	-	-	< 0.004	0.000452	0.147	< 0.002	< 0.001	< 0.01	< 0.002	0.517	< 0.002	0.0394	< 0.0002	0.00162	0.000533	< 0.002	0.861	0.783	1.64
	5/15/2024	1.56	66.5	32.7	0.433	-	25.5	541	< 0.004	< 0.002	0.149	-	< 0.001	< 0.01	< 0.002	0.433	< 0.002	0.041	< 0.0002	< 0.005	< 0.002	-	1.95	1.86	3.81
	11/25/2024	1.65	74.1	48.6	0.564	-	26	572	< 0.004	< 0.002	0.191	-	< 0.001	< 0.01	< 0.002	0.564	< 0.002	0.0373	< 0.0002	< 0.005	< 0.002	-	0.382	0.996	1.38
MW-805	6/7/2016	0.51	422	520	0.122	6.52	829	2070	< 0.002	< 0.002	0.0387	< 0.002	< 0.001	< 0.002	< 0.002	0.122	< 0.002	0.053	< 0.0002	< 0.005	< 0.002	< 0.002	0.158	-0.253	0.158
	8/10/2016	0.415	437	491	0.126	6.35	776	2440	< 0.002	< 0.002	0.0471	< 0.002	< 0.001	0.00284	< 0.002	0.126	< 0.002	0.0217	< 0.0002	< 0.005	< 0.002	< 0.002	0.319	0.609	0.928
	10/11/2016	0.462	422	466	0.136	6.36	726	1820	< 0.002	0.00267	0.0401	< 0.002	< 0.001	< 0.002	0.0079	0.136	< 0.002	0.0234	< 0.0002	< 0.005	< 0.002	< 0.002	0.211	0.487	0.698
	12/6/2016	0.507	422	464	0.181	6.36	742	2420	< 0.002	< 0.002	0.0356	< 0.002	< 0.001	< 0.002	0.00431	0.181	< 0.002	0.0277	< 0.0002	< 0.005	< 0.002	< 0.002	0.228	0.536	0.764
	2/6/2017	0.456	435	467	0.145	6.62	846	2140	< 0.002	< 0.002	0.034	< 0.002	< 0.001	< 0.002	0.00218	0.145	< 0.002	< 0.015	< 0.0002	< 0.005	< 0.002	< 0.002	0.146	0.882	1.81
	4/5/2017	0.444	444	504	0.142	6.9	836	2270	< 0.002	< 0.002	0.0334	< 0.002	< 0.001	< 0.002	< 0.002	0.142	< 0.002	0.0178	< 0.0002	< 0.005	< 0.002	< 0.002	0.018	-0.03	0.018
	6/13/2017	0.468	430	459	0.214	6.43	742	2420	< 0.002	< 0.002	0.0337	< 0.002	< 0.001	< 0.002	< 0.002	0.214	< 0.002	< 0.015	< 0.0002	< 0.005	< 0.002	< 0.002	0.05	0.01	0.06
	8/8/2017	0.518	414	470	0.143	6.49	737	2150	< 0.002	< 0.002	0.0327	< 0.002	< 0.001	< 0.002	< 0.002	0.143	< 0.002	0.0272	< 0.0002	< 0.005	< 0.002	< 0.002	0.175	-0.444	0.175
	10/5/2017	0.406	467	505	< 0.1	5.99	914	2110	< 0.002	< 0.002	0.0344	< 0.002	< 0.001	< 0.002	< 0.002	< 0.1	< 0.002	0.0173	< 0.0002	< 0.005	< 0.002	< 0.002	0.123	-0.427	0.123
	12/11/2017	-	525	-	-	6.35	753	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/9/2018	-	439	-	-	6.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2018	0.517	434	424	0.191	6.52	660	1810	-	-	-	-	-	-	-	0.191	-	-	-	-	-	-	-	-	-
	11/30/2018	0.525	455	471	0.124	6.31	722	2070	-	-	-	-	-	-	-	0.124	-	-	-	-	-	-	-	-	-
	1/14/2019	-	473	-	-	6.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/11/2019	-	468	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/23/2019	0.582	442	455	0.173	6.44	666	2180	-	-	-	-	-	-	-	0.173	-	-	-	-	-	-	-	-	-

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Appendix III Constituents							Appendix IV Constituents																
Monitoring Well	Sample Date	Boron, Total mg/L	Calcium, Total mg/L	Chloride mg/L	Fluoride mg/L	pH (lab) SU	Sulfate mg/L	Total Dissolved Solids (TDS) mg/L	Antimony, Total mg/L	Arsenic, Total mg/L	Barium, Total mg/L	Beryllium, Total mg/L	Cadmium, Total mg/L	Chromium, Total mg/L	Cobalt, Total mg/L	Fluoride mg/L	Lead, Total mg/L	Lithium, Total mg/L	Mercury, Total mg/L	Molybdenum, Total mg/L	Selenium, Total mg/L	Thallium, Total mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & 228 pCi/L
MW-805	7/17/2019	0.55	-	-	-	6.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/23/2019	0.537	-	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2019	0.525	475	492	0.13	6.52	730	2070	-	-	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-
	5/19/2020	0.503	450	472	0.176	6.52	713	2220	< 0.004	< 0.002	0.035	< 0.002	< 0.001	< 0.01	< 0.01	0.176	< 0.005	0.024	< 0.0002	< 0.005	< 0.002	< 0.002	0.0441	1.2	1.24
	11/12/2020	0.495	464	454	0.129	6.42	736	2210	-	-	-	-	-	-	-	0.129	-	-	-	-	-	-	-	-	-
	5/18/2021	0.55	443	509	0.197	6.58	724	2020	-	-	-	-	-	-	-	0.197	-	-	-	-	-	-	-	-	-
	11/18/2021	0.546	452	472	0.175	6.44	702	2010	-	-	-	-	-	-	-	0.175	-	-	-	-	-	-	-	-	-
	5/9/2022	0.519	433	501	0.187	6.94	721	1980	-	-	-	-	-	-	-	0.187	-	-	-	-	-	-	-	-	-
	11/9/2022	0.515	440	502	0.144	-	723	619	-	-	-	-	-	-	-	0.144	-	-	-	-	-	-	-	-	-
	5/17/2023	0.531	447	484	0.191	-	717	2270	-	-	-	-	-	-	-	0.191	-	-	-	-	-	-	-	-	-
	11/17/2023	0.496	459	464	0.143	-	629	1890	-	-	-	-	-	-	-	0.143	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.155	-	-	-	< 0.004	0.000396	0.0364	< 0.002	< 0.001	0.00229	0.000814	0.155	< 0.002	0.026	< 0.0002	0.0024	< 0.002	< 0.002	0.183	0.831	1.01
	5/15/2024	0.494	466	497	0.165	-	711	2280	< 0.004	< 0.002	0.0302	-	< 0.001	< 0.01	< 0.002	0.165	< 0.002	0.0253	0.000213	< 0.005	< 0.002	-	0.665	0.0559	0.721
	11/25/2024	0.471	482	502	0.205	-	763	2100	< 0.004	< 0.002	0.0316	-	< 0.001	< 0.01	< 0.002	0.205	< 0.002	0.0191	< 0.0002	< 0.005	< 0.002	-	0.378	0.431	0.809
TW-1	6/9/2016	1.47	31	41.5	0.404	7.83	63.4	1010	< 0.002	< 0.002	0.0671	< 0.002	< 0.001	< 0.002	< 0.002	0.404	< 0.002	0.136	< 0.0002	< 0.005	< 0.002	< 0.002	0.21	1.67	1.88
	8/9/2016	1.54	29.9	42.9	0.431	7.54	60.9	976	< 0.002	< 0.002	0.0686	< 0.002	< 0.001	< 0.002	< 0.002	0.431	< 0.002	0.127	< 0.0002	< 0.005	< 0.002	< 0.002	0.035	0.491	0.526
	10/11/2016	1.6	35.3	43.4	0.431	7.69	58.8	1050	< 0.002	< 0.002	0.0701	< 0.002	< 0.001	< 0.002	< 0.002	0.431	< 0.002	0.137	< 0.0002	< 0.005	< 0.002	< 0.002	0.208	1.06	1.27
	12/6/2016	1.67	35.9	45.1	0.459	7.53	59.3	1080	< 0.002	< 0.002	0.0823	< 0.002	< 0.001	< 0.002	< 0.002	0.459	< 0.002	0.14	< 0.0002	< 0.005	< 0.002	< 0.002	0.066	1.53	1.6
	2/7/2017	1.64	31.7	44.5	0.399	7.89	66.7	1120	< 0.002	< 0.002	0.0733	< 0.002	< 0.001	< 0.002	< 0.002	0.399	< 0.002	0.145	0.00026	< 0.005	< 0.002	< 0.002	0.253	0.728	0.328
	4/4/2017	1.68	33	45.7	0.42	7.78	63.4	1020	< 0.002	< 0.002	0.0706	< 0.002	< 0.001	< 0.002	< 0.002	0.42	< 0.002	0.147	< 0.0002	< 0.005	< 0.002	< 0.002	0.055	0.32	0.375
	6/13/2017	1.53	29.6	44.3	0.384	7.67	62.7	1030	< 0.002	< 0.002	0.0711	< 0.002	< 0.001	< 0.002	< 0.002	0.384	< 0.002	0.151	< 0.0002	< 0.005	< 0.002	< 0.002	0.185	2.45	2.64
	8/8/2017	1.6	35.1	43.5	0.461	7.65	63.9	1010	< 0.002	< 0.002	0.0737	< 0.002	< 0.001	< 0.002	< 0.002	0.461	< 0.002	0.155	< 0.0002	< 0.005	< 0.002	< 0.002	0.302	0.743	1.05
	10/3/2017	1.65	33.4	44.9	0.403	7.48	59	1050	< 0.002	< 0.002	0.0829	< 0.002	< 0.001	< 0.002	< 0.002	0.403	< 0.002	0.151	< 0.0002	< 0.005	< 0.002	< 0.002	0.348	0.818	1.17
	5/24/2018	1.67	25.7	44.5	0.463	7.6	61.1	1000	-	-	-	-	-	-	-	0.463	-	-	-	-	-	-	-	-	-
	12/4/2018	1.48	26.8	41.4	0.39	7.55	66.4	962	-	-	-	-	-	-	-	0.39	-	-	-	-	-	-	-	-	-
	5/23/2019	1.47	24.1	41.8	0.365	7.72	62.9	1050	-	-	-	-	-	-	-	0.365	-	-	-	-	-	-	-	-	-
	11/7/2019	1.42	23.3	40.1	0.411	7.71	61.9	956	-	-	-	-	-	-	-	0.411	-	-	-	-	-	-	-	-	-
	5/19/2020	1.37	25	40.5	0.405	7.71	69.1	864	< 0.004	< 0.002	0.0656	< 0.002	< 0.001	< 0.01	< 0.01	0.405	< 0.005	0.127	< 0.0002	< 0.005	< 0.002	< 0.002	0.213	0.97	1.18
	7/14/2020	-	-	-	-	-	69.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/27/2020	-	-	-	-	-	72.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/2020	1.38	24.6	40.5	0.384	7.72	73.8	1050	-	-	-	-	-	-	-	0.384	-	-	-	-	-	-	-	-	-
	2/4/2021	-	-	-	-	-	68.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/3/2021	-	-	-	-	-	74.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/18/2021	1.42	24.5	40.8	0.412	7.52	68.5	1030	-	-	-	-	-	-	-	0.412	-	-	-	-	-	-	-	-	-
	7/21/2021	-	-	-	-	-	68.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/2021	-	-	-	-	-	70.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2021	1.45	25.5	40.2	0.404	7.5	70.4	994	-	-	-	-	-	-	-	0.404	-	-	-	-	-	-	-	-	-
	1/27/2022	-	-	-	-	7.53	62.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/9/2022	1.37	24.3	41.2	0.355	-	72.9	951	-	-	-	-	-	-	-	0.355	-	-	-	-	-	-	-	-	-
	11/9/2022	1.42	23.8	40.3	0.377	-	72.2	908	-	-	-	-	-	-	-	0.377	-	-	-	-	-	-	-	-	-
	5/17/2023	1.41	23.9	39	0.389	-	66.5	974	-	-	-	-	-	-	-	0.389	-	-	-	-	-	-	-	-	-
	11/17/2023	1.4	25.8	39.5	0.4	-	73	960	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-
	4/3/2024	-	-	-	0.337	-	-	-	< 0.004	0.000366	0.0628	< 0.002	< 0.001	< 0.01	< 0.002	0.337	< 0.002	0.137	< 0.0002	0.00147	< 0.002	< 0.002	0.453	1.5	1.95
	5/15/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	1.49	2.79
	5/16/2024	1.3	22.9	39.3	0.326	-	71.5	1040	< 0.004	< 0.002	0.0586	-	< 0.001	< 0.01	< 0.002	0.326	< 0.002	0.129	< 0.0002	< 0.005	< 0.002	-	-	-	-
	11/25/2024	1.36	23.5	40.5	0.365	-	74.3	984	< 0.004	< 0.002	0.0619	-	< 0.001	< 0.01	< 0.002	0.365	< 0.002	0.137	< 0.0002	< 0.005	< 0.002	-	< 0.00	1.01	1.01
Maximum concentration, all wells		2.59	525	520	1.81	11.38	6500	9880	0.012	0.0115	1.06	2.25	0.00146	0.00684	0.0234	1.81	0.00779	1.29	0.00026	0.0191	0.00422	0.002 U	2.08	4.41	4.74

Notes:
-: Not analyzed for
<: Not detected, value is the reporting limit
mg/L: milligram per liter
pCi/L: picocuries per liter
SU: pH standard units
U: Not detected, value is the lowest reporting limit

TABLE 2
PUBLISHED HUMAN HEALTH SCREENING LEVELS
FOR DRINKING WATER AND SURFACE WATER
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Published Human Health Screening Level - Drinking Water						Published Human Health Screening Level - Surface Water				Selected Screening Levels for Drinking Water and Surface Water	
Constituent	**CAS RN**	**USEPA MCL (a) (mg/L)**		**USEPA RSL Tap Water (b) (mg/L)**		**Kansas Domestic Water Supply Surface Water Quality Standards (c) (mg/L)**		**USEPA NRWQC Consumption of Organism Only (d) (mg/L)**		**Kansas Food Procurement Use Surface Water Quality Standards (e) (mg/L)**		**Selected Screening Level - Drinking Water (f) (mg/L)**	**Selected Screening Level - Surface Water Consumption of Organism Only (g) (mg/L)**
Detection Monitoring - USEPA Appendix III Constituents (h)													
Boron	7440-42-8	NA		4		NA		NA		NA		4	NA
Fluoride	16984-48-8	4		0.8		2		NA		NA		4	NA
Assessment Monitoring - USEPA Appendix IV Constituents													
Antimony	7440-36-0	0.006		0.0078		0.006		0.64		0.64		0.006	0.64
Arsenic	7440-38-2	0.01		0.00052	(i)	0.01		0.0014	(i, j)	0.0014	(i, k)	0.01	0.0014
Barium	7440-39-3	2		3.8		1		NA		NA		2	NA
Beryllium	7440-41-7	0.004		0.025		0.004		NA		NA		0.004	NA
Cadmium	7440-43-9	0.005		0.0018		0.005		NA		0.17		0.005	0.17
Chromium (Total)	7440-47-3	0.1		22	(l)	0.1		NA		3,433	(l)	0.1	3,433
Cobalt	7440-48-4	NA		0.006		NA		NA		NA		0.006	NA
Lead	7439-92-1	0.01	(m)	0.01	(m)	0.015	(m)	NA		NA		0.01	NA
Lithium	7439-93-2	NA		0.04		NA		NA		NA		0.04	NA
Mercury	7439-97-6	0.002	(n)	0.0057	(o)	0.002	(p)	NA		0.000146	(p)	0.002	0.000146
Molybdenum	7439-98-7	NA		0.1		NA		NA		NA		0.1	NA
Selenium	7782-49-2	0.05		0.1		0.05		4.2		4.2		0.05	4.2
Radiological (pCi/L)													
Radium-226 & 228	7440-14-4	5		NA		5		NA		NA		5	NA

Notes:

CAS RN: Chemical Abstracts Service Registry Number.
CCC HLSC: Continuous Criterion Concentration. Human Life-Cycle Safe Concentration.
MCL: Maximum Contaminant Level.
mg/L: milligrams/liter.
NA: Not Available.
NRWQC: National Recommended Water Quality Criteria.
pCi/L: picoCuries/liter.
RSL: Regional Screening Level.
USEPA: United States Environmental Protection Agency.

TABLE 2
PUBLISHED HUMAN HEALTH SCREENING LEVELS
FOR DRINKING WATER AND SURFACE WATER
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Additional Notes:

(a) - USEPA National Primary Drinking Water Regulations.
https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations

(b) - USEPA Regional Screening Levels (November 2024). Values for Tap Water, Hazard Index = 1.0. TR = 1E-06.
https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

(c) - Kansas Surface Water Quality Standards. Kansas Department of Health and Environment, Bureau of Water. April, 2025. Article 16. Kansas Surface Water Quality Standards - Tables of Numeric Criteria. Table 1a. Aquatic Life, Agriculture, And Public Health Designated Uses Numeric Criteria. Values for Domestic Water Supply.
https://www.kdhe.ks.gov/DocumentCenter/View/48391/Kansas-Surface-Water-Quality-Standards-2024-PDF

(d) - USEPA National Recommended Water Quality Criteria - Human Health Criteria Table. USEPA NRWQC - Human Health Criteria for the Consumption of Organism Only apply to total concentrations.
https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table

(e) - Kansas Surface Water Quality Standards. Kansas Department of Health and Environment Bureau of Water. April, 2025. Article 16. Kansas Surface Water Quality Standards - Tables of Numeric Criteria. Table 1a. Aquatic Life, Agriculture, And Public Health Designated Uses Numeric Criteria. Values for "Food procurement," which are for the use of surface waters for obtaining edible forms of aquatic or semiaquatic life for human consumption.
https://www.kdhe.ks.gov/DocumentCenter/View/48391/Kansas-Surface-Water-Quality-Standards-2024-PDF

(f) - The hierarchy for the selection of published human health screening levels for drinking water is:
1) USEPA MCL
2) USEPA RSL - Tap Water
3) Kansas Domestic Water Supply Surface Water Quality Standards

(g) - The hierarchy for selection of published human health screening levels for surface water - "consumption of organisms only" is:
1) USEPA NRWQC - Consumption of Organism Only.
2) Kansas Food Procurement Surface Water Quality Standards

(h) - Detection Monitoring - EPA Appendix III Constituents without health risk-based screening levels are not included.

(i) - Value based on a target lifetime excess cancer risk of 1E-05, the cumulative target cancer risk that should not be exceeded per Kansas Department of Health and Environment (KDHE) risk assessment guidance (KDHE, 2021). Cancer risk-based screening levels for arsenic based on a target cancer risk of 1E-06 were adjusted to values based on a target cancer risk of 1E-05 as arsenic is the only constituent evaluated that is carcinogenic (via the oral and/or dermal pathways accounted for in the screening levels).

(j) - Value for inorganic arsenic.

(k) - Value for inorganic arsenic as arsenite, As(III), derived from non-threshold cancer risk.

(l) - Value for chromium (III).

(m) - Drinking water treatment action level for lead.

(n) - Value for inorganic mercury.

(o) - Value for mercuric chloride.

(p) - Value for total mercury.

References:

Kansas Department of Health and Environment (KDHE). 2021. Risk-Based Standards for Kansas. RSK Manual – 6th Version. Kansas Department of Health and Environment. Bureau of Environmental Remediation. July. Available at: https://www.kdheks.gov/remedial/download/RSK_Manual_15.pdf.

United States Environmental Protection Agency (USEPA). 2015. Final Rule: Disposal of Coal Combustion Residuals (CCRs) for Electric Utilities. 80 FR 21301-21501. U.S. Environmental Protection Agency, Washington, D.C. Available at: https://www.epa.gov/coalash/coal-ash-rule.

TABLE 3
SITE-SPECIFIC, RISK-BASED SCREENING LEVELS
FOR RECREATIONAL USE OF LA CYGNE LAKE
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Constituent	CAS RN	Human Health Calculated RBSL - Recreational Use of La Cygne Lake (a): Hypothetical Recreational Swimmer Age-Adjusted (Ages 1 - 26) (b) (mg/L)		Hypothetical Recreational Wader Age-Adjusted (Ages 1 - 26) (b) (mg/L)		Current/Future Recreational Angler (Adult) (b) (mg/L)		Selected Human Health Calculated RBSL - Recreational Use of Surface Water (c) (mg/L)
Detection Monitoring - USEPA Appendix III Constituents (c)								
Boron	7440-42-8	162		176		10,600		162
Fluoride	16984-48-8	32		35		2,130		32
Assessment Monitoring - USEPA Appendix IV Constituents								
Antimony	7440-36-0	0.20		0.30		3.2		0.20
Arsenic	7440-38-2	0.0015	(e, f)	0.0026	(e, g)	0.058	(e, h)	0.0015
Barium	7440-39-3	65		122		745		65
Beryllium	7440-41-7	0.10		0.30		0.75		0.10
Cadmium	7440-43-9	0.03		0.054		0.27		0.026
Chromium (Total)	7440-47-3	127	(i)	371	(i)	1,040	(i)	127
Cobalt	7440-48-4	0.26		0.27		40		0.26
Lead	7439-92-1	0.010	(j)	0.010	(j)	0.010	(j)	0.010
Lithium	7439-93-2	1.6		1.8		106		1.6
Mercury	7439-97-6	0.10	(k)	0.18	(k)	1.1	(k)	0.10
Molybdenum	7439-98-7	4.1		4.4		266		4.05
Selenium	7782-49-2	4.1		4.4		266		4.05
Radiological (pCi/L)								
Radium-226 & 228	7440-14-4	NA		NA		NA		NA

Notes:

CAS RN: Chemical Abstracts Service Registry Number.
mg/L: micrograms/liter.
NA: Not Available.
pCi/L: picoCuries/liter.
RBSL: Risk-Based Screening Level.
USEPA: United States Environmental Protection Agency.

TABLE 3
SITE-SPECIFIC, RISK-BASED SCREENING LEVELS
FOR RECREATIONAL USE OF LA CYGNE LAKE
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Additional Notes:

(a) - Some calculated values may be above solubility limits.

(b) - Documentation for the risk-based screening level (RBSL) calculations for recreational anglers is provided in Attachment A. RBSLs calculated using the USEPA RSL calculator (USEPA, 2025b).

(c) - Detection Monitoring - EPA Appendix III Constituents without health risk-based screening levels are not included.

(e) - Arsenic RBSL is based on the lower of the values based on a hazard index of 1 and an excess lifetime cancer risk of 1E-05. Per Kansas Department of Health and Environment (KDHE) risk assessment guidance (KDHE, 2021), cumulative cancer risk should not exceed 1E-05. Cancer RBSL for arsenic was therefore calculated using a target cancer risk of 1E-05 as arsenic is the only constituent evaluated that is carcinogenic via the dermal pathway accounted for in the RBSL. RBSLs for arsenic were also calculated using the recently promulgated oral cancer slope factor of 32 per milligrams per kilogram per day (mg/kg-day) and oral reference dose of 0.00006 mg/kg-day (USEPA, 2025a).

(f) - RBSL based on cancer endpoint (noncancer-based RBSL is 0.17 mg/L).

(g) - RBSL based on cancer endpoint (noncancer-based RBSL is 0.75 mg/L).

(h) - RBSL based on cancer endpoint (noncancer-based RBSL is 3.2 mg/L).

(i) - Value for chromium (III).

(j) - USEPA lead action level of 0.010 mg/L for lead in drinking water (USEPA, 2024b) is used as the RBSL.

(k) - Value for mercuric chloride.

References:

Kansas Department of Health and Environment (KDHE). 2021. Risk-Based Standards for Kansas. RSK Manual – 6th Version. Kansas Department of Health and Environment. Bureau of Environmental Remediation. July. Available at: https://www.kdheks.gov/remedial/download/RSK_Manual_15.pdf.

United States Environmental Protection Agency (USEPA). 2015. Final Rule: Disposal of Coal Combustion Residuals (CCRs) for Electric Utilities. 80 FR 21301-21501. U.S. Environmental Protection Agency, Washington, D.C. Available at: https://www.epa.gov/coalash/coal-ash-rule

USEPA. 2024. National Primary Drinking Water Regulations. Available at: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations. Last updated on 12 December 2024.

USEPA. 2025a. Integrated Risk Information System. Available at: https://epa.gov/iris

USEPA. 2025b. RSL Calculator. Available at: https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

TABLE 4
PUBLISHED ECOLOGICAL SCREENING LEVELS FOR SURFACE WATER
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

		Published Ecological Screening Levels - Surface Water											
		USEPA NRWQC Aquatic Life Criteria CMC - Freshwater (acute) (a) (mg/L)		USEPA NRWQC Aquatic Life Criteria CCC - Freshwater (chronic) (a) (mg/L)		Kansas Aquatic Life Surface Water Quality Standards (acute) (b) (mg/L)		Kansas Aquatic Life Surface Water Quality Standards (chronic) (b) (mg/L)		Selected Ecological Screening Level (acute) (c) (mg/L)		Selected Ecological Screening Level (chronic) (c) (mg/L)	
Constituent	CAS RN	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Detection Monitoring - USEPA Appendix III Constituents (d)													
Boron	7440-42-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	16984-48-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assessment Monitoring - USEPA Appendix IV Constituents													
Antimony	7440-36-0	NA	NA	NA	NA	0.088	NA	0.03	NA	0.088	NA	0.03	NA
Arsenic	7440-38-2	0.34 (e)	0.34 (e)	0.15 (e)	0.15 (e)	0.34 (f)	NA	0.15 (f)	NA	0.34	0.34	0.15	0.15
Barium	7440-39-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	7440-41-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	0.0025 (g)	0.0023 (g)	NA	0.00031 (g,h)	0.0025 (g)	NA	0.00097 (g)	NA	0.0025	0.0023	0.0009742	0.00031
Chromium (Total)	7440-47-3	2.2 (g)	0.71 (g)	0.107 (g)	0.092 (g)	2.2 (g, i)	NA	0.107 (g,i)	NA	2.2	0.71	0.107	0.092
Cobalt	7440-48-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	0.114 (g)	0.086 (g)	0.0044 (g)	0.0033 (g)	0.114 (g)	NA	0.0044 (g)	NA	0.114	0.086	0.0044	0.0033
Lithium	7439-93-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	0.0016 (j)	0.0014 (j)	0.00091 (j)	0.00077 (j)	0.0014	NA	0.00077	NA	0.0016	0.0014	0.00091	0.00077
Molybdenum	7439-98-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	NA	NA	NA	0.0031 (k)	0.02	NA	0.005	NA	0.02	NA	0.005	0.0031
Radiological (pCi/L)													
Radium-226 & 228	7440-14-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
CAS RN: Chemical Abstracts Service Registry Number.
CCC: Continuous Criterion Concentration
CMC: Criterion Maximum Concentration
mg/L: micrograms/liter.
NA: Not Available
NRWQC: National Recommended Water Quality Criteria
pCi/L: picoCuries/liter.
USEPA: United States Environmental Protection Agency

Additional Notes:

(a) - USEPA Water Quality Criteria. Current Water Quality Criteria Tables. National Recommended Water Quality Criteria - Aquatic Life Criteria Table.
https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table

(b) - Kansas Surface Water Quality Standards. Kansas Department of Health and Environment, Bureau of Water. April, 2025. Article 16. Kansas Surface Water Quality Standards - Tables of Numeric Criteria. Tables 1a and 1b. Surface Water Quality Standards for metals apply to total recoverable concentrations.
https://www.kdhe.ks.gov/DocumentCenter/View/48391/Kansas-Surface-Water-Quality-Standards-2024-PDF

(c) - The hierarchy for the selection of ecological screening levels is:
1) USEPA NRWQC. Aquatic Life Criteria - Freshwater.
2) Kansas Aquatic Life Surface Water Quality Standards.

(d) - Detection Monitoring - EPA Appendix III Constituents without health risk-based screening levels are not included.

(e) - Value for inorganic arsenic only.

(f) - Value for total arsenic.

(g) - Value displayed is based on a Site-specific hardness value of 130 mg/L, obtained from surface water sample station location 21 KAN001_WQX-LM044002 from the USEPA Water Quality Portal (USEPA, 2025).

(h) - On August 18, 2023, the U.S. District Court for the District of Arizona issued an order vacating EPA's 2016 national recommended chronic freshwater cadmium aquatic life criterion. EPA is continuing to evaluate the Order. But as a result of that Order, the current national recommended chronic freshwater cadmium aquatic life criterion can be found in EPA's 2001 Update of Ambient Water Quality Criteria for Cadmium.
https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations#seven

(i) - Value for chromium (III).

(j) - Aquatic Life Criterion for metallic mercury (CAS RN 7439-97-6) and/or methylmercury (CAS RN 22967-92-6).

(k) - USEPA Office of Water. Final Criterion: Aquatic Life Ambient Water Quality Criterion for Selenium - Freshwater. 30 June 2016. Freshwater value for chronic (30 day) water column concentration (mg/L) of dissolved selenium in lotic (flowing) surface water. The criterion is based on fish ovary concentrations, and in lieu of that, the water column values are used.
https://www.epa.gov/sites/production/files/2016-07/documents/aquatic_life_awqc_for_selenium_-_freshwater_2016.pdf

Reference:

United States Environmental Protection Agency. 2025. LA CYGNE LAKE (21KAN001_WQX-LM044002) site data in the Water Quality Portal. Available at: https://www.waterqualitydata.us/provider/STORET/21KAN001_WQX/21KAN001_WQX-LM044002/.

TABLE 5
SELECTED SURFACE WATER SCREENING LEVELS AND DERIVATION OF TARGET SCREENING LEVELS FOR GROUNDWATER (PROTECTIVE OF LA CYGNE LAKE SURFACE WATER)
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Constituent	CAS RN	HH DW SL (a) (mg/L)	HH REC SL - Consumption of Organism Only (b) (mg/L)	HH Recreational Calculated RBSL (c) (mg/L)	ECO SL - Total (acute) (d) (mg/L)	ECO SL - Dissolved (acute) (d) (mg/L)	ECO SL - Total (chronic) (d) (mg/L)	ECO SL - Dissolved (chronic) (d) (mg/L)	Lowest of the Human Health and Ecological Screening Levels (mg/L)	Target Groundwater Screening Level - La Cygne Lake (f) (mg/L)
									Dilution-Attenuation Factor for La Cygne Lake (e)	41,000
Detection Monitoring - USEPA Appendix III Constituents (g)										
Boron	7440-42-8	4	NA	162	NA	NA	NA	NA	4	164,000
Fluoride	16984-48-8	4	NA	32	NA	NA	NA	NA	4	164,000
Assessment Monitoring - USEPA Appendix IV Constituents										
Antimony	7440-36-0	0.006	0.64	0.20	0.088	NA	0.03	NA	0.006	250
Arsenic	7440-38-2	0.01	0.0014	0.00	0.34	0.34	0.15	0.15	0.0014	57
Barium	7440-39-3	2	NA	64.7	NA	NA	NA	NA	2	82,000
Beryllium	7440-41-7	0.004	NA	0.10	NA	NA	NA	NA	0.004	160
Cadmium	7440-43-9	0.005	0.17	0.026	0.0025	0.0023	0.0010	0.00031	0.00031	13
Chromium (Total)	7440-47-3	0.1	3433	127	2.2	0.7	0.11	0.092	0.092	3,800
Cobalt	7440-48-4	0.006	NA	0.26	NA	NA	NA	NA	0.006	250
Lead	7439-92-1	0.01	NA	0.01	0.11	0.09	0.0044	0.0033	0.0033	140
Lithium	7439-93-2	0.04	NA	1.6	NA	NA	NA	NA	0.04	1,600
Mercury	7439-97-6	0.002	0.000146	0.0971	0.0016	0.0014	0.000906	0.00077	0.000146	6.0
Molybdenum	7439-98-7	0.1	NA	4.1	NA	NA	NA	NA	0.1	4,100
Selenium	7782-49-2	0.05	4.2	4.1	0.02	NA	0.005	0.0031	0.0031	130
Radiological (pCi/L)										
Radium-226 & 228	7440-14-4	5	NA	NA	NA	NA	NA	NA	5	205,000

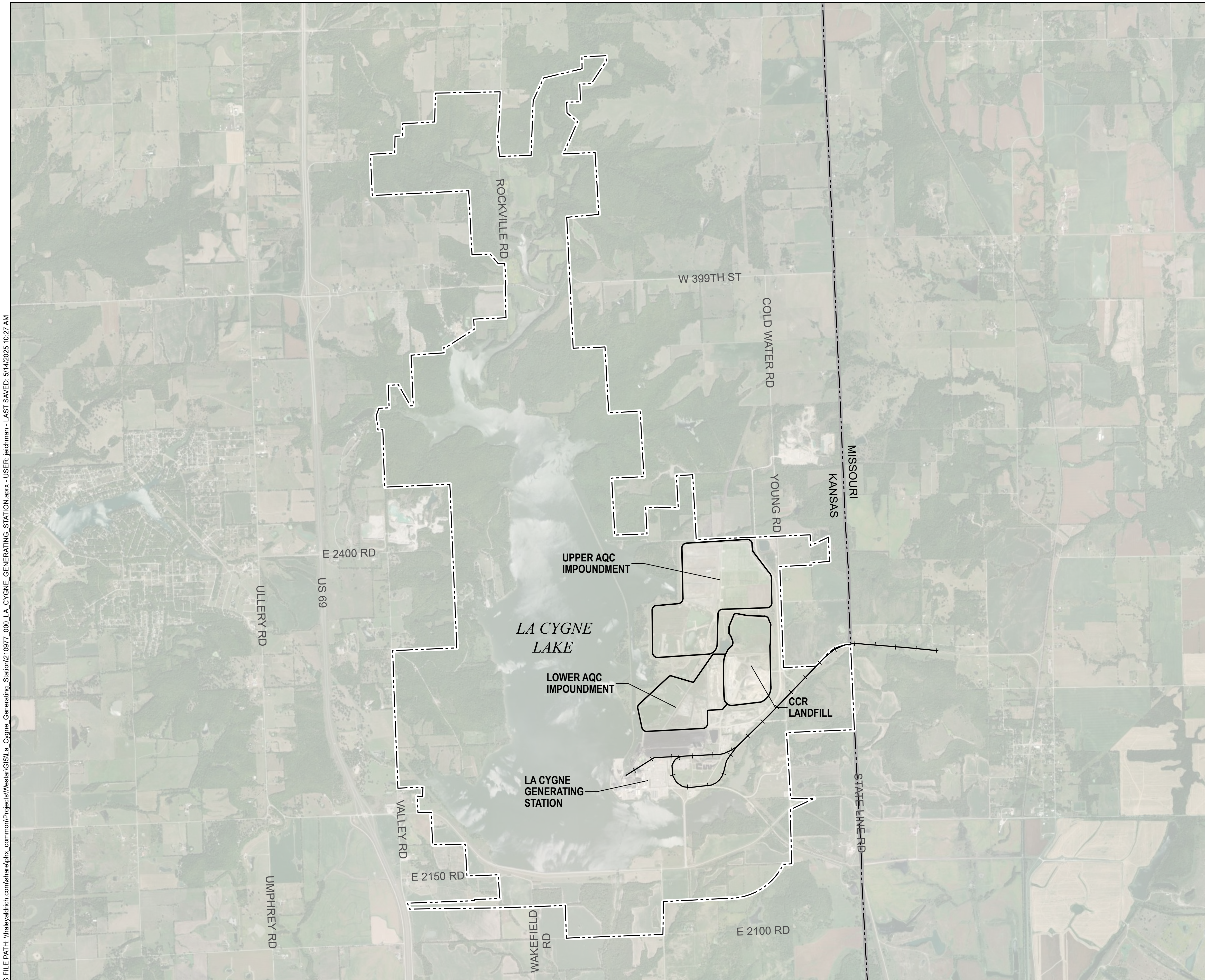
TABLE 5
SELECTED SURFACE WATER SCREENING LEVELS AND DERIVATION OF TARGET
SCREENING LEVELS FOR GROUNDWATER (PROTECTIVE OF LA CYGNE LAKE SURFACE WATER)
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Notes:

CAS RN: Chemical Abstracts Service Registry Number.
ECO SL: Ecological Screening Level.
HH DW SL: Human Health Drinking Water Screening Level.
HH REC SL: Human Health Recreational Use Screening Level.
mg/L: milligram per liter.
NA: Not Available.
pCi/L: picoCuries/liter.
RBSL: Risk-Based Screening Level.

(a) - Human health screening levels for drinking water selected in Table 2 using the following hierarchy:
1) United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels
2) USEPA Regional Screening Level - Tap Water
3) Kansas Domestic Water Supply Surface Water Quality Standards
(b) - Human health screening levels for surface water, "consumption of organism only," selected in Table 2 using the following hierarchy:
1) USEPA National Recommended Water Quality Criteria (NRWQC) - Consumption of Organism Only.
2) Kansas Food Procurement Surface Water Quality Standards
(c) - Minimum human health risk-based screening level (RBSL) for current/future off-site recreational swimmer, current/future off-site recreational wader, and current/future off-site recreational boater, obtained from Table 3.
(d) - Ecological Screening Levels selected in Table 4 using the following hierarchy:
1) USEPA NRWQC. Aquatic Life Criteria - Freshwater.
2) Kansas Aquatic Life Surface Water Quality Standards.
(e) - Estimated value, see Attachment B for derivation.
(f) - The Target Groundwater Screening Level = Minimum Screening Level x Dilution-Attenuation Factor.
(g) - Detection Monitoring - EPA Appendix III Constituents without health risk-based screening levels are not included.

FIGURES



LEGEND

RAILROAD

CCR UNIT BOUNDARIES

EVERGY PROPERTY BOUNDARY

STATE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

0 4,000 8,000
SCALE IN FEET

HALEY ALDRICH

EVERGY METRO INC.
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SITE LOCATION AND FEATURES

MAY 2025

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\La_Cygne_Generating_Station\210977_000_LA_CYGNE_GENERATING_STATION.aprx - USER: jeichman - LAST SAVED: 5/14/2025 10:27 AM

LEGEND

- COMPLIANCE WELL
- NATURE AND EXTENT MONITORING WELL
- RAILROAD
- CCR UNIT BOUNDARY
- SITE BOUNDARY
- STATE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

N

0 1,000 2,000
SCALE IN FEET

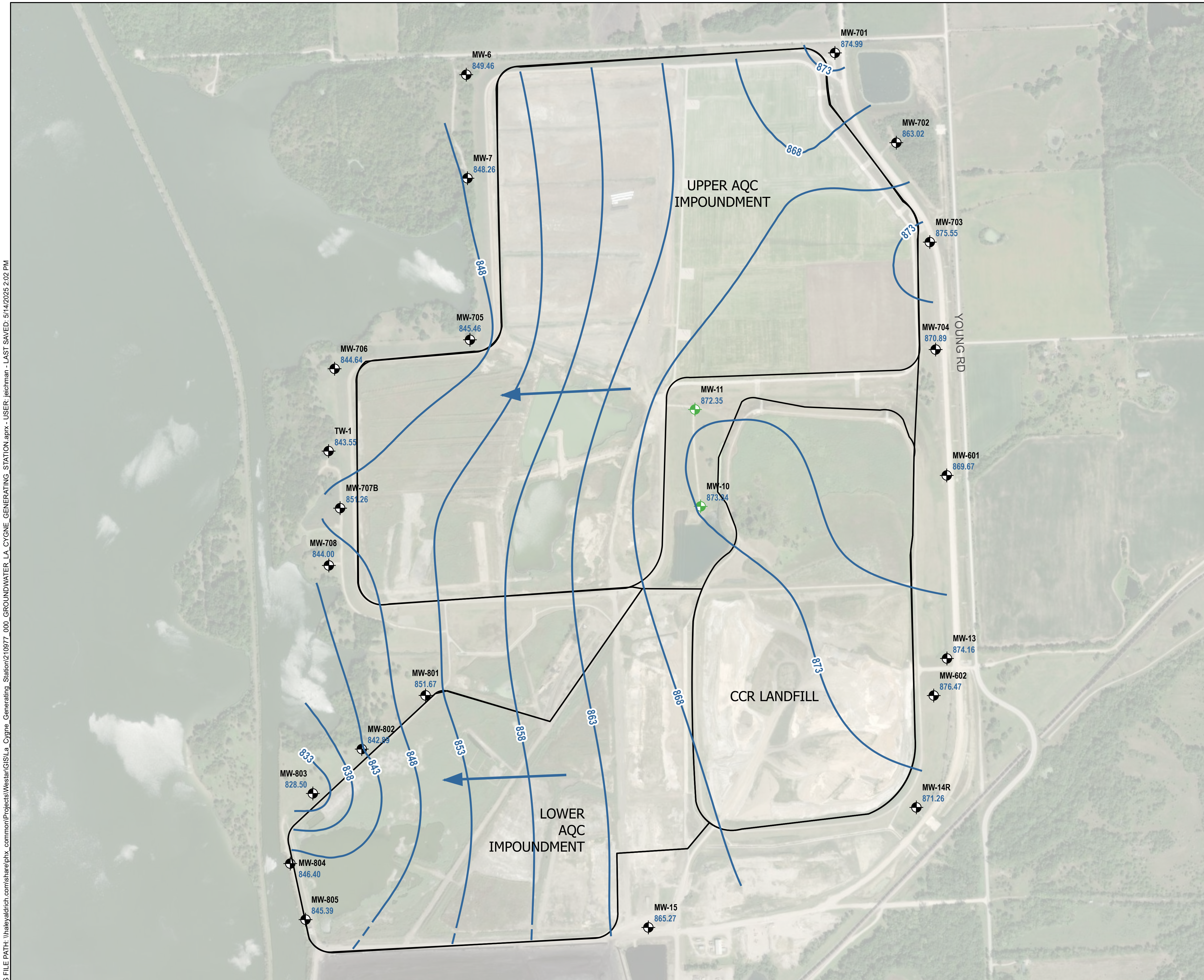
HALEY ALDRICH

EVERGY METRO, INC.
LA CYGNE GENERATING STATION
LA, CYGNE, KANSAS

MONITORING WELL LOCATION MAP

MAY 2025

FIGURE 2



LEGEND

- COMPLIANCE WELL
- NATURE AND EXTENT WELL
- GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- CCR UNIT BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 25 NOVEMBER 2024.
3. GROUNDWATER ELEVATION IN **BOLD BLUE TEXT** AND IN FEET ABOVE MEAN SEA LEVEL (AMSL).
4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 25 NOVEMBER 2024. THE HYDRAULIC CONDUCTIVITY VALUES COLLECTED THROUGH SLUG TESTING DURING WELL DEVELOPMENT, AND EFFECTIVE POROSITY VALUES OBTAINED FROM PUBLISH SOURCES.
5. AERIAL IMAGERY SOURCE: ESRI

N

0 850 1,700
SCALE IN FEET

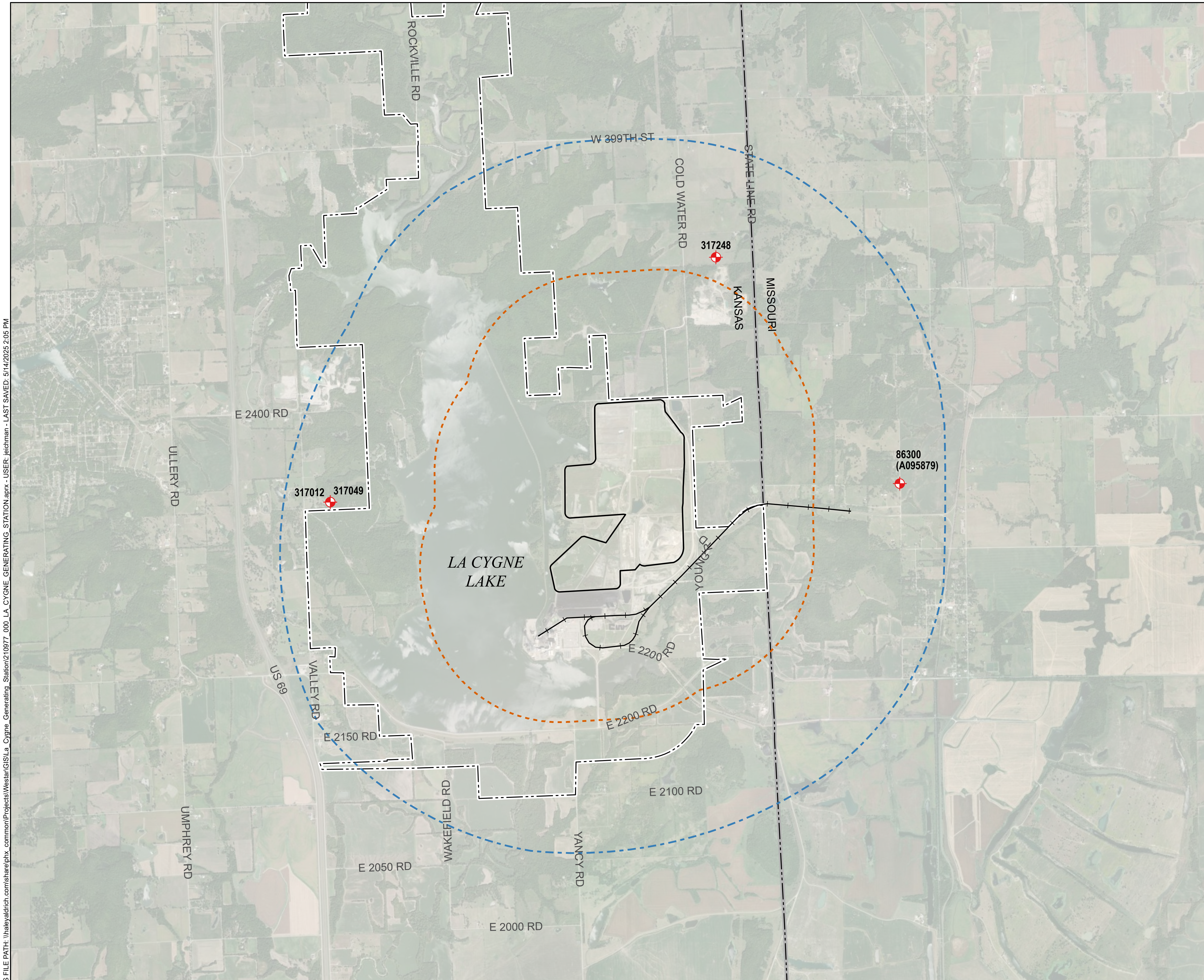
HALEY ALDRICH

EVERGY METRO, INC.
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

GROUNDWATER ELEVATION
CONTOUR MAP
NOVEMBER 2024

MAY 2025

FIGURE 3



LEGEND

- DOMESTIC WELL
- RAILROAD
- ONE-MILE RADIUS OF CCR SYSTEM
- TWO-MILE RADIUS OF CCR SYSTEM
- CCR UNIT BOUNDARY
- SITE BOUNDARY
- STATE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WELL LOCATION SOURCE: STATES OF MISSOURI AND KANSAS
3. AERIAL IMAGERY SOURCE: ESRI

N

0 4,000 8,000

SCALE IN FEET

HALEY ALDRICH

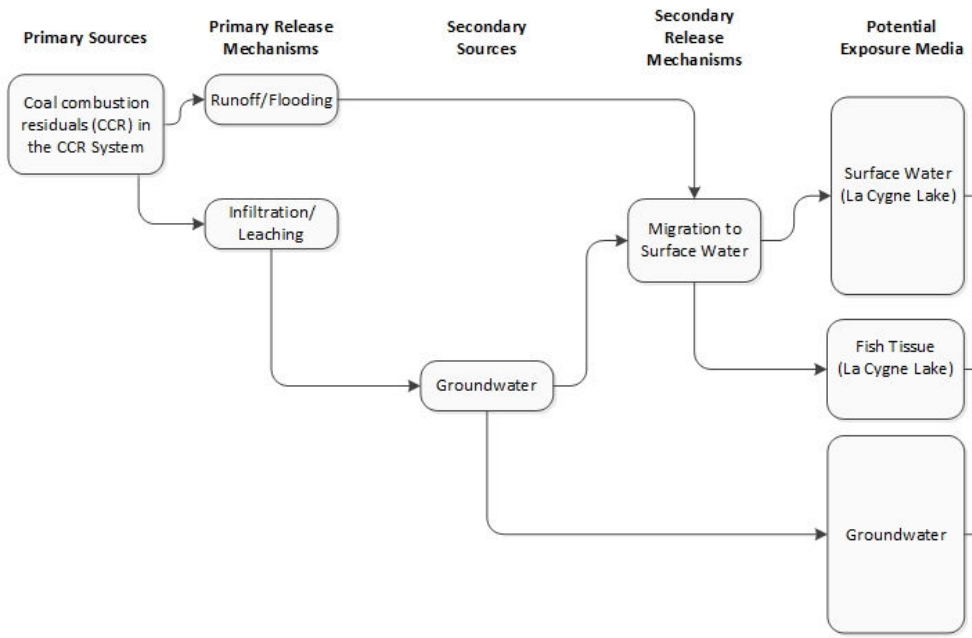
EVERGY METRO, INC.
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

WATER WELL LOCATIONS WITHIN TWO MILES OF CCR SYSTEM

MAY 2025

FIGURE 4

GIS FILE PATH: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\La_Cygne_Generating_Station\210977_000_LA_CYGNE_GENERATING_STATION.aprx - USER: jeichman - LAST SAVED: 5/14/2025 2:05 PM



	Potential Human Health Receptors			Potential Ecological Receptors
Potential Exposure Route	Offsite Resident	Hypothetical Recreational Swimmer or Wader	Current/Future Recreational Angler	Aquatic Receptors
Ingestion	⦿ (a)	●	○	NA
Dermal Contact	⦿ (a)	●	●	NA
Aquatic Exposure	NA	NA	NA	●
Ingestion	○	○	●	NA
Ingestion	○ (b)	○	○	NA
Dermal Contact	○ (b)	○	○	NA
Aquatic Exposure	NA	NA	NA	○ (c)

Notes:

- ● Potentially complete exposure pathway
- ⦿ Incomplete exposure pathway, but evaluated as if it were complete
- ○ Incomplete exposure pathway

(a) There are no public water supply intakes nor are there any residences on La Cygne Lake. Nevertheless, as a conservative, health protective measure, exposure to lake surface water as a potential source of drinking water was evaluated as if it were complete for nearby residents.
(b) As groundwater does not flow from the CCR System towards off-site residential water wells, potential exposures to CCR constituents in groundwater at these wells is incomplete.
(c) Ecological Receptors are not exposed to groundwater.

NA – Not Applicable

HALEY ALDRICH

EVERGY METRO, INC.
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

CONCEPTUAL SITE MODEL

MAY 2025

FIGURE 5

ATTACHMENT A
Derivation of Risk-Based Screening Levels for Recreational Use of Surface Water

TABLE A-1
EXPOSURE PARAMETERS FOR DERIVATION OF RISK-BASED SCREENING LEVELS FOR RECREATIONAL USE OF LA CYGNE LAKE SURFACE WATER
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

			Hypothetical Recreational Swimmer						Hypothetical Recreational Wader						Recreational Angler			
			Child (Age <6)		Adolescent (6-<16 years)		Adult		Child (Age <6)		Adolescent (6-<16 years)		Adult		Adolescent (6-<16 years)		Adult	
Exposure Parameter		Units	Value / Source		Value / Source		Value / Source		Value / Source		Value / Source		Value / Source		Value / Source		Value / Source	
Standard Parameters																		
Body Weight	BW	kg	15	USEPA, 2014a	44	USEPA, 2011 [1]	80	USEPA, 2014a	15	USEPA, 2014a	44	USEPA, 2011 [1]	80	USEPA, 2014a	44	USEPA, 2011 [1]	80	USEPA, 2014a
Exposure Duration	ED	years	6	Ages <6	10	Ages 6 - <16	10	Balance of 26-yr exposure	6	Ages <6	10	Ages 6 - <16	10	Balance of 26-yr exposure	10	Ages 6 - <16	10	Balance of 26-yr exposure (as an adult)
Non–carcinogenic Averaging Time	ATnc	days	2190	ED expressed in days	3650	ED expressed in days	3650	ED expressed in days	2190	ED expressed in days	3650	ED expressed in days	3650	ED expressed in days	3650	ED expressed in days	3650	ED expressed in days
Carcinogenic Averaging Time	ATc	days	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime	25550	70 year lifetime
Incidental Ingestion of Surface Water																		
Exposure Frequency	EF	days/year	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	NA		NA	
Water Ingestion Rate	IR	L/day	0.10	USEPA, 2014b [3]	0.10	USEPA, 2014b [3]	0.10	USEPA, 2014b [3]	0.10	USEPA, 2014b [4]	0.02	USEPA, 2014b [4]	0.02	USEPA, 2014b [4]	NA		NA	
Fraction Ingested	FI	unitless	1.0	Assumption	1.0	Assumption	1.0	Assumption	1.0	Assumption	1.0	Assumption	1.0	Assumption	NA		NA	
Dermal Exposure with Surface Water																		
Exposure Frequency	EF	days/year	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	60	USEPA, 2011 [2]	29	KDWP, 2022 [5]	29	KDWP, 2022 [5]
Exposed Skin Surface Area	SA	cm^2	6365	USEPA, 2014a	13350	USEPA, 2011 [6]	19652	USEPA, 2014a	1749	USEPA, 2011 [7]	3944	USEPA, 2011 [7]	6075	USEPA, 2011 [7]	1466	USEPA, 2011 [8]	2200	USEPA, 2011 [8]
Exposure Time	t-event	hr/event	2	Site-specific [9]	2	Site-specific [9]	2	Site-specific [9]	2	Site-specific [9]	2	Site-specific [9]	2	Site-specific [9]	8	Site-specific [10]	8	Site-specific [10]
Events per Day	EV	event/day	1	Site-specific [9]	1	Site-specific [9]	1	Site-specific [9]	1	Site-specific [9]	1	Site-specific [9]	1	Site-specific [9]	1	Site-specific [10]	1	Site-specific [10]

TABLE A-1
EXPOSURE PARAMETERS FOR DERIVATION OF RISK-BASED SCREENING LEVELS FOR RECREATIONAL USE OF LA CYGNE LAKE SURFACE WATER
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Notes and Abbreviations:

NA = not applicable
KDWP, 2022 - The 2020 Kansas Licensed Angler Survey, Prepared by Kansas Department of Wildlife and Parks. October 2022.
USEPA, 2011 - Exposure Factors Handbook. USEPA/600/R-10/030. October, 2011.
USEPA, 2014a - Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. OSWER 9200.1-120. February 6, 2014.
USEPA, 2014b - Region 4 Human Health Risk Assessment Supplemental Guidance. January 2014. Draft Final.
[1] - Table 8-1 of USEPA (2011); weighted average of mean body weights (6 to <16 years)
[2] - The number of days children are assumed to play surface water is the 95th percentile value calculated based on information provided by USEPA for number of days swimming per month by children ages 1 to 4 and 5 to 11 years (USEPA, 2011, Table 16-41), multiplied by three summer months. The child exposure frequency values are used for adults under the assumption that adults are supervising children.
[3] - Based on USEPA Region 4-recommended ingestion rate of 50 mL/hour for exposures to water during swimming (USEPA, 2014b), site-specific exposure time (2 hours per event), and site-specific events per day (1). The water ingestion rate in liters/day is calculated as follows: ingestion (mL/hr) x exposure time (hr/event)/1000 (mL/L) x events per day (1)
[4] - Based on USEPA Region 4-recommended ingestion rates of 50 mL/hour for children (age <6) and 10 mL/hour for adolescents and adults for exposures to water during wading (USEPA, 2014b), site-specific exposure time (2 hours per event), and site-specific events per day (1). The water ingestion rate in liters/day is calculated as follows: ingestion (mL/hr) x exposure time (hr/event)/1000 (mL/L) x events per day (1)
[5] - Based on The 2020 Kansas Licensed Angler Survey (Kansas Department of Wildlife and Parks, 2022), anglers fished in Kansas waters an average of 28.71 days in the previous 12 months. Total for all water body types.
[6] - Table 7-1 of USEPA (2011); weighted average of mean skin surface area (6 to <16 years)
[7] - Based on surface area of hands, forearms, lower legs, and feet
[8] - Based on surface area of hands and forearms
[9] - Assumes 2 hours per event, 1 event per day, and that on days when recreation in water occurs, all daily exposure to water is derived from locations at the Site.
[10] - Assumes 8 hours per event, 1 event per day.

Values based on a time-weighted average of child, adolescent, and adult exposure values are calculated as follows:
Water
IFWadj = (child ED [0-2] x child EF [0-2] x child IR [0-2] / child BW [0-2]) + (child ED [2-6] x child EF [2-6] x child IR [2-6] / child BW [2-6]) + (older child ED [6-16] x older child EF [6-16] x older child IR [6-16] / older child BW [6-16]) + (adult ED x adult EF x adult IR / adult BW)
DFWadj = (child EF [0-2] x child ED [0-2] x child SA [0-2] x child EV [0-2] / child BW [0-2]) + (child EF [2-6] x child ED [2-6] x child SA [2-6] x child EV [2-6] / child BW [2-6]) + (older child EF [6-16] x older child ED [6-16] x older child SA [6-16] x older child EV [6-16] / older child BW [6-16]) + (adult EF x adult ED x adult SA x adult EV / adult BW)

Water - mutagenic
IFWM = (child ED [0-2] x child EF [0-2] x child IR [0-2] x ADAF [0-2] / child BW [0-2]) + (child ED [2-6] x child EF [2-6] x child IR [2-6] x ADAF [2-6] / child BW [2-6]) + (older child ED [6-16] x child EF [6-16] x older child IR [6-16] x ADAF [6-16] / older child BW [6-16]) + (adult ED x adult EF x adult IR x adult ADAF / adult BW)
DFWM = (child EF [0-2] x child ED [0-2] x child SA [0-2] x child EV [0-2] x ADAF [0-2] / child BW [0-2]) + (child EF [2-6] x child ED [2-6] x child SA [2-6] x child EV [2-6] x ADAF [2-6] / child BW [2-6]) + (older child EF [6-16] x older child ED [6-16] x older child SA [6-16] x older child EV [6-16] x ADAF [6-16] / older child BW [6-16]) + (adult EF x adult ED x adult SA x adult EV x adult ADAF / adult BW)

USEPA guidance for early life exposure to carcinogens (USEPA, 2005) requires that risks for potentially carcinogenic constituents that are presumed to act by a mutagenic mode of action be calculated differently than for constituents that do not act via a mutagenic mode of action.
Therefore, the age-dependent adjustment factors (ADAF) will be applied for calculations involving children under the age of 16. The ADAFs are as follows:
Age 0 to 2 years (2 year interval from birth until 2nd birthday) – ADAF = 10
Ages 2 to 16 years (14 year interval from 2nd birthday to 16th birthday) – ADAF = 3
Ages 16 and up (after 16th birthday) – no adjustment - ADAF = 1
The exposure parameters for children ages <6 are applied to children 0 - 2 and 2- 6.

ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
INPUT VALUES - RECREATIONAL SWIMMER

Variable	Recreator Surface Water Default Value	Site-Specific Value
BW0-2 (body weight) kg	15	15
BW2-6 (body weight) kg	15	15
BW6-16 (body weight) kg	80	44
BW16-26 (body weight) kg	80	80
BWrec-c (body weight - adult) kg	15	15
BWrec-a (body weight - adult) kg	80	62
DFWrec-adj (age-adjusted dermal factor) cm2-event/kg	0	472134.194
DFWMrec-adj (mutagenic age-adjusted dermal factor) cm2-event/kg	0	1508246.36
EDrec (exposure duration - recreator) years	26	26
ED0-2 (exposure duration) years	2	2
ED2-6 (exposure duration) years	4	4
ED6-16 (exposure duration) years	10	10
ED16-26 (exposure duration) years	10	10
EDrec-a (exposure duration - adult) years	20	20
EFrec (exposure frequency) days/year	0	60
EF2-6 (exposure frequency) days/year	0	60
EF6-16 (exposure frequency) days/year	0	60
EF16-26 (exposure frequency) days/year	0	60
EFrec-a (adult exposure frequency) days/year	0	60
ET0-2 (exposure time) hours/event	0	2
ET2-6 (exposure time) hours/event	0	2
ET6-16 (exposure time) hours/event	0	2
ET16-26 (exposure time) hours/event	0	2
ETrec-a (adult exposure time) hours/event	0	2
EV0-2 (events) events/day	0	1
EV2-6 (events) events/day	0	1
EV6-16 (events) events/day	0	1
EV16-26 (events) events/day	0	1
EVrec-a (adult) events/day	0	1
THQ (target hazard quotient) unitless	0.1	1
IFWrec-adj (age-adjusted water intake rate) L/kg	0	4.335
IFWMrec-adj (mutagenic age-adjusted water intake rate) L/kg	0	17.641
IRW0-2 (water intake rate) L/hour	0.12	0.05
IRW2-6 (water intake rate) L/hour	0.12	0.05
IRW6-16 (water intake rate) L/hour	0.124	0.05
IRW16-26 (water intake rate) L/hour	0.0985	0.05
IRWrec-a (water intake rate - adult) L/hr	0.11	0.05
LT (lifetime - recreator) years	70	70
SA0-2 (skin surface area) cm2	6365	6365
SA2-6 (skin surface area) cm2	6365	6365
SA6-16 (skin surface area) cm2	19652	13350
SA16-26 (skin surface area) cm2	19652	19652
SArec (skin surface area - adult) cm2	19652	16501
SArec-a (skin surface area - adult) cm2	19652	16501
Apparent thickness of stratum corneum (cm)	0.001	0.001
TR (target risk) unitless	0.000001	0.00001

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ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
OUTPUT VALUES - RECREATIONAL SWIMMER

Site-specific

Recreator Risk-Based Regional Screening Levels (RSL) for Surface Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; T = ATSDR DRAFT; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Analytical Type	Chemical Analytical Type	SFo (mg/kg-day)-1	SFo Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m3)	RfC Ref	RAGSe GIABS (unitless)	Kp (cm/hr)	MW	FA (unitless)	In EPD?
Antimony (metallic)	7440-36-0	No	No	Inorganics	Inorganics	-		4.00E-04	I	3.00E-04	A	1.50E-01	1.00E-03	1.22E+02	1.00E+00	Yes
Arsenic, Inorganic	7440-38-2	No	No	Inorganics	Inorganics	3.20E+01	I	6.00E-05	I	1.50E-05	C	1.00E+00	1.00E-03	7.49E+01	1.00E+00	Yes
Barium	7440-39-3	No	No	Inorganics	Inorganics	-		2.00E-01	I	5.00E-04	H	7.00E-02	1.00E-03	1.37E+02	1.00E+00	Yes
Beryllium and compounds	7440-41-7	No	No	Inorganics	Inorganics	-		2.00E-03	I	2.00E-05	I	7.00E-03	1.00E-03	9.01E+00	1.00E+00	Yes
Boron And Borates Only	7440-42-8	No	No	Inorganics	Inorganics	-		2.00E-01	I	2.00E-02	H	1.00E+00	1.00E-03	1.38E+01	1.00E+00	Yes
Cadmium (Water)	7440-43-9	No	No	Inorganics	Inorganics	-		1.00E-04	A	1.00E-05	A	5.00E-02	1.00E-03	1.12E+02	1.00E+00	Yes
Chromium(III), (Insoluble Salts)	16065-83-1	No	No	Inorganics	Inorganics	-		1.50E+00	I	-		1.30E-02	1.00E-03	5.20E+01	1.00E+00	Yes
Cobalt	7440-48-4	No	No	Inorganics	Inorganics	-		3.00E-04	P	6.00E-06	P	1.00E+00	4.00E-04	5.89E+01	1.00E+00	Yes
Fluoride	16984-48-8	No	No	Inorganics	Inorganics	-		4.00E-02	C	1.30E-02	C	1.00E+00	1.00E-03	3.80E+01	1.00E+00	Yes
Lead and Compounds	7439-92-1	No	No	Inorganics	Inorganics	-		-		-		1.00E+00	1.00E-04	2.07E+02	1.00E+00	Yes
Lithium	7439-93-2	No	No	Inorganics	Inorganics	-		2.00E-03	P	-		1.00E+00	1.00E-03	6.94E+00	1.00E+00	Yes
Mercuric Chloride	7487-94-7	No	No	Inorganics	Inorganics	-		3.00E-04	I	3.00E-04	G	7.00E-02	1.00E-03	2.72E+02	1.00E+00	Yes
Molybdenum	7439-98-7	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-03	A	1.00E+00	1.00E-03	9.59E+01	1.00E+00	Yes
Selenium	7782-49-2	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-02	C	1.00E+00	1.00E-03	7.90E+01	1.00E+00	Yes

Chemical	DAevent (ca)	DAevent (nc child)	DAevent (nc adult)	Ingestion SL TR=1E-06 (ug/L)	Dermal SL TR=1E-06 (ug/L)	Carcinogenic SL TR=1E-06 (ug/L)	Ingestion SL (Child) THQ=1 (ug/L)	Dermal SL (Child) THQ=1 (ug/L)	Noncarcinogenic SL (Child) THQ=1 (ug/L)	Ingestion SL (Adult) THQ=1 (ug/L)	Dermal SL (Adult) THQ=1 (ug/L)	Noncarcinogenic SL (Adult) THQ=1 (ug/L)	Screening Level (ug/L)
Antimony (metallic)	-	8.60E-04	1.37E-03	-	-	-	3.65E+02	4.30E+02	1.97E+02	1.51E+03	6.86E+02	4.71E+02	1.97E+02 nc
Arsenic, Inorganic	1.69E-05	8.60E-04	1.37E-03	1.84E+00	8.46E+00	1.51E+00	5.48E+01	4.30E+02	4.86E+01	2.26E+02	6.86E+02	1.70E+02	1.51E+00 ca
Barium	-	2.01E-01	3.20E-01	-	-	-	1.83E+05	1.00E+05	6.47E+04	7.54E+05	1.60E+05	1.32E+05	6.47E+04 nc
Beryllium and compounds	-	2.01E-04	3.20E-04	-	-	-	1.83E+03	1.00E+02	9.51E+01	7.54E+03	1.60E+02	1.57E+02	9.51E+01 nc
Boron And Borates Only	-	2.87E+00	4.57E+00	-	-	-	1.83E+05	1.43E+06	1.62E+05	7.54E+05	2.29E+06	5.67E+05	1.62E+05 nc max
Cadmium (Water)	-	7.17E-05	1.14E-04	-	-	-	9.13E+01	3.58E+01	2.57E+01	3.77E+02	5.71E+01	4.96E+01	2.57E+01 nc
Chromium(III), (Insoluble Salts)	-	2.80E-01	4.46E-01	-	-	-	1.37E+06	1.40E+05	1.27E+05	5.66E+06	2.23E+05	2.14E+05	1.27E+05 nc max
Cobalt	-	4.30E-03	6.86E-03	-	-	-	2.74E+02	5.38E+03	2.60E+02	1.13E+03	8.57E+03	1.00E+03	2.60E+02 nc
Fluoride	-	5.73E-01	9.14E-01	-	-	-	3.65E+04	2.87E+05	3.24E+04	1.51E+05	4.57E+05	1.13E+05	3.24E+04 nc
Lead and Compounds	-	-	-	-	-	-	-	-	-	-	-	-	
Lithium	-	2.87E-02	4.57E-02	-	-	-	1.83E+03	1.43E+04	1.62E+03	7.54E+03	2.29E+04	5.67E+03	1.62E+03 nc
Mercuric Chloride	-	3.01E-04	4.80E-04	-	-	-	2.74E+02	1.51E+02	9.71E+01	1.13E+03	2.40E+02	1.98E+02	9.71E+01 nc
Molybdenum	-	7.17E-02	1.14E-01	-	-	-	4.56E+03	3.58E+04	4.05E+03	1.89E+04	5.71E+04	1.42E+04	4.05E+03 nc
Selenium	-	7.17E-02	1.14E-01	-	-	-	4.56E+03	3.58E+04	4.05E+03	1.89E+04	5.71E+04	1.42E+04	4.05E+03 nc

Output generated 12MAY2025:21:05:57

ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
INPUT VALUES - RECREATIONAL WADER

Variable	Recreator Surface Water Default Value	Site-Specific Value
BW0-2 (body weight) kg	15	15
BW2-6 (body weight) kg	15	15
BW6-16 (body weight) kg	80	44
BW16-26 (body weight) kg	80	80
BWrec-c (body weight - adult) kg	15	15
BWrec-a (body weight - adult) kg	80	62
DFWrec-adj (age-adjusted dermal factor) cm2-event/kg	0	138934.065
DFWMrec-adj (mutagenic age-adjusted dermal factor) cm2-event/kg	0	430779.955
EDrec (exposure duration - recreator) years	26	26
ED0-2 (exposure duration) years	2	2
ED2-6 (exposure duration) years	4	4
ED6-16 (exposure duration) years	10	10
ED16-26 (exposure duration) years	10	10
EDrec-a (exposure duration - adult) years	20	20
EFrec (exposure frequency) days/year	0	60
EF2-6 (exposure frequency) days/year	0	60
EF6-16 (exposure frequency) days/year	0	60
EF16-26 (exposure frequency) days/year	0	60
EFrec-a (adult exposure frequency) days/year	0	60
ET0-2 (exposure time) hours/event	0	2
ET2-6 (exposure time) hours/event	0	2
ET6-16 (exposure time) hours/event	0	2
ET16-26 (exposure time) hours/event	0	2
ETrec-a (adult exposure time) hours/event	0	2
EV0-2 (events) events/day	0	1
EV2-6 (events) events/day	0	1
EV6-16 (events) events/day	0	1
EV16-26 (events) events/day	0	1
EVrec-a (adult) events/day	0	1
THQ (target hazard quotient) unitless	0.1	1
IFWrec-adj (age-adjusted water intake rate) L/kg	0	2.787
IFWMrec-adj (mutagenic age-adjusted water intake rate) L/kg	0	13.768
IRW0-2 (water intake rate) L/hour	0.12	0.05
IRW2-6 (water intake rate) L/hour	0.12	0.05
IRW6-16 (water intake rate) L/hour	0.124	0.01
IRW16-26 (water intake rate) L/hour	0.0985	0.01
IRWrec-a (water intake rate - adult) L/hr	0.11	0.01
LT (lifetime - recreator) years	70	70
SA0-2 (skin surface area) cm2	6365	1749
SA2-6 (skin surface area) cm2	6365	1749
SA6-16 (skin surface area) cm2	19652	3944
SA16-26 (skin surface area) cm2	19652	6075
SArec (skin surface area - adult) cm2	19652	5009.5
SArec-a (skin surface area - adult) cm2	19652	5009.5
Apparent thickness of stratum corneum (cm)	0.001	0.001
TR (target risk) unitless	0.000001	0.00001

Output generated 12MAY2025:20:50:08

ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
OUTPUT VALUES - RECREATIONAL WADER

Site-specific

Recreator Risk-Based Regional Screening Levels (RSL) for Surface Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; T = ATSDR DRAFT; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Analytical Type	Chemical Analytical Type	SF_o $(mg/kg\text{-}day)^{-1}$	SF_o Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m^3)	RfC Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	FA (unitless)	In EPD?	$DA_{event\ (ca)}$	$DA_{event\ (nc\ child)}$	$DA_{event\ (nc\ adult)}$	Ingestion SL TR=1E-06 (ug/L)	Dermal SL TR=1E-06 (ug/L)	Carcinogenic SL TR=1E-06 (ug/L)	Ingestion SL (Child) THQ=1 (ug/L)	Dermal SL (Child) THQ=1 (ug/L)	Noncarcinogenic SL (Child) THQ=1 (ug/L)	Ingestion SL (Adult) THQ=1 (ug/L)	Dermal SL (Adult) THQ=1 (ug/L)	Noncarcinogenic SL (Adult) THQ=1 (ug/L)	Screening Level (ug/L)
Antimony (metallic)	7440-36-0	No	No	Inorganics	Inorganics	-		4.00E-04	I	3.00E-04	A	1.50E-01	1.00E-03	1.22E+02	1.00E+00	Yes	-	3.13E-03	4.52E-03	-	-	-	3.65E+02	1.57E+03	2.96E+02	7.54E+03	2.26E+03	1.74E+03	2.96E+02 nc
Arsenic, Inorganic	7440-38-2	No	No	Inorganics	Inorganics	3.20E+01	I	6.00E-05	I	1.50E-05	C	1.00E+00	1.00E-03	7.49E+01	1.00E+00	Yes	5.75E-05	3.13E-03	4.52E-03	2.86E+00	2.87E+01	2.61E+00	5.48E+01	1.57E+03	5.29E+01	1.13E+03	2.26E+03	7.54E+02	2.61E+00 ca
Barium	7440-39-3	No	No	Inorganics	Inorganics	-		2.00E-01	I	5.00E-04	H	7.00E-02	1.00E-03	1.37E+02	1.00E+00	Yes	-	7.30E-01	1.05E+00	-	-	-	1.83E+05	3.65E+05	1.22E+05	3.77E+06	5.27E+05	4.62E+05	1.22E+05 nc max
Beryllium and compounds	7440-41-7	No	No	Inorganics	Inorganics	-		2.00E-03	I	2.00E-05	I	7.00E-03	1.00E-03	9.01E+00	1.00E+00	Yes	-	7.30E-04	1.05E-03	-	-	-	1.83E+03	3.65E+02	3.04E+02	3.77E+04	5.27E+02	5.20E+02	3.04E+02 nc
Boron And Borates Only	7440-42-8	No	No	Inorganics	Inorganics	-		2.00E-01	I	2.00E-02	H	1.00E+00	1.00E-03	1.38E+01	1.00E+00	Yes	-	1.04E+01	1.51E+01	-	-	-	1.83E+05	5.22E+06	1.76E+05	3.77E+06	7.53E+06	2.51E+06	1.76E+05 nc max
Cadmium (Water)	7440-43-9	No	No	Inorganics	Inorganics	-		1.00E-04	A	1.00E-05	A	5.00E-02	1.00E-03	1.12E+02	1.00E+00	Yes	-	2.61E-04	3.76E-04	-	-	-	9.13E+01	1.30E+02	5.37E+01	1.89E+03	1.88E+02	1.71E+02	5.37E+01 nc
Chromium(III), (Insoluble Salts)	16065-83-1	No	No	Inorganics	Inorganics	-		1.50E+00	I	-		1.30E-02	1.00E-03	5.20E+01	1.00E+00	Yes	-	1.02E+00	1.47E+00	-	-	-	1.37E+06	5.09E+05	3.71E+05	2.83E+07	7.34E+05	7.16E+05	3.71E+05 nc max
Cobalt	7440-48-4	No	No	Inorganics	Inorganics	-		3.00E-04	P	6.00E-06	P	1.00E+00	4.00E-04	5.89E+01	1.00E+00	Yes	-	1.57E-02	2.26E-02	-	-	-	2.74E+02	1.96E+04	2.70E+02	5.66E+03	2.82E+04	4.71E+03	2.70E+02 nc
Fluoride	16984-48-8	No	No	Inorganics	Inorganics	-		4.00E-02	C	1.30E-02	C	1.00E+00	1.00E-03	3.80E+01	1.00E+00	Yes	-	2.09E+00	3.01E+00	-	-	-	3.65E+04	1.04E+06	3.53E+04	7.54E+05	1.51E+06	5.03E+05	3.53E+04 nc
Lead and Compounds	7439-92-1	No	No	Inorganics	Inorganics	-		-		-		1.00E+00	1.00E-04	2.07E+02	1.00E+00	Yes	-	-	-	-	-	-	-	-	-	-	-	-	
Lithium	7439-93-2	No	No	Inorganics	Inorganics	-		2.00E-03	P	-		1.00E+00	1.00E-03	6.94E+00	1.00E+00	Yes	-	1.04E-01	1.51E-01	-	-	-	1.83E+03	5.22E+04	1.76E+03	3.77E+04	7.53E+04	2.51E+04	1.76E+03 nc
Mercuric Chloride	7487-94-7	No	No	Inorganics	Inorganics	-		3.00E-04	I	3.00E-04	G	7.00E-02	1.00E-03	2.72E+02	1.00E+00	Yes	-	1.10E-03	1.58E-03	-	-	-	2.74E+02	5.48E+02	1.83E+02	5.66E+03	7.91E+02	6.94E+02	1.83E+02 nc
Molybdenum	7439-98-7	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-03	A	1.00E+00	1.00E-03	9.59E+01	1.00E+00	Yes	-	2.61E-01	3.76E-01	-	-	-	4.56E+03	1.30E+05	4.41E+03	9.43E+04	1.88E+05	6.28E+04	4.41E+03 nc
Selenium	7782-49-2	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-02	C	1.00E+00	1.00E-03	7.90E+01	1.00E+00	Yes	-	2.61E-01	3.76E-01	-	-	-	4.56E+03	1.30E+05	4.41E+03	9.43E+04	1.88E+05	6.28E+04	4.41E+03 nc

Output generated 12MAY2025:20:50:08

ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
INPUT VALUES - RECREATIONAL ANGLER

Variable	Recreator Surface Water Default Value	Site-Specific Value
BW0-2 (body weight) kg	15	15
BW2-6 (body weight) kg	15	15
BW6-16 (body weight) kg	80	44
BW16-26 (body weight) kg	80	80
BWrec-c (body weight - adult) kg	15	0
BWrec-a (body weight - adult) kg	80	62
DFWrec-adj (age-adjusted dermal factor) cm2-event/kg	0	17147.419
DFWMrec-adj (mutagenic age-adjusted dermal factor) cm2-event/kg	0	36961.818
EDrec (exposure duration - recreator) years	26	20
ED0-2 (exposure duration) years	2	0
ED2-6 (exposure duration) years	4	0
ED6-16 (exposure duration) years	10	10
ED16-26 (exposure duration) years	10	10
EDrec-a (exposure duration - adult) years	20	20
EFrec (exposure frequency) days/year	0	29
EF2-6 (exposure frequency) days/year	0	0
EF6-16 (exposure frequency) days/year	0	29
EF16-26 (exposure frequency) days/year	0	29
EFrec-a (adult exposure frequency) days/year	0	29
ET0-2 (exposure time) hours/event	0	0
ET2-6 (exposure time) hours/event	0	0
ET6-16 (exposure time) hours/event	0	8
ET16-26 (exposure time) hours/event	0	8
ETrec-a (adult exposure time) hours/event	0	8
EV0-2 (events) events/day	0	0
EV2-6 (events) events/day	0	0
EV6-16 (events) events/day	0	1
EV16-26 (events) events/day	0	1
EVrec-a (adult) events/day	0	1
THQ (target hazard quotient) unitless	0.1	1
IFWrec-adj (age-adjusted water intake rate) L/kg	0	0
IFWMrec-adj (mutagenic age-adjusted water intake rate) L/kg	0	0
IRW0-2 (water intake rate) L/hour	0.12	0
IRW2-6 (water intake rate) L/hour	0.12	0
IRW6-16 (water intake rate) L/hour	0.124	0
IRW16-26 (water intake rate) L/hour	0.0985	0
IRWrec-a (water intake rate - adult) L/hr	0.11	0
LT (lifetime - recreator) years	70	70
SA0-2 (skin surface area) cm2	6365	0
SA2-6 (skin surface area) cm2	6365	0
SA6-16 (skin surface area) cm2	19652	1466
SA16-26 (skin surface area) cm2	19652	2200
SArec (skin surface area - adult) cm2	19652	1833
SArec-a (skin surface area - adult) cm2	19652	1833
Apparent thickness of stratum corneum (cm)	0.001	0.001
TR (target risk) unitless	0.000001	0.00001

Output generated 12MAY2025:21:15:48

ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONAL SCREENING LEVEL CALCULATOR
INPUT VALUES - RECREATIONAL ANGLER

Site-specific

Recreator Risk-Based Regional Screening Levels (RSL) for Surface Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; T = ATSDR DRAFT; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; s
= Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Analytical Type	Chemical Analytical Type	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m^3)	RfC Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	FA (unitless)	In EPD?	$DA_{event\ (ca)}$	DA_{event} (nc child)	$DA_{event\ (nc\ adult)}$	Ingestion SL TR=1E-06 (ug/L)	Dermal SL TR=1E-06 (ug/L)	Carcinogenic SL TR=1E-06 (ug/L)	Ingestion SL (Child) THQ=1 (ug/L)	Dermal SL (Child) THQ=1 (ug/L)	Noncarcinogenic SL (Child) THQ=1 (ug/L)	Ingestion SL (Adult) THQ=1 (ug/L)	Dermal SL (Adult) THQ=1 (ug/L)	Noncarcinogenic SL (Adult) THQ=1 (ug/L)	Screening Level (ug/L)
Antimony (metallic)	7440-36-0	No	No	Inorganics	Inorganics	-		4.00E-04	I	3.00E-04	A	1.50E-01	1.00E-03	1.22E+02	1.00E+00	Yes	-	-	2.55E-02	-	-	-	-	-	-	-	3.19E+03	3.19E+03	3.19E+03 nc
Arsenic, Inorganic	7440-38-2	No	No	Inorganics	Inorganics	3.20E+01	I	6.00E-05	I	1.50E-05	C	1.00E+00	1.00E-03	7.49E+01	1.00E+00	Yes	4.66E-04	-	2.55E-02	-	5.82E+01	5.82E+01	-	-	-	-	3.19E+03	3.19E+03	5.82E+01 ca
Barium	7440-39-3	No	No	Inorganics	Inorganics	-		2.00E-01	I	5.00E-04	H	7.00E-02	1.00E-03	1.37E+02	1.00E+00	Yes	-	-	5.96E+00	-	-	-	-	-	-	-	7.45E+05	7.45E+05	7.45E+05 nc max
Beryllium and compounds	7440-41-7	No	No	Inorganics	Inorganics	-		2.00E-03	I	2.00E-05	I	7.00E-03	1.00E-03	9.01E+00	1.00E+00	Yes	-	-	5.96E-03	-	-	-	-	-	-	-	7.45E+02	7.45E+02	7.45E+02 nc
Boron And Borates Only	7440-42-8	No	No	Inorganics	Inorganics	-		2.00E-01	I	2.00E-02	H	1.00E+00	1.00E-03	1.38E+01	1.00E+00	Yes	-	-	8.51E+01	-	-	-	-	-	-	-	1.06E+07	1.06E+07	1.06E+07 nc max
Cadmium (Water)	7440-43-9	No	No	Inorganics	Inorganics	-		1.00E-04	A	1.00E-05	A	5.00E-02	1.00E-03	1.12E+02	1.00E+00	Yes	-	-	2.13E-03	-	-	-	-	-	-	-	2.66E+02	2.66E+02	2.66E+02 nc
Chromium(III), (Insoluble Salts)	16065-83-1	No	No	Inorganics	Inorganics	-		1.50E+00	I	-		1.30E-02	1.00E-03	5.20E+01	1.00E+00	Yes	-	-	8.30E+00	-	-	-	-	-	-	-	1.04E+06	1.04E+06	1.04E+06 nc max
Cobalt	7440-48-4	No	No	Inorganics	Inorganics	-		3.00E-04	P	6.00E-06	P	1.00E+00	4.00E-04	5.89E+01	1.00E+00	Yes	-	-	1.28E-01	-	-	-	-	-	-	-	3.99E+04	3.99E+04	3.99E+04 nc
Fluoride	16984-48-8	No	No	Inorganics	Inorganics	-		4.00E-02	C	1.30E-02	C	1.00E+00	1.00E-03	3.80E+01	1.00E+00	Yes	-	-	1.70E+01	-	-	-	-	-	-	-	2.13E+06	2.13E+06	2.13E+06 nc max
Lead and Compounds	7439-92-1	No	No	Inorganics	Inorganics	-		-		-		1.00E+00	1.00E-04	2.07E+02	1.00E+00	Yes	-	-	-	-	-	-	-	-	-	-	-	-	
Lithium	7439-93-2	No	No	Inorganics	Inorganics	-		2.00E-03	P	-		1.00E+00	1.00E-03	6.94E+00	1.00E+00	Yes	-	-	8.51E-01	-	-	-	-	-	-	-	1.06E+05	1.06E+05	1.06E+05 nc max
Mercuric Chloride	7487-94-7	No	No	Inorganics	Inorganics	-		3.00E-04	I	3.00E-04	G	7.00E-02	1.00E-03	2.72E+02	1.00E+00	Yes	-	-	8.94E-03	-	-	-	-	-	-	-	1.12E+03	1.12E+03	1.12E+03 nc
Molybdenum	7439-98-7	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-03	A	1.00E+00	1.00E-03	9.59E+01	1.00E+00	Yes	-	-	2.13E+00	-	-	-	-	-	-	-	2.66E+05	2.66E+05	2.66E+05 nc max
Selenium	7782-49-2	No	No	Inorganics	Inorganics	-		5.00E-03	I	2.00E-02	C	1.00E+00	1.00E-03	7.90E+01	1.00E+00	Yes	-	-	2.13E+00	-	-	-	-	-	-	-	2.66E+05	2.66E+05	2.66E+05 nc max

Output generated 12MAY2025:21:15:48

ATTACHMENT B
Dilution Attenuation Factor Calculations

HALEY ALDRICH	**CALCULATIONS**	File No.	0210977
		Sheet	1 of 5
Client	La Cygne Generating Station	Date	8 May 2025
Project	Evergy Metro, Inc,– La Cygne, KANSAS	Computed By	Javad Ashjari
Subject	Dilution Attenuation Factor Calculations	Checked By	Dimitri Quafisi

The La Cygne Generating Station is located to the east of the La Cygne Dam reservoir, which flows from north to south. The dam, situated at the southern end, stores water to meet the facility's demand by drawing in water through wells located on the southern side of the site. After circulating through the plant, the water is discharged into a canal on the western side of the Site. Notably, the flow direction of the canal is opposite to that of the dam. The water level in the canal is regulated by a weir structure at the northern end, which helps maintain a relatively stable water level throughout the canal. While the water levels are measured daily, there is limited data available regarding the water flux rate.

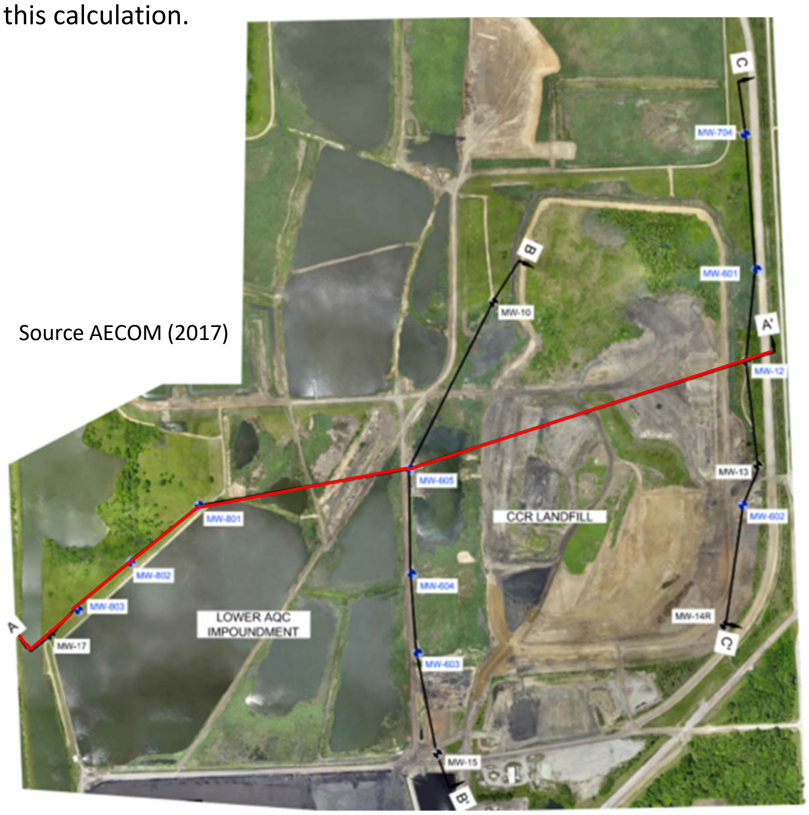
Google Earth Imagery

CALCULATIONS

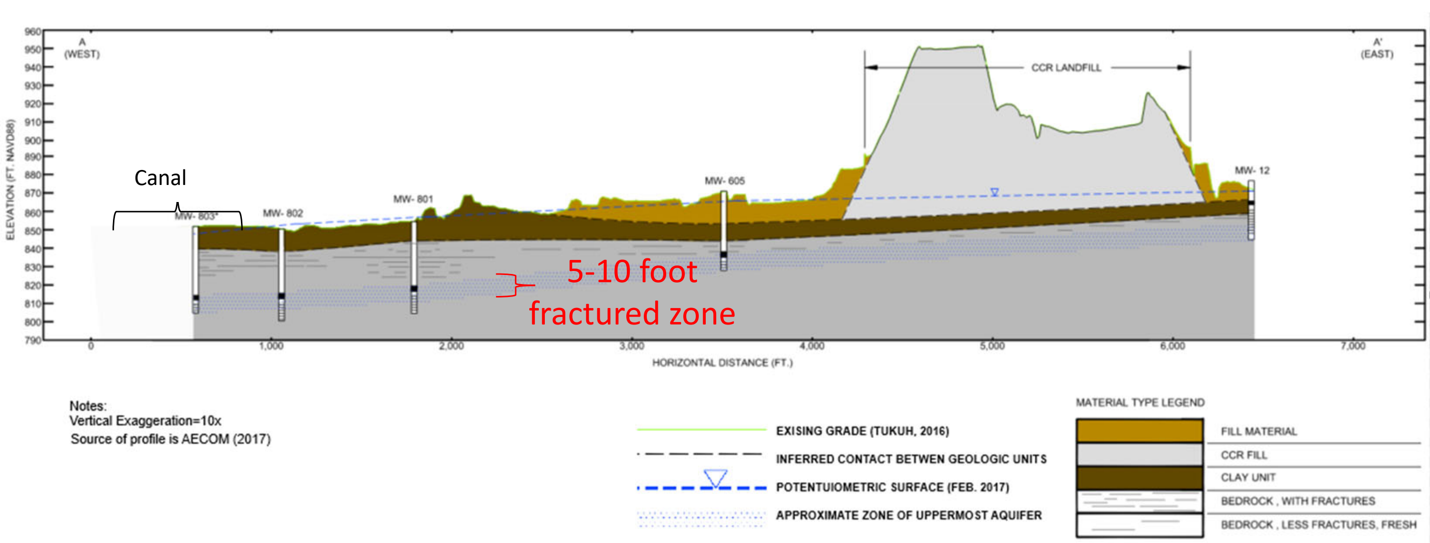
Client	La Cygne Generating Station	File No.	0210977
Project	Evergy Metro, Inc,– La Cygne, KANSAS	Sheet	2 of 5
Subject	Dilution Attenuation Factor Calculations	Date	8 May 2025
		Computed By	Javad Ashjari
		Checked By	Dimitri Quafisi

A Conceptual Model was developed for the La Cygne Ponds using subsurface cross section interpretations from boring logs, and surveyed elevations (AECOM 2017). Five subsurface units were identified: bedrock (less fractured shale), shale with significant fractures, clay unit, Fill materials, Landfill and pond Material (coal combustion residuals or "ash"). The fractured shale zone is regarded as the primary flow pathways at the Site and was utilized for this calculation.

Source AECOM (2017)



The thickness was variable and changes from 5 to 10 feet for fractured shale zone.



Canal discharge values were obtained from Evergy intake volume, located downstream of the Site.

The discharge rate depends on how many pumps are in service; the flow can be from 100,000 – 300,000 gpm. The minimum value of the available records are used for the calculations to maintain a conservative estimate for DAF calculations.

CALCULATIONS

Client	La Cygne Generating Station	File No.	0210977
Project	Evergy Metro, Inc,– La Cygne, KANSAS	Sheet	4 of 5
Subject	Dilution Attenuation Factor Calculations	Date	8 May 2025
		Computed By	Javad Ashjari
		Checked By	Dimitri Quafisi

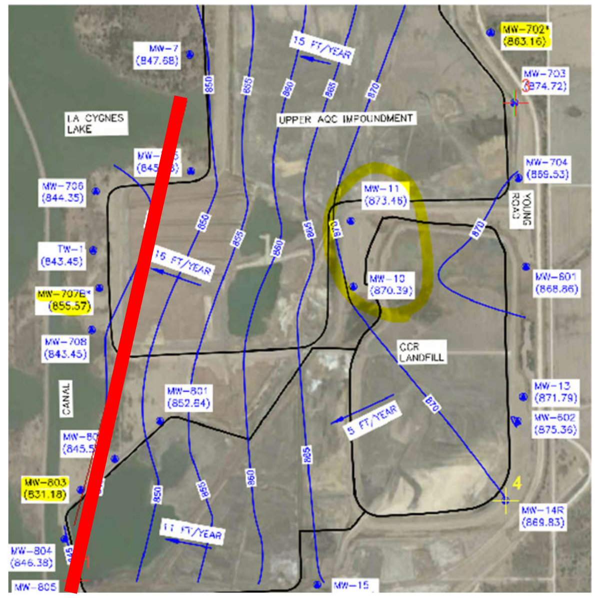
Uppermost aquifer Groundwater Flow Zone

Groundwater Flux Calculations:

$$Q = KAI$$

$$K = Hydraulic\ Conductivity$$

Unit	Horizontal K (cm/sec)	Horizontal K (ft/day)
MW-705	1.0×10^{-03}	2.954
MW-708	7.0×10^{-05}	0.198
MW-804	7.5×10^{-07}	0.002
Average K	3.7×10^{-04}	1.051



Hydraulic Conductivity calculated from geometric mean of wells MW-705, MW-708, MW-804.

$$A = Area$$

Cross-section	Length (ft)	Thickness (ft)	Area (ft^2)
Red Line	5,383	10	53,830

Cross-sectional Area Used for Calculations. Groundwater flow map from the November 17, 2023, gauging event. Arrows indicate groundwater flow direction.

Length of cross-sectional area

$$I = Gradient$$

Cross-section	Head (ft)	Distance (ft)	Gradient (ft/ft)
Near MW-705	5	914	0.0055
Near MW-708	5	602	0.0083
Near MW-804	5	729	0.0069

$$Q = Groundwater\ Flux$$

Cross-section	Horizontal K (ft/day)	Area (ft^2)	Gradient (ft/ft)	Groundwater Flux (ft^3/day)
Minimum gradient	1.051	53,830	0.0055	311
Maximum gradient	1.051	53,830	0.0083	470

Discharge Canal Flow Calculations:

$Q_R =$ Discharge of the canal, at Low-Flow conditions. west of the Site

$$Q_R = 100{,}000\ gpm = 19{,}250{,}000\ ft^3/\text{day}$$

DAF Calculations:

$$DAF = \frac{Q_R}{Q_G}$$

Where:

$Q_R =$ Discharge of the canal, west of the Site, at Low-Flow conditions.

$Q_G =$ Calculated Groundwater Discharge from the Site Ponds to the canal

Scenarios	Q_G (ft^3/day)	Q_R (ft^3/day)	DAF
Minimum gradient	311	19,250,000	**62,000**
Maximum gradient	470	19,250,000	**41,000**