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2021 Annual Federal Groundwater Monitoring and Corrective Action Report

Indian River Generating Station Industrial Waste Facility

Prepared for:
Indian River Generating Station
Indian River Power LLC

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January 2022

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

List of Tables

List of Figures

List of Attachments

Overview

This Indian River Power, LLC 2021 Federal Annual Groundwater Monitoring and Corrective Action Report has been prepared for the Indian River Generating Station Phase II Coal Ash Landfill to comply with Federal regulations and amendments. The purpose of this report is to document the status of the groundwater monitoring and corrective action program for the Indian River Coal Ash landfill from January 1, 2021 to December 31, 2021.

Throughout 2021, the landfill groundwater monitoring program and corrective action program continued to remain in detection monitoring because a statistically significant difference was not identified from the 2021 groundwater monitoring events.

This overview of the 2021 groundwater monitoring period is provided in accordance with the revised requirements under Section 257.90(e)(6). Each required item is discussed separately below.

- Section 257.90(e)(6)(i) – At the start of the current monitoring period, the subject CCR unit was operating under the detection monitoring program outlined in Section 257.94.

- Section 257.90(e)(6)(ii) – At the end of the current monitoring period, the subject CCR unit is continuing to operate under the detection monitoring program outlined in Section 257.94.

- Section 257.90(e)(6)(iii) –Statistically significant increases (SSIs) above established background for Appendix III detection monitoring constituents were not noted during this monitoring period.

- Section 257.90(e)(6)(iv) – The subject unit is not under assessment monitoring because there were no SSIs above established background for Appendix III detection monitoring constituents during this monitoring period.

- Section 257.90 (e)(6)(v) – No remedy, nor a date of remedy selection (pursuant to Section 257.97) was required during this monitoring period because the program remains in detection monitoring.

- Section 257.90 (e)(6)(vi) – Remedial activities were not initiated, nor are ongoing (pursuant to Section 257.98) during this monitoring period because the program remains in detection monitoring.

1.0 INTRODUCTION

1.1 Compliance With Federal Regulations

This 2021 Federal Annual Groundwater Monitoring and Corrective Action Report has been prepared for Indian River Power, LLC (facility) 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, amended Federal Register Vol. 83, No. 146 dated July 30, 2018, amended Federal Register Vol. 85, No. 168, dated August 28, 2020) 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 2021 along with any description and resolution of issues for 2021.

Federal Regulations 257.105 (h), 257.106 (h) and 257.107 (h) also require the facility to post this annual report to the facility record by January 31, 2021; notify the State of Delaware Department of Natural Resources and Environmental Control (DNREC) that this report has been placed in the operating record; and post this annual report to the company's website within 30 days.

1.2 Site Background

The coal ash landfill (landfill) has operated in accordance with permits issued by DNREC for over 40 years, with the current being Permit SW-12/01 (last modified March 9, 2018) for operating an industrial waste landfill. This permit includes a rigorous groundwater monitoring program requirement, to which the facility complies. 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. Regardless, the facility is in compliance with the requirements of Part 257 and independently, the requirements of the DNREC program.

Groundwater has been monitored at the landfill site for 39 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 from 1982 through the April 2015 sampling event as per DNREC sampling requirements. Beginning with the October 2015 sampling event, the analytical testing methods were changed to total metal analyses to comply with federal regulations and to obtain a minimum of eight background samples and additional parameters to make the background demonstrations required in Federal Regulations Part 257.94 (Detection Monitoring Program).

2.0 SITE DESCRIPTION

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

The station has 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 2019, 2020 and 2021, Unit 4 operated at about a capacity factor of 3.4%, 2.4% and 7.92%, respectively. 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 beneficially used as regional projects become available, but this is an extreme rarity.

The landfill consists of two distinct disposal areas (Phase I and Phase II). Construction of the 43.8-acre Phase I landfill was initiated in 1979 and disposal commenced in 1980. Waste materials disposed in the Phase I landfill include primarily fly ash and bottom ash and, to a lesser extent, wastewater treatment sludge, coal pile runoff sump area sludge, coal pyrites and cooling tower sediment sludge. The Phase I landfill 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 on 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, contiguous to and immediately west of the Phase I landfill, is constructed with a liner system and leachate collection system that meet Federal Regulation 257.70. The Phase II landfill is currently active and consists of two lined cells (Cell 1 is to the south and Cell 2 to the north) with a total area of 26 acres. Cell 1 is approximately 12 acres. Cell 2 is approximately 14 acres. 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. Cell 1 construction began in 2009 and began receiving waste in 2010 and is near final capacity. The final 5,000 cy of Cell 1 is currently used as an emergency reserve disposal area. Cell 2 construction began in 2012 and began receiving waste in 2014.

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 DNREC special wastes are permitted to be disposed of in the Phase II landfill in accordance with the current DNREC permit.

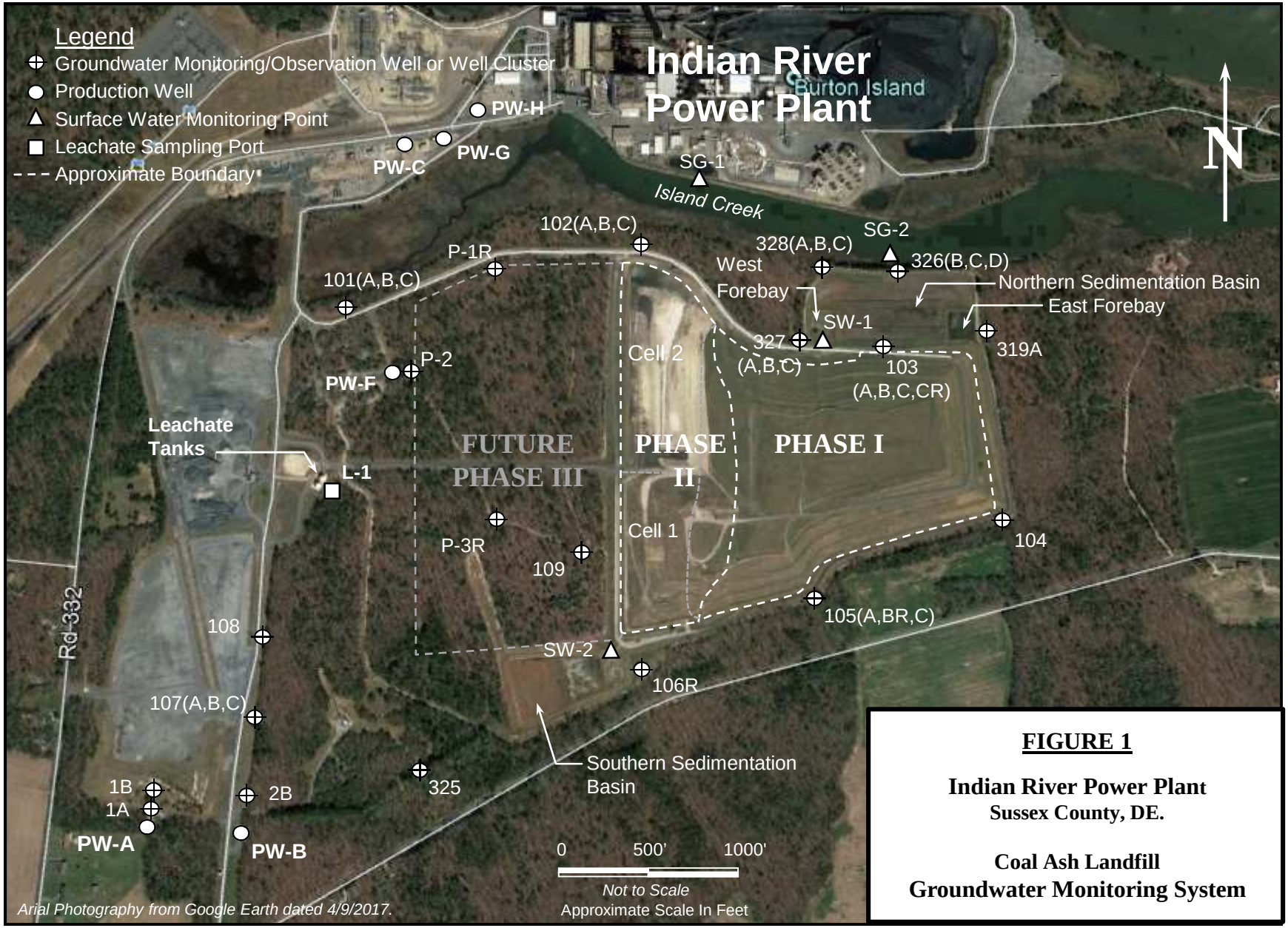

FIGURE 1

Indian River Power Plant
Sussex County, DE.

Coal Ash Landfill
Groundwater Monitoring System

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. These sedimentation basins are not CCR impoundments.

- 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.

- Surface water monitoring locations for runoff into the sedimentation basins and stream gauging station used for monitoring 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 used by the plant to generate water for various industrial purposes (e.g., primarily cooling water and to provide dust control water used at the landfill).

- Leachate Holding Tanks contain leachate pumped from the leachate collection sumps.

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. The groundwater monitoring wells are screened in the Columbia aquifer.

Water level measurements are typically collected from all groundwater monitoring and observation wells during each groundwater monitoring sampling event to enable groundwater elevation and groundwater flow direction determinations. 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. 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 GROUND WATER MONITORING

The groundwater monitoring system for the landfill was developed progressively beginning 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 since 1983.

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 site plan showing the overall groundwater monitoring system is provided on Figure 1. Under the current DNREC permit, all the shallow monitoring and observation wells are used to determine the overall site hydraulic gradients in the upper aquifer. Select monitoring wells are used for groundwater quality sampling to comply with the DNREC permit and Federal Regulations, as described below.

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 referenced in this report is a subset of the existing overall monitoring system described above with emphasis on monitoring groundwater quality associated with the Phase II landfill. These Phase II detection groundwater monitoring wells are listed in Table 1 and locations shown on Figure 2.

The Phase II landfill detection groundwater monitoring system includes four background wells (104, 105A, 106R and P-3R), located upgradient of the landfill; four release detection wells (102A, 103A, 327A and 319A) situated downgradient of the landfill boundary (compliant with the Part 257 mandate for a minimum of three release detection wells); and, two supplementary downgradient wells (326D and 328A) to assist with release detection farther downgradient from the landfill boundary and the north sedimentation basin.

The 2021 analytical results are provided in Attachment C – Groundwater Quality Data and include groundwater quality monitoring sampling events from October 2015 through October 2021. The groundwater quality monitoring sampling events from October 2015 through September 2017 were used to establish background groundwater conditions for the landfill detection and assessment monitoring. A background report ("Indian River Generating Station Industrial Waste Facility Background Report Groundwater Monitoring Program", November 2017) for groundwater using these groundwater quality monitoring sampling events was prepared and submitted to DNREC to be compliant with the landfill permit and federal regulations. This report developed the comparison values or comparison range (as is the case for pH) from the detection and assessment monitoring parameter's MCLs, SMCLs and background threshold values.

Table 1 – Phase II Landfill Detection Monitoring Wells

Well	Location	Comment
106R	Upgradient	Background
105A	Upgradient	Background
104	Upgradient	Background
P-3R	Side gradient	Background
102A	Downgradient - landfill boundary	Release detection
327A	Downgradient - landfill boundary	Release detection
103A	Downgradient - landfill boundary	Release detection
319A	Downgradient - landfill boundary	Release detection
328A	Downgradient - supplemental	Release detection - beyond
326D	Downgradient - supplemental	Release detection - beyond

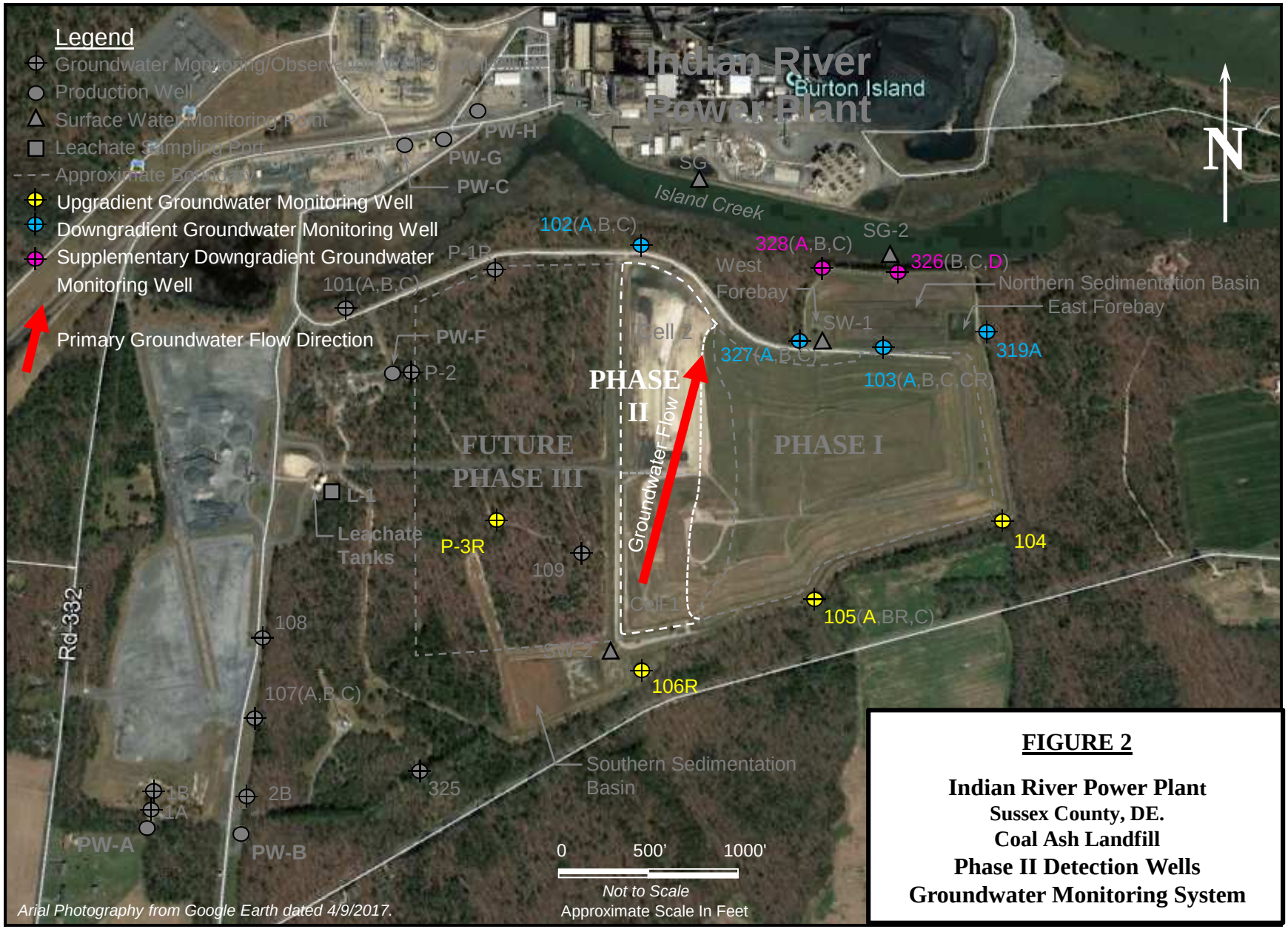

FIGURE 2

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

The comparison values used to evaluate the 2021 analytical results are provided in Table 2. 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 required by the Federal Regulations Part 257 Subpart D is provided in this report Attachment C.

The detection monitoring system groundwater monitoring wells were sampled semi-annually in April and October during the year 2021. Groundwater samples from these wells were analyzed for the Federal Regulation Appendix III to Part 257 - Constituents for Detection Monitoring which are boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids, along with additional DNREC required parameters (not listed here but included in Attachment C). Each of the Federal Detection Monitoring Parameter results are discussed in the following sections.

Table 2 – Phase II Landfill Federal Detection Monitoring Parameters and Comparison Values

Parameter	Comparison Values
pH (standard units)	4.5-8.5
Boron (mg/L)	24.3
Calcium (mg/L)	309
Chloride (mg/L)	453
Fluoride (mg/L)	4
Sulfate (mg/L)	1,350
Total Dissolved Solids (mg/L)	2,570

3.1 Boron

Boron was analyzed at both the April and October 2021 sampling events at the groundwater quality monitoring wells. The comparison value for Boron is 24.3 mg/l.

For 2021, boron was not detected at any of the upgradient groundwater quality monitoring wells with all reported concentrations less than the minimum detection limit of 0.11 mg/l.

The downgradient groundwater quality monitoring well boron concentrations ranged from below the minimum detection limit of 0.11 mg/l at wells 102A and 319A, to 4.1 mg/l at well 327A (April event) for the 2021 groundwater quality monitoring sampling events.

The 2021 groundwater water quality upgradient and downgradient concentrations for boron were less than the comparison value. Boron concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.2 Calcium

Calcium was analyzed for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison value for calcium is 309 mg/l.

Upgradient calcium concentrations for the 2021 groundwater quality monitoring sampling events ranged from 1.8 mg/l at well 105A (April and October events) to 12.2 mg/l at well 104 (April event).

The 2021 calcium concentrations for the downgradient wells ranged from 8.2 mg/l in well 103A (October event) to 126 mg/l at well 327A (April event).

The 2021 groundwater water quality upgradient and downgradient concentrations for calcium were less than the comparison value. Calcium concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.3 Chloride

Chloride was analyzed for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison value for chloride is 453 mg/l.

Upgradient chloride concentrations for the 2021 groundwater quality monitoring sampling events ranged from 8.0 mg/l at well 106R (April event) to 41.6 mg/l at well 104 (October event).

Downgradient chloride concentrations for the 2021 groundwater quality monitoring sampling events ranged from 4 mg/l in well 319A (October event) to 211 mg/l at well 327A (April event).

The 2021 groundwater water quality upgradient and downgradient concentrations for chloride were less than the comparison value. Chloride concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.4 Fluoride

Fluoride was analyzed for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison value for fluoride is 4 mg/l.

Upgradient and downgradient fluoride concentrations for the 2021 groundwater quality monitoring sampling events were not detected greater than 0.20 mg/l.

The 2021 groundwater water quality upgradient and downgradient concentrations for fluoride were less than the comparison value. Fluoride concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.5 pH

The pH was measured for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison range for pH is 4.5 s.u. to 8.5 s.u.

Upgradient pH measurements for the 2021 groundwater quality monitoring sampling events ranged from 4.11 s.u. at well 104 (April event) to 5.63 s.u. at well 105A (April event).

Downgradient pH measurements for the 2021 groundwater quality monitoring sampling events ranged from 4.4 s.u. at well 103A (October event) to 6.24 s.u. at well 319A (April event).

The 2021 groundwater water quality upgradient and downgradient concentrations for pH did not exceed the comparison range upper value (8.5 s.u.).

A few upgradient wells pH values (104: 4.11 s.u., April event and 4.3 s.u., October event, and 106R: 4.39 s.u., October event) and a downgradient well pH value (103A: 4.4 s.u., October event) were below the comparison range lower value (4.5 s.u.) and were statistically analyzed using the individual well's historic data. The statistical analysis included performance of the non-parametric Wilcoxon-Mann-Whitney test and Rosner's test for outliers. From these test, it was determined that these pH concentrations fall within their respective individual well's lower range and are not outliers. Therefore, since these pH values are not outliers, these pH concentrations are not considered to indicate a statistically significant decrease.

Overall, the pH concentrations at the Phase II monitoring wells were not detected at a concentration that indicate a statistically significant increase or decrease for the year 2021.

3.6 Sulfate

Sulfate was analyzed for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison value for sulfate is 1,350 mg/l.

Upgradient sulfate concentrations for the 2021 groundwater quality monitoring sampling events ranged from 5.9 mg/l at well 105A (April event) to 22.1mg/l at well P-3R (October event).

Downgradient sulfate concentrations for the 2021 groundwater quality monitoring sampling events ranged from 4.8 mg/l at well 102A (October event) to 363 mg/l at well 327A (April event).

The 2021 groundwater water quality upgradient and downgradient concentrations for sulfate were less than the comparison value. Sulfate concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.7 Total Dissolved Solids

Total dissolved solids were analyzed for the April and October 2021 sampling events at the groundwater monitoring wells. The comparison value is 2,570 mg/l.

Upgradient total dissolved solid concentrations for the 2021 groundwater quality monitoring sampling events were detected at 54 mg/l at well 105A and 106R (April event) to 198 mg/l at well 104 (October event).

Downgradient total dissolved solid concentrations for the 2021 groundwater quality monitoring sampling events ranged from 83 mg/l at well 319A (April event) to 970 mg/l at well 327A (April event).

The 2021 groundwater water quality upgradient and downgradient concentrations for total dissolved solids were less than the comparison value. Total dissolved solid concentrations at the Phase II monitoring wells were below levels that would indicate a statistically significant increase for the year 2021.

3.8 2021 Groundwater Analytical Results Summary

Comparison of 2021 groundwater sampling analytical results (except for a few pH values below the comparison range lower value) to the comparison values demonstrate that the 2021 detection monitoring parameters were not statistically significant because the groundwater sampling analytical results were below the comparison values. For the pH values below the comparison range lower value, a statistical analysis was performed, and it was determined that these pH values were not at levels that would indicate a statistically significant increase.

Since a statistically significant difference was not identified from the 2021 groundwater monitoring events, the landfill groundwater monitoring program continues to remain in detection monitoring.

4.0 KEY ACTIONS COMPLETED IN 2021

The key actions completed during 2021 include the following items:

- Posting by NRG of the 2020 Annual Federal Annual Groundwater Monitoring and Corrective Action Report to the facility operating record by January 31, 2021.
- Providing written notification from NRG to DNREC on February 2, 2021 that the 2020 Annual Federal Annual Groundwater Monitoring and Corrective Action Report has been placed in the facility operating record.
- Completing the semi-annual groundwater quality sampling events in April and October 2021.
- Evaluating the April and October groundwater monitoring events and concluding that these event results do not indicate any statistically significant increases and that the unit remains in its current detection monitoring status.

5.0 DESCRIPTION AND RESOLUTION OF ISSUES

For 2021, there were no issues that required resolution.

6.0 KEY ACTIVITIES FOR THE YEAR 2021

Key activities for 2021 to comply with the federal regulations include performing semi-annual (April and October 2021) detection monitoring groundwater sampling events, evaluating the sampling events results for statistical significance and preparing this 2021 Federal annual report. Future activities associated with the 2021 Federal annual report include posting the annual report to the facility operating record by January 31, 2022, posting the annual report to the facility website, and notifying DNREC that the Federal annual report has been placed accordingly.

7.0 REFERENCES

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ATTACHMENT A
Groundwater Well Elevation Tables

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 the following page.)

ATTACHMENT A
Groundwater Well Elevation Tables
(Continued)

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.

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ATTACHMENT B
Well Location Table

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 top of concrete
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	707145.299	212789.706	Google Earth (1/19/21)
Prod. Well H	707612.339	212992.969	Google Earth (1/19/21)
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

ATTACHMENT B
Well Location Table
(Continued)

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.

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ATTACHMENT C
Phase II Landfill Groundwater Analytical Data

ATTACHMENT C
Phase II Landfill Groundwater Analytical Data

October 2015 to October 2021 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	03/13/18	10/04/18	04/18/19	10/23/19	06/10/20	10/28/20	04/07/21	10/13/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well 102A		*15102702*	*16012802*	*16042803*	*16072601*	*16102009*	*17011102*	*17041208*	*17071903*	*17091203*	*18031306*	*18100407*	*19041801*	*19102307*	*20061004*	*20102805*	*21040707*	*21101307*
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	10.2	9.9	10.7	10.8	11.3	10.6	10.6	10.7	10.5	10.8	11.8	12.5	13.3	14.5	14.3	15.4	16.0
Chloride	mg/L	15.8	13.5	14.4	13.6	14.8	13.9	14.6	14.4	14.2	13.6	15.1	20.3	17.7	16.2	16.3	16.4	17.1
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	6.16	5.57	5.35	5.93	5.67	5.81	5.63	5.51	5.21	5.79	5.33	5.50	5.21	5.12	5.65	5.43	4.91
Sulfate	mg/L	23.4	9.9	10	9.5	10.5	9.8	9.8	9.6	9.3	8.3	7.6	6.6	7.9	6.0	5.7	5.4	4.8
Total Dissolved Solids	mg/L	87	105	77	117	111	112	114	134	142	111	69	187	358	76	158	198	316

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	03/14/18	10/03/18	04/17/19	10/23/19	06/09/20	10/26/20	04/06/21	10/11/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well 103A		*15102601*	*16012805*	*16042603*	*16072703*	*16101706*	*17011202*	*17041003*	*17071803*	*17091103*	*18031407*	*18100311*	*19041709*	*19102301*	*20060901*	*20102613*	*21040609*	*21101103*
Boron, Total	mg/L	9.6	8.7	5.8	5.7	8.9	5.1	7.2	4.6	5.6	4.6	4.2	1.6	1.1	0.82	1.0	1.7	0.42
Calcium, Total	mg/L	107	101	67.5	66.7	110	65.1	91.7	55.5	76.1	57.5	62.1	26.1	19.1	18.5	19.9	37.5	8.2
Chloride	mg/L	111	140	67.9	66.6	110	66.8	90.6	58.0	70.1	58.2	66.3	45.9	40.1	35.9	39.5	60.0	23.7
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	4.80	4.82	5.07	5.43	4.95	5.08	4.92	4.99	4.81	5.31	4.82	5.13	4.92	5.00	5.93	4.81	4.40
Sulfate	mg/L	604	500	345	362	586	338	422	257	355	266	270	98.1	66.0	62.0	66.0	116	31.4
Total Dissolved Solids	mg/L	949	905	573	589	990	589	800	556	704	556	559	293	136	110	188	372	109

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	03/13/18	10/02/18	04/18/19	10/23/19	06/10/20	10/28/20	04/08/21	10/14/21
Year-Quarter		2015-4	2016-2	2016-4	2017-2	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units													
Well 104		*15102710*	*16042608*	*16101908*	*17041108*	*17091408*	*18031309*	*18100207*	*19041805*	*19102313*	*20061007*	*20102809*	*21040808*	*21101406*
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	13.1	14.7	14.9	13.2	13.2	12.0	13.1	9.6	10.1	11.1	12.2	12.2	10.2
Chloride	mg/L	31.2	29.3	30.7	34.0	32.4	33.9	33.3	29.9	41.4	33.5	43.8	38.4	41.6
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	4.93	5.04	4.91	4.94	4.39	5.16	4.51	5.03	4.58	4.51	5.07	4.11	4.30
Sulfate	mg/L	10.8	10.7	10.9	12.6	12.6	13.4	13.1	20.1	21.5	16.3	15.9	15.4	15.9
Total Dissolved Solids	mg/L	169	236	204	177	253	174	185	172	110	200	182	176	198

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	03/13/18	10/02/18	04/16/19	10/22/19	06/10/20	10/27/20	04/08/21	10/13/21
Year-Quarter		2015-4	2016-2	2016-4	2017-2	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units													
Well 105A		*15102706*	*16042704*	*16101804*	*17041102*	*17091401*	*18031303*	*18100209*	*19041603*	*19102203*	*20061001*	*20102703*	*21040805*	*21101310*
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	1.4	1.7	1.5	1.5	1.5	1.6	1.8	1.7	1.8	1.7	1.9	1.8	1.8
Chloride	mg/L	12.2	11.8	12.2	12.8	13.3	12.2	10.0	20.1	14.2	12.6	13.2	12.7	13.7
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	5.50	5.42	5.47	5.26	4.52	5.62	4.78	5.20	4.48	4.86	6.20	5.63	4.50
Sulfate	mg/L	6.1	6	5.9	5.9	6.0	5.8	<2.0	15.2	6.6	6.1	6.0	5.9	6.7
Total Dissolved Solids	mg/L	45	56	43	27	65	54	59	134	48	<25	86	54	62

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	03/13/18	10/05/18	04/18/19	10/23/19	06/10/20	10/28/20	04/08/21	10/12/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
			Last 106		*First 106R*													
Well 106/106R		*15102908*	*16012606*	*Not Sampled*	*16072808*	*16101806*	*17011011*	*17041009*	*17071910*	*17091108*	*18031310*	*18100211*	*19041804*	*19102312*	*20061011*	*20102808*	*21040809*	*21101212*
Boron, Total	mg/L	<0.11	<0.11		<0.11	4.6	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	1.4	1.4		2.7	57.4	2.2	2.2	2.0	1.8	2.0	1.8	2.3	1.9	2.2	1.9	2.3	2.2
Chloride	mg/L	3.3	4.7		5.9	5.6	6.2	7.6	7.6	7.2	7.2	55.9	6.0	7.7	10.1	10.1	8.0	10.4
Fluoride	mg/L	<0.20	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	5.15	4.66		6.04	5.32	5.50	4.99	5.00	3.93	5.35	4.31	4.99	4.28	4.68	5.10	4.95	4.39
Sulfate	mg/L	8.1	8.6		9.4	8.6	8.0	8.0	6.9	6.6	6.6	23.3	9.5	6.6	6.7	13.4	10.6	9.5
Total Dissolved Solids	mg/L	35	73		64	52	72	56	66	39	43	69	79	<25	64	40	54	71

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	03/15/18	10/03/18	04/17/19	10/23/19	06/10/20	10/27/20	04/08/21	10/14/21
Year-Quarter		2015-4	2016-1	2016-2	2016-4	2017-2	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units														
Well 319A		*15102810*	*Not Sampled*	*16042706*	*16101909*	*17041210*	*17091206*	*18031501*	*18100314*	*19041716*	*19102314*	*20061008*	*20102706*	*21040810*	*21101405*
Boron, Total	mg/L	<0.11		<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	17.4		20.4	21.0	17.8	18.0	18.5	15.4	15.9	12.3	16.4	17.1	12.6	11.7
Chloride	mg/L	6.9		12.5	9.1	7.3	6.8	6.3	4.0	6.0	5.1	5.7	5.0	4.1	4.0
Fluoride	mg/L	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	6.30		6.23	6.31	6.01	5.88	6.32	5.70	6.23	6.07	6.07	6.84	6.24	6.05
Sulfate	mg/L	29.9		25.3	11.8	20.5	11.2	12.3	9.4	23.0	11.9	10.1	8.4	6.2	10.4
Total Dissolved Solids	mg/L	87		117	184	97	99	93	97	114	<25	122	72	83	94

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	09/12/17	03/15/18	10/02/18	04/16/19	10/22/19	06/09/20	10/27/20	04/07/21	10/13/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well 326D		*15102803*	*16012603*	*16042708*	*16072806*	*16101807*	*17011002*	*17041104*	*17072001*	*17091207*	*18031504*	*18100205*	*19041606*	*19102206*	*20060909*	*20102707*	*21040704*	*21101303*
Boron, Total	mg/L	2.1	2.3	2.3	3.7	<0.11	3.8	3.3	3.6	3.7	2.8	3.0	3.2	2.0	1.4	1.4	2.8	2.3
Calcium, Total	mg/L	31.5	25.6	36.8	48.9	2.0	47.0	43.3	45.2	48.3	39.7	38.2	42.1	26.2	20.3	21.7	54.0	38.8
Chloride	mg/L	35.3	37.3	45.5	58.7	64.6	48.3	49.6	50.1	50.2	45.1	44.7	52.9	36.0	29.5	33.9	63.3	60.6
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	5.67	5.42	5.87	5.97	5.51	5.68	5.58	5.57	5.32	5.65	5.43	5.64	5.30	5.52	7.39	5.49	5.30
Sulfate	mg/L	119	123	158	283	247	258	196	204	206	174	155	186	102	67.8	78.1	176	141
Total Dissolved Solids	mg/L	285	282	354	462	457	435	378	447	202	364	322	397	248	174	168	436	378

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	03/12/18	10/04/18	04/15/19	10/21/19	06/08/20	10/26/20	04/05/21	10/12/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well 327A		*15102901*	*16012708*	*16042812*	*16072708*	*16101902*	*17011105*	*17041305*	*17071906*	*17091404*	*18031203*	*18100415*	*19041503*	*19102104*	*20060801*	*20102605*	*21040504*	*21101203*
Boron, Total	mg/L	6.1	6.9	8.7	6.8	5.5	5.1	6.1	3.4	3.3	4.4	6.5	4.3	2.1	1.0	2.7	4.1	2.5
Calcium, Total	mg/L	120	135.0	181	140	114	116	137	79.9	71.9	102	163	105	56.8	35.6	81.9	126	87.8
Chloride	mg/L	117	159	193	149	125	142	153	102	97.6	137	289	158	104	71.8	164	211	193
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	5.01	5.41	5.5	5.34	5.03	4.97	4.92	4.84	4.57	5.23	5.06	5.41	5.16	4.87	6.19	4.89	4.95
Sulfate	mg/L	490	612	824	665	455	496	526	311	277	345	610	369	190	88.0	218	363	271
Total Dissolved Solids	mg/L	956	1130	1420	1130	788	891	1100	729	678	781	1150	831	494	198	512	970	744

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	03/15/18	10/04/18	04/16/19	10/22/19	06/09/20	10/28/20	04/06/21	10/12/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well 328A		*15102807*	*16012704*	*16042807*	*16072801*	*16101906*	*17011009*	*17041302*	*17071808*	*17091307*	*18031506*	*18100403*	*19041610*	*19102210*	*20060906*	*20102803*	*21040602*	*21101207*
Boron, Total	mg/L	8.3	10.2	7.8	6.8	2.9	4.8	4.9	5.8	2.9	6.0	5.2	4.9	3.1	5.6	6.2	2.9	1.5
Calcium, Total	mg/L	154	145	136	121	45.3	118	97.8	123	64.5	133	99.0	98.6	59.1	120	133	56.6	45.2
Chloride	mg/L	166	188	156	151	53.0	154	125	173	91.6	210	159	165	95.6	195	219	88.5	86.5
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	6.14	5.81	6.05	6.13	5.87	5.81	6	5.69	5.55	5.7	5.78	5.95	5.63	5.47	5.9	6.22	5.18
Sulfate	mg/L	614	696	608	564	165	467	635	449	206	481	376	380	206	416	461	174	143
Total Dissolved Solids	mg/L	1290	1290	1110	1070	334	887	802	1070	551	1010	878	920	550	1010	1120	498	478

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	03/14/18	10/04/18	04/18/19	10/23/19	06/10/20	10/28/20	04/07/21	10/13/21
Year-Quarter		2015-4	2016-1	2016-2	2016-3	2016-4	2017-1	2017-2	2017-3	2017-4	2018-2	2018-4	2019-2	2019-4	2020-2	2020-4	2021-2	2021-4
Parameter	Units																	
Well P-3/3R		*15102811*	*16012710*	*16042609*	*16072607*	*16102012*	*17011109*	*17041201*	*17072005*	*17091311*	*18031414*	*18100408*	*19041806*	*19102311*	*20061010*	*20102810*	*21040711*	*21101313*
Boron, Total	mg/L	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Calcium, Total	mg/L	3.1	2.9	3.2	3.0	3.0	3.0	3.0	3.0	3.4	3.2	3.2	2.6	2.2	3.2	3.1	2.8	2.7
Chloride	mg/L	11.5	12.6	12.4	10.9	11.9	10.6	10.8	11.5	12.4	12.0	11.9	9.5	9.7	10.9	12.7	10.4	30.7
Fluoride	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
pH	SU	5.22	5.06	5.24	5.41	5.12	5.43	4.98	5.03	4.26	5.23	4.66	5.03	4.69	4.67	5.86	4.92	4.50
Sulfate	mg/L	15.7	20.5	20.4	20.2	15.9	21.1	15.5	15.7	20.2	15.3	13.3	11.1	11.4	14.2	14.6	12.2	22.1
Total Dissolved Solids	mg/L	57	70	71	63	75	72	63	77	68	100	48	79	<25	71	57	70	76