2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

FLY ASH IMPOUNDMENT
SIBLEY GENERATING STATION
SIBLEY, MISSOURI

Presented To:

KCP&L Greater Missouri Operations Company

Presented By:

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

January 30, 2018
File Number 27213169.17

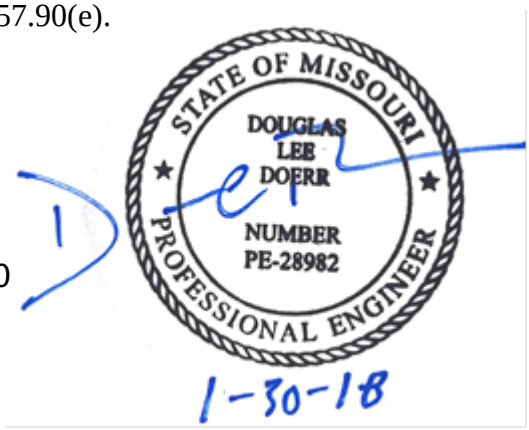
CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Registered Geologist in the State of Missouri, do hereby certify that the 2017 Annual Groundwater Monitoring and Corrective Action Report for the Fly Ash Impoundment at the Sibley Generating Station was prepared by me or under my direct supervision and fulfills the requirements of 40 CFR 257.90(e).

John R. Rockhold, R.G.
SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Missouri, do hereby certify that the 2017 Annual Groundwater Monitoring and Corrective Action Report for the Fly Ash Impoundment at the Sibley Generating Station was prepared by me or under my direct supervision and fulfills the requirements of 40 CFR 257.90(e).

Douglas L. Doerr
Digitally signed by Douglas L. Doerr
Date: 2018.01.30 16:30:14 -06'00'



Douglas L. Doerr, P.E.
SCS Engineers

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Appendices

1 INTRODUCTION

This 2017 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule) published by the United States Environmental Protection Agency (USEPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (USEPA, 2015). Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90 (e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2017 Annual Groundwater Monitoring and Corrective Action Report for the Fly Ash Impoundment at the Sibley Generating Station.

2 § 257.90(e) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. *For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:*

2.1 § 257.90(e)(1) SITE MAP

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

A site map with an aerial image showing the Fly Ash Impoundment and all background (or upgradient) and downgradient monitoring wells with identification numbers for the Fly Ash Impoundment groundwater monitoring program is provided as Figure 1 in Appendix A.

2.2 § 257.90(e)(2) MONITORING SYSTEM CHANGES

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

The CCR groundwater monitoring system was initially certified on October 13, 2017. No new monitoring wells were installed and no wells were decommissioned as part of the CCR groundwater monitoring program for the Fly Ash Impoundment in 2017.

2.3 § 257.90(e)(3) SUMMARY OF SAMPLING EVENTS

In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Only detection monitoring was conducted during the reporting period. Sampling for the detection monitoring program began in December 2015. Samples were analyzed as indicated in **Appendix B**, **Table 1** (Appendix III and Appendix IV Detection Monitoring Results, and **Table 2** (Detection Monitoring Field Measurements). The dates of sample collection and the results of the analyses are also provided in these tables.

2.4 § 257.90(e)(4) MONITORING TRANSITION NARRATIVE

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

There was no transition between monitoring programs in 2017. Only detection monitoring was conducted in 2017. Statistical evaluation of the data was still in process as of the end of 2017.

2.5 § 257.90(e)(5) OTHER REQUIREMENTS

Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

A summary of potentially required information and the corresponding section of the Rule is provided in the following sections. In addition, the information if applicable is provided.

2.5.1 § 257.90(e)

Status of Groundwater Monitoring and Corrective Action Program.

The groundwater monitoring and corrective action program is in detection monitoring.

Summary of Key Actions Completed.

Collection of initial background groundwater quality data was completed and the initial detection monitoring sampling and analysis event was completed in October 2017. Verification sampling was also conducted per the certified statistical method.

Description of Any Problems Encountered.

No noteworthy problems were encountered.

Discussion of Actions to Resolve the Problems.

Not applicable because no noteworthy problems were encountered.

Projection of Key Activities for the Upcoming Year (2018).

Completion of statistical evaluation of detection monitoring data. Groundwater sampling and analysis and alternative source demonstration(s) (if required).

2.5.2 § 257.94(d)(3)

Demonstration providing the basis for an alternative monitoring frequency for detection monitoring and certification that it meets the requirements of this section.

Not applicable because no alternative monitoring frequency for detection monitoring and certification was pursued.

2.5.3 § 257.94(e)(2)

Demonstration that an alternative source other than the CCR unit caused the statistically significant increase (SSI) over background or that the SSI was caused by an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was conducted.

2.5.4 § 257.95(c)(3)

Demonstration providing the basis for an alternative monitoring frequency for assessment monitoring and certification that it meets the requirements of this section.

Not applicable because no such demonstration was conducted.

2.5.5 § 257.95(d)(3)

Include the concentrations of Appendix III and detected Appendix IV constituents from the assessment monitoring, the established background concentrations, and the established groundwater protection standards.

Not applicable because there was no assessment monitoring conducted.

2.5.6 § 257.95(g)(3)(ii)

Demonstration that an alternative source other than the CCR unit caused the contamination, or that the SSI (during assessment monitoring) resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was conducted.

2.5.7 § 257.96(a)

Demonstration of the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was conducted.

3 GENERAL COMMENTS

This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. The information contained in this report is a reflection of the conditions encountered at the Sibley Generating Station at the time of fieldwork. This report includes a review and compilation of the required information and does not reflect any variations of the subsurface, which may occur between sampling locations. Actual subsurface conditions may vary and the extent of such variations may not become evident without further investigation.

Conclusions drawn by others from the result of this work should recognize the limitation of the methods used. Please note that SCS Engineers does not warrant the work of regulatory agencies or other third parties supplying information used in the assimilation of this report. This report is prepared in accordance with generally accepted environmental engineering and geological practices, within the constraints of the client's directives. It is intended for the exclusive use of KCP&L Greater Missouri Operations Company for specific application to the Sibley Generating Station Fly Ash Impoundment. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map

LEGEND:

- 506 — CCR GROUNDWATER MONITORING SYSTEM WELLS
- CCR UNIT BOUNDARY

NOTES:

1. HORIZONTAL & VERTICAL DATUM: URS PLANS FOR CONSTRUCTION, KCP&L SIBLEY GENERATING STATION, DESIGN FILE 16530511.00001, DATED JANUARY 2010
2. GOOGLE EARTH AERIAL IMAGE, MARCH 2015. MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITORING WELL LOCATIONS ARE APPROXIMATE.

200 0 200 400
SCALE FEET

REV.	DATE
-	-

SHEET TITLE
SITE MAP
FLY ASH IMPOUNDMENT
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE
2017 GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT

CLIENT
KCP&L GREATER MISSOURI OPERATIONS CO.
SIBLEY GENERATING STATION
SIBLEY, MISSOURI

SCS ENGINEERS
7311 W. 130th St, Ste. 100
Overland Park, Kansas 66213
PH: (913) 681-0030 FAX: (913) 681-0012

PROJ. NO.	DWN. BY:	Q/A RVW BY:
27213169.17	RCW	JRF
DSN. BY:	CHK. BY:	PROJ. MGR:
RCW	JRF	JRF

CADD FILE:
FIG 1 – SIBLEY FLY ASH IMP.DWG

DATE:
1/12/18

FIGURE NO.
1

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\ANNUAL CCR REPORTING\2017\FIG 1 - SIBLEY FLY ASH IMP.DWG

APPENDIX B

TABLES

Table 1: Appendix III and Appendix IV Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
Fly Ash Impoundment
Appendix III and Appendix IV Detection Monitoring Results
KCP&L GMO Sibley Generating Station

		Appendix III Constituents							Appendix IV Constituents															
Well Number	Sample Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Dissolved Solids (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MW-801	12/16/2015	0.438	159	73.6	0.182	7.39	88.1	601	<0.002	<0.002	0.146	<0.002	<0.001	<0.01	<0.01	0.182	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.848
MW-801	2/17/2016	0.382	150	72.4	0.165	6.70	60.5	589	<0.002	<0.002	0.112	<0.002	<0.001	<0.01	<0.01	0.165	<0.002	0.0182	<0.0002	<0.005	<0.002	<0.002	0.028
MW-801	5/26/2016	0.377	147	88.2	0.149	8.06	65.2	669	<0.002	<0.002	0.110	<0.002	<0.001	<0.01	<0.01	0.149	<0.002	0.0274	<0.0002	<0.005	<0.002	<0.002	1.658
MW-801	8/23/2016	0.315	137	73.8	0.159	7.37	58.6	544	<0.002	<0.002	0.103	<0.002	<0.001	<0.01	<0.01	0.159	<0.002	0.0154	<0.0002	<0.005	0.00224	<0.002	0.146
MW-801	11/10/2016	0.361	143	88.2	0.182	6.56	66.5	602	<0.002	<0.002	0.114	<0.002	<0.001	<0.01	<0.01	0.182	<0.002	0.0153	<0.0002	<0.005	0.00218	<0.002	0.251
MW-801	2/9/2017	0.321	115	78.6	0.117	6.70	66.6	564	<0.002	<0.002	0.110	<0.002	<0.001	<0.01	<0.01	0.117	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.17
MW-801	5/3/2017	0.396	127	101	0.150	6.42	67.2	622	<0.002	<0.002	0.124	<0.002	<0.001	<0.01	<0.01	0.150	<0.002	0.0159	<0.0002	<0.005	<0.002	<0.002	0.582
MW-801	8/1/2017	0.307	138	91.8	0.174	7.23	56.5	527	<0.002	<0.002	0.111	<0.002	<0.001	<0.01	<0.01	0.174	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.681
MW-801	10/4/2017	0.318	148	119	0.104	6.46	57.5	677	<0.002	<0.002	0.127	<0.002	<0.001	<0.01	<0.01	0.104	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.22
MW-801	11/16/2017	---	**156	*125	---	**7.14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-801	12/28/2017	---	---	*136	---	**6.53	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-802	12/16/2015	0.221	86.6	63.5	0.268	7.53	33.3	385	<0.002	0.00304	0.232	<0.002	<0.001	<0.01	<0.01	0.268	0.0026	<0.015	<0.0002	<0.005	<0.002	<0.002	2.334
MW-802	2/17/2016	<0.200	91.4	55	0.233	6.58	35.5	413	<0.002	0.00223	0.170	<0.002	<0.001	<0.01	<0.01	0.233	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.075
MW-802	5/26/2016	<0.200	68.9	50.5	0.222	8.16	26.1	375	<0.002	0.00200	0.123	<0.002	<0.001	<0.01	<0.01	0.222	<0.002	0.0168	<0.0002	<0.005	<0.002	<0.002	4.222
MW-802	8/23/2016	<0.200	82.2	46.3	0.202	7.20	41.2	372	<0.002	0.00257	0.172	<0.002	<0.001	<0.01	<0.01	0.202	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.287
MW-802	11/10/2016	<0.200	49.6	26.6	0.183	6.39	38.0	277	<0.002	0.00262	0.133	<0.002	<0.001	<0.01	<0.01	0.183	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.144
MW-802	2/9/2017	<0.200	71.4	58.6	0.113	6.25	88.9	432	<0.002	0.00200	0.198	<0.002	<0.001	<0.01	<0.01	0.113	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	2.23
MW-802	5/3/2017	<0.200	71.0	53.9	0.173	6.37	35.2	416	<0.002	0.00823	0.304	<0.002	<0.001	<0.01	<0.01	0.173	0.0042	<0.015	<0.0002	<0.005	<0.002	<0.002	1.48
MW-802	8/1/2017	<0.200	78.9	43.5	0.174	6.73	54.2	357	<0.002	0.00206	0.162	<0.002	<0.001	<0.01	<0.01	0.174	<0.002	<0.015	<0.0002	<0.005	0.00237	<0.002	0.65
MW-802	10/4/2017	<0.200	72.0	43.1	<0.1	6.30	69.4	384	<0.002	<0.002	0.154	<0.002	<0.001	<0.01	<0.01	<0.1	<0.002	<0.015	<0.0002	<0.005	0.00266	<0.002	0.066
MW-802	11/17/2017	---	**80.3	**46.7	---	**6.85	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-803	12/15/2015	3.01	131	14.9	0.276	7.36	175	564	<0.002	0.00493	0.150	<0.002	<0.001	<0.01	<0.01	0.276	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.11
MW-803	2/17/2016	2.85	127	14.8	0.245	7.03	162	558	<0.002	0.00401	0.141	<0.002	<0.001	<0.01	<0.01	0.245	<0.002	0.0197	<0.0002	<0.005	<0.002	<0.002	0.389
MW-803	5/26/2016	2.71	120	14.4	0.290	7.51	135	598	<0.002	0.00365	0.131	<0.002	<0.001	<0.01	<0.01	0.290	<0.002	0.0246	<0.0002	<0.005	<0.002	<0.002	0.441
MW-803	8/23/2016	2.86	120	14.9	0.295	7.20	130	538	<0.002	0.00296	0.129	<0.002	<0.001	<0.01	<0.01	0.295	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.741
MW-803	11/10/2016	2.79	121	15.0	0.290	6.96	135	543	<0.002	0.00336	0.137	<0.002	<0.001	<0.01	<0.01	0.290	0.00385	<0.015	<0.0002	<0.005	<0.002	<0.002	0.817
MW-803	2/9/2017	2.79	105	15.1	0.262	7.23	157	594	<0.002	0.00282	0.126	<0.002	<0.001	<0.01	<0.01	0.262	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.717
MW-803	5/3/2017	2.73	103	15.9	0.254	7.00	127	552	<0.002	0.00292	0.129	<0.002	<0.001	<0.01	<0.01	0.254	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0
MW-803	8/1/2017	2.69	117	16.3	0.281	7.15	124	500	<0.002	0.00257	0.125	<0.002	<0.001	<0.01	<0.01	0.281	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.73
MW-803	10/4/2017	2.79	122	17.5	0.230	7.02	116	532	<0.002	0.00270	0.131	<0.002	<0.001	<0.01	<0.01	0.230	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.826
MW-803	11/16/2017	---	**123	*16.1	---	**7.27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-804	12/15/2015	4.63	193	17.5	0.219	7.32	<5	673	<0.002	0.0108	0.531	<0.002	<0.001	<0.01	<0.01	0.219	0.00865	0.0218	<0.0002	<0.005	<0.002	<0.002	1.257
MW-804	2/17/2016	3.81	158	14.6	0.183	7.20	<5	588	<0.002	0.00719	0.370	<0.002	<0.001	<0.01	<0.01	0.183	<0.002	0.0257	<0.0002	<0.005	<0.002	<0.002	1.308
MW-804	5/26/2016	3.76	167	15.5	0.164	7.22	<5	631	<0.002	0.00607	0.398	<0.002	<0.001	<0.01	<0.01	0.164	0.00402	0.0379	<0.0002	<0.005	<0.002	<0.002	4.27
MW-804	8/23/2016	3.62	157	14.4	0.168	6.96	<5	613	<0.002	0.00403	0.329	<0.002	<0.001	<0.01	<0.01	0.168	<0.002	0.0234	<0.0002	<0.005	<0.002	<0.002	1.545
MW-804	11/10/2016	3.33	155	14.2	0.148	6.83	<5	606	<0.002	0.00644	0.390	<0.002	<0.001	<0.01	<0.01	0.148	<0.002	0.0195	<0.0002	<0.005	<0.002	<0.002	1
MW-804	2/9/2017	3.58	132	15.2	0.119	7.20	<5	561	<0.002	0.00640	0.342	<0.002	<0.001	<0.01	<0.01	0.119	<0.002	0.0204	<0.0002	<0.005	<0.002	<0.002	0.749
MW-804	5/3/2017	3.40	134	15.0	0.182	6.83	<5	609	<0.002	0.00700	0.411	<0.002	<0.001	<0.01	<0.01	0.182	0.00230	0.0210	<0.0002	<0.005	<0.002	<0.002	0.822
MW-804	8/1/2017	5.08	153	17.1	0.206	6.97	<5	602	<0.002	0.00418	0.365	<0.002	<0.001	<0.01	<0.01	0.206	<0.002	0.0232	<0.0002	<0.005	<0.002	<0.002	1.28
MW-804	10/4/2017	3.64	155	15.8	0.118	6.95	<5	594	<0.002	0.00545	0.406	<0.002	<0.001	<0.01	<0.01	0.118	<0.002	0.0220	<0.0002	<0.005	<0.002	<0.002	0.511
MW-804	11/16/2017	---	**155	**14.7	---	**6.84	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-805	12/15/2015	<0.200	104	9.51	0.148	7.74	60.9	356	<0.002	<0.002	0.180	<0.002	<0.001	<0.01	<0.01	0.148	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.843
MW-805	2/17/2016	<0.200	99.5	9.86	0.155	7.46	50.7	366	<0.002	<0.002	0.172	<0.002	<0.001	<0.01	<0.01	0.155	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.94
MW-805	5/26/2016	<0.200	98.5	9.85	0.191	7.62	<5	358	<0.002	<0.002	0.181	<0.002	<0.001	<0.01	<0.01	0.191	<0.002	0.0153	<0.0002	<0.005	<0.002	<0.002	0.785
MW-805	8/23/2016	<0.200	105	10.9	0.172	7.14	51.7	360	<0.002	<0.002	0.174	<0.002	<0.001	<0.01	<0.01	0.172	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.705
MW-805	11/10/2016	<0.200	98.9	10.9	0.170	7.15	54.7	381	<0.002	<0.002	0.171	<0.002	<0.001	<0.01	<0.01	0.170	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.668
MW-805	2/9/2017	<0.200	88.8	11.2	0.178	7.79	59.8	417	<0.002	<0.002	0.163	<0.002	<0.001	<0.01	<0.01	0.178	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.338
MW-805	5/3/2017	<0.200	86.2	11.5	0.161	7.00	54.4	388	<0.002	<0.002	0.170	<0.002	<0.001	<0.01	<0.01	0.161	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	1.2
MW-805	8/1/2017	<0.200	100	10.8	0.194	7.24	54.2	347	<0.002	<0.002	0.163	<0.002	<0.001	<0.01	<0.01	0.194	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.387
MW-805	10/4/2017	<0.200	104	12.8	0.121	7.15	56.0	375	<0.002	<0.002	0.168	<0.002	<0.001	<0.01	<0.01	0.121	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.605
MW-805	11/16/2017	---	**104	*11.3	---	**7.04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-806R	6/2/2016	5.10	135	28.6	0.252	7.98	182	677	<0.002	0.00256	0.125	<0.002	<0.001	<0.01	<0.01	0.252	<0.002	0.0301	<0.0002	1.24	<0.002	<0.002	0.695
MW-806R	7/19/2016	4.81	131	28.4	0.242	7.33	139	624	<0.002	0.00269	0.104	<0.002	<0.001	<0.01	<0.01	0.242	<0.002	0.0170	<0.0002	1.11	<0.002	<0.002	0.034
MW-806R	8/23/2016	5.25	141	22.9	0.253	6.95	146	605	<0.002	0.00342	0.102	<0.002	<0.001	<0.01	<0.01	0.253	<0.002	0.0181	<0.0002	1.18	<0.002	<0.002	0.109
MW-806R	11/11/2016	4.77	137	22.9	0.197	9.32	134	589	<0.002	0.00388	0.0966	<0.002	<0.001	<0.01	<0.01	0.197	<0.002	0.0154	<0.0002	1.18	<0.002	<0.002	0.228
MW-806R	2/9/2017	4.64	123	24.6	0.205	7.88	165	633	<0.002	0.00357	0.0919	<0.002	<0.001	<0.01	<0.01	0.205	<0.002	0.0180	<0.0002	1.09	<0.002	<0.002	0.731
MW-806R	3/22/2017	5.02	126	28.1	0.224	7.75	150	568	<0.002	0.00634	0.103	<0.002	<0.001	<0.01	<0.01	0.224	<0.002	0.0184	<0.0002	1.24	<0.002	<0.002	0.668
MW-806R	5/3/2017	4.76	121	25.6	0.195	7.00	149	620	<0.002	0.00295	0.0747	<0.002	<0.001	<0.01	<0.01	0.195	<0.002	0.0163	<0.0002	1.19	<0.002	<0.002	0.131
MW-806R	8/1/2017	4.61	149	27.3	0.223	8.23	181	599	<0.002	0.00685	0.0930	<0.002	<0.001	<0.01	<0.01	0.223	<0.002	0.0175	<0.0002	1.33	<0.002	<0.002	0.494
MW-806R	10/4/2017	4.77	148	29.9	0.129	6.92	148	621	<0.002	0.00555	0.0901	<0.002	<0.001	<0.01	<0.01	0.129	<0.002	0.0182	<0.0002	1.33	<0.002	<0.002	2.35
MW-806R	11/17/2017	---	**151	**26.3	---	**7.71	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

* Verification Sample
**Extra Sample for Quality Control Validation or per Standard Sampling Procedure
mg/L - miligrams per liter
pCi/L - picocuries per liter
S.U. - Standard Units
--- Not Sampled

Table 2
Fly Ash Impoundment
Detection Monitoring Field Measurements
KCP&L GMO Sibley Generating Station

Well Number	Sample Date	pH (S.U.)	Specific Conductivity (µS)	Temperature (^{o}C)	Turbidity (NTU)	Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-801	12/16/2015	7.39	963	12.12	43.6	19.43	710.94
MW-801	2/17/2016	6.70	1030	12.36	24.7	20.50	709.87
MW-801	5/26/2016	8.06	1010	14.35	0.0	18.91	711.46
MW-801	8/23/2016	7.37	954	16.83	0.0	19.57	710.80
MW-801	11/10/2016	6.56	992	15.04	0.0	20.08	710.29
MW-801	2/9/2017	6.70	1000	8.28	2.4	22.89	707.48
MW-801	5/3/2017	6.42	1110	12.20	3.2	19.91	710.46
MW-801	8/1/2017	7.23	759	15.23	0.0	20.70	709.67
MW-801	10/4/2017	6.46	962	13.56	0.0	21.10	709.27
MW-801	11/16/2017	**7.14	1220	13.08	0.0	20.85	709.51
MW-801	12/28/2017	**6.53	925	10.49	5.4	21.65	708.71
MW-802	12/16/2015	7.53	590	13.39	54.4	13.05	718.20
MW-802	2/17/2016	6.58	707	12.66	46.6	13.25	718.00
MW-802	5/26/2016	8.16	504	13.63	0.0	12.64	718.61
MW-802	8/23/2016	7.20	630	17.27	18.2	12.61	718.64
MW-802	11/10/2016	6.39	483	15.43	1.9	12.90	718.35
MW-802	2/9/2017	6.25	624	8.34	2.9	14.15	717.10
MW-802	5/3/2017	6.37	633	12.01	19.7	13.72	717.53
MW-802	8/1/2017	6.73	480	14.89	0.0	13.96	717.29
MW-802	10/4/2017	6.30	537	13.66	29.3	14.19	717.06
MW-802	11/17/2017	**6.85	659	14.00	4.3	13.41	717.76
MW-803	12/15/2015	7.36	876	12.75	39.5	21.83	704.95
MW-803	2/17/2016	7.03	900	14.58	91.3	26.45	700.33
MW-803	5/26/2016	7.51	861	17.19	34.4	21.91	704.87
MW-803	8/23/2016	7.20	822	19.70	6.8	26.17	700.61
MW-803	11/10/2016	6.96	859	16.22	5.4	26.41	700.37
MW-803	2/9/2017	7.23	873	8.85	5.0	27.67	699.11
MW-803	5/3/2017	7.00	840	13.26	0.0	22.75	704.03
MW-803	8/1/2017	7.15	779	19.16	2.1	26.15	700.63
MW-803	10/4/2017	7.02	825	15.65	2.4	26.94	699.84
MW-803	11/16/2017	**7.27	953	14.95	0.0	26.60	700.29
MW-804	12/15/2015	7.32	1210	12.11	48.8	23.63	704.91
MW-804	2/17/2016	7.20	1070	14.89	45.9	32.24	696.30
MW-804	5/26/2016	7.22	1160	17.58	180	25.44	703.10
MW-804	8/23/2016	6.96	1010	21.19	44.5	31.94	696.60
MW-804	11/10/2016	6.83	1100	18.21	2.1	32.24	696.30
MW-804	2/9/2017	7.20	1070	10.57	1.7	33.47	695.07
MW-804	5/3/2017	6.83	1120	14.43	6.7	26.28	702.26
MW-804	8/1/2017	6.97	999	20.62	2.3	31.68	696.86
MW-804	10/4/2017	6.95	1020	15.79	5.3	32.41	696.13
MW-804	11/16/2017	**6.84	953	15.35	0.0	32.30	696.16
MW-805	12/15/2015	7.74	619	12.36	11.5	21.13	707.88
MW-805	2/17/2016	7.46	602	14.51	41.6	28.31	700.70
MW-805	5/26/2016	7.62	599	16.55	6.3	22.51	706.50
MW-805	8/23/2016	7.14	548	20.46	27.9	27.98	701.03
MW-805	11/10/2016	7.15	621	16.17	0.0	28.34	700.67
MW-805	2/9/2017	7.79	626	11.71	0.5	29.62	699.39
MW-805	5/3/2017	7.00	598	14.03	3.4	23.61	705.40
MW-805	8/1/2017	7.24	577	16.64	0.4	28.28	700.73
MW-805	10/4/2017	7.15	597	16.14	2.4	28.80	700.21
MW-805	11/16/2017	**7.04	541	15.24	0.0	28.68	700.11
MW-806R	6/2/2016	7.98	1056	15.14	26.7	17.81	711.49
MW-806R	7/19/2016	7.33	990	20.22	7.4	21.85	707.45
MW-806R	8/23/2016	6.95	850	17.66	1.2	23.02	706.28
MW-806R	11/11/2016	9.32	891	16.40	6.7	23.42	705.88
MW-806R	2/9/2017	7.88	1010	11.03	10.1	24.07	705.23
MW-806R	3/22/2017	7.75	981	14.46	7.5	24.15	705.15
MW-806R	5/3/2017	7.00	904	14.02	6.7	21.29	708.01
MW-806R	8/1/2017	8.23	820	20.21	3.8	23.38	705.92
MW-806R	10/4/2017	6.92	859	15.38	2.8	23.90	705.40
MW-806R	11/17/2017	**7.71	969	15.01	3.5	23.34	705.82

* Verification Sample
** Extra Sample Collected per Standard Sampling Procedure
S.U. - Standard Units
µS - microsiemens
^{o}C - Degrees Celsius
ft btoc - Feet Below Top of Casing
ft NGVD - National Geodetic Vertical Datum (NAVD 88)
NTU - Nephelometric Turbidity Unit