2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CCR LANDFILL
IATAN GENERATING STATION
IATAN, MISSOURI

Presented To:

Kansas City Power & Light Company

Presented By:

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

Revision 1: February 13, 2018
File Number 27213167.17

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 CCR Landfill at the Iatan 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 CCR Landfill at the Iatan 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: 2018.02.13 15:08:30 -06'00'

Douglas L. Doerr, P.E.
SCS Engineers

Revision Number	Revision Date	Revision Section	Summary of Revisions
1	2/13/2018	Report Text	Revision table added. No changes to text regarding the 2017 Annual Groundwater Monitoring and Corrective Action Report.
1	2/13/2018	Appendix B Table 1	Table 1 was revised to include the extra cadmium sample collected on 11/14/2017 from monitoring well MW-2.

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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 CCR Landfill at the Iatan 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 CCR Landfill and all background (or upgradient) and downgradient monitoring wells with identification numbers for the CCR Landfill 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 CCR Landfill 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 August 2016. 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

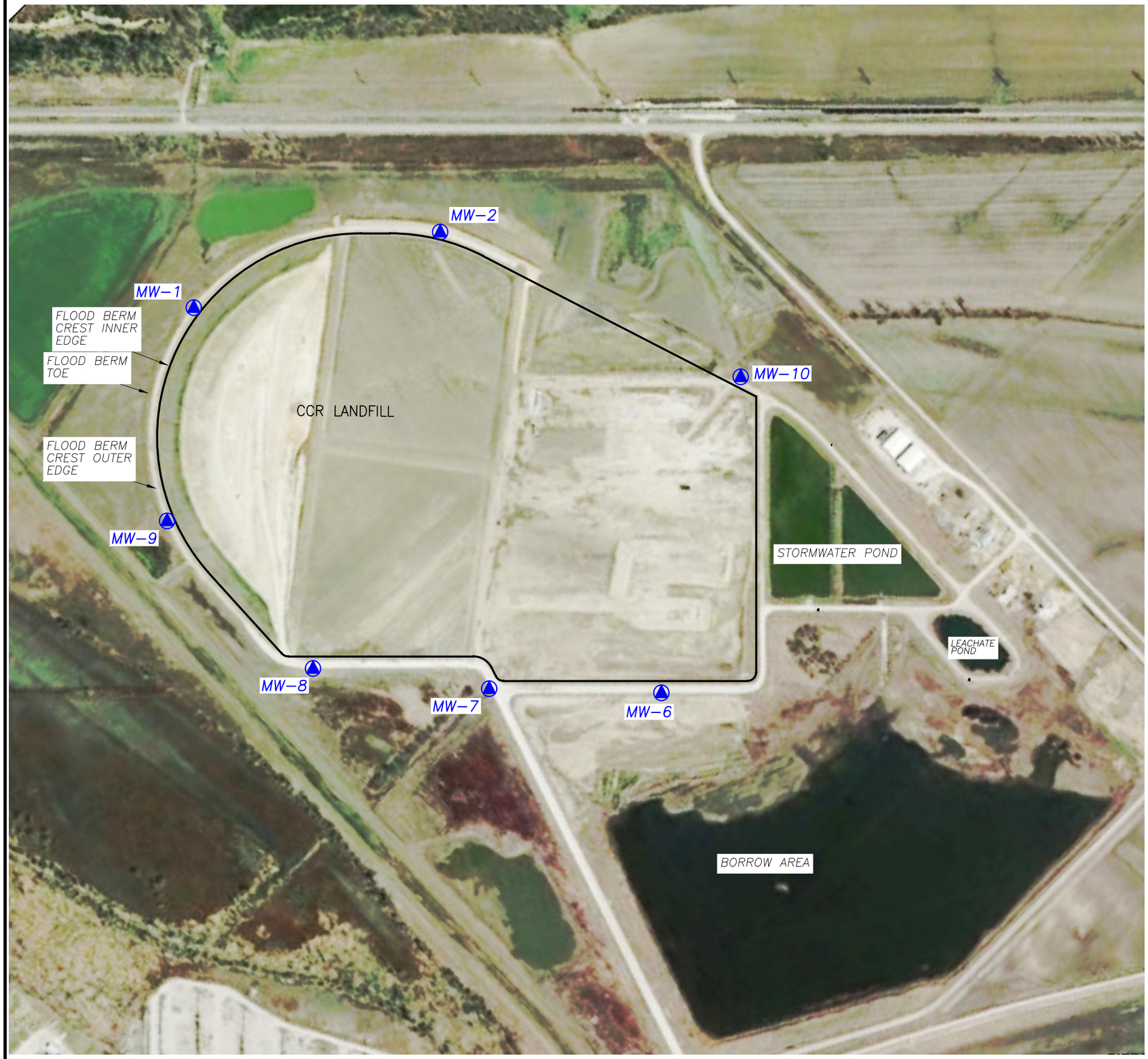
This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. The information contained in this report is a reflection of the conditions encountered at the Iatan Generating Station at the time of fieldwork. This report includes 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 for specific application to the Iatan Generating Station CCR Landfill. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map

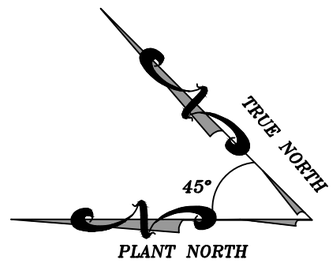


LEGEND:

- *MW–1* — *CCR GROUNDWATER MONITORING WELL SYSTEM*
- *CCR LANDFILL UNIT BOUNDARY*

NOTES:

1. *HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)*
2. *VERTICAL DATUM: NAVD 88*
3. *GOOGLE EARTH IMAGE DATED MARCH 27, 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE*
4. *BOUNDARY AND MONITOR WELL LOCATIONS PROVIDED BY BURNS & MCDONNELL*
5. *CCR LANDFILL UNIT BOUNDARY SHOWN IS APPROXIMATE.*



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SCALE FEET

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SHEET TITLE: SITE MAP
CCR LANDFILL
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE: 2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CLIENT: KANSAS CITY POWER & LIGHT COMPANY
IATAN GENERATING STATION
WESTON, MISSOURI

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PROJ. NO. 27213167.17 | DSN. BY: LAM | DWN. BY: LAM | CHK. BY: JRR | Q/A REVIEW BY: JRR | PROJ. MGR: JRR

CADD FILE: FIG 1_IATAN SITE MAP_2017 CCR.DWG

DATE: 1/26/18

FIGURE NO. 1

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APPENDIX B

TABLES

Table 1: Appendix III and Appendix IV Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
CCR Landfill
Appendix III and Appendix IV Detection Monitoring Results
KCP&L Iatan Generating Station

Well Number	Sample Date	Appendix III Constituents							Appendix IV Constituents														
		Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Total 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-1	08/18/16	<0.200	134	5.93	0.234	6.89	32.4	513	<0.002	0.017	0.267	<0.002	<0.001	<.010	<.010	0.234	<0.002	0.0551	<0.0002	<0.005	<0.002	<0.002	0.899
MW-1	09/29/16	<0.200	134	6.07	0.292	7.24	35.3	486	<0.002	0.0131	0.244	<0.002	<0.001	<.010	<.010	0.292	<0.002	0.0536	<0.0002	<0.005	<0.002	<0.002	0.171
MW-1	11/09/16	<0.200	136	5.95	0.274	6.74	33.2	484	<0.002	0.0119	0.239	<0.002	<0.001	<.010	<.010	0.274	<0.002	0.0555	<0.0002	<0.005	<0.002	<0.002	0.36
MW-1	12/21/16	<0.200	134	5.97	0.241	6.86	36.2	493	<0.002	0.0206	0.308	<0.002	<0.001	<.010	<.010	0.241	0.00227	0.0542	<0.0002	<0.005	<0.002	<0.002	2.37
MW-1	02/03/17	<0.200	116	6.00	0.288	6.91	36.9	506	<0.002	0.0139	0.252	<0.002	<0.001	<.010	<.010	0.288	<0.002	0.0525	<0.0002	<0.005	<0.002	<0.002	1.42
MW-1	05/24/17	<0.200	128	5.61	0.272	7.41	27.4	477	<0.002	0.013	0.234	<0.002	<0.001	<.010	<.010	0.272	<0.002	0.0521	<0.0002	<0.005	<0.002	<0.002	0.46
MW-1	07/05/17	<0.200	129	5.78	0.275	7.54	34.2	481	<0.002	0.0129	0.235	<0.002	<0.001	<.010	<.010	0.275	<0.002	0.0558	<0.0002	<0.005	<0.002	<0.002	0.142
MW-1	08/17/17	<0.200	134	6.13	0.276	6.98	35.2	500	<0.002	0.0135	0.254	<0.002	<0.001	<.010	<.010	0.276	<0.002	0.0523	<0.0002	<0.005	<0.002	<0.002	1.21
MW-1	10/05/17	<0.200	141	6.75	0.273	7.03	34.5	472	<0.002	0.0138	0.262	<0.002	<0.2	<.010	<.010	0.273	<0.002	0.0534	<0.0002	<0.005	<0.002	<0.002	0.5
MW-1	11/14/17	---	*130	*6.73	---	**6.93	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	12/29/17	---	---	*6.27	---	**6.98	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/18/16	<0.200	170	8.26	0.303	6.90	142	696	<0.002	0.0222	0.222	<0.002	0.00114	<.010	<.010	0.303	<0.002	0.0563	<0.0002	<0.005	<0.002	<0.002	0.142
MW-2	09/29/16	<0.200	169	8.79	0.356	7.45	151	651	<0.002	0.0202	0.218	<0.002	0.00209	<.010	<.010	0.356	<0.002	0.0552	<0.0002	<0.005	<0.002	<0.002	0.884
MW-2	11/09/16	<0.200	169	8.76	0.331	6.79	155	711	<0.002	0.0192	0.218	<0.002	0.0014	<.010	<.010	0.331	<0.002	0.0553	<0.0002	<0.005	<0.002	<0.002	0.707
MW-2	12/21/16	<0.200	166	8.24	0.292	6.85	155	636	<0.002	0.0191	0.213	<0.002	<0.001	<.010	<.010	0.292	<0.002	0.0496	<0.0002	<0.005	<0.002	<0.002	1.84
MW-2	02/03/17	<0.200	146	8.17	0.342	7.08	150	661	<0.002	0.0193	0.223	<0.002	0.00163	<.010	<.010	0.342	<0.002	0.0513	<0.0002	<0.005	<0.002	<0.002	1.23
MW-2	05/24/17	<0.200	166	9.54	0.327	7.35	172	690	<0.002	0.021	0.213	<0.002	0.00121	<.010	<.010	0.327	<0.002	0.0557	<0.0002	<0.005	<0.002	<0.002	0.495
MW-2	07/05/17	<0.200	165	8.99	0.334	7.33	158	638	<0.002	0.0232	0.211	<0.002	0.00367	<.010	<.010	0.334	<0.002	0.0585	<0.0002	<0.005	<0.002	<0.002	1.28
MW-2	08/17/17	<0.200	168	8.98	0.332	6.97	149	690	<0.002	0.0219	0.223	<0.002	0.00291	<.010	<.010	0.332	<0.002	0.0544	<0.0002	<0.005	<0.002	<0.002	1.21
MW-2	10/05/17	<0.200	177	9.23	0.326	7.00	151	683	<0.002	0.0232	0.227	<0.002	0.00729	<0.01	<0.01	0.326	<0.002	0.0546	<0.0002	<0.005	<0.002	<0.002	1.40
MW-2	11/14/17	---	*161	**8.97	---	**6.91	---	---	---	---	---	---	**<0.001	---	---	---	---	---	---	---	---	---	---
MW-6	08/18/16	<0.200	142	1.31	0.298	7.18	30.2	522	<0.002	0.0237	0.294	<0.002	<0.001	<.010	<.010	0.298	<0.002	0.0368	<0.0002	<0.005	<0.002	<0.002	0.624
MW-6	09/29/16	<0.200	139	1.46	0.343	6.97	33.5	498	<0.002	0.0193	0.282	<0.002	<0.001	<.010	<.010	0.343	<0.002	0.0362	<0.0002	<0.005	<0.002	<0.002	1.39
MW-6	11/09/16	<0.200	142	1.29	0.324	7.72	31.4	506	<0.002	0.0185	0.289	<0.002	<0.001	<.010	<.010	0.324	<0.002	0.0366	<0.0002	<0.005	<0.002	<0.002	0.629
MW-6	12/21/16	<0.200	146	1.72	0.293	6.99	28.6	519	<0.002	0.0345	0.335	<0.002	<0.001	<.010	<.010	0.293	<0.002	0.0319	<0.0002	<0.005	<0.002	<0.002	1.53
MW-6	02/03/17	<0.200	136	1.4	0.348	7.10	28.5	527	<0.002	0.0214	0.325	<0.002	<0.001	<.010	<.010	0.348	<0.002	0.0342	<0.0002	<0.005	<0.002	<0.002	4.46
MW-6	05/24/17	<0.200	150	1.49	0.297	7.49	32.7	544	<0.002	0.0196	0.306	<0.002	<0.001	<.010	<.010	0.297	<0.002	0.0387	<0.0002	<0.005	<0.002	<0.002	0.064
MW-6	07/05/17	<0.200	147	1.54	0.317	7.46	37.2	508	<0.002	0.0219	0.304	<0.002	<0.001	<.010	<.010	0.317	<0.002	0.0409	<0.0002	<0.005	<0.002	<0.002	1.37
MW-6	08/17/17	<0.200	150	1.32	0.313	7.47	37.6	542	<0.002	0.0213	0.331	<0.002	<0.001	<.010	<.010	0.313	<0.002	0.0372	<0.0002	<0.005	<0.002	<0.002	1.24
MW-6	10/05/17	<0.200	157	2.09	0.312	7.20	34.5	528	<0.002	0.0182	0.304	<0.002	<0.001	<.010	<.010	0.312	<0.002	0.0376	<0.0002	<0.005	<0.002	<0.002	0.974
MW-6	11/14/17	---	*151	*2.12	---	**7.14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/29/17	---	---	*1.45	---	**7.02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-7	08/18/16	<0.200	145	12.3	0.366	6.97	70.2	560	<0.002	0.0104	0.285	<0.002	<0.001	<.010	<.010	0.366	<0.002	0.0417	<0.0002	<0.005	<0.002	<0.002	1.011
MW-7	09/29/16	<0.200	144	13.9	0.395	7.25	70.6	554	<0.002	0.0225	0.278	<0.002	<0.001	<.010	<.010	0.395	<0.002	0.0411	<0.0002	<0.005	<0.002	<0.002	0.746
MW-7	11/09/16	<0.200	146	11.1	0.333	7.87	62.6	538	<0.002	0.0104	0.288	<0.002	<0.001	<.010	<.010	0.333	<0.002	0.0406	<0.0002	<0.005	<0.002	<0.002	0.349
MW-7	12/21/16	<0.200	138	6.64	0.284	6.88	50.0	492	<0.002	0.0524	0.374	<0.002	<0.001	<.010	<.010	0.284	<0.002	0.037	<0.0002	<0.005	<0.002	<0.002	1.47
MW-7	02/03/17	<0.200	116	3.32	0.337	7.01	41.9	487	<0.002	0.00805	0.282	<0.002	<0.001	<.010	<.010	0.337	<0.002	0.0389	<0.0002	<0.005	<0.002	<0.002	1.51
MW-7	05/24/17	<0.200	123	1.76	0.391	7.67	16.2	462	<0.002	0.0195	0.24	<0.002	<0.001	<.010	<.010	0.391	<0.002	0.0361	<0.0002	<0.005	<0.002	<0.002	0.306
MW-7	07/05/17	<0.200	125	1.81	0.378	7.36	19.5	445	<0.002	0.0167	0.259	<0.002	<0.001	<.010	<.010	0.378	<0.002	0.0462	<0.0002	<0.005	<0.002	<0.002	0.762
MW-7	08/17/17	<0.200	133	2.00	0.326	7.15	34.1	466	<0.002	0.00706	0.286	<0.002	<0.001	<.010	<.010	0.326	<0.002	0.0409	<0.0002	<0.005	<0.002	<0.002	1
MW-7	10/05/17	<0.200	135	3.32	0.341	7.15	24.3	459	<0.002	0.0113	0.287	<0.002	<0.001	<.010	<.010	0.341	<0.002	0.0422	<0.0002	<0.005	<0.002	<0.002	0.301
MW-7	11/14/17	---	**125	**2.58	---	**7.13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Table 1
CCR Landfill
Appendix III and Appendix IV Detection Monitoring Results
KCP&L Iatan Generating Station

Well Number	Sample Date	Appendix III Constituents							Appendix IV Constituents														
		Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Total 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-8	08/18/16	<0.200	136	1.50	0.438	7.10	23.3	494	<0.002	0.00749	0.2	<0.002	<0.001	<.010	<.010	0.438	<0.002	0.0436	<0.0002	<0.005	<0.002	<0.002	0.123
MW-8	09/29/16	<0.200	132	1.42	0.439	7.32	24.2	517	<0.002	0.00661	0.192	<0.002	<0.001	<.010	<.010	0.439	<0.002	0.0402	<0.0002	<0.005	<0.002	<0.002	0.089
MW-8	11/09/16	<0.200	135	1.76	0.415	8.24	23.8	471	<0.002	0.00695	0.198	<0.002	<0.001	<.010	<.010	0.415	<0.002	0.0421	<0.0002	<0.005	<0.002	<0.002	1.82
MW-8	12/21/16	<0.200	139	1.89	0.461	7.10	25.5	493	<0.002	0.00691	0.207	<0.002	<0.001	<.010	<.010	0.461	<0.002	0.039	<0.0002	<0.005	<0.002	<0.002	1.07
MW-8	02/03/17	<0.200	133	4.02	0.407	7.13	39.6	515	<0.002	0.00711	0.231	<0.002	<0.001	<.010	<.010	0.407	<0.002	0.0436	<0.0002	<0.005	<0.002	<0.002	1.69
MW-8	05/24/17	<0.200	138	3.63	0.391	7.66	42.8	485	<0.002	0.00756	0.2	<0.002	<0.001	<.010	<.010	0.391	<0.002	0.0392	<0.0002	<0.005	<0.002	<0.002	0.691
MW-8	07/05/17	<0.200	142	4.44	0.391	7.44	54.8	500	<0.002	0.00752	0.215	<0.002	0.00207	<.010	<.010	0.391	<0.002	0.0417	<0.0002	<0.005	<0.002	<0.002	1.73
MW-8	08/17/17	<0.200	145	3.53	0.406	7.27	43	504	<0.002	0.0088	0.226	<0.002	<0.001	<.010	<.010	0.406	<0.002	0.0437	<0.0002	<0.005	<0.002	<0.002	1.52
MW-8	10/05/17	<0.200	155	4.55	0.396	7.25	43.4	505	<0.002	0.0107	0.229	<0.002	<0.001	<.010	<.010	0.396	<0.002	0.0439	<0.0002	<0.005	<0.002	<0.002	0.828
MW-8	11/14/17	---	*145	**4.86	---	**7.24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9	08/18/16	<0.200	119	1.95	0.338	7.02	16.7	475	<0.002	0.0121	0.327	<0.002	<0.001	<.010	<.010	0.338	<0.002	0.0425	<0.0002	<0.005	<0.002	<0.002	1.041
MW-9	09/29/16	<0.200	102	<1	0.415	7.28	26.2	398	<0.002	0.0116	0.299	<0.002	<0.001	<.010	<.010	0.415	<0.002	0.04	<0.0002	<0.005	<0.002	<0.002	2.11
MW-9	11/09/16	<0.200	103	<1	0.383	6.99	23	476	<0.002	0.0156	0.276	<0.002	<0.001	<.010	<.010	0.383	<0.002	0.0445	<0.0002	<0.005	<0.002	<0.002	0.984
MW-9	12/21/16	<0.200	116	1.66	0.344	7.02	22.2	415	<0.002	0.00702	0.312	<0.002	<0.001	<.010	<.010	0.344	<0.002	0.0399	<0.0002	<0.005	<0.002	<0.002	3.16
MW-9	02/03/17	<0.200	105	1.16	0.327	7.05	21.1	442	<0.002	0.00703	0.33	<0.002	<0.001	<.010	<.010	0.327	<0.002	0.0458	<0.0002	<0.005	<0.002	<0.002	2.39
MW-9	05/24/17	<0.200	108	1.07	0.387	7.61	15.9	415	<0.002	0.0106	0.276	<0.002	<0.001	<.010	<.010	0.387	<0.002	0.046	<0.0002	<0.005	<0.002	<0.002	0.083
MW-9	07/05/17	<0.200	97.2	1.06	0.364	7.37	24.8	386	<0.002	0.0145	0.249	<0.002	<0.001	<.010	<.010	0.364	<0.002	0.0431	<0.0002	<0.005	<0.002	<0.002	1.31
MW-9	08/17/17	<0.200	110	<1	0.39	7.13	19.8	431	<0.002	0.0122	0.28	<0.002	<0.001	<.010	<.010	0.39	<0.002	0.0431	<0.0002	<0.005	<0.002	<0.002	1.56
MW-9	10/05/17	<0.200	113	3.57	0.204	7.35	21.5	414	<0.002	0.0139	0.255	<0.002	<0.001	<.010	<.010	0.204	<0.002	0.0413	<0.0002	<0.005	<0.002	<0.002	0.175
MW-9	11/14/17	---	**113	*1.82	---	**7.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-10	08/18/16	<0.200	123	7.47	0.584	7.06	17.8	532	<0.002	0.0195	0.232	<0.002	<0.001	<.010	<.010	0.584	<0.002	0.0569	<0.0002	<0.005	<0.002	<0.002	1.5
MW-10	09/29/16	<0.200	118	7.83	0.622	7.31	19.7	502	<0.002	0.02	0.23	<0.002	<0.001	<.010	<.010	0.622	<0.002	0.0554	<0.0002	<0.005	<0.002	<0.002	1.34
MW-10	11/09/16	<0.200	124	9.15	0.642	6.93	17.4	516	<0.002	0.0165	0.231	<0.002	<0.001	<.010	<.010	0.642	<0.002	0.0586	<0.0002	<0.005	<0.002	<0.002	0.816
MW-10	12/21/16	<0.200	123	9.84	0.538	6.96	17.7	497	<0.002	0.0159	0.249	<0.002	<0.001	<.010	<.010	0.538	<0.002	0.052	<0.0002	<0.005	<0.002	<0.002	0.925
MW-10	02/03/17	<0.200	109	10.3	0.521	6.99	19.1	531	<0.002	0.0168	0.236	<0.002	<0.001	<.010	<.010	0.521	<0.002	0.0541	<0.0002	<0.005	<0.002	<0.002	2.4
MW-10	05/24/17	<0.200	125	12.6	0.591	7.51	22.4	1760	<0.002	0.0226	0.234	<0.002	<0.001	<.010	<.010	0.591	<0.002	0.0572	<0.0002	<0.005	<0.002	<0.002	0.176
MW-10	07/05/17	<0.200	120	15.9	0.582	7.31	24.7	474	<0.002	0.0215	0.227	<0.002	<0.001	<.010	<.010	0.582	<0.002	0.0577	<0.0002	<0.005	<0.002	<0.002	1.1
MW-10	08/17/17	<0.200	122	17.6	0.682	7.10	26.5	539	<0.002	0.017	0.235	<0.002	<0.001	<.010	<.010	0.682	<0.002	0.0566	<0.0002	<0.005	<0.002	<0.002	0.889
MW-10	10/05/17	<0.200	131	19.7	0.312	7.05	26.4	539	<0.002	0.0137	0.229	<0.002	<0.001	<.010	<.010	0.312	<0.002	0.0545	<0.0002	<0.005	<0.002	<0.002	1.31
MW-10	11/14/17	---	*119	*17.6	---	**7.09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Table 2
CCR Landfill
Detection Monitoring Field Measurements
KCP&L Iatan Generating Station

Well Number	Sample Date	pH (S.U.)	Specific Conductivity (µS)	Temperature (°C)	Turbidity (NTU)	Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-1	08/18/16	6.89	856	17.02	4.9	19.64	769.28
MW-1	09/29/16	7.24	934	15.59	0.0	17.95	770.97
MW-1	11/09/16	6.74	892	16.58	0.0	19.75	769.17
MW-1	12/21/16	6.86	877	13.7	19.1	21.35	767.57
MW-1	02/03/17	6.91	894	12.07	1.2	22.47	766.45
MW-1	05/24/17	7.41	772	14.86	0.0	19.19	769.73
MW-1	07/05/17	7.54	690	16.3	0.0	19.60	769.32
MW-1	08/17/17	6.98	806	16.06	3.4	21.72	767.20
MW-1	10/05/17	7.03	819	14.75	5.5	21.12	767.57
MW-1	11/14/17	**6.93	760	14.13	3.7	21.47	767.22
MW-1	12/29/17	**6.98	752	12.05	4.8	23.00	765.69
MW-2	08/18/16	6.90	988	18.24	0.0	20.59	769.18
MW-2	09/29/16	7.45	1134	15.9	0.0	19.14	770.63
MW-2	11/09/16	6.79	1070	16.27	0.0	20.19	769.58
MW-2	12/21/16	6.85	1050	13.77	21.95	21.95	767.82
MW-2	02/03/17	7.08	1160	12.34	0.3	22.98	766.79
MW-2	05/24/17	7.35	976	15.47	0.0	20.61	769.16
MW-2	07/05/17	7.33	841	16.27	0.0	20.57	769.20
MW-2	08/17/17	6.97	980	16.64	0.9	22.46	767.31
MW-2	10/05/17	7.00	995	15.58	0.0	21.82	767.79
MW-2	11/14/17	**6.91	911	14.7	0.2	22.14	767.47
MW-6	08/18/16	7.18	870	15.69	3.6	21.05	768.63
MW-6	09/29/16	6.97	926	16.18	0.0	20.18	769.50
MW-6	11/09/16	7.72	861	15.56	0.0	20.77	768.91
MW-6	12/21/16	6.99	899	14.29	5.6	22.01	767.67
MW-6	02/03/17	7.10	962	12.64	4.3	23.28	766.40
MW-6	05/24/17	7.49	868	15.45	0.0	22.72	766.96
MW-6	07/05/17	7.46	720	17.9	0.0	22.03	767.65
MW-6	08/17/17	7.47	665	23.27	3.1	22.94	766.74
MW-6	10/05/17	7.20	839	15.24	0.7	22.35	767.30
MW-6	11/14/17	**7.14	821	15.3	0.0	22.62	767.03
MW-6	12/29/17	**7.02	833	13.75	3.4	23.69	765.96
MW-7	08/18/16	6.97	787	17.81	15.9	21.10	768.56
MW-7	09/29/16	7.25	970	15.31	0.0	19.75	769.91
MW-7	11/09/16	7.87	869	14.43	4.6	20.66	769.00
MW-7	12/21/16	6.88	859	14.31	11.7	22.28	767.38
MW-7	02/03/17	7.01	837	12.91	1.5	23.58	766.08
MW-7	05/24/17	7.67	723	14.93	0.0	22.15	767.51
MW-7	07/05/17	7.36	611	16.05	12.1	21.66	768.00
MW-7	08/17/17	7.15	728	16.33	2.7	23.02	766.64
MW-7	10/05/17	7.15	709	14.96	1.8	22.39	767.26
MW-7	11/14/17	**7.13	681	14.75	0.2	22.69	766.96
MW-8	08/18/16	7.10	800	14.93	0.0	21.31	768.43
MW-8	09/29/16	7.32	850	15.43	0.0	19.31	770.43
MW-8	11/09/16	8.24	808	14.98	2.5	20.57	769.17
MW-8	12/21/16	7.10	825	13.73	5.1	22.75	766.99
MW-8	02/03/17	7.13	921	12.74	0.0	24.02	765.72
MW-8	05/24/17	7.66	763	14.82	0.0	21.15	768.59
MW-8	07/05/17	7.44	660	15.29	0.0	21.32	768.42
MW-8	08/17/17	7.27	801	16.02	1.3	23.27	766.47
MW-8	10/05/17	7.25	791	15.04	0.0	22.58	767.13
MW-8	11/14/17	**7.24	768	14.63	2.9	22.85	766.86
MW-9	08/18/16	7.02	760	16.8	0.0	21.12	768.71
MW-9	09/29/16	7.28	763	15.84	0.0	19.22	770.61
MW-9	11/09/16	6.99	734	16.11	0.0	20.39	769.44
MW-9	12/21/16	7.02	789	13.99	9.1	22.94	766.89
MW-9	02/03/17	7.05	833	12.23	0.7	24.02	765.81
MW-9	05/24/17	7.61	657	15.02	0.0	20.57	769.26
MW-9	07/05/17	7.37	545	16.13	0.0	21.05	768.78
MW-9	08/17/17	7.13	690	17.67	0.0	23.20	766.63
MW-9	10/05/17	7.35	669	15.61	0.0	22.46	767.44
MW-9	11/14/17	**7.19	686	14.25	0.6	22.72	767.18
MW-10	08/18/16	7.06	876	16.31	0.0	20.48	768.97
MW-10	09/29/16	7.31	963	15.69	0.0	19.36	770.09
MW-10	11/09/16	6.93	939	15.68	0.0	19.95	769.50
MW-10	12/21/16	6.96	922	13.25	16.9	21.54	767.91
MW-10	02/03/17	6.99	927	12.21	1.0	22.62	766.83
MW-10	05/24/17	7.51	829	16.47	0.0	21.10	768.35
MW-10	07/05/17	7.31	746	21.52	0.0	20.70	768.75
MW-10	08/17/17	7.10	844	20.34	1.3	22.32	767.13
MW-10	10/05/17	7.05	898	15.57	0.0	21.66	767.80
MW-10	11/14/17	**7.09	818	14.24	0.2	22.01	767.45

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