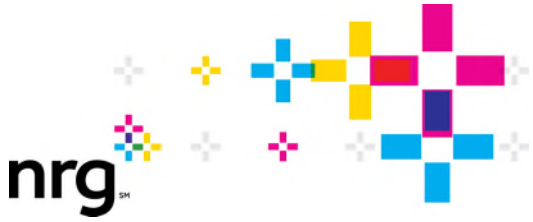
January 2018

Indian River Generating Station Industrial Waste Facility

2017

Annual Federal Groundwater Monitoring and Corrective Action Report



Prepared for

Indian River Generating Station

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1.0 Introduction

This 2017 Federal Annual Groundwater Monitoring and Corrective Action Report has been prepared for Indian River Power to comply with the Federal Regulations Part 257 Subpart D -Standards for the Disposal of Coal Combustion Residuals (CCRs) in Landfills and Surface Impoundments Groundwater Monitoring and Corrective Action, 257.90 (e) Annual groundwater monitoring and corrective action report (Federal Register Vol. 80, No. 74, dated April 17, 2015 page 21483) requirements for the Indian River Generating Station Phase II Coal Ash Landfill. The purpose of this report is to document the status of the groundwater monitoring and corrective action program for the CCR landfill, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year" (Fed. Reg. 257.90 (e). This report includes a description of the site, groundwater monitoring program, key actions completed in 2017 along with any issues, and key activities for 2018.

NRG will place this report, by January 31, 2018, in the facility's operating record; will notify the State of Delaware Department of Natural Resources and Environmental Control (DNREC) that this report has been placed in the operating record; and, will place this report onto the NRG web site to comply with Federal Regulations 257.105 (h), 257.106 (h) and 257.107 (h), respectively.

The coal ash landfill (landfill) has operated in accordance with permits issued by DNREC for over 35 years, with the current/most recent being Permit SW-12/01 (last modified November 6, 2015) for operating an industrial waste landfill. This permit includes a rigorous groundwater monitoring program requirement with which the facility is compliant. The USEPA Part 257 regulations regarding CCR disposal units became effective Oct 19, 2015 and contain substantially equivalent obligations, some of which currently are not fully synchronized with the existing DNREC program. It is anticipated that these differences will be resolved in the future into a combined state/federal program that includes permit conditions similar to those currently in place.

Groundwater has been monitored at the landfill site for more than 35 years and there is a substantial body of data for many of the parameters; however, only dissolved metal analyses were performed on field filtered samples through the April 2015 sampling event. Beginning with the October 2015 sampling event the analytical testing methods were changed to total analyses to comply with federal regulations and to obtain a minimum of eight background samples and additional parameters needed to make the demonstrations required in Part 257.94 (Detection Monitoring Program).

2.0 Site Description

The landfill is located within the 1200-acre plant property at the Indian River Generating Station near the city of Dagsboro, in Sussex County, Delaware. Non-hazardous CCRs that result from burning coal at the station are disposed in the landfill, located about one half of a mile south of the station. The landfill is separated from the generating station proper area by Island Creek as shown on Figure 1.

The station originally operated four generating units with nominal capacities of 90, 90, 165 and 424 megawatts (Units 1 through 4 respectively). The station generating capacity was developed between 1957 (Unit 1) and 1980 (Unit 4). Units 1 through 3 have been retired from service. Unit 4 currently operates intermittently. During 2016, Unit 4 operated at only about 13% capacity. The station produces CCRs that include fly ash, bottom ash, and a flue gas desulfurization (FGD) byproduct. The CCRs are removed from the power plant and hauled to the on-site landfill for disposal. The CCR may be hauled to off-site utilization projects but this is a rarity.

The landfill consists of two distinct disposal areas (Phase I and Phase II). The original 43.8-acre Phase I landfill was closed in 2011. The Phase II landfill is currently active and consists of two lined cells with a total area of 25.5 acres, located immediately west of the Phase I landfill. The eastern 6.2 acres of the Phase II landfill is built over, or piggy-backs, the western slope of the Phase I landfill with its liner system separating the two phases of disposal.

Construction of the Phase I landfill was initiated in 1979 and disposal commenced in 1980. Waste contains primarily fly ash and bottom ash and, to a lesser extent, wastewater treatment sludge, coal pile runoff sump area sludge, coal pyrites, cooling tower sediment sludge, and construction debris produced at the plant. The Phase I landfill is unlined and was formally closed in 2011 with the completion of a cover system that consists of a geosynthetic membrane with a vegetated soil cover. DNREC approved the Phase I closure October 14, 2014. The Phase I landfill is currently in post closure care and ceased receiving CCR waste prior to the April 17, 2015 effective date of the Federal CCR rule. Therefore, the Federal CCR Regulations do not apply to the Phase I landfill.

The Phase II landfill is contiguous to and west of the Phase I landfill, and consist of two lined disposal cells (Cells 1 is to the south and Cell 2 to the north). Maximum design elevation of both Phase I and Phase II is 100 feet MSL. Only non-hazardous CCR wastes consisting of: coal fly ash, bottom ash, FGD byproduct; or special wastes consisting of grit blast media used to remove ash and paint from equipment, soils and sediment contaminated with ash removed during cleanup and sludge from the on-site wastewater treatment plant are permitted to be disposed of in the Phase II landfill in accordance with the current DNREC permit.

The Phase II landfill liner system has a geosynthetic membrane and a leachate collection system. Leachate collected in Cell 1 is transported via gravity to a collection sump on the south side of the landfill where it is then pumped to leachate holding tanks located approximately 1,700 ft west of the landfill. Leachate collected in Cell 2 flows by gravity to a collection sump on the north side of the landfill where it is then pumped to the leachate holding tanks. Other integral components of the CCR unit shown on Figure 1 include:

- Two sedimentation basins (the North and Southwest Sedimentation Basins) collect surface water runoff from the landfill and prevent or minimize the flow of turbid water into Island Creek.

- The North Sedimentation Basin has two interior bermed areas (east and west forebays) near the points of inflow into the basin. These interior bermed areas are approximately 150 x 150 ft square, each, and about five feet high. They are used to contain the distribution of sediments within the basin and facilitate clean out. Sediments are cleaned out from this interior basin, as needed.

- Haul roads used for transporting CCRs from the plant to the landfill.

- The stream gauging station is used for monitoring surface water quality in Island Creek.

- The groundwater monitoring and observation wells are used to measure water levels and select wells are sampled to monitor upgradient and downgradient groundwater water quality.

- Production wells are used by the plant to generate water for various industrial purposes (e.g., primarily cooling water and to provide dust control water used at landfill).

- Leachate Holding Tanks contain leachate pumped from the leachate collection sumps until it can be used at the plant or disposed.

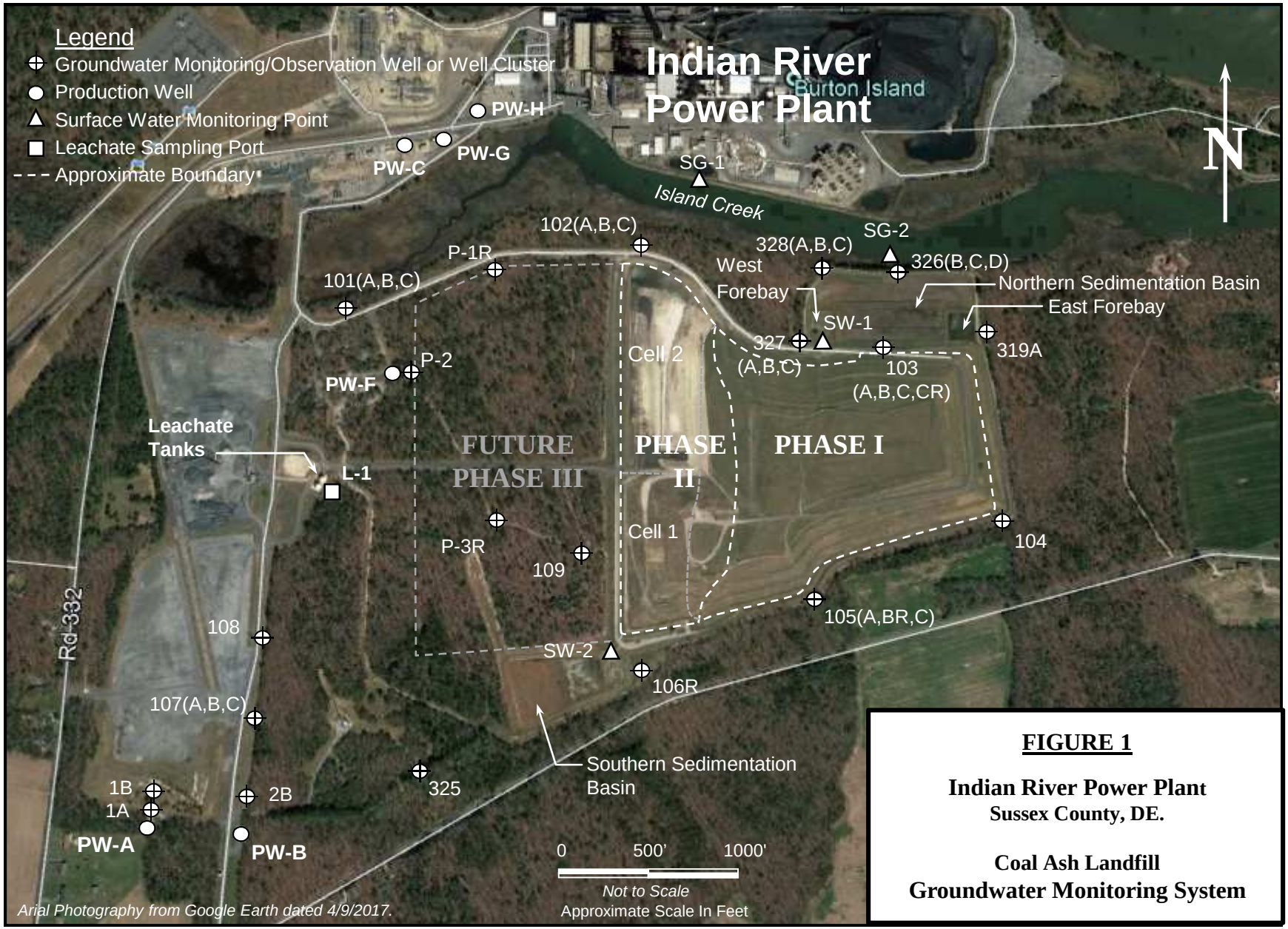

FIGURE 1

Indian River Power Plant
Sussex County, DE.

Coal Ash Landfill
Groundwater Monitoring System

2.1 Site Geology

Geologically, southern Delaware is situated in the Coastal Plain physiographic province, a wedge-shaped deposit of alternating layers of sand and clay that overlies crystalline basement rocks and increases in thickness to the southeast where it reaches a thickness of 15,000 feet (Woodruff, 1977). A surficial blanket of sand, typically on the order of 100 feet in thickness, overlies much of the state and supports an unconfined aquifer below which the deeper confined units subcrop in sequence to the northwest. It is this surficial unit that supports the uppermost aquifer at the landfill and towards which the groundwater monitoring efforts are directed. The unconfined aquifer consists of channel-fill sands in northern Delaware south of the Piedmont Province and of a broad sheet of sand across central and southern Delaware. The saturated thickness of the aquifer ranges from a few feet in much of northern Delaware to more than 180 feet in southern Delaware (USGS, 2017).

The geology at the landfill, as described in "Hydrogeologic Studies - 1984 Update," prepared by Michael Baker, Jr., Inc. (Michael Baker), 1984, is as follows:

> The disposal site is underlain by the Columbia sand deposits (Pleistocene age) which blanket the entire central and southern portions of the State. These deposits range in the thickness from less than 50 to over 125 feet in southern Delaware (Johnston, 1972) and are comprised of predominantly medium-grained sand with varying mixtures of silt and gravel. In the landfill area, the Columbia deposits are approximately 100 to 110 feet thick and have been found to consist of relatively homogeneous sand throughout their entire thickness. The Columbia deposits are generally classified as either SP-SM or SW-SM soils according to the Unified Soil Classification System which translates to moderately well-to-poorly sorted sand with minor amounts of silt.
>
> Relatively deep test wells drilled for water production (wells A and B) a few hundred feet southwest of proposed Phase II (see Figure 1) encountered lenses or pockets of green silty clay interspersed with coarse sand below 110 feet (Gilbert Associates, Inc., 1980). These lenses have been assumed to mark the upper boundary of Miocene-age sediments at the site. The Miocene sediments generally consist of sand units interbedded with silty clay layers. According to Johnston (1972), the Miocene sands may directly underlie Pleistocene sands, making differentiation between the two difficult. Thus, some of the upper Miocene sands may have been identified at the site as Columbia deposits. However, it is apparent that silty clay is present below an elevation of approximately -75 to -90 ft in the site area.

2.2 Site Hydrogeology

Hydrologically the landfill is underlain by the shallow unconfined Columbia aquifer which constitutes the uppermost aquifer, extending to a depth greater than 100 ft. The silty clay layers at the top of the Miocene sediments may act as a lower confining unit or aquitard. All the monitoring wells are set in the Columbia aquifer. Water level measurements are typically collected from all groundwater monitoring and observation wells during each groundwater monitoring sampling event to collect elevation data for determining groundwater flow directions.

The overall groundwater flow direction for the Phase II Landfill is predominately north to northeast, based on groundwater contours developed from all the shallow groundwater wells at the site from previous sampling events.

3.0 Groundwater Monitoring Program

The groundwater monitoring system for the landfill was developed progressively starting in 1981 and has included monitoring points utilizing piezometers, production wells and monitoring wells. Water levels have been measured in most of these wells on a quarterly or semi-annual basis for the entire 34-year period of record.

The existing groundwater monitoring system has a network of 34 monitoring wells, six production wells and three observation wells (for monitoring water levels only). The current list of all wells at the site is presented in Attachment A with the coordinate locations provided in Attachment B. The groundwater monitoring system is shown on Figure 1. Under the current DNREC permit, all the shallow monitoring and observation wells are used for water level measurements to determine the overall site hydraulic gradients in the upper aquifer but only select monitoring wells are used for groundwater quality sampling to comply with the permit and Federal Regulations, as described below. Groundwater contour maps of the shallow monitoring wells prepared for each sampling event are included in the event sampling reports and annual reports submitted to DNREC.

For the federal regulations, it is required that a detection groundwater monitoring system be established for the Phase II landfill. In accordance with federal regulation, Part 257.91 a minimum of one background well and three downgradient wells for this detection groundwater monitoring system are required. A detection monitoring system was established in October 2017 by NRG to comply with the Federal Regulations by the report "Detection Groundwater Monitoring System Compliance Report Detection Groundwater Monitoring System Coal Combustion Residuals Landfill Indian River" (October 2017). The detection groundwater monitoring system established by this report includes a subset of the existing monitoring system described above with emphasis on monitoring groundwater quality associated with the Phase II landfill. These detection groundwater monitoring wells are listed in Table 1 and locations shown on Figure 2.

For the Phase II landfill, the four background wells were selected based solely on hydrogeological considerations. The four release detection wells are situated downgradient of the landfill boundary, compliant with the Part 257 mandate for a minimum of three. Two secondary wells are located farther downgradient from the landfill boundary and sedimentation pond are also included to assist with release detection.

Groundwater monitoring wells 102A, 103A, 106R, 326D, 327A, 328A and P-3R were sampled quarterly in January, April, June and October during the year 2017. Groundwater monitoring wells 104, 105A and 319 were sampled semi-annually in April and October during the year 2017. Groundwater samples from these wells were analyzed for the Federal Regulation Appendix III to Part 257 - Constituents for Detection Monitoring that include boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids, as listed in Table 2. The 2017 samples were also analyzed for parameters required for the Federal Regulation Appendix IV to Part 257 - Constituents for Assessment Monitoring which are listed in Table 2, along with additional DNREC required parameters (not listed).

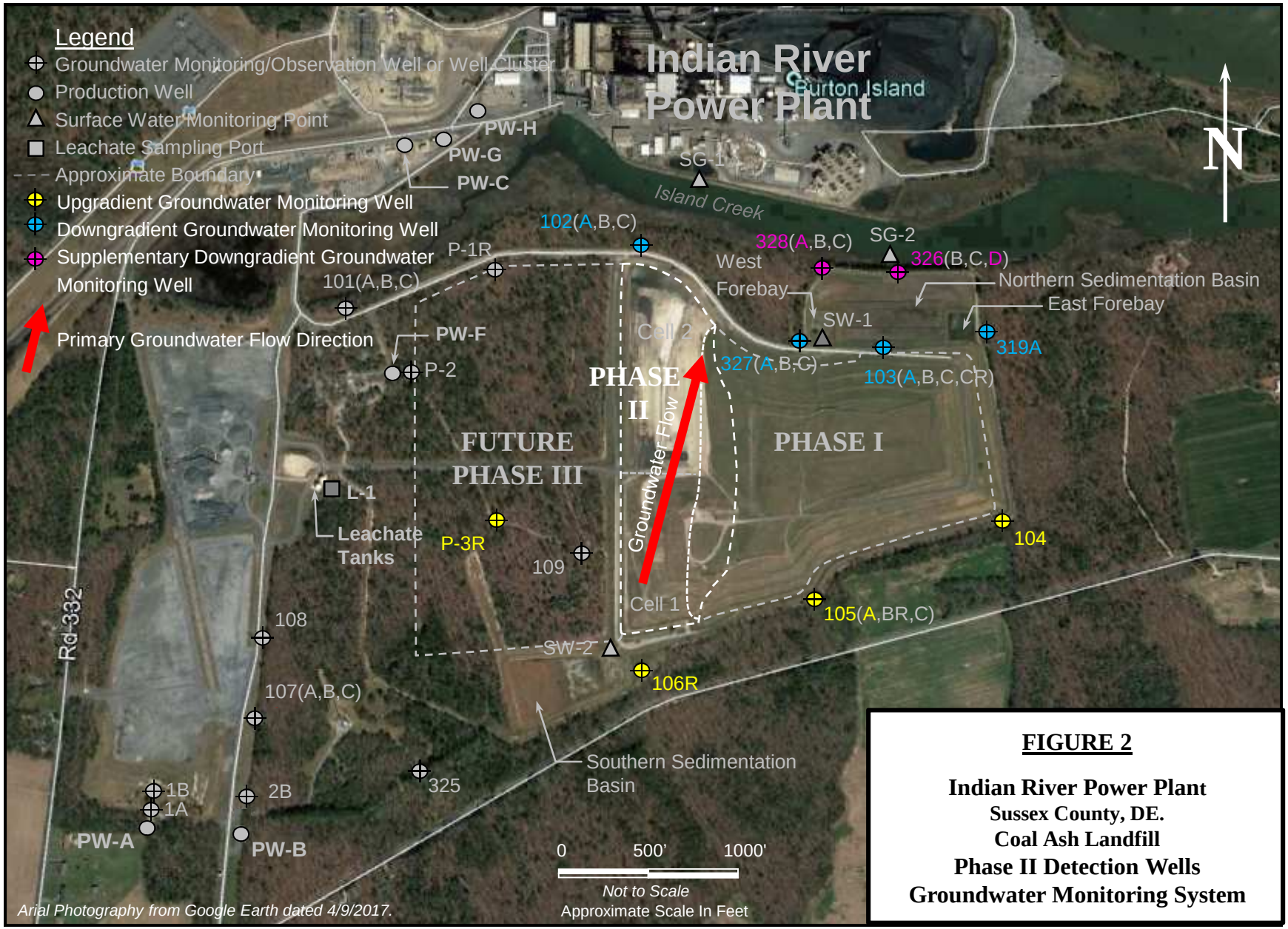

FIGURE 2

Indian River Power Plant
Sussex County, DE.
Coal Ash Landfill
Phase II Detection Wells
Groundwater Monitoring System

Table 1 – Phase II Landfill Detection Monitoring Wells

Well	Location	Comment
106/106R	up-gradient	background
105A	up-gradient	background
104	up-gradient	background
P-3R	side gradient	background
102A	down gradient - landfill boundary	release detection
327A	down gradient - landfill boundary	release detection
103A	down gradient - landfill boundary	release detection
319A	down gradient - landfill boundary	release detection
328A	down gradient - supplemental	release detection - beyond boundary
326D	down gradient - supplemental	release detection - beyond boundary

Table 2 – Phase II Landfill Federal Monitoring Parameters

Parameter	Detection Monitoring Parameters	Assessment Monitoring Parameters
Field Parameter		
pH	X	X
Lab Parameters		
Antimony	--	X
Arsenic	--	X
Barium	--	X
Beryllium	--	X
Boron	X	--
Cadmium	--	X
Calcium	X	--
Chloride	X	--
Chromium	--	X
Cobalt	--	X
Fluoride	X	X
Lead	--	X
Lithium	--	X
Mercury	--	X
Molybdenum	--	X
Radium 226 & 228 (combined)	--	X
Selenium	--	X
Sulfate	X	--
Thallium	--	X
Total Dissolved Solids	X	--

The 2017 analytical results are provided in Attachment C – Groundwater Quality Data and include nine groundwater quality monitoring sampling events from October 2015 through September 2017. These groundwater quality monitoring sampling events are used to establish background groundwater conditions for the landfill. A background report for groundwater using these groundwater quality monitoring sampling events has been prepared and submitted to DNREC to be compliant with the landfill permit and federal regulations. While there is additional water quality data dating back to 1983 for some wells, only the analytical data collected since October 2015 for the detection monitoring water quality monitoring is provided in this report.

4.0 Key Actions Completed in 2017

During 2017 the background groundwater quality sampling was completed and numerous reports were prepared pertaining to groundwater sampling, monitoring, detection, analysis, and results for determining background water quality. Additional details for each are described in the following.

The Environmental Monitoring Plan (EMP) and Sampling and Analysis Plan (SAP) for the Phase II Landfill were updated by others on behalf of NRG with submission to DNREC on July 11, 2017. The EMP and SAP provide detailed sampling plans for the groundwater at the landfill. These documents were updated to comply with permit and Federal Regulation requirements.

The "Compliance Report for the Detection Groundwater Monitoring System at the Coal Combustion Residuals Landfill" (Michael Baker, 2017) and the "Compliance Report for the Statistical Method for Groundwater Data Evaluation at the Coal Combustion Residuals Landfill" (Michael Baker, 2017) were prepared and posted to the NRG internet site, in compliance with the Federal Regulations.

The background sampling of groundwater was completed to comply with the October 17, 2017 Federal Regulation deadline to have a minimum of eight results for statistical evaluation. Background groundwater quality monitoring sampling events included October 2015, January 2016, April 2016, July 2016, October 2016, January 2017, April 2017, July 2017 and September 2017. The last background groundwater quality monitoring sampling event was performed in September rather than October to enable completion of sampling and testing to present results by the October 17, 2017 Federal Regulation reporting deadline. Also, the September 2017 event was needed to provide a complete eight quarterly events because well 103C was not sampled in January 2016 and well 106 was not sampled in April 2016. Both issues relate to well integrity concerns as described in the following:

- Well 103C's missing January 2016 sample was because DNREC had directed NRG not to sample the well while information questioning the integrity of the well was evaluated by DNREC. From DNRECs review, well 103C was considered to provide a representative sample of groundwater and sampling resumed with the April 2016 groundwater quality monitoring sampling event.

- Well 106's missing April 2016 sample was because the well integrity was lost (PVC casing failed and well filled with sand) and a representative sample could not have been collected. Well 106 was abandoned and a new replacement well, 106R, was installed in June 2016. Groundwater sampling resumed at well 106R during the July 2016 groundwater quality monitoring sampling event.

Following the completion of the background sampling of groundwater, preparation began on the "Background Report Groundwater Monitoring Program" (Michael Baker, 2017). This report was required by the DNREC permit and was prepared to document the statistically determined background threshold values for each of the groundwater quality monitoring parameters. This report describes the statistical method used to determine background levels (i.e., background threshold values) and describes how statistically significant increases over background threshold values will be determined in the future for the groundwater at the Phase II landfill. This report was submitted by NRG to DNREC on November 13, 2017 and, as of this report, is currently being reviewed by DNREC. It is planned that

once the background threshold values are confirmed by the State, then the background threshold values will be used for comparative purposes of future groundwater analytical data to comply with federal regulations detection monitoring requirements.

5.0 Description and Resolutions of Issues

The only issue reported for 2017 had to do with the Federal Regulation requirement to complete the groundwater quality background monitoring by October 17, 2017. To meet this deadline the groundwater quality monitoring sampling event normally required to be performed in October was performed in September 2017. DNREC granted permission to NRG with a letter, dated July 13, 2017, to allow NRG to move the October 2017 water quality sampling event to September 2017. With the sampling performed in September 2017 and the analysis completed prior to October 17, 2017, NRG complied with the October 17, 2017 Federal Regulation mandate. Future sampling events will revert to the DNREC permit schedule.

The only issue reported for 2016 had to do with the sampling of wells 103C and 106 as described in the previous sections.

6.0 Key Activities for the Year 2018

Future events anticipated for 2018 include:

1. DNREC is currently in process of updating the landfill's operating permit. Based on preliminary draft editions of the permit, no significant changes are anticipated that would affect the groundwater monitoring program except to change from quarterly to semi-annual sampling events for the groundwater monitoring.

2. DNREC is currently in the process of reviewing the Background Investigation Report. Based on previous discussions with DNREC, it is believed the report will be accepted.

3. Semi-annual groundwater sampling for detection monitoring is planned to be completed in April and October 2018 to comply with Federal Regulations.

7.0 Reference

Gilbert Associates, Inc. 1976, 1980. Design Plan for the Environmentally Safe Disposal of Coal Ash, Indian River Power Generating Station. Report submitted to the Delaware DNREC by Delmarva Power and Light Company.

Johnston, R.H. 1973. Hydrology of the Columbia (Pleistocene) Deposits of Delaware: An Appraisal of a Regional Water Table Aquifer. Delaware Geological Survey, Bulletin No. 14.

Michael Baker International. March 2017. *NRG Indian River Generating Station Industrial Waste Facility 2016 Annual Report.* Michael Baker International, Moon Township, Pennsylvania.

Michael Baker International. October 15, 2017. *Compliance Report for the Detection Groundwater Monitoring System at the Coal Combustion Residuals Landfill.* Michael Baker International, Moon Township, Pennsylvania.

Michael Baker International. October 17, 2017. *Compliance Report for the Statistical Method for Groundwater Data Evaluation at the Coal Combustion Residuals Landfill.* Michael Baker International, Moon Township, Pennsylvania.

Michael Baker International. November 2017. *Indian River Generating Station Industrial Waste Facility Background Report Groundwater Monitoring Program.* Michael Baker International, Moon Township, Pennsylvania.

USGS. 2017. National Water Summary – Groundwater Resources, Delaware, Water Supply Paper 2275. https://md.water.usgs.gov/preview/publications/wsp-2275/de-html.html.

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ATTACHMENT A

ATTACHMENT A

GROUNDWATER WELL ELEVATION TABLES

Well	Top of PVC Casing Elevation[1] (NAVD 88) (feet)	Ground Surface Elevation[1] (NAVD 88) (feet)	Screen Elevation (NAVD 88) (feet)		Monitoring Zone[3]
			Top[2]	Bottom[2]	
Production and Observation Wells					
A	25.2[4]	23.4[4]	-66.6[4]	-86.6[4]	Very Deep (Production Well)
1A	26.2	23.1	-71.7	-76.7	Very Deep (Observation Well)
1B	28.8	25.7	-71.5	-76.5	Very Deep (Observation Well)
B	20.1[4]	19.5[4]	-90.5[4]	-110.5[4]	Very Deep (Production Well)
2A	20.7	18.5	-71.5	-81.5	Very Deep (Observation Well), Abandoned 04/05/16
2B	*22.9*	20.0	-62.4	-72.4	Very Deep (Observation Well)
C	NA	8.2[4]	-191.8[4]	-251.8[4]	Very Deep Miocene Sediments (Production Well)
E	NA	NA	NA (-70')[5]	NA (-90')[5]	Very Deep (Production Well), Abandoned 10/11/07
F	13.3[4]	11.8[4]	-24.4[4]	-67.4[4]	Deep (Production Well) (estimated elevations)
G	NA	NA	NA (-192')[5]	NA (-252')[5]	Very Deep Miocene Sediments (Production Well)
H	NA	NA	NA (-187')[5]	NA (-197')[5]	Very Deep Miocene Sediments (Production Well)
Upgradient and Side Gradient Wells					
104	15.0	13.0	*-7.0*	*-17.0*	Shallow
105A	18.2	16.9	*-34.5*	*-44.5*	Deep
105B	18.9	17.0	*-15.3*	*-25.3*	Intermediate, Abandoned 6/29/16
105BR	*18.9*	*16.6*	*-13.4*	*-23.4*	Intermediate, Installed 6/30/16
105C	19.4	16.9	-2.3	-12.3	Shallow
106	16.4	13.7	-3.7	-13.7	Shallow, Abandoned 6/28/16
106R	*16.0*	*13.7*	*-6.3*	*-16.3*	Shallow, Installed 6/30/2016
107A	20.7	19.7	-31.2	-41.2	Deep
107B	21.3	19.7	-15.8	-25.8	Intermediate
107C	21.4	19.7	*-0.5*	*-10.5*	Shallow
108	24.6	23.2	-2.3	-12.3	Shallow
109	*17.3*	*14.5*	*-3.3*	*-13.3*	Shallow
325	22.8	22.0	15.4	-1.1	Shallow
P-1	NA	NA	NA (4')[5]	NA (14')[5]	Very Shallow piezometer, Abandoned 9/29/10
P-1R	14.4	10.7	-2.1	-12.1	Shallow well
P-2	13.9	11.5	7.7	-2.3	Very Shallow piezometer
P-3	NA	NA	NA (4')[5]	NA (14')[5]	Very Shallow piezometer, Abandoned 9/29/10
P-3R	15.7	12.7	-4.4	-14.4	Shallow well

(Table continued on following page.)

GROUNDWATER WELL ELEVATION TABLES

(Continued from previous page.)

Well	Top of PVC Casing Elevation[1] (NAVD 88) (feet)	Ground Surface Elevation[1] (NAVD 88) (feet)	Screen Elevation (NAVD 88) (feet)		Monitoring Zone[3]
			Top[2]	Bottom[2]	
Downgradient Wells					
101A	11.2	10.0	-33.6	-43.6	Deep
101B	11.9	10.0	-15.7	-25.7	Intermediate
101C	12.0	10.3	-2.7	-12.7	Shallow
102A	13.8	12.4	-35.3	-45.3	Deep
102B	14.3	12.5	-16.4	-26.4	Intermediate
102C	14.7	12.3	-5.1	-15.1	Shallow
103A	24.4	22.3	-30.6	-40.6	Deep
103B	23.6	21.7	-19.7	-29.7	Intermediate
103C	23.2	21.7	*-3.9*	*-13.9*	Shallow
103CR	20.9	17.8	-5.8	-15.8	Shallow
319A	9.1	6.9	-3.5	-13.5	Shallow
326A	NA	NA	NA (2')[5]	NA (12')[5]	Very Shallow (Abandoned 10/14/99)
326B	11.1	9.4	-3.0	-13.0	Shallow
326C	11.8	9.4	-19.7	-29.7	Intermediate
326D	11.9	9.2	-27.4	-37.4	Deep
327A	15.9	12.8	-35.6	-45.6	Deep
327B	13.4	10.9	-23.8	-33.8	Intermediate
327C	12.8	10.2	-8.5	-18.5	Shallow
328A	10.8	8.8	-38.2	-48.2	Deep
328B	12.1	9.4	-20.0	-30.0	Intermediate
328C	12.5	10.2	-5.3	-15.3	Shallow

Notes: NA = Information not available for inclusion in report.

[1]Elevations based on 2015 and 2016 Survey. Elevations from the 2016 survey include wells 105BR, 106R, 2B, and 109 that are shown in italics.

[2]Bottom of well screen assumed to be at bottom of well based on field observations/measurements post 2015/2016 outer protective steel casing replacements. The elevation of the top of the well screen estimated from bottom of well elevation and length of well screen on boring logs. Screen elevations shown in italics have been revised based on measurements taken immediately after April 2016 well development.

[3] The zones monitored by the well screen are installed in the Pleistocene Columbia deposits unless noted otherwise as being in the very deep Miocene sediments. The monitoring zone column describes the well screen position (very shallow, shallow, intermediate, deep or very deep) relative to the location of the other well screens within the clusters.

[4]Elevations for Production Wells A, B, C, and F are provided for comparison purposes only as they are based on the erroneous 2010 survey which may differed from 2015 survey by as much as three feet.

[5]Elevations are not available for production wells E, G, and H, and wells 326A, P-1, and P-3, so depths of well screen from ground surface are shown in parentheses for relative comparisons.

ATTACHMENT B

ATTACHMENT B

WELL LOCATION TABLE

Well ID	Easting NAD83 (feet)	Northing NAD83 (feet)	Reference
Prod. Well A	705642.953	209037.060	McCrone 2010 Survey, elevations "for
Prod. Well B	706142.961	208,996.202	McCrone 2010 Plant Grid (5/15/11)
Prod. Well C	706926.347	212810.967	McCrone 2010 Plant Grid (5/15/11)
Prod. Well E	#N/A	#N/A	Abandoned 10/11/2007
Prod. Well F	706909.894	211502.517	McCrone 2010 Plant Grid (5/15/11)
Prod. Well G	#N/A	#N/A	#N/A
Prod. Well H	#N/A	#N/A	#N/A
1A	705654.330	209131.461	McCrone 9/9/2015 Survey
1B	705667.454	209230.543	McCrone 9/9/2015 Survey
2A	706149.497	209090.921	McCrone 9/9/2015 Survey (abandoned 04/05/16)
2B	706155.361	209190.259	McCrone 07/2016 Survey
101A	706648.862	211882.885	McCrone 9/9/2015 Survey
101B	706637.978	211877.451	McCrone 9/9/2015 Survey
101C	706628.574	211875.364	McCrone 9/9/2015 Survey
102A	708275.362	212242.133	McCrone 9/9/2015 Survey
102B	708264.512	212241.292	McCrone 9/9/2015 Survey
102C	708253.234	212242.731	McCrone 9/9/2015 Survey
103A	709630.813	211645.513	McCrone 9/9/2015 Survey
103B	709618.546	211647.772	McCrone 9/9/2015 Survey
103C	709608.631	211647.253	McCrone 9/9/2015 Survey
103CR	709594.078	211656.075	McCrone 9/9/2015 Survey
104	710234.982	210689.763	McCrone 9/9/2015 Survey
105A	709212.020	210257.751	McCrone 9/9/2015 Survey
105B	709224.095	210261.73	McCrone 9/9/2015 Survey (abandoned 6/29/2016)
105BR	709,225.553	210,257.516	McCrone 07/2016 Survey
105C	709230.794	210267.676	McCrone 9/9/2015 Survey
106	708265.760	209880.189	McCrone 9/9/2015 Survey (abandoned 6/30/2016)
106R	708267.073	209868.757	McCrone 07/2016 Survey
107A	706190.059	209589.995	McCrone 9/9/2015 Survey
107B	706188.923	209601.084	McCrone 9/9/2015 Survey
107C	706187.815	209611.923	McCrone 9/9/2015 Survey
108	706208.027	210040.75	McCrone 9/9/2015 Survey
109	707945.254	210506.808	McCrone 9/9/2016 Survey
319A	710201.904	211739.894	McCrone 9/9/2015 Survey
325	707081.014	209329.118	McCrone 9/9/2015 Survey

(Continued following page.)

TABLE 2 - WELL LOCATION TABLE

(Continued from previous page.)

Well ID	Easting NAD83 (feet)	Northing NAD83 (feet)	Reference
326A	#N/A	#N/A	Abandoned 10/14/1999
326B	709697.292	212086.202	McCrone 9/9/2015 Survey
326C	709708.835	212086.115	McCrone 9/9/2015 Survey
326D	709720.261	212086.081	McCrone 9/9/2015 Survey
327A	709158.941	211697.613	McCrone 9/9/2015 Survey
327B	709149.938	211695.368	McCrone 9/9/2015 Survey
327C	709144.259	211693.533	McCrone 9/9/2015 Survey
328A	709285.804	212121.045	McCrone 9/9/2015 Survey
328B	709288.328	212114.813	McCrone 9/9/2015 Survey
328C	709290.616	212108.119	McCrone 9/9/2015 Survey
P-1	#N/A	#N/A	Abandoned 9/20/2010
P-1R	707455.468	212093.161	McCrone 9/9/2015 Survey
P-2	706973.827	211506.723	McCrone 9/9/2015 Survey
P-3	#N/A	#N/A	Abandoned 9/20/2010
P-3R	707478.115	210685.095	McCrone 9/9/2015 Survey.

ATTACHMENT C

ATTACHMENT C

PHASE II LANDFILL GROUNDWATER ANALYTICAL DATA

October 2015 to September 2017 Sampling Events for Wells:

102A

103A

104

105A

106/106R

319A

326D

327A

328A

P-3R

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/27/15	01/28/16	04/28/16	07/26/16	10/20/16	01/11/17	04/12/17	07/19/17	09/12/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
Well 102A		*15102702*	*16012802*	*16042803*	*16072601*	*16102009*	*17011102*	*17041208*	*17071903*	*17091203*
Al, Dissolved	mg/L									
Alkalinity, Bicarbonate	mg/L $CaCO_3$	11		13		11		12		10
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0033	<0.0033	<0.0033
Barium, Total	mg/L	0.11	0.11	0.12	0.11	0.11	0.12	0.12	0.12	0.12
Beryllium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	10.2	9.9	10.7	10.8	11.3	10.6	10.6	10.7	10.5
Chloride	mg/L	15.8	13.5	14.4	13.6	14.8	13.9	14.6	14.4	14.2
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Dissolved Oxygen	mg/L	7.96	9.04	7.4	7.86	7.37	8.25	9.76	7.79	8.51
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067		<0.067		<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Magnesium, Total	mg/L	2.3		2.4		2.6		2.5		2.4
Manganese, Total	mg/L	<0.0056		<0.0056		<0.0056		<0.0056		<0.0056
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Oxidation-Reduction Potential	mV	224.6	135.4	195	80.3	178.5	227.3	126.8	82.3	136
pH	Std.	6.16	5.57	5.35	5.93	5.67	5.81	5.63	5.51	5.21
Potassium, Total	mg/L	2.8		2.9		3.0		2.9		2.6
Radium 226	pCi/L	0.167	0.45	0.000	0.652	0.237	0.000	0.979	0.000	0.0756
Radium 228	pCi/L	0.761	0.415	0.115	1.26	0.814	0.181	0.354	0.299	0.430
Radium 226 & 228 (combined)	pCi/L	0.9280	0.865	0.115	1.912	1.051	0.181	1.333	0.299	0.506
Selenium, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	13.6		13.5		14.5		14.3		12.7
Specific Conductance	µS/cm	154	155	161	148	153	146	158	159	161
Sulfate	mg/L	23.4	9.9	10	9.5	10.5	9.8	9.8	9.6	9.3
Temperature	°C	14.6	13.98	14.11	15.61	15.04	14.28	15.73	15.72	15.2
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	87	105	77	117	111	112	114	134	142
Total Organic Carbon	mg/L	<1.0		<1.0		<0.50		<0.50		<0.50
Turbidity	NTU	0.11	0.10	1.27	0.70	0.59	0.01	0.0	0.48	0.85
Vanadium, Total	mg/L									

**Total metal analyses after 10/1/2015.*

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/26/15	01/28/16	04/26/16	07/27/16	10/17/16	01/12/17	04/10/17	07/18/17	09/11/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
Well 103A		*15102601*	*16012805*	*16042603*	*16072703*	*16101706*	*17011202*	*17041003*	*17071803*	*17091103*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	<5		<5		6		5		<5
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	0.015	0.0200	0.0034	0.0052	0.021	0.0092	0.013	0.0035	0.011
Barium, Total	mg/L	0.023	0.024	0.013	0.013	0.036	0.015	0.020	0.012	0.022
Beryllium, Total	mg/L	0.0064	0.0048	0.0041	0.0034	0.0057	0.0029	0.0042	0.0025	0.0034
Boron, Total	mg/L	9.6	8.7	5.8	5.7	8.9	5.1	7.2	4.6	5.6
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	107	101	67.5	66.7	110	65.1	91.7	55.5	76.1
Chloride	mg/L	111	140	67.9	66.6	110	66.8	90.6	58.0	70.1
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	0.018	0.018	0.011	0.010	0.018	0.010	0.012	0.0074	0.011
Dissolved Oxygen	mg/L	3.42	7.20	4.77	5.25	3.81	4.93	3.94	5.48	3.85
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067		<0.067		<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	0.0026	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	0.45	0.46	0.36	0.28	0.44	0.26	0.32	0.24	0.28
Magnesium, Total	mg/L	33.2		19.7		33.7		27.4		22.5
Manganese, Total	mg/L	0.43		0.26		0.48		0.38		0.31
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	0.0025	0.0022	<0.0022	<0.0022	<0.0022
Oxidation-Reduction Potential	mV	535	466.3	110.5	227.8	301	568.4	360.8	167.2	344
pH	Std.	4.80	4.82	5.07	5.43	4.95	5.08	4.92	4.99	4.81
Potassium, Total	mg/L	29.0		24.9		32.2		24.0		22.2
Radium 226	pCi/L	0.676	0.997	0.0728	0.000	0.000	0.213	1.05	-0.057	-0.078
Radium 228	pCi/L	0.426	1.05	2.26	0.775	1.45	0.379	1.01	0.363	0.847
Radium 226 & 228 (combined)	pCi/L	1.102	2.05	2.33	0.775	1.450	0.592	2.06	0.306	0.769
Selenium, Total	mg/L	0.029	0.033	0.0062	0.0089	0.035	0.016	0.015	0.0074	0.021
Sodium, Total	mg/L	95.7		68.4		103		84.3		70.5
Specific Conductance	µS/cm	1408	1312	918	836	1297	846	1189	798	1000
Sulfate	mg/L	604	500	345	362	586	338	422	257	355
Temperature	°C	14.98	14.30	18.6	18.40	16.37	14.99	15.70	19.61	15.93
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	949	905	573	589	990	589	800	556	704
Total Organic Carbon	mg/L	1.4		4.5		1.3		1.0		0.92
Turbidity	NTU	0.82	8.7	0.68	1.22	1.22	0.01	0.0	0.79	0.95
Vanadium, Total	mg/L									

**Total metal analyses after 10/1/2015.*

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/27/15	04/26/16	10/19/16	04/11/17	09/14/17
Year-Quarter		2015-4	2016-2	2016-4	2017-2	2017-4
Parameter	Units					
Well 104		*15102710*	*16042608*	*16101908*	*17041108*	*17091408*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	<5	<5	<5	<5	<5
Antimony, Total	mg/L					
Arsenic, Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0033	<0.0033
Barium, Total	mg/L					
Beryllium, Total	mg/L					
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L					
Calcium, Total	mg/L	13.1	14.7	14.9	13.2	13.2
Chloride	mg/L	31.2	29.3	30.7	34.0	32.4
Chromium, Total	mg/L					
Cobalt, Total	mg/L					
Dissolved Oxygen	mg/L	7.89	7.42	6.43	8.57	8.94
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067	<0.067	<0.067	<0.067	<0.067
Lead, Total	mg/L					
Lithium, Total	mg/L					
Magnesium, Total	mg/L	14.5	15.9	16.5	14.6	14.1
Manganese, Total	mg/L	0.033	0.039	0.041	0.037	0.037
Mercury, Total	mg/L					
Molybdenum, Total	mg/L					
Oxidation-Reduction Potential	mV	282	106.7	201.8	152.9	187.1
pH	Std.	4.93	5.04	4.91	4.94	4.39
Potassium, Total	mg/L	4.0	4.2	4.6	4.2	3.7
Radium 226	pCi/L					
Radium 228	pCi/L					
Radium 226 & 228 (combined)	pCi/L					
Selenium, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	13.8	15.1	17.1	17.7	15.5
Specific Conductance	µS/cm	277	337	310	306	320
Sulfate	mg/L	10.8	10.7	10.9	12.6	12.6
Temperature	°C	14.35	15.23	14.42	14.34	15.77
Thallium, Total	mg/L					
Total Dissolved Solids	mg/L	169	236	204	177	253
Total Organic Carbon	mg/L	<1.0	1.1	0.90	1.2	1.3
Turbidity	NTU	0.43	1.15	0.55	0.0	0.29
Vanadium, Total	mg/L					

*Total metal analyses after 10/1/2015.

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/27/15	04/27/16	10/18/16	04/11/17	09/14/17
Year-Quarter		2015-4	2016-2	2016-4	2017-2	2017-4
Parameter	Units					
Well 105A		*15102706*	*16042704*	*16101804*	*17041102*	*17091401*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	7	8	7	8	9
Antimony, Total	mg/L					
Arsenic, Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0033	<0.0033
Barium, Total	mg/L					
Beryllium, Total	mg/L					
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L					
Calcium, Total	mg/L	1.4	1.7	1.5	1.5	1.5
Chloride	mg/L	12.2	11.8	12.2	12.8	13.3
Chromium, Total	mg/L					
Cobalt, Total	mg/L					
Dissolved Oxygen	mg/L	8.83	7.19	7.73	11.11	8.86
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067	<0.067	<0.067	<0.067	<0.067
Lead, Total	mg/L					
Lithium, Total	mg/L					
Magnesium, Total	mg/L	0.94	0.95	1.0	1.0	1.1
Manganese, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Mercury, Total	mg/L					
Molybdenum, Total	mg/L					
Oxidation-Reduction Potential	mV	253.4	121	187.6	143.2	131.8
pH	Std.	5.50	5.42	5.47	5.26	4.52
Potassium, Total	mg/L	1.7	1.6	1.6	1.6	1.6
Radium 226	pCi/L					
Radium 228	pCi/L					
Radium 226 & 228 (combined)	pCi/L					
Selenium, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	9.1	9.3	9.9	9.8	10.5
Specific Conductance	µS/cm	68	76	68	70	73
Sulfate	mg/L	6.1	6	5.9	5.9	6.0
Temperature	°C	13.48	12.77	12.91	13.70	14.36
Thallium, Total	mg/L					
Total Dissolved Solids	mg/L	45	56	43	27	65
Total Organic Carbon	mg/L	<1.0	<1.0	0.51	0.58	0.67
Turbidity	NTU	0.30	1.32	0.37	0.0	5.53
Vanadium, Total	mg/L					

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/29/15	01/26/16	04/27/16	07/28/16	10/18/16	01/10/17	04/10/17	07/19/17	09/11/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
		Last well 106 sample.			*First Well 106R*					
Well 106/106R		*15102908*	*16012606*	*Not Sampled*	*16072808*	*16101806*	*17011011*	*17041009*	*17071910*	*17091108*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	<5				10		10		8
Antimony, Total	mg/L	<0.0022	<0.0022		<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	<0.0030	<0.0030		<0.0030	<0.0030	<0.0030	<0.0033	<0.0033	<0.0033
Barium, Total	mg/L	0.028	0.029		0.037	0.037	0.045	0.045	0.045	0.044
Beryllium, Total	mg/L	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Boron, Total	mg/L	<0.11	<0.11		<0.11	4.6	<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L	<0.0011	<0.0011		<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	1.4	1.4		2.7	57.4	2.2	2.2	2.0	1.8
Chloride	mg/L	3.3	4.7		5.9	5.6	6.2	7.6	7.6	7.2
Chromium, Total	mg/L	<0.0022	<0.0022		<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	<0.0056	<0.0056		<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Dissolved Oxygen	mg/L	3.81	3.20		2.77	1.91	3.07	2.52	2.43	2.42
Fluoride	mg/L	<0.20	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067				<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	<0.0022		<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	<0.11	<0.11		<0.11	0.14	<0.11	<0.11	<0.11	<0.11
Magnesium, Total	mg/L	1.7				17.6		2.7		2.4
Manganese, Total	mg/L	0.020				0.26		0.056		0.046
Mercury, Total	mg/L	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	0.0028	<0.0022		<0.0022	<0.0022	<0.0022	0.0069	<0.0022	0.0070
Oxidation-Reduction Potential	mV	3.6	232.4		64.9	175.2	201.4	155.3	87.5	196.2
pH	Std.	5.15	4.66		6.04	5.32	5.50	4.99	5.00	3.93
Potassium, Total	mg/L	1.2				16.7		1.6		1.3
Radium 226	pCi/L	0.1620	0.0661		0.0694	0.000	-0.075	0.000	0.231	0.225
Radium 228	pCi/L	0.2660	0.67		0.709	0.975	0.360	0.342	0.419	0.313
Radium 226 & 228 (combined)	pCi/L	0.4280	0.74		0.7784	0.975	0.285	0.342	0.650	0.538
Selenium, Total	mg/L	<0.0056	<0.0056		<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	3.5				59.9		5.9		5.3
Specific Conductance	µS/cm	44	46		72	60	67	70	68	65
Sulfate	mg/L	8.1	8.6		9.4	8.6	8.0	8.0	6.9	6.6
Temperature	°C	15.81	14.08		15.53	15.91	14.09	14.90	16.10	15.94
Thallium, Total	mg/L	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	35	73		64	52	72	56	66	39
Total Organic Carbon	mg/L	<1.0				0.66		0.66		0.53
Turbidity	NTU	9.3	8.7		2.62	1.37	0.38	0.29	0.29	0.97
Vanadium, Total	mg/L									

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/28/15	01/28/16	04/27/16	10/19/16	04/12/17	09/12/17
Year-Quarter		2015-4	2016-1	2016-2	2016-4	2017-2	2017-4
Parameter	Units						
Well 319A		*15102810*	*Not Sampled*	*16042706*	*16101909*	*17041210*	*17091206*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	30		53	55	45	47
Antimony, Total	mg/L						
Arsenic, Total	mg/L	<0.0030		<0.0030	<0.0030	<0.0033	<0.0033
Barium, Total	mg/L						
Beryllium, Total	mg/L						
Boron, Total	mg/L	<0.11		<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L						
Calcium, Total	mg/L	17.4		20.4	21.0	17.8	18.0
Chloride	mg/L	6.9		12.5	9.1	7.3	6.8
Chromium, Total	mg/L						
Cobalt, Total	mg/L						
Dissolved Oxygen	mg/L	2.58		2.63	1.97	2.17	2.24
Fluoride	mg/L	<0.20		<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	0.13		0.13	3.5	0.12	0.79
Lead, Total	mg/L						
Lithium, Total	mg/L						
Magnesium, Total	mg/L	2.3		2.8	3.5	2.7	2.9
Manganese, Total	mg/L	0.054		0.03	0.012	<0.0056	0.0061
Mercury, Total	mg/L						
Molybdenum, Total	mg/L						
Oxidation-Reduction Potential	mV	-40.7		133.5	157.1	158.3	109.3
pH	Std.	6.30		6.23	6.31	6.01	5.88
Potassium, Total	mg/L	3.5		4.2	6.2	4.2	4.3
Radium 226	pCi/L						
Radium 228	pCi/L						
Radium 226 & 228 (combined)	pCi/L						
Selenium, Total	mg/L	0.0060		<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	4.6		5.7	6.6	5.3	4.8
Specific Conductance	µS/cm	149		175	159	146	153
Sulfate	mg/L	29.9		25.3	11.8	20.5	11.2
Temperature	°C	15.47		12.19	17.96	13.47	17.82
Thallium, Total	mg/L						
Total Dissolved Solids	mg/L	87		117	184	97	99
Total Organic Carbon	mg/L	4.6		5	5.7	5.0	4.9
Turbidity	NTU	0.21		1.87	65.3	1.78	29.9
Vanadium, Total	mg/L						

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/28/15	01/26/16	04/27/16	07/28/16	10/18/16	01/10/17	04/11/17	07/20/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3
Parameter	Units								
Well 326D		*15102803*	*16012603*	*16042708*	*16072806*	*16101807*	*17011002*	*17041104*	*17072001*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	8		13		11		12	
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0033	<0.0033
Barium, Total	mg/L	0.049	0.038	0.057	0.062	0.057	0.046	0.039	0.041
Beryllium, Total	mg/L	<0.0010	<0.0010	0.0010	0.0012	<0.0010	<0.0010	<0.0011	<0.0011
Boron, Total	mg/L	2.1	2.3	2.3	3.7	<0.11	3.8	3.3	3.6
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	31.5	25.6	36.8	48.9	2.0	47.0	43.3	45.2
Chloride	mg/L	35.3	37.3	45.5	58.7	64.6	48.3	49.6	50.1
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	0.0078	0.0064	0.0078	0.010	0.011	0.0081	0.0068	0.0074
Dissolved Oxygen	mg/L	7.91	8.22	5.64	7.18	6.05	7.18	8.43	7.03
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067		<0.067		<0.067		<0.067	
Lead, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	0.12	0.15	0.15
Magnesium, Total	mg/L	9.5		11.3		2.1		13.7	
Manganese, Total	mg/L	0.15		0.17		0.055		0.19	
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	0.0066	0.0045	0.014	0.022
Oxidation-Reduction Potential	mV	-58.7	134.1	120	87.3	167.1	236.9	156.5	137.8
pH	Std.	5.67	5.42	5.87	5.97	5.51	5.68	5.58	5.57
Potassium, Total	mg/L	11.0		14.0		1.3		13.2	
Radium 226	pCi/L	0.622	0.299	0.436	0.000	0.259	0.162	0.0848	0.594
Radium 228	pCi/L	0.485	0.0877	0.385	0.102	0.450	0.524	0.758	0.141
Radium 226 & 228 (combined)	pCi/L	1.107	0.387	0.821	0.102	0.709	0.686	0.843	0.735
Selenium, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	29.4		37.4		5.7		42.9	
Specific Conductance	µS/cm	429	417	611	618	731	605	570	614
Sulfate	mg/L	119	123	158	283	247	258	196	204
Temperature	°C	14.63	14.61	14.38	17.29	15.79	14.26	15.70	16.11
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011
Total Dissolved Solids	mg/L	285	282	354	462	457	435	378	447
Total Organic Carbon	mg/L	<1.0		1.2		0.90		0.67	
Turbidity	NTU	0.29	0.08	1.07	0.83	1.08	0.12	0.04	1.27
Vanadium, Total	mg/L								

**Total metal analyses after 10/1/2015.*

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/29/15	01/27/16	04/28/16	07/27/16	10/19/16	01/11/17	04/13/17	07/19/17	09/14/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
Well 327A		*15102901*	*16012708*	*16042812*	*16072708*	*16101902*	*17011105*	*17041305*	*17071906*	*17091404*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	5		7		<5		<5		<5
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	0.0082	0.012	0.011	0.0069	0.0068	0.016	0.014	0.0038	0.0048
Barium, Total	mg/L	0.022	0.028	0.026	0.024	0.018	0.027	0.023	0.025	0.022
Beryllium, Total	mg/L	0.0040	0.0032	0.0072	0.0063	0.0057	0.0079	0.0088	0.0060	0.0043
Boron, Total	mg/L	6.1	6.9	8.7	6.8	5.5	5.1	6.1	3.4	3.3
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	120	135.0	181	140	114	116	137	79.9	71.9
Chloride	mg/L	117	159	193	149	125	142	153	102	97.6
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	0.0033	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	0.029	0.028	0.039	0.035	0.024	0.025	0.027	0.019	0.014
Dissolved Oxygen	mg/L	3.53	6.43	0.97	2	2.81	3.45	3.41	4.71	5.34
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067		<0.067		<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	<0.0022	0.0025	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	0.16	0.37	0.32	0.21	0.29	0.27	0.31	0.18	0.22
Magnesium, Total	mg/L	31.4		48.4		29.6		34.8		18.3
Manganese, Total	mg/L	0.35		0.56		0.37		0.44		0.22
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	0.0074	0.050	0.041	0.0083	0.017	0.0095	0.011	0.0043	0.014
Oxidation-Reduction Potential	mV	511.5	64.7	110.3	134.5	170.0	230.2	129.9	142.3	134.5
pH	Std.	5.01	5.41	5.5	5.34	5.03	4.97	4.92	4.84	4.57
Potassium, Total	mg/L	39.5		58.9		48.3		48.7		32.3
Radium 226	pCi/L	0.0955	0.227	0.0505	0.0758	0.825	0.142	0.323	0.724	0.000
Radium 228	pCi/L	1.02	0.854	1.49	1.19	0.837	0.968	0.852	0.676	1.11
Radium 226 & 228 (combined)	pCi/L	1.116	1.081	1.54	1.27	1.662	1.110	1.175	1.400	1.11
Selenium, Total	mg/L	0.014	0.020	0.024	0.012	0.0082	0.022	0.017	0.0075	0.0072
Sodium, Total	mg/L	85.6		128		91.8		104		58.5
Specific Conductance	µS/cm	1300	1604	2013	1442	1182	1301	1483	981	927
Sulfate	mg/L	490	612	824	665	455	496	526	311	277
Temperature	°C	15.80	13.78	14.71	18.96	15.91	15.15	15.49	16.50	16.36
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	956	1130	1420	1130	788	891	1100	729	678
Total Organic Carbon	mg/L	1.4		1.8		1.3		1.3		1.1
Turbidity	NTU	0.41	9.5	1.16	1.29	0.52	0.13	0.05	0.78	0.41
Vanadium, Total	mg/L									

**Total metal analyses after 10/1/2015.*

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/28/15	01/27/16	04/28/16	07/28/16	10/19/16	01/10/17	04/13/17	07/18/17	09/13/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
Well 328A		*15102807*	*16012704*	*16042807*	*16072801*	*16101906*	*17011009*	*17041302*	*17071808*	*17091307*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	44		44		22		25		23
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	0.0054	0.0064	<0.0030	<0.0030	<0.0030	0.0069	<0.0033	0.0040	<0.0033
Barium, Total	mg/L	0.031	0.028	0.029	0.030	0.018	0.057	0.039	0.045	0.030
Beryllium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Boron, Total	mg/L	8.3	10.2	7.8	6.8	2.9	4.8	4.9	5.8	2.9
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	154	145	136	121	45.3	118	97.8	123	64.5
Chloride	mg/L	166	188	156	151	53.0	154	125	173	91.6
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	0.021	0.023	0.019	0.017	0.0061	0.019	0.016	0.020	0.0094
Dissolved Oxygen	mg/L	4.24	4.52	4.02	4.07	6.46	4.87	6	3.82	6.29
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	0.084		<0.067		<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	0.61	0.68	0.79	0.64	0.34	0.57	0.51	0.63	0.37
Magnesium, Total	mg/L	50.9		43.2		13.7		28.1		18.2
Manganese, Total	mg/L	0.59		0.51		0.18		0.31		0.19
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	0.41	0.41	0.54	0.27	0.13	0.14	0.12	0.13	0.092
Oxidation-Reduction Potential	mV	15.9	387.4	229	127.8	165.3	189.5	152	182.3	38
pH	Std.	6.14	5.81	6.05	6.13	5.87	5.81	6	5.69	5.55
Potassium, Total	mg/L	45.7		52.9		27.5		33.4		25.9
Radium 226	pCi/L	-0.183	0.00514	0.529	0.635	0.234	0.0856	0.507	0.607	0.277
Radium 228	pCi/L	0.386	0.753	0.735	1.31	0.752	1.33	1.26	0.705	1.54
Radium 226 & 228 (combined)	pCi/L	0.203	0.75814	1.26	1.95	0.986	1.42	1.77	1.312	1.82
Selenium, Total	mg/L	0.011	0.012	0.0069	0.0064	<0.0056	0.013	<0.0056	0.012	<0.0056
Sodium, Total	mg/L	115		105		46.9		80.7		56.9
Specific Conductance	µS/cm	1753	1827	1557	1362	576	1279	1148	1474	815
Sulfate	mg/L	614	696	608	564	165	467	635	449	206
Temperature	°C	15.13	13.23	13.42	15.26	15.20	13.51	14	16.19	16.04
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	1290	1290	1110	1070	334	887	802	1070	551
Total Organic Carbon	mg/L	2.0		1.7		0.66		1.1		0.83
Turbidity	NTU	0.29	0.11	0.61	0.94	0.44	0.02	0	0.89	4.83
Vanadium, Total	mg/L									

**Total metal analyses after 10/1/2015.*

NRG Indian River Coal Ash Industrial Landfill

Month/Day/Year		10/28/15	01/27/16	04/26/16	07/26/16	10/20/16	01/11/17	04/12/17	07/20/17	09/13/17
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4
Parameter	Units									
Well P-3/3R		*15102811*	*16012710*	*16042609*	*16072607*	*16102012*	*17011109*	*17041201*	*17072005*	*17091311*
Alkalinity, Bicarbonate	mg/L $CaCO_3$	<5		6		<5		5		<5
Antimony, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Arsenic, Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0033	<0.0033	<0.0033
Barium, Total	mg/L	0.079	0.078	0.077	0.068	0.072	0.074	0.073	0.076	0.076
Beryllium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Cadmium, Total	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Calcium, Total	mg/L	3.1	2.9	3.2	3.0	3.0	3.0	3.0	3.0	3.4
Chloride	mg/L	11.5	12.6	12.4	10.9	11.9	10.6	10.8	11.5	12.4
Chromium, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Cobalt, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Dissolved Oxygen	mg/L	6.20	9.71	5.37	6.69	5.58	7.98	7.12	5.55	5.77
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Iron, Total	mg/L	<0.067		<0.067		<0.067		<0.067		<0.067
Lead, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Lithium, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Magnesium, Total	mg/L	3.4		3.7		3.6		3.5		3.6
Manganese, Total	mg/L	0.0096		0.011		0.0097		0.0099		0.0097
Mercury, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum, Total	mg/L	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
Oxidation-Reduction Potential	mV	1.9	122.3	110.3	72.6	219.0	239.7	123.1	90.2	130.8
pH	Std.	5.22	5.06	5.24	5.41	5.12	5.43	4.98	5.03	4.26
Potassium, Total	mg/L	2.3		2.4		2.5		2.2		2.3
Radium 226	pCi/L	0.0652	0.429	0.175	0.444	0.270	0.140	-0.197	0.536	0.319
Radium 228	pCi/L	0.816	0.295	0.872	0.468	0.568	0.326	0.673	0.746	0.000
Radium 226 & 228 (combined)	pCi/L	0.8812	0.724	1.047	0.912	0.838	0.466	0.476	1.282	0.319
Selenium, Total	mg/L	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
Sodium, Total	mg/L	6.7		7.1		7.3		6.9		7.3
Specific Conductance	µS/cm	97	89	104	87	91	71	91	96	98
Sulfate	mg/L	15.7	20.5	20.4	20.2	15.9	21.1	15.5	15.7	20.2
Temperature	°C	14.68	13.22	14.67	15.56	14.82	14.08	13.47	15.33	15.96
Thallium, Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0011	<0.0011	<0.0011
Total Dissolved Solids	mg/L	57	70	71	63	75	72	63	77	68
Total Organic Carbon	mg/L	1.2		<1.0		0.87		0.71		0.68
Turbidity	NTU	0.63	1.03	0.47	0.92	0.47	0.08	0.0	0.17	0.07
Vanadium, Total	mg/L									