

2019 LANDFILL GAS AND GROUNDWATER MONITORING REPORT

# BARRETT LANDFILL

21001 W Coffee Road, New Berlin, Wisconsin 53146 | January 2020



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# 1 SITE INFORMATION

The Barrett Landfill is located in the western portion of the City of New Berlin, in Waukesha County, Wisconsin. Figure 1 shows the location of the landfill and locations of the private wells. Figure 2 shows topography of the Site. The site can be accessed from two separate locations, one on Coffee Road and one on Swartz Road and has the following WDNR associated identification numbers:

**Site Address:** 21001 Coffee Road, New Berlin Wisconsin 53151

**Main Entrance Address:** 3601 S. Swartz Road, New Berlin, Wisconsin 53151

**FID (Facility Identification Number):** 268134130

**BRRTS Number:** 09-68-534609

**Solid Waste License Number:** 1940

## 1.1 SITE BACKGROUND

The 39-acre property was a gravel mining pit that was filled with waste once mining operations ceased. When operational, the landfill accepted a variety of wastes including industrial, construction and demolition, ash, foundry sand, asbestos, vehicle shredding fluff and tannery hides. Some waste was open burned.

A leachate collection system was installed in a portion of the landfill. The extent of this system was not documented nor was it constructed over an engineered liner, but likely over less permeable soils. Leachate from the system collects in a sump/lift station and is pumped to a collection tank near the main entrance on S. Swartz Road.

Monitoring of the landfill gas probes, groundwater monitoring wells and private water supply wells was last conducted in 2017 by Tetra Tech.

# 2 BIENNIAL MONITORING

Monitoring events at the Barrett Landfill occurs biennially, during the fall of odd-numbered years. During this monitoring event, twenty-nine gas probes, fifteen private water supply wells, and seventeen groundwater monitoring wells/piezometers were sampled by Kapur. Monitoring locations are provided on Figure 1. Field forms can be found in Appendix A. The monitoring results are included in the GEMS submittal for this monitoring event and are presented in Section 3.

## 2.1 LANDFILL GAS MONITORING

The objective of the landfill gas monitoring program is to monitor the concentration of the landfill gases at the site boundary to ensure that potential gas migration away from the site and towards nearby buildings does not pose a risk. Monitoring of the gas probes (GP-1 through GP-12) was completed on November 4, 2019. Landfill gas was measured at gas probes around the perimeter of the landfill. Twenty-nine measurements were collected from twelve gas probe locations. Majority of the gas probes are installed in clusters to provide monitoring of gas measurements at varying depths (S=Shallow, M=Medium, D=Deep). Currently, GP-4 and Gp-7 are listed in the monitoring plan, however these probes

have either been previously abandoned or lost. Information on each of the gas probes is provided on the field form in Appendix A.

The gas probes were analyzed for barometric and relative pressures, temperature, percent volume carbon dioxide (CO<sub>2</sub>), percent volume oxygen (O<sub>2</sub>), percent volume and percent lower explosive limit (LEL) methane (CH<sub>4</sub>). In addition, the gas probes will be screened using a photoionization detector (PID) when opened. Collection of measurements from the gas probes was conducted using a Landtec GEM 5000 Landfill Gas Meter and a MiniRae 3000 PID. Gas probe field monitoring forms are provided in Appendix A.

The monitoring results (barometric pressure, pressure trend, temperature, percent volume carbon dioxide (CO<sub>2</sub>), percent volume oxygen (O<sub>2</sub>), and percent LEL methane (CH<sub>4</sub>)) are included in the GEMS submittal for this monitoring event.

## 2.2 GROUNDWATER MONITORING WELLS

A total of sixteen (16) monitoring wells are included in the Operation and Maintenance Plan. Groundwater monitoring was conducted during November 2019, and in accordance with Sampling Analysis Plan (Kapur, 2019). Historic results were reviewed to determine a sampling order. Sampling was conducted from least contaminated, to most contaminated where accessibility permitted and within each well nest. The pump and tubing were decontaminated after each well using a trisodium phosphate (TSP) powder and distilled water and rinsed with distilled water.

Each well sampled using low-flow sampling techniques, utilizing a submersible Proactive Monsoon pump (used with a flow control regulator) and 3/8" vinyl tubing to purge each well. The initial temperature (°C), pH (units), conductivity (25°C), oxidation reduction potential (ORP), Dissolved Oxygen (DO) (mg/L and %) were recorded, and sampling was conducted when three consecutive readings have become stable within 10% of each parameter.

Wells that had significant drawdown (greater than 1 foot), were purged of 3 well casing volumes. Once desired volume was purged, the pump was left in the well until the water recharged enough to be sampled. Temperature, specific conductivity and pH were measured using a handheld Hanna meter. Olfactory color, odor and turbidity was recorded.

All samples were collected using the Proactive Monsoon pump. All purge water that had exceeded a ch. NR 140 standard during the 2017 sampling event, and all water used in decontamination procedures was disposed of in the leachate storage tank on the eastern portion of the Site.

Each well was sampled for metals (arsenic, lead, nickel, manganese, magnesium, chromium), chloride, sulfates, total kjeldahl nitrogen (TKN), and nitrate plus nitrite. A disposable 0.45-micron filter was connected to the end of the discharge tubing for the samples to be field filtered. Due to a miscount of field filters by the field staff, monitoring wells B-96-18A and B-96-18B were filtered in the lab prior to analysis (instead of in the field).

The following laboratory provided bottles were field filtered (using a disposable, in-line 0.45-micron filter) for the following grouping of samples:



- 250 mL plastic HNO<sub>3</sub> - Metals (As, Pb, Ni, Mn, Mg, Cr)
- 250 mL plastic Unpreserved - Chloride, Sulfate
- 250 mL plastic H<sub>2</sub>SO<sub>4</sub> - Nitrate plus Nitrate, TKN

One duplicate sample, one field blank and one equipment blank was collected during sampling of the groundwater monitoring wells. The duplicate sample was collected at B-94-25. The field blank was collected by filling sampling containers with distilled water. The equipment blank was collected at the completion of sampling. The pump was decontaminated, connected to the same tubing that was used during the sampling event, and placed in a jug of distilled water. The pump was turned on and sample bottles were filled with the distilled water.

All samples were brought back to the Kapur office where they were picked up by a courier, and brought to the Pace Analytical in Green Bay, Wisconsin for analysis.

## 2.3 GROUNDWATER ELEVATION

The depth to water was measured at all monitoring wells that are included in the sampling plan using a Heron Dipper-T Water Level Indicator. Measurements were recorded to the nearest 0.01 foot. The water level indicator was rinsed with distilled water in between each location. The water was contained and disposed of in the leachate storage tank with the other decontamination water.

## 2.4 PRIVATE WATER SUPPLY WELLS

Monitoring of private water supply wells was conducted during November 2019.

Prior to sampling, letters were sent out by Kapur to notify the property owner of the sampling event. In the letter it urged the property owner to contact Kapur to schedule sampling of their private water supply well. If no response from the property owner was received, Kapur stopped by the residence and hand delivered a second letter. If property owner was home, sampling was conducted at that time.

Three property owners were unresponsive: Schmidt (GEMS ID 952), Rhyner (GEMS ID 240), and Munoz (GEMS ID 237). Since the Schmidt (GEMS ID 952) and Rhyner (GEMS ID 240) residences had not changed ownership since the last sampling event, under the WDNR discretion, a trip was made to the properties and samples were obtained from outdoor spigots. The Munoz (GEMS ID 237) residence is under new ownership since the last sampling event, and the home is under construction. A sample from this private water supply well was not obtained at the time of this report.

Samples were collected from either an outdoor spigot or the closest location to the pump inside the home (without going through treatment devices). The spigot or a faucet inside the home were turned on for 20 minutes (or until a minimum of 50 gallons had been purged from the well).

Each well was sampled for metals (arsenic, lead, chromium, manganese, magnesium), chloride, and nitrate plus nitrite. The following laboratory provided bottles will be field filtered for the following grouping of samples:

- 250 mL plastic HNO<sub>3</sub> - Metals (As, Pb, Cr, Mn, Mg)
- 250 mL plastic Unpreserved - Chloride
- 250 mL plastic H<sub>2</sub>SO<sub>4</sub> - Nitrate plus Nitrate

Samples were collected by filling the bottles directly from a spigot/faucet nearest to where the well water enters the home. If collected inside, this location may be different from the purge location. If collected from an outdoor spigot, the hose that was used to run the water away from the home was detached from the spigot, and the sample was collected directly from the spigot. The hose at the Rhyner (GEMS ID 240) residence would not detach from the spigot, so the sample was collected from the end of the hose instead of directly from the spigot. A duplicate sample was collected from the Whitehaus (GEMS ID 242) well. Temperature, specific conductivity and pH were measured using a handheld Hanna meter. Olfactory color, odor and turbidity was recorded.

All samples were brought back to the Kapur office where they were picked up by a courier, and brought to the Pace Analytical in Green Bay, Wisconsin for analysis.

After receipt of the laboratory results, letters were drafted to each property owner (and approved by the WDNR) with the results of sampling and an explanation of results included.

### 3 RESULTS

#### 3.1 LANDFILL GAS MONITORING RESULTS

During monitoring activities, the background methane was reading 0.2% volume (4.0% LEL). The landfill gas meter had recently been sent in for factory calibration, and per the manufacturer, the 0.2% volume is within calibration limits. No methane above the background level (0.2% volume/4.0% LEL) was detected in any of the monitoring points. No PID readings were detected above 0.0 parts per million (ppm).

#### 3.2 GROUNDWATER MONITORING WELL RESULTS

Groundwater samples were collected from seventeen (17) onsite groundwater monitoring wells/piezometers. The analytical results indicated that chloride, arsenic and manganese are elevated and exceed the associated ch. NR 140 Enforcement Standard (ES), additionally sulfate and nitrogen (NO<sub>2</sub> plus NO<sub>3</sub>) exceed the associated ch. NR 140 Preventive Action Limit (PAL). Chromium, lead and nickel had no exceedances of any ch. NR 140 standard. Magnesium and TKN do not have established standards.

##### Chloride

Chloride was detected exceeding the ES of 250 mg/L in one location:

- W-24 (GEMS ID 263)

Chloride was detected exceeding the PAL of 125 mg/L in five locations:

- W-23A (GEMS ID 260)
- B-94-19A (GEMS ID 904)
- B-94-25A (906)
- B-96-18A (915)
- B-96-18B (GEMS ID 916)

##### Sulfate

Sulfate was not detected exceeding the ES of 250 mg/L in any location sampled.

Sulfate was detected exceeding the PAL of 125 mg/L in three locations:

- W-23A (GEMS ID 260)
- B-94-14A (GEMS ID 903)
- B-96-13A (GEMS ID 911)

### **Nitrogen (NO<sub>2</sub> plus NO<sub>3</sub>)**

Nitrogen (NO<sub>2</sub> plus NO<sub>3</sub>) was not detected exceeding the ES of 10 mg/L in any location sampled.

Nitrogen (NO<sub>2</sub> plus NO<sub>3</sub>) was detected exceeding the PAL of 2.0 mg/L in two locations:

- W-24 (GEMS ID 263)
- B-96-17 (GEMS ID 913)
- B-96-18A (GEMS ID 915)
- B-96-18B (GEMS ID 916)

### **Arsenic**

Arsenic was detected exceeding the ES of 10 ug/L in two locations:

- B-15 (GEMS ID 225)
- B-94-25A (GEMS ID 906)

Arsenic was not detected exceeding the PAL of 1.0 ug/L in any of the other locations sampled.

### **Manganese**

Manganese was detected exceeding the ES of 300 ug/L in one location:

- B-21 (GEMS ID 252).

Manganese was detected exceeding the PAL of 60 ug/L in three locations:

- B-15 (GEMS ID 225)
- B-15A (GEMS ID 251)
- B-96-13A (GEMS ID 911)

Monitoring wells B-21A (GEMS ID 253), W-23 (GEMS ID 259), B-94-14R (GEMS ID 902), B-94-25 (GEMS ID 905) and B-96-17A (GEMS ID 914) had no exceedances of any ch. NR 140 standard. Analytical results are presented on Figure 2. Laboratory reports are presented in Appendix B.

## **3.3 GROUNDWATER ELEVATION**

The depth to water was measured at all monitoring wells that are included in the sampling plan. Most of the monitoring wells in the monitoring plan are located within well nests (clusters) around the site and extend to different depths, shallow and deep. Using the shallower of the two wells, and any stand-alone wells, the groundwater elevations were plotted on Figure 4. The general groundwater flow is to the north.

## **3.4 PRIVATE WATER SUPPLY WELL RESULTS**

Water samples were collected from fourteen (14) private water supply wells at properties near or adjacent to the Barrett Landfill. The analytical results indicated that arsenic and chromium are elevated and exceed the associated ch. NR 140 Enforcement Standard (ES), additionally lead and manganese exceed the associated ch. NR 140 Preventive Action Limit (PAL). Magnesium and nitrogen (NO<sub>2</sub> plus NO<sub>3</sub>) had no exceedances of any ch. NR 140 standard.

### **Chloride**

Chloride was detected exceeding the ES of 250 mg/L in one location:

- Servi (GEMS ID 239)

Chloride was detected exceeding the PAL of 125 mg/L in one location:

- Sri Lakshmi Narashimha Temple (GEMS ID 950)

### **Arsenic**

Arsenic was detected exceeding the ES of 10.0 ug/L in one location:

- Meyer (GEMS ID 238)

Arsenic was detected exceeding the PAL of 1.0 ug/L:

- Sanfelippo (GEMS ID 236)
- Rhyner (GEMS ID 240)
- Kowis (GEMS ID 246)
- Sri Lakshmi Narashimha Temple (GEMS ID 950)
- Sanchez (GEMS ID 951)
- Schmidt (GEMS ID 952)
- Christiansen (GEMS ID 953)

### **Chromium**

Chromium was not detected exceeding the ES of 100 ug/L in any location sampled.

Chromium was detected exceeding the PAL of 10.0 ug/L in one location:

- Meyer (GEMS ID 238)

### **Lead**

Lead was not detected exceeding the ES of 15 ug/L in any location sampled.

Lead was detected exceeding the PAL of 1.5 ug/L in three locations:

- Meyer (GEMS ID 238)
- Rhyner (GEMS ID 240)
- Sanchez (GEMS ID 951)

### **Manganese**

Manganese was not detected exceeding the ES of 300 ug/L in any location sampled.

Manganese was detected exceeding the PAL of 60 ug/L in two location:

- Sanfelippo (GEMS ID 236)
- Sri Lakshmi Narashimha Temple (GEMS ID 950)

Private water supply wells at the Berghammer (GEMS ID 245), Heun (GEMS ID 241), Schmidt (GEMS ID 952), Servi (GEMS ID 239), Werning (GEMS ID 244), Whitehaus (GEMS ID 242) and Wyszowski (GEMS ID 243) residences had no exceedances of any ch. NR 140 Public Health standard. A sample was not obtained by the time of this report from the private water supply well at the Munoz (GEMS ID 237) residence. In the event where the property owner contacts Kapur, sampling will be scheduled, and those results will be reported at that time. Analytical results are presented on Figure 3. Laboratory reports are presented in Appendix B.

## 4 CONCLUSION

Based off the 2019 gas and groundwater monitoring findings, these results are consistent with historical results and are showing a general stable trend in concentrations. All results within this report are included in the GEMS submittal.



## FIGURES



PROJECT:  
**BARRETT LANDFILL PROJECT**

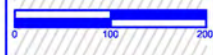
LOCATION:  
**NEW BERLIN, WISCONSIN**

CLIENT:

NORTH ARROW:



SCALE: 1" = 200'



SEAL:

all in

SHEET:  
**SITE LAYOUT**

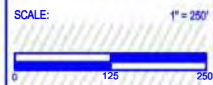
DESIGNED BY: XXX  
DRAWN BY: XXX  
CHECKED BY: XXX  
APPROVED BY: XXX  
DATE: 12/09/2019

PROJECT NO: 190007.01  
FIGURE:



- LEGEND**
- GP-3▼ GAS PROBE
  - PRIVATE WELL● PRIVATE WELL
  - LHW-2⊕ LEACHATE HEAD WELL
  - MW-1⊕ MONITORING WELL
  - GV-136○ GAS VENT





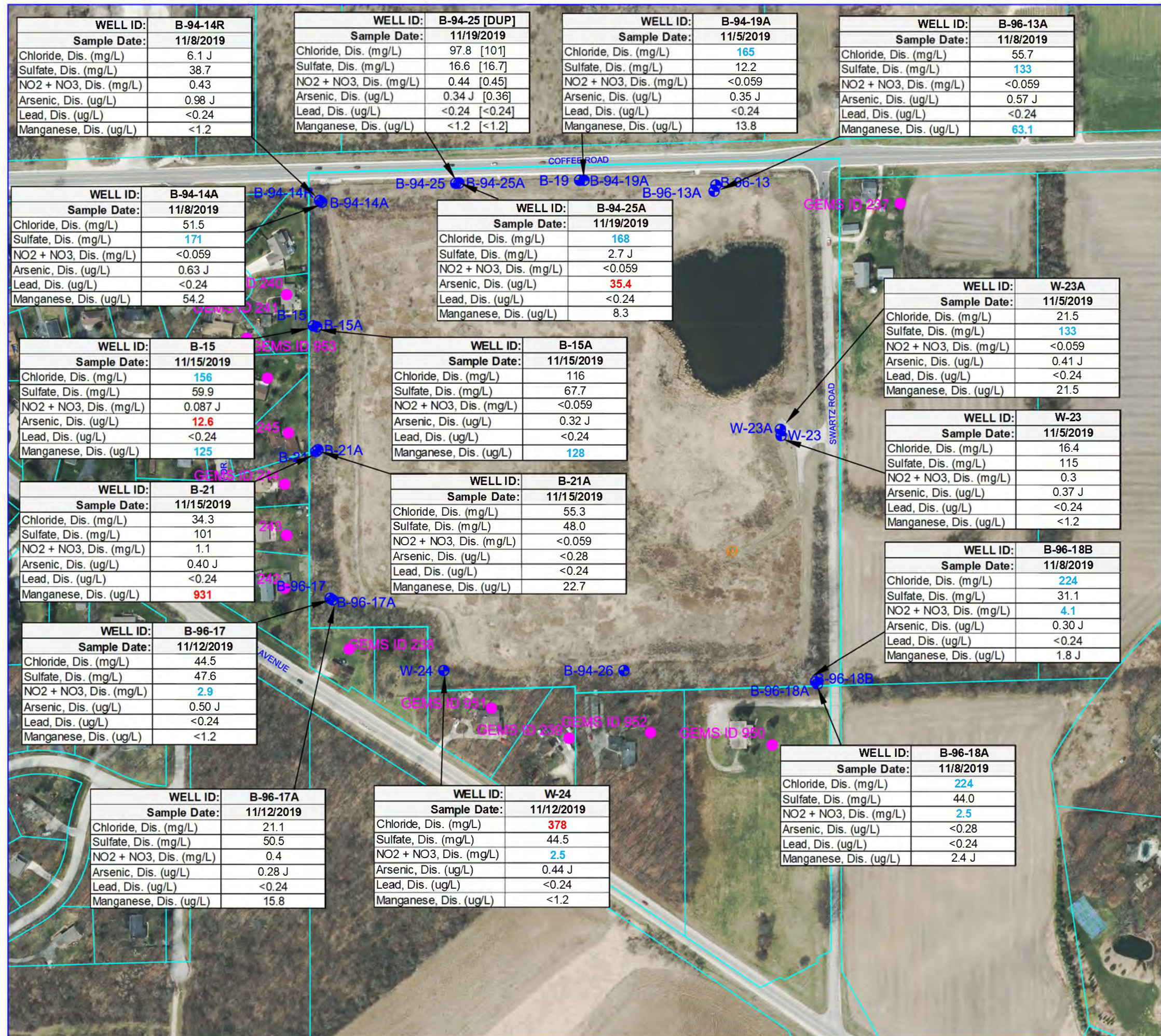
SEAL:

all in

SHEET:  
**GROUNDWATER QUALITY - LANDFILL WELLS**

DESIGNED BY: XXX  
DRAWN BY: XXX  
CHECKED BY: XXX  
APPROVED BY: XXX  
DATE: 12/09/2019

PROJECT NO. 180007.01  
FIGURE:



**LEGEND**

PRIVATE WELL ● PRIVATE WELL

MW-1 ● MONITORING WELL



PROJECT:  
**BARRETT LANDFILL PROJECT**

LOCATION:  
**NEW BERLIN, WISCONSIN**

CLIENT:

NORTH ARROW:



SCALE: 1" = 250'

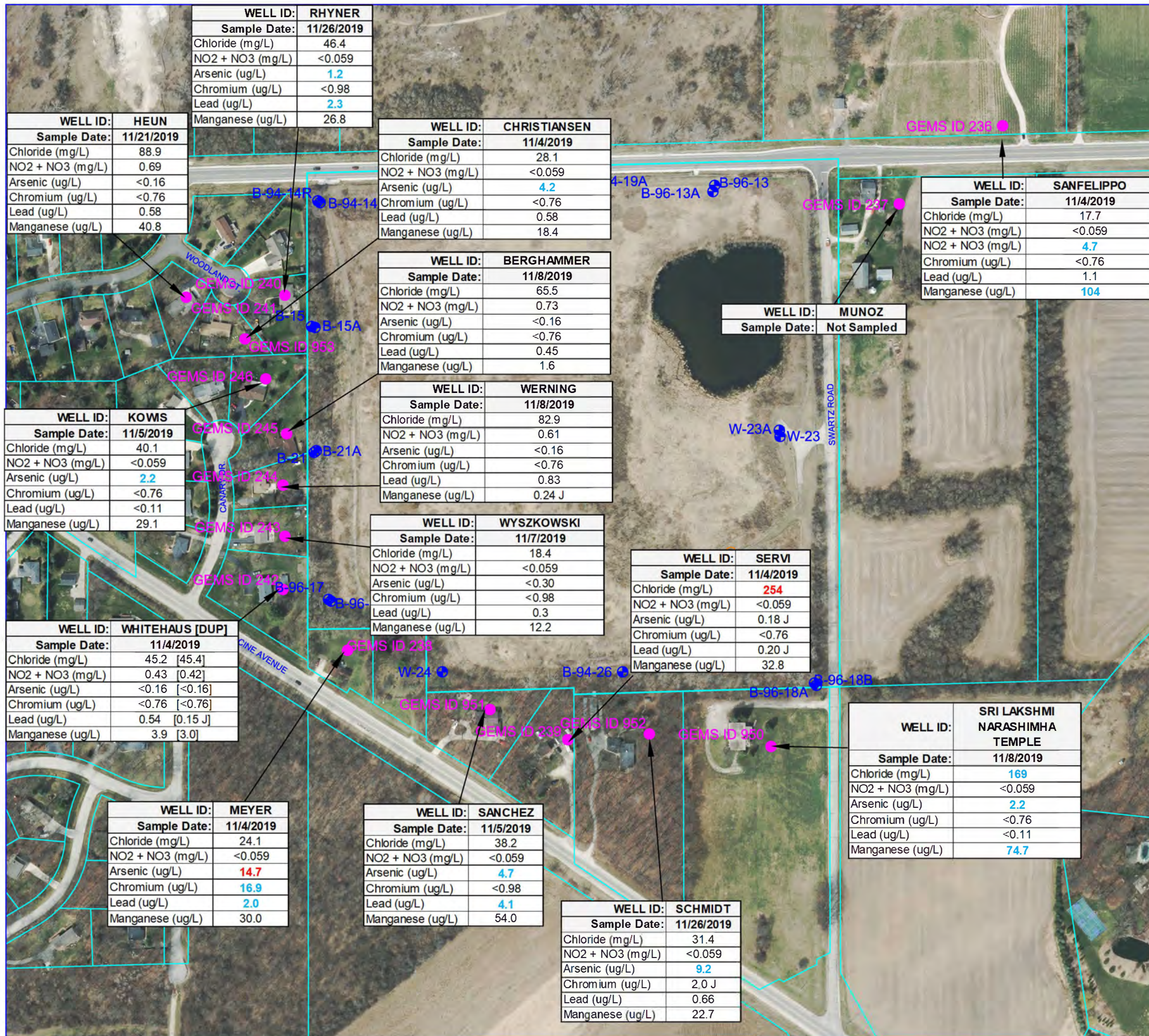
SEAL:

all in

SHEET:  
**GROUNDWATER QUALITY - PRIVATE WELLS**

DESIGNED BY: XXX  
 DRAWN BY: XXX  
 CHECKED BY: XXX  
 APPROVED BY: XXX  
 DATE: 12/09/2019

PROJECT NO. 190007.01  
 FIGURE:



<b>WELL ID: RHYNER</b>	
<b>Sample Date: 11/26/2019</b>	
Chloride (mg/L)	46.4
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	1.2
Chromium (ug/L)	<0.98
Lead (ug/L)	2.3
Manganese (ug/L)	26.8

<b>WELL ID: HEUN</b>	
<b>Sample Date: 11/21/2019</b>	
Chloride (mg/L)	88.9
NO2 + NO3 (mg/L)	0.69
Arsenic (ug/L)	<0.16
Chromium (ug/L)	<0.76
Lead (ug/L)	0.58
Manganese (ug/L)	40.8

<b>WELL ID: CHRISTIANSEN</b>	
<b>Sample Date: 11/4/2019</b>	
Chloride (mg/L)	28.1
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	4.2
Chromium (ug/L)	<0.76
Lead (ug/L)	0.58
Manganese (ug/L)	18.4

<b>WELL ID: SANFELIPPO</b>	
<b>Sample Date: 11/4/2019</b>	
Chloride (mg/L)	17.7
NO2 + NO3 (mg/L)	<0.059
NO2 + NO3 (mg/L)	4.7
Chromium (ug/L)	<0.76
Lead (ug/L)	1.1
Manganese (ug/L)	104

<b>WELL ID: MUNOZ</b>	
<b>Sample Date: Not Sampled</b>	

<b>WELL ID: BERGHAMMER</b>	
<b>Sample Date: 11/8/2019</b>	
Chloride (mg/L)	65.5
NO2 + NO3 (mg/L)	0.73
Arsenic (ug/L)	<0.16
Chromium (ug/L)	<0.76
Lead (ug/L)	0.45
Manganese (ug/L)	1.6

<b>WELL ID: WERNING</b>	
<b>Sample Date: 11/8/2019</b>	
Chloride (mg/L)	82.9
NO2 + NO3 (mg/L)	0.61
Arsenic (ug/L)	<0.16
Chromium (ug/L)	<0.76
Lead (ug/L)	0.83
Manganese (ug/L)	0.24 J

<b>WELL ID: KOWIS</b>	
<b>Sample Date: 11/5/2019</b>	
Chloride (mg/L)	40.1
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	2.2
Chromium (ug/L)	<0.76
Lead (ug/L)	<0.11
Manganese (ug/L)	29.1

<b>WELL ID: WYSZKOWSKI</b>	
<b>Sample Date: 11/7/2019</b>	
Chloride (mg/L)	18.4
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	<0.30
Chromium (ug/L)	<0.98
Lead (ug/L)	0.3
Manganese (ug/L)	12.2

<b>WELL ID: SERVI</b>	
<b>Sample Date: 11/4/2019</b>	
Chloride (mg/L)	254
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	0.18 J
Chromium (ug/L)	<0.76
Lead (ug/L)	0.20 J
Manganese (ug/L)	32.8

<b>WELL ID: WHITEHAUS [DUP]</b>	
<b>Sample Date: 11/4/2019</b>	
Chloride (mg/L)	45.2 [45.4]
NO2 + NO3 (mg/L)	0.43 [0.42]
Arsenic (ug/L)	<0.16 [<0.16]
Chromium (ug/L)	<0.76 [<0.76]
Lead (ug/L)	0.54 [0.15 J]
Manganese (ug/L)	3.9 [3.0]

<b>WELL ID: SRI LAKSHMI NARASHIMHA TEMPLE</b>	
<b>Sample Date: 11/8/2019</b>	
Chloride (mg/L)	169
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	2.2
Chromium (ug/L)	<0.76
Lead (ug/L)	<0.11
Manganese (ug/L)	74.7

<b>WELL ID: MEYER</b>	
<b>Sample Date: 11/4/2019</b>	
Chloride (mg/L)	24.1
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	14.7
Chromium (ug/L)	16.9
Lead (ug/L)	2.0
Manganese (ug/L)	30.0

<b>WELL ID: SANCHEZ</b>	
<b>Sample Date: 11/5/2019</b>	
Chloride (mg/L)	38.2
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	4.7
Chromium (ug/L)	<0.98
Lead (ug/L)	4.1
Manganese (ug/L)	54.0

<b>WELL ID: SCHMIDT</b>	
<b>Sample Date: 11/26/2019</b>	
Chloride (mg/L)	31.4
NO2 + NO3 (mg/L)	<0.059
Arsenic (ug/L)	9.2
Chromium (ug/L)	2.0 J
Lead (ug/L)	0.66
Manganese (ug/L)	22.7

**LEGEND**

- PRIVATE WELL ● PRIVATE WELL
- MW-10 ● MONITORING WELL



PROJECT:  
**BARRETT LANDFILL  
PROJECT**

LOCATION:  
**NEW BERLIN,  
WISCONSIN**

CLIENT:

NORTH ARROW:



SCALE: 1" = 200'



SEAL:

all in

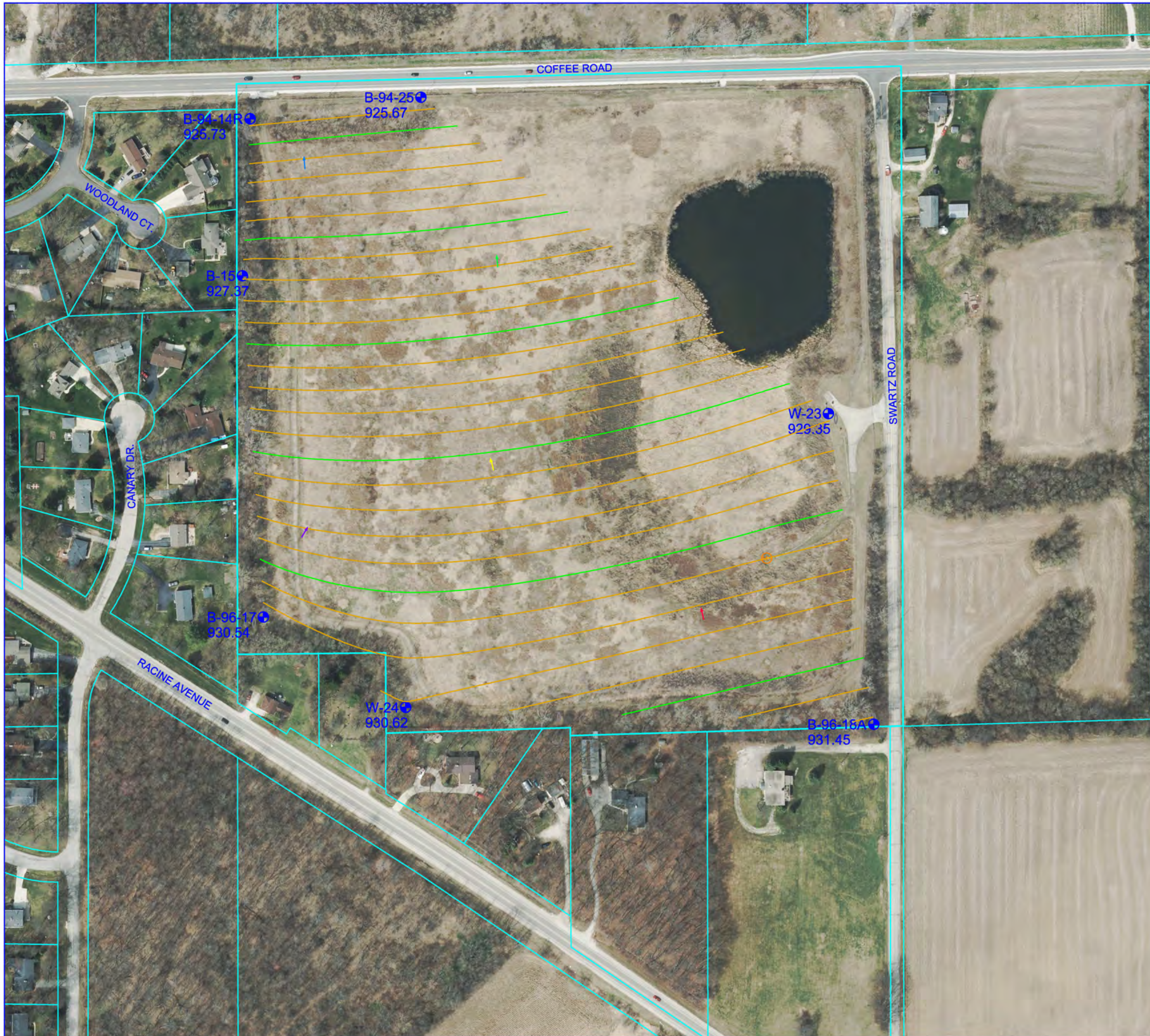
SHEET:  
**GROUNDWATER  
ELEVATION**

DESIGNED BY: XXX  
DRAWN BY: XXX  
CHECKED BY: XXX  
APPROVED BY: XXX  
DATE: 12/09/2019

PROJECT NO. 190007.01

FIGURE:

**4**





## **TABLES**



Table A.1: Groundwater Analytical Results  
Barrett Landfill  
21001 West Coffee Road, New Berlin, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	B-96-13A	B-94-14R	B-94-14A	B-15	B-15A	B-21	B-21A	B-96-17	B-96-17A	B-96-18A	B-96-18B	B-94-19A	B-94-25
		Sample Date		11/8/2019	11/8/2019	11/8/2019	11/15/2019	11/15/2019	11/15/2019	11/15/2019	11/12/2019	11/12/2019	11/8/2019	11/8/2019	11/5/2019	11/19/2019
		GEMS ID		911	902	903	225	251	252	253	913	914	915	916	904	905
<b>Indicator Parameters</b>																
Chloride, Dissolved	mg/L	<b>250</b>	<b>125</b>	55.7	6.1 J	51.5	<b>156</b>	116	34.3	55.3	44.5	21.1	<b>224</b>	<b>224</b>	<b>165</b>	97.8
Sulfate, Dissolved	mg/L	<b>250</b>	<b>125</b>	<b>133</b>	38.7	<b>171</b>	59.9	67.7	101	48.0	47.6	50.5	44.0	31.1	12.2	16.6
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	NS	NS	<0.22	0.23 J	0.54 J	1.6	<0.22	<0.22	<0.22	0.32 J	<0.22	<0.22	<0.22	1.2	0.35 J
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<b>10</b>	<b>2.0</b>	<0.059	0.43	<0.059	0.087 J	<0.059	1.1	<0.059	<b>2.9</b>	0.4	<b>2.5</b>	<b>4.1</b>	<0.059	0.44
Arsenic, Dissolved	ug/L	<b>10</b>	<b>1.0</b>	0.57 J	0.98 J	0.63 J	<b>12.6</b>	0.32 J	0.40 J	<0.28	0.50 J	0.28 J	<0.28	0.30 J	0.35 J	0.34 J
Chromium, Dissolved	ug/L	<b>100</b>	<b>10</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lead, Dissolved	ug/L	<b>15</b>	<b>1.5</b>	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
Magnesium, Dissolved	mg/L	NS	NS	57	39.4	66.8	74.2	53.1	62.2	40.4	41	50.1	61.2	46.9	60.5	25
Manganese, Dissolved	ug/L	<b>300</b>	<b>60</b>	<b>63.1</b>	<1.2	54.2	<b>125</b>	<b>128</b>	<b>931</b>	22.7	<1.2	15.8	2.4 J	1.8 J	13.8	<1.2
Nickel, Dissolved	ug/L	<b>100</b>	<b>20</b>	1.7	1.5	1.1	2.2	0.35 J	14.5	0.98 J	0.67 J	0.82 J	0.35 J	4.3	0.76 J	0.70 J
<b>Field Parameters</b>																
Apparent Color	no units			None	None	None	None	None	None	None	None	None	None	None	None	None
Field Specific Conductance	umhos/cm			1048	858	1035	1275	1055	1091	856	968	839	1408	1297	1086	809
Field pH	Std. Units			7.28	7	7.35	7.07	7.57	7.13	7.41	7.08	6.99	7.13	7.26	7.44	7.43
Odor	no units			None	None	None	None	None	None	None	None	None	None	None	None	None
Groundwater Elevation	feet			913.27	925.73	925.47	927.37	924.37	929.83	929.82	930.54	930.22	931.45	931.57	916.97	925.67
Temperature, Water (C)	deg C			11.1	6.9	4.9	10.1	8	9.9	8.7	5.4	8.9	9.7	9.5	13.7	12
Turbidity	NTU			None	None	None	None	None	None	None	None	None	None	None	None	None

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

NS = No Standard

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.





Table A.1: Groundwater Analytical Results  
Barrett Landfill  
21001 West Coffee Road, New Berlin, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	B-94-25 DUP	B-94-25A	W-23	W-23A	W-24
		Sample Date		11/19/2019	11/19/2019	11/5/2019	11/5/2019	11/12/2019
		GEMS ID		905	906	259	260	263
<b>Indicator Parameters</b>								
Chloride, Dissolved	mg/L	<b>250</b>	<b>125</b>	101	<b>168</b>	16.4	21.5	<b>378</b>
Sulfate, Dissolved	mg/L	<b>250</b>	<b>125</b>	16.7	2.7 J	115	<b>133</b>	44.5
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	NS	NS	0.31 J	2.8	<0.22	<0.22	<0.22
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<b>10</b>	<b>2.0</b>	0.45	<0.059	0.3	<0.059	<b>2.5</b>
Arsenic, Dissolved	ug/L	<b>10</b>	<b>1.0</b>	0.36 J	<b>35.4</b>	0.37 J	0.41 J	0.44 J
Chromium, Dissolved	ug/L	<b>100</b>	<b>10</b>	<1.0	<1.0	<1.0	<1.0	<1.0
Lead, Dissolved	ug/L	<b>15</b>	<b>1.5</b>	<0.24	<0.24	<0.24	<0.24	<0.24
Magnesium, Dissolved	mg/L	NS	NS	26.6	61.5	45.6	53.6	58.2
Manganese, Dissolved	ug/L	<b>300</b>	<b>60</b>	<1.2	8.3	<1.2	21.5	<1.2
Nickel, Dissolved	ug/L	<b>100</b>	<b>20</b>	0.76 J	0.64 J	0.42 J	0.76 J	2.9
<b>Field Parameters</b>								
Apparent Color	no units			None	None	None	None	None
Field Specific Conductance	umhos/cm			809	1189	776	959	1830
Field pH	Std. Units			7.43	7.69	7.33	7.25	7.34
Odor	no units			None	None	None	None	None
Groundwater Elevation	feet			925.67	925.44	929.35	923.38	930.62
Temperature, Water (C)	deg C			12	10.3	11.5	12.5	9.7
Turbidity	NTU			None	None	None	None	None

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

NS = No Standard

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.



Table A.1.i: Groundwater Analytical Results  
Barrett Landfill  
21001 West Coffee Road, New Berlin, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	BERGHAMMER	CHRISTIANSEN	HEUN	KOWIS	MEYER	RHYNER	SANCHEZ
			Sample Date	11/8/2019	11/4/2019	11/21/2019	11/5/2019	11/4/2019	11/26/2019	11/5/2019
			GEMS ID	245	953	241	246	238	240	951
			Private Well Address	3600 S. Canary Rd	3551 S. Woodland Ct.	3561 S. Woodland Ct.	3540 S. Canary Rd	3690 S. Racine Ave	3640 S. Woodland Ct.	3720 S. Racine Ave
<b>Indicator Parameters</b>										
Chloride	mg/L	<b>250</b>	<b>125</b>	65.5	28.1	88.9	40.1	24.1	46.4	38.2
Nitrogen, NO2 plus NO3	mg/L	<b>10</b>	<b>2.0</b>	0.73	<0.059	0.69	<0.059	<0.059	<0.059	<0.059
Arsenic	ug/L	<b>10</b>	<b>1.0</b>	<0.16	<b>4.2</b>	<0.16	<b>2.2</b>	<b>14.7</b>	<b>1.2</b>	<b>4.7</b>
Chromium	ug/L	<b>100</b>	<b>10</b>	<0.76	<0.76	<0.76	<0.76	<b>16.9</b>	<0.98	<0.98
Lead	ug/L	<b>15</b>	<b>1.5</b>	0.45	0.58	0.58	<0.11	<b>2.0</b>	<b>2.3</b>	<b>4.1</b>
Magnesium	mg/L	NS	NS	37.7	44.2	40.8	43.2	45.2	48.2	45.6
Manganese	ug/L	<b>300</b>	<b>60</b>	1.6	18.4	40.8*	29.1*	30.0*	26.8*	54.0**
<b>Field Parameters</b>										
Apparent Color	no units			None	None	None	None	None	None	None
Field Specific Conductance	umhos/cm			834	1,092	943	902	796	850	777
Field pH	Std. Units			7.53	7.35	7.55	7.52	7.43	7.4	7.53
Odor	no units			None	None	None	None	None	None	None
Temperature, Water (C)	deg C			9.6	10.7	12.1	12.4	11.5	9.6	10.5
Turbidity	NTU			None	None	None	None	None	None	None

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

NS = No Standard

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

\*= exceeds manganese Public Welfare Preventive Action Limits (25 ug/L)

\*\*= exceeds manganese Public Welfare Enforcement Standards (50 ug/L)



Table A.1.i: Groundwater Analytical Results  
Barrett Landfill  
21001 West Coffee Road, New Berlin, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	SANFELIPPO	SCHMIDT	SERVI	SRI LAKSHMI NARASHIMHA TEMPLE	WERNING	WHITEHAUS	WHITEHAUS DUP	WYSZKOWSKI
			Sample Date	11/4/2019	11/26/2019	11/4/2019	11/8/2019	11/8/2019	11/4/2019		11/7/2019
			GEMS ID	236	952	239	950	244	242		243
			Private Well Address	200770 W. Coffee Rd	3770 S. Racine Ave	3730 S. Racine Ave	3800 Swartz Rd.	3620 S. Canary Rd	3640 S. Canary Rd		3630 S. Canary Rd
<b>Indicator Parameters</b>											
Chloride	mg/L	<b>250</b>	<b>125</b>	17.7	31.4	<b>254</b>	<b>169</b>	82.9	45.2	45.4	18.4
Nitrogen, NO2 plus NO3	mg/L	<b>10</b>	<b>2.0</b>	<0.059	<0.059	<0.059	<0.059	0.61	0.43	0.42	<0.059
Arsenic	ug/L	<b>10</b>	<b>1.0</b>	<b>4.7</b>	<b>9.2</b>	0.18 J	<b>2.2</b>	<0.16	<0.16	<0.16	<0.30
Chromium	ug/L	<b>100</b>	<b>10</b>	<0.76	2.0 J	<0.76	<0.76	<0.76	<0.76	<0.76	<0.98
Lead	ug/L	<b>15</b>	<b>1.5</b>	1.1	0.66	0.20 J	<0.11	0.83	0.54	0.15 J	0.3
Magnesium	mg/L	NS	NS	40.8	45.7	54.6	47.2	43.8	51.5	49.9	43.9
Manganese	ug/L	<b>300</b>	<b>60</b>	<b>104</b>	22.7	32.8*	<b>74.7</b>	0.24 J	3.9	3.0	12.2
<b>Field Parameters</b>											
Apparent Color	no units			N	N	N	N	N	N	N	N
Field Specific Conductance	umhos/cm			1,422	779	1,685	1,107	951	1,310	1,310	785
Field pH	Std. Units			7.37	7.66	7.3	7.77	7.44	7.15	7.15	7.43
Odor	no units			Some	None	None	None	None	None	None	None
Temperature, Water (C)	deg C			11.9	9.1	11.2	11.5	8.2	11.3	11.3	11.1
Turbidity	NTU			None	None	None	None	None	None	None	None

NOTES:  
 Only analytes with a detection in at least one sample are shown  
 NA = Not Analyzed  
 NS = No Standard  
 ug/kg = micrograms per kilogram  
 Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**  
 Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**  
 J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
 \* = exceeds manganese Public Welfare Preventive Action Limits (25 ug/L)  
 \*\* = exceeds manganese Public Welfare Enforcement Standards (50 ug/L)

**APPENDIX A**  
**FIELD FORMS**



KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	W-23	START PURGE TIME	1045
SAMPLE DATE	11-5-19	END PURGE TIME	1105
SAMPLE TIME	1110	KEY NUMBER	
DEPTH TO WATER (ft)	55.89	PURGE VOLUME (gal)	6.5
DEPTH TO BOTTOM (ft)	67.71	PURGE METHOD	Proactive Pump
1 CASING VOLUME (gal)	-	SAMPLING METHOD	↓
3 CASING VOLUME (gal)	-	SAMPLING DEPTH	66.5

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (µS/cm)	pH (units)	ORP (mV)
1050	5	10.4	55.5	6.19	792	6.98	140.2
1053	8	10.9	49.6	5.46	759	7.17	131.1
1056	11	11.3	46.0	5.02	766	7.23	126.7
1059	14	10.9	44.4	4.89	772	7.29	123.3
1101	16	11.3	43.0	4.69	775	7.30	121.1
1103	18	11.5	41.1	4.49	775	7.32	119.3
1104	19	11.5	41.0	4.48	776	7.33	119.0

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)  
 Ysi died right when stable  
 clear, none, clear  
 0.34 g/min

SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes









KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-94-19A	START PURGE TIME	1240
SAMPLE DATE	11-5-19	END PURGE TIME	
SAMPLE TIME	13:05	KEY NUMBER	2258
DEPTH TO WATER (ft)	42.79 / 42.85	PURGE VOLUME (gal)	4.0
DEPTH TO BOTTOM (ft)	79.55	PURGE METHOD	Proactive Pump
1 CASING VOLUME (gal)	-	SAMPLING METHOD	
PURGE RATE (gal/min)	NM	SAMPLING DEPTH	78.0

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (µS/cm)	pH (units)	ORP (mV)
1243	3	12.8	-	-	1078	7.55	-
1248	8	11.8	-	-	1094	7.98	-
<del>1253</del>	<del>13</del>						
1256	16	13.0	-	-	1093	7.54	-
1258	18	13.4	-	-	1093	7.47	-
1300	20	14.4	-	-	1092	7.45	-
1302	22	13.7	-	-	1086	7.44	-

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)  
 ysi was dead, used hanna

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate 1-250 mL; P; None; Yes

Metals (As, Pb, Ni, Mn, Mg, Cr) 1-250 mL; P; HNO<sub>3</sub>; Yes

Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN) 1-250 mL; P; H<sub>2</sub>SO<sub>4</sub>; Yes

B-19  
 42.78 ~~75.10~~



KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	YSI
LOCATION	New Berlin, WI		Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-96-18A	START PURGE TIME	9:42
SAMPLE DATE	11-8-19	END PURGE TIME	10:05
SAMPLE TIME	10:10	KEY NUMBER	2258
DEPTH TO WATER (ft)	42.42	PURGE VOLUME (gal)	4.5
DEPTH TO BOTTOM (ft)	59.40	PURGE METHOD	pump
1 CASING VOLUME (gal)	-	SAMPLING METHOD	↓
3 CASING VOLUME (gal)	-	SAMPLING DEPTH	58

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
9:55	13	6.6	85.9	10.49	1406	6.93	169.3
10:00	18	10.0	83.3	9.39	1408	7.09	164.3
10:02	20	9.8	81.3	9.13	1410	7.12	164.6
10:09	<del>21</del> 21	9.7	80.9	9.15	1405	7.12	166.0
10:09	<del>22</del> 22	9.7	80.4	9.09	1408	7.13	165.2

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)  
 Clear, none, clear  
 Brush was around well nest upon arrival - dumped from someone

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate 1-250 mL; P; None; Yes, ~~NO~~ \* NOT field filtered

Metals (As, Pb, Ni, Mn, Mg, Cr) 1-250 mL; P; HNO<sub>3</sub>; Yes, ~~NO~~

Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN) 1-250 mL; P; H<sub>2</sub>SO<sub>4</sub>; Yes, ~~NO~~







KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-96-18B	START PURGE TIME	1025
SAMPLE DATE	11-8-19	END PURGE TIME	1049
SAMPLE TIME	10:55	KEY NUMBER	2258
DEPTH TO WATER (ft)	43.09	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	85.91	PURGE METHOD	pump
1 CASING VOLUME (gal)	—	SAMPLING METHOD	↓
3 CASING VOLUME (gal)	—	SAMPLING DEPTH	84

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
1036	11	8.9	34.1	3.93	1321	7.27	181.5
1040	15	9.2	30.6	3.48	1311	7.26	179.6
1042	17	9.4	29.0	3.31	1305	7.26	178.6
1044	19	9.4	28.2	3.21	1304	7.26	177.3
1046	21	9.4	27.3	3.12	1300	7.26	176.0
1047	22	9.5	26.7	3.04	1295	7.26	175.3
1048	23	9.5	26.3	3.00	1297	7.26	174.7

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)

clear none clear

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate	1-250 mL; P; None; Yes	NOT Field Filtered
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes	
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	↓









KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-94-14R	START PURGE TIME	11:52
SAMPLE DATE	11.8.19	END PURGE TIME	12:08
SAMPLE TIME	12:10	KEY NUMBER	2258
DEPTH TO WATER (ft)	28.45	PURGE VOLUME (gal)	B
DEPTH TO BOTTOM (ft)	42.31	PURGE METHOD	Proactive Pump
1 CASING VOLUME (gal)	=	SAMPLING METHOD	
3 CASING VOLUME (gal)	=	SAMPLING DEPTH	41.0

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
11:57	5	7.1	58.6	7.05	894	7.18	220.2
12:02	10	6.4	54.3	6.67	881	7.03	211.6
12:04	12	6.6	53.8	6.58	878	7.02	210.9
12:06	14	6.9	53.6	6.51	883	7.01	211.1
12:08	15	6.9	53.9	6.54	858	7.00	210.3

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)  
 Gave new lock - old one was rusted  
 clear, none, clear

SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes





KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-96-13A	START PURGE TIME	14:56
SAMPLE DATE	11/08/19	END PURGE TIME	15:20
SAMPLE TIME	15:21	KEY NUMBER	
DEPTH TO WATER (ft)	62.70	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	100.24	PURGE METHOD	
1 CASING VOLUME (gal)		SAMPLING METHOD	
3 CASING VOLUME (gal)		SAMPLING DEPTH	

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
1506	10	11.0	6.4	0.70	1003	7.30	58.6
1511	15	11.2	5.7	0.62	1038	7.29	58.8
1513	17	11.1	5.4	0.60	1041	7.29	58.2
1515	19	11.2	5.3	0.57	1052	7.28	57.7
1517	21	11.1	5.0	0.55	1048	7.28	57.4

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)	

SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes





KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	YSI
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	Hanna
FIELD STAFF	Ashley Wagner	TURBIDITY METER	NA
	Jenny Skweres		

WELL ID	B-96-17A	START PURGE TIME	9:15
SAMPLE DATE	11.12.19	END PURGE TIME	9:40
SAMPLE TIME	9:45	KEY NUMBER	2258
DEPTH TO WATER (ft)	49.11	PURGE VOLUME (gal)	3.0
DEPTH TO BOTTOM (ft)	92.71	PURGE METHOD	Proactive Pump
1 CASING VOLUME (gal)		SAMPLING METHOD	↓
3 CASING VOLUME (gal)		SAMPLING DEPTH	91.0

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
9:20	5	7.1	28.6	3.45	849	6.54	273.5
9:23	8	6.8	<del>28.6</del> 21.4	2.59	827	6.68	260.9
9:26	11	5.2	17.0	2.16	837	6.76	241.0
9:29	14	6.4	13.7	1.64	823	6.82	210.3
9:31	19	8.6	8.0	0.92	842	6.97	165.7
9:36	21	8.2	8.0	0.95	847	6.99	161.1
9:38	23	7.8	8.7	1.03	845	6.99	156.4
9:39	24	7.9	8.9	1.06	835	6.97	151.5
9:40	25	8.9	8.2	0.93	839	6.99	145.0

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)

clear, none clear

SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes



KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-96-17	START PURGE TIME	955
SAMPLE DATE	11.12.19	END PURGE TIME	1022
SAMPLE TIME	10:25	KEY NUMBER	2258
DEPTH TO WATER (ft)	43.90	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	61.96	PURGE METHOD	Proactive Pump
1 CASING VOLUME (gal)		SAMPLING METHOD	↓
3 CASING VOLUME (gal)		SAMPLING DEPTH	

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
10:10		5.3	63.3	8.00	972	7.08	207.9
10:15		5.3	63.0	7.95	962	7.09	218.3
10:19		5.2	63.3	8.08	953	7.10	224.2
10:20		5.1	62.8	7.98	952	7.09	226.9
10:21		5.4	62.8	7.92	960	7.08	228.4
10:22							

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes







## KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-15									
SAMPLE DATE	11/19/20									
SAMPLE TIME	955									
DEPTH TO WATER (ft)	29.70									
DEPTH TO BOTTOM (ft)	62.49									
1 CASING VOLUME (gal)										
3 CASING VOLUME (gal)										
PURGE VOLUME (gal)										
PURGE METHOD										
SAMPLING METHOD	Time elapsed	936	940	942	944	946	948	949	950	951
SAMPLING DEPTH	6	10	12	14	16	18	19	20	21	
TEMPERATURE (°C)	9.2	9.2	9.8	10.1	10.1	10.1	10.1	10.1	10.1	10.1
DISSOLVED OXYGEN (%)	7.8	7.6	7.8	7.5	7.0	6.4	6.3	6.1	5.8	
DISSOLVED OXYGEN (ppm)	0.89	0.86	0.88	0.83	0.79	0.72	0.72	0.68	0.66	
SPEC. CONDUCTIVITY (µs/cm)	1295	1279	1263	1259	1271	1271	1274	1280	1275	
pH (units)	6.79	6.92	6.96	6.99	7.02	7.04	7.05	7.07	7.07	
ORP (mV)	11.1	-13.9	-21.6	-28.5	-34.7	-42.3	-45.0	-48.3	-50.9	
COLOR										
ODOR										
CLARITY										
NOTES	Sediment accumulating in tubing					clear none clear				
SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)									
Chloride, Sulfate	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes
	Start 930									
	Stop 951									





KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	YSI Hanna
LOCATION	New Berlin, WI	TURBIDITY METER	NA
FIELD STAFF	Ashley Wagner Jenny Skweres		

WELL ID	B-15A		B-21	B-21A
SAMPLE DATE	11-19-20			
SAMPLE TIME	1055			
DEPTH TO WATER (ft)	35.73		33.19	53.86
DEPTH TO BOTTOM (ft)	84.74?	Remeasure	54.22	<del>85.19</del>
1 CASING VOLUME (gal)	7.99			
3 CASING VOLUME (gal)				
PURGE VOLUME (gal)	8.0 Dry			
PURGE METHOD	Pump			
SAMPLING METHOD	↓			
SAMPLING DEPTH	83.0			
TEMPERATURE (°C)	11.8.0°C			
DISSOLVED OXYGEN (%)	=			
DISSOLVED OXYGEN (ppm)	=			
SPEC. CONDUCTIVITY (ms/cm)	10.55			
pH (units)	7.57			
ORP (mV)	=			
COLOR	0			
ODOR	N			
CLARITY	Cloudy			
NOTES	<p>iron bacteria present</p> <p>too much draw down could not be low-flow sampled purged w/ pump let recover w/ pump in well sampled w/ pump</p>			
SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)			
Chloride, Sulfate	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes

KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	YSI
LOCATION	New Berlin, WI	FIELD STAFF	Hanna
FIELD STAFF	Ashley Wagner	TURBIDITY METER	NA
	Jenny Skweres		

WELL ID	B-21A	START PURGE TIME	1942
SAMPLE DATE	11.19.20	END PURGE TIME	1208
SAMPLE TIME	1210	KEY NUMBER	2258
DEPTH TO WATER (ft)	33.86	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	85.19	PURGE METHOD	pump
1 CASING VOLUME (gal)		SAMPLING METHOD	
3 CASING VOLUME (gal)		SAMPLING DEPTH	

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
1147	5	9.8	5.3	0.60	<del>858</del> 858	7.48	28.2 dropping
1152	10	9.9	3.5	0.39	862	7.43	2.9
1157	15	9.9	2.8	0.32	859	7.41	-8.4
1200	18	9.8	2.6	0.30	857	7.41	-11.5
1203	21	9.9	2.5	0.28	856	7.41	-13.4
1205	23	9.9	2.5	0.27	856	7.41	-14.8
1206	24	10.0	2.4	0.27	858	7.41	-15.3
1207	25	9.9	2.3	0.26	856	7.41	-15.6
1208	26	9.9	2.4	0.27	856	7.41	-15.9
		✓	✓	✓	✓	✓	✓

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)  
 Dark gray sediment @ Bottom  
 water cleared w/ pumping  
 x dont need to contain

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate 1-250 mL; P; None; Yes

Metals (As, Pb, Ni, Mn, Mg, Cr) 1-250 mL; P; HNO<sub>3</sub>; Yes

Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN) 1-250 mL; P; H<sub>2</sub>SO<sub>4</sub>; Yes

water pumping  
 5 gal in 15 min = ~0.33 gal/min







KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-21	START PURGE TIME	1222
SAMPLE DATE	11-19-20	END PURGE TIME	1239
SAMPLE TIME	1245	KEY NUMBER	2258
DEPTH TO WATER (ft)	33.19	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	54.22	PURGE METHOD	
1 CASING VOLUME (gal)		SAMPLING METHOD	
3 CASING VOLUME (gal)		SAMPLING DEPTH	

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
1227	5	9.1	7.9	0.86	1079	7.19	56.2
1232	10	8.7	4.3	0.50	1072	7.14	37.5
1235	13	8.8	4.1	0.47	1088	7.13	36.9
1237	15	8.8	3.8	0.45	1087	7.13	36.3
1238	16	8.7	3.9	0.46	1089	7.13	36.7
1239	17	8.7	3.8	0.45	1091	7.13	36.5

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)

Dark gray sediment @ bottom cleared w/ pumping

lock, plug, label

SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes



KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	YSI
LOCATION	New Berlin, WI		Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	3-94-25 A	START PURGE TIME	13:40
SAMPLE DATE	11-19-20	END PURGE TIME	14:05
SAMPLE TIME	14:06	KEY NUMBER	
DEPTH TO WATER (ft)	25.95	PURGE VOLUME (gal)	1.5
DEPTH TO BOTTOM (ft)	61.05	PURGE METHOD	Pump
1 CASING VOLUME (gal)		SAMPLING METHOD	↓
3 CASING VOLUME (gal)		SAMPLING DEPTH	60

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
13:51	5	11.1	13.2	1.44	1202	7.79	-185.7
13:56	10	10.0	10.5	1.19	1205	7.74	-180.3
14:00	14	9.8	12.7	1.39	1226	7.67	-159.7
14:02	16	8.9	10.6	1.22	1225	7.67	-163.9
14:03	17	9.1	9.7	1.10	1234	7.68	-166.3
14:04	18	9.9	9.2	1.04	1203	7.68	-167.2
14:05	19	10.3	9.0	0.99	1189	7.69	-169.6

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)

SAMPLING PARAMETERS (# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)

Chloride, Sulfate	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes





KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM LOW-FLOW

DWP 14:55

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI
FIELD STAFF	Ashley Wagner		Hanna
	Jenny Skweres	TURBIDITY METER	NA

WELL ID	B-94-25	START PURGE TIME	14:27
SAMPLE DATE	11.19.20	END PURGE TIME	14:49
SAMPLE TIME	14:50	KEY NUMBER	
DEPTH TO WATER (ft)	24.96	PURGE VOLUME (gal)	
DEPTH TO BOTTOM (ft)	39.75	PURGE METHOD	
1 CASING VOLUME (gal)		SAMPLING METHOD	
3 CASING VOLUME (gal)		SAMPLING DEPTH	

CLOCK TIME	# OF MINUTES LAPSED	TEMP. (°C)	DISSOLVED OXYGEN (%)	DISSOLVED OXYGEN (ppm)	SPEC. COND. (ms/cm)	pH (units)	ORP (mV)
14:32	5	12.2	51.0	5.55	816	7.53	-15.0
14:37	10	12.4	51.4	5.50	813	7.47	1.3
14:39	12	12.4	51.5	5.48	813	7.47	8.9
14:41	14	12.2	51.6	5.52	813	7.45	15.5
14:43	16	12.1	51.1	5.46	810	7.45	18.6
14:44	17	12.0	50.9	5.47	811	7.44	21.1
14:45	18	12.0	51.4	5.56	809	7.44	23.6
14:46	19	11.9	51.4	5.53	809	7.44	25.9
14:47	20	11.8	51.5	5.57	809	7.43	27.5
14:48	21	11.9	51.5	5.53	809	7.43	30.1
14:49	22	12.0	51.2	5.50	809	7.43	31.6

NOTES (COLOR, ODOR, CLARITY, ISSUES, WELL/KEY CONDITION)	
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SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)
---------------------	--

Chloride, Sulfate	1-250 mL; P; None; Yes
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Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes
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Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes
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KAPUR & ASSOCIATES PRIVATE WELL WATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	NA
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	Hanna
LOCATION	New Berlin, WI	TURBIDITY METER	NA
FIELD STAFF	Ashley Wagner Jenny Skweres		

WELL ID	Sanfelippo	Whitehaus	Christiansen	Servi	Meyer
SAMPLE DATE	11-4-19	11-4-19	11-4-19	11-4-19	11-4-19
SAMPLE TIME	9:55	10:45	11:15	11:50	15:00
WELL ADDRESS	20770 W. Coffee Rd	3640 S. Canary Rd	3551 S. Woodland Ct	3730 S. Racine Ave	31690 S. Racine Ave
OWNER'S PHONE NUMBER	—	(262) 519-5944	(262) 853-1977	(751) 571-9651	(530) 200-0000
PURGE RATE (gal/min)	NM	<del>1000</del> 4.5	4.5	5.0	NM
PURGE VOLUME (gal)	↓	90	90	100	↓
PURGE LOCATION	Kit. Sink	Spigot	Spigot	Spigot	
SAMPLING LOCATION	Press. Tank	↓	↓	↓	
TEMPERATURE (°C)	11.9	11.3	10.7	11.2	11.5
DISSOLVED OXYGEN (ppm)	NA	NA	NA	NA	NA
DISSOLVED OXYGEN (%)	NA	NA	NA	NA	NA
Spec. Conductivity (ms/cm)	1422 us/cm	1310	1092	1685	790
pH (units)	7.37	7.15	7.35	7.30	7.43
ORP (mV)	NA	NA	NA	NA	NA
COLOR	clear	clear	clear	clear	clear
ODOR	rotten eggs	none	none	none	none
CLARITY	clear	clear	clear	clear	clear
NOTES	Start 9:31 Stop 9:55 P. Tank: 11	10:19 10:39 spigot in backyard	10:54 11:14 spigot E of front door	11:28 11:48 spigot E of house	14:35 14:55 spigot N of house (backyard)
SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)				
Chloride	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No
Metals (As, Pb, Cr, Mn, Mg)	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No
Nitrate + Nitrite	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No
		1-OK DIP 10:45			Fluctuating flow rate well pump is on W. side of house







KAPUR & ASSOCIATES PRIVATE WELL WATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	NA
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	Hanna
LOCATION	New Berlin, WI	TURBIDITY METER	NA
FIELD STAFF	Ashley Wagner Jenny Skweres		

WELL ID	Kowis	Sanchez	WyszKowski		
SAMPLE DATE	11-5-19	11-5-19	11-7-19		
SAMPLE TIME	930	1455	730		
WELL ADDRESS			3630 S Canary Rd		
OWNER'S PHONE NUMBER					
PURGE RATE (gal/min)	NM	NM	NM		
PURGE VOLUME (gal)	↓	↓	↓		
PURGE LOCATION	B. Sink	Garage spigot	B. Sink		
SAMPLING LOCATION	P. Tank	Garage spigot	P. Tank		
TEMPERATURE (°C)	12.4	10.5	11.1		
DISSOLVED OXYGEN (ppm)	NA	NA	NA	NA	NA
DISSOLVED OXYGEN (%)	NA	NA	NA	NA	NA
Spec. Conductivity (µS/cm)	902	777	785		
pH (units)	7.52	7.53	7.43		
ORP (mV)	NA	NA	NA	NA	NA
COLOR	Clean	C	C		
ODOR	None	N	N		
CLARITY	Clean	C	C		
NOTES	Start 905 Stop 925		Start 700 Stop 720  pH=7.43		
SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)				
Chloride	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No
Metals (As, Pb, Cr, Mn, Mg)	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No
Nitrate + Nitrite	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No
		Don't use water to drink	Don't use water to drink - except ice coffee		
	Purged in Basement				
	Sink - Sample		Spigot Before P. Tank - Had to		

Pressure tank

wait until tank kicked on to get water nit.+nit. taken @ Bottom of P.Tank





KAPUR & ASSOCIATES PRIVATE WELL WATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	NA
PROJECT NUMBER	20.0039.01	WATER QUALITY METER(S)	Hanna
LOCATION	New Berlin, WI	TURBIDITY METER	NA
FIELD STAFF	Ashley Wagner Jenny Skweres		

(262) 719-0628

WELL ID	Temple	Berghammer	Werning	Hahn	
SAMPLE DATE	11-8-19	11-8-19	11-8-19	11-12-19	
SAMPLE TIME	11:35	13:20	1400	16:30	
WELL ADDRESS	3800 Swartz	3600 S Canary	3620 S. Canary		
OWNER'S PHONE NUMBER					
PURGE RATE (gal/min)	NM	NM	5.0	NM	
PURGE VOLUME (gal)	↓	↓	80	↓	
PURGE LOCATION	1st Floor Sink	B. Sink	spigot (south)	B. sink	
SAMPLING LOCATION	↓	P. tank	↓	P. tank	
TEMPERATURE (°C)	11.5	9.6	8.2	12.1	
DISSOLVED OXYGEN (ppm)	NA	NA	NA	NA	NA
DISSOLVED OXYGEN (%)	NA	NA	NA	NA	NA
Spec. Conductivity (µS/cm)	1107	834	951	943	
pH (units)	7.77	7.53	7.44	7.55	
ORP (mV)	NA	NA	NA	NA	NA
COLOR	C	C	C	C	
ODOR	N	N	N	N	
CLARITY	C	C	C	C	
NOTES	Start 11:09 End 11:29		1339 1355		

SAMPLING PARAMETERS	# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)				
Chloride	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No	1-250 mL; P; None; No
Metals (As, Pb, Cr, Mn, Mg)	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No	1-250 mL; P; HNO <sub>3</sub> ; No
Nitrate + Nitrite	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; No
	Sink in main hall - purge + sample location		spigot between house + garage next to well		



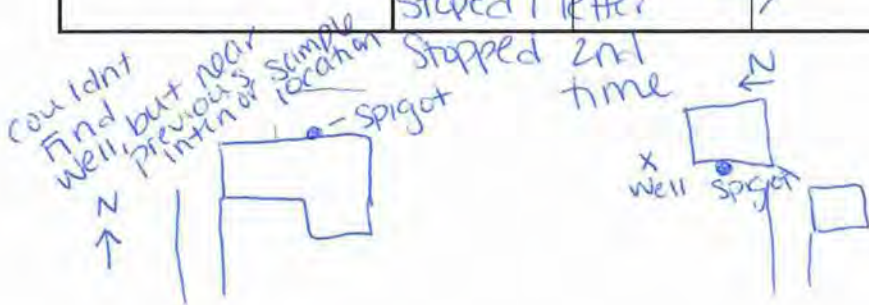




KAPUR & ASSOCIATES GROUNDWATER QUALITY FIELD FORM

PROJECT NAME	Barrett Landfill	WATER LEVEL PROBE	Heron
PROJECT NUMBER	20.0039.01		
LOCATION	New Berlin, WI	WATER QUALITY METER(S)	YSI Hanna
FIELD STAFF	Ashley Wagner Jenny Skweres	TURBIDITY METER	NA

WELL ID	Schmidt	Rhiner		
SAMPLE DATE	11.26.19	11.26.19		
SAMPLE TIME	925	955		
DEPTH TO WATER (ft)	-	-		x put tarp
DEPTH TO BOTTOM (ft)	-	-		tarp
1 CASING VOLUME (gal)	-	-		around
3 CASING VOLUME (gal)	10 gpm	4.3 bpm		leachate
PURGE VOLUME (gal)	100	65		noses
PURGE METHOD	Backspigot	Front Spigot		
SAMPLING METHOD	(N)	(N)		used
SAMPLING DEPTH	NA	NA		Bungee
TEMPERATURE (°C)	9.1	9.6		corals
DISSOLVED OXYGEN (%)	-	-		
DISSOLVED OXYGEN (ppm)	-	-		need
SPEC. CONDUCTIVITY (ms/cm)	779	850		Bigger
pH (units)	7.66	7.40		tarp
ORP (mV)	-	-		
COLOR	lt Gray	C		
ODOR	N	N		
CLARITY	C	C		
NOTES	sampled/ purged N spigot Backward	sampled purged w spigot Front yard		
SAMPLING PARAMETERS	(# OF CONTAINERS, SIZE OF CONTAINER, CONTAINER TYPE (A = AMBER, G = GLASS, P = PLASTIC), FILTERED? (YES/NO), PRESERVATIVE)			
Chloride, Sulfate	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes	1-250 mL; P; None; Yes
Metals (As, Pb, Ni, Mn, Mg, Cr)	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes	1-250 mL; P; HNO <sub>3</sub> ; Yes
Nitrate + Nitrite, Total Kjeldahl Nitrogen (TKN)	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes	1-250 mL; P; H <sub>2</sub> SO <sub>4</sub> ; Yes
	Start 910		Start 935	
	Stop 920		Stop 950	
	mailed 1 letter staped 1 letter	→		





## KAPUR & ASSOCIATES LANDFILL GAS MONITORING FIELD FORM

Probe	GEMS ID	Time	Methane % Vol.	Methane % LEL	Oxygen % Vol.	Carbon Dioxide % Vol.	PID (ppm)	Barometric Pressure (inches of water)	Relative Pressure (inches of water)
GP-1	280	13:45	0.2	4.0	20.1	0.5	0	29.14	-0.31
GP-2S	284	13:30	0.2	4.0	20.3	1.0	0	29.14	-0.26
GP-2D	286	13:30	0.2	4.0	19.3	1.3	0	29.14	-0.27
GP-3S	287	14:00	0.2	4.0	21.6	0.1	0	29.15	-0.31
GP-3M	288	14:00	0.2	4.0	21.6	0.1	0	29.15	-0.35
GP-3D	289	14:00	0.2	4.0	21.6	0.1	0	29.15	-0.34
GP-4	290	Lost/Abandoned							
GP-5S	294	13:57	0.2	4.0	21.2	0.3	0	29.15	-0.37
GP-5M	295	13:57	0.2	4.0	21.6	0.2	0	29.15	-0.30
GP-5D	296	13:57	0.2	4.0	19.6	2.2	0	29.15	-0.31
GP-6S	297	13:36	0.2	4.0	20.4	3.5	0	29.14	-0.28
GP-6M	298	13:36	0.2	4.0	21.2	0.4	0	29.14	-0.28
GP-6D	299	13:36	0.2	4.0	21.4	0.1	0	29.14	-0.27
GP-7	300	Lost/Abandoned							
GP-8S	264	12:36	0.2	4.0	14.1	1.2	0	29.15	-0.43
GP-8M	265	12:36	0.2	4.0	20.2	0.2	0	29.15	-0.38
GP-8D	266	12:36	0.2	4.0	18.7	0.7	0	29.15	-0.52
GP-9S	267	12:47	0.2	4.0	19.1	0.9	0	29.15	-0.29
GP-9M	268	12:47	0.2	4.0	20.1	0.9	0	29.15	-0.35
GP-9D	269	12:47	0.2	4.0	20.4	0.3	0	29.15	-0.37
GP-10S	270	12:55	0.2	4.0	19.4	2.9	0	29.15	-0.48
GP-10M	271	12:55	0.2	4.0	18.3	1.0	0	29.15	-0.41
GP-10D	272	12:55	0.2	4.0	20.8	0.3	0	29.15	-0.32
GP-11S	273	13:05	0.2	4.0	14.5	2.4	0	29.14	0.39
GP-11M	274	13:05	0.2	4.0	20.0	0.3	0	29.14	-0.30
GP-11D	275	13:05	0.2	4.0	20.0	2.5	0	29.14	-0.38
GP-12S	276	13:18	0.2	4.0	20.8	0.6	0	29.14	-0.41
GP-12M	277	13:18	0.2	4.0	18.3	2.1	0	29.14	-0.29
GP-12D	278	13:18	0.2	4.0	21.2	0.1	0	29.14	-0.27

**Date:** 11-4-19

**Instruments Used:** MiniRae 3000 (PID; Background = 0.0 ppm) Landtec GEM 5000 (LFG Meter)

**Operators:** Ashley Wagner Jenny Skweres

**Weather Conditions**

**Temperature:** 45°F **Sky Conditions:** \_\_\_\_\_

**Barometric Pressure:** 28.8 in. of water **Humidity:** \_\_\_\_\_

**Dew Point:** 37°F **Wind Speed/Direction:** 14 mph/east

**Ground Condition:** Wet to damp, some light snow cover

**Notes:** GP-8S and GP-3D caps fell inside the protective casing and could not be reached.  
Caps need to be replaced.

The landfill gas meter (LFG meter) was reading methane at 0.2 % volume as background  
Per the LFG meter manufacturer, this value is within calibration limits  
(factory calibration August 2019)



**APPENDIX B**  
**LABORATORY REPORTS**

December 10, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory between November 08, 2019 and November 21, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198877001	B-94-19A	Water	11/05/19 13:05	11/08/19 15:15
40198877002	W-23	Water	11/05/19 11:10	11/08/19 15:15
40198877003	W-23A	Water	11/05/19 12:00	11/08/19 15:15
40198877004	WHITEHAUS DUP	Water	11/05/19 10:45	11/08/19 15:15
40199200001	B-96-13A	Water	11/08/19 15:21	11/14/19 09:40
40199200002	B-94-14R	Water	11/08/19 12:10	11/14/19 09:40
40199200003	B-96-18A	Water	11/08/19 10:10	11/14/19 09:40
40199200004	B-96-18B	Water	11/08/19 10:55	11/14/19 09:40
40199200005	B-94-14A	Water	11/08/19 14:30	11/14/19 09:40
40199200006	B-96-17	Water	11/12/19 10:25	11/14/19 09:40
40199200007	B-96-17A	Water	11/12/19 09:45	11/14/19 09:40
40199200008	W-24	Water	11/12/19 11:35	11/14/19 09:40
40199584001	B-15	Water	11/19/19 09:55	11/21/19 08:45
40199584002	B-15A	Water	11/19/19 10:55	11/21/19 08:45
40199584003	B-21	Water	11/19/19 12:45	11/21/19 08:45
40199584004	B-21A	Water	11/19/19 12:10	11/21/19 08:45
40199584005	B-94-25	Water	11/19/19 14:50	11/21/19 08:45
40199584006	B-94-25A	Water	11/19/19 14:06	11/21/19 08:45
40199584007	B-94-25 DUP	Water	11/19/19 14:55	11/21/19 08:45
40199584008	FIELD BLANK	Water	11/19/19 15:00	11/21/19 08:45
40199584009	EQUIPMENT BLANK	Water	11/19/19 15:02	11/21/19 08:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198877001	B-94-19A	EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40198877002	W-23	EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40198877003	W-23A	EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40198877004	WHITEHAUS DUP	EPA 200.7	KJE	1	PASI-I
			EPA 200.8	CAW	4
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40199200001	B-96-13A	EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40199200002	B-94-14R	EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40199200003	B-96-18A	EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40199200004	B-96-18B	EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199200005	B-94-14A	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
40199200006	B-96-17	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
40199200007	B-96-17A	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
40199200008	W-24	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	DS1	6	PASI-G
			CDH	7	PASI-G
40199584001	B-15	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
40199584002	B-15A	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
40199584003	B-21	EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199584004	B-21A	EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
40199584005	B-94-25	EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
40199584006	B-94-25A	EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
40199584007	B-94-25 DUP	EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
			CDH	7	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
40199584008	FIELD BLANK	EPA 353.2	DAW	1	PASI-G
		EPA 6020	KXS	6	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40199584009	EQUIPMENT BLANK	EPA 6020	KXS	6	PASI-G
		EPA 300.0	HMB	2	PASI-G
		EPA 351.2	TMK	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Lab Project No.: 40198877

Sample: **B-94-19A** Lab ID: **40198877001** Collected: 11/05/19 13:05 Received: 11/08/19 15:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>0.35J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 00:46	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/14/19 05:49	11/16/19 00:46	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/14/19 05:49	11/16/19 00:46	7439-92-1	
Magnesium, Dissolved	<b>60.5</b>	mg/L	0.25	0.031	1	11/14/19 05:49	11/16/19 00:46	7439-95-4	
Manganese, Dissolved	<b>13.8</b>	ug/L	4.0	1.2	1	11/14/19 05:49	11/16/19 00:46	7439-96-5	
Nickel, Dissolved	<b>0.76J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 00:46	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.44</b>	Std. Units			1		11/05/19 13:05		
Field Specific Conductance	<b>1086</b>	umhos/cm			1		11/05/19 13:05		
Turbidity	<b>N</b>	NTU			1		11/05/19 13:05		
Static Water Level	<b>916.97</b>	feet			1		11/05/19 13:05		
Apparent Color	<b>N</b>	no units			1		11/05/19 13:05		
Odor	<b>N</b>	no units			1		11/05/19 13:05		
Temperature, Water (C)	<b>13.7</b>	deg C			1		11/05/19 13:05		
<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	<b>165</b>	mg/L	10.0	2.2	5		11/23/19 12:56	16887-00-6	
Sulfate, Dissolved	<b>12.2</b>	mg/L	10.0	2.2	5		11/23/19 12:56	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<b>1.2</b>	mg/L	0.73	0.22	1	11/12/19 12:11	11/12/19 17:43	7727-37-9	M0
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 10:39		

Sample: **W-23** Lab ID: **40198877002** Collected: 11/05/19 11:10 Received: 11/08/19 15:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>0.37J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 00:53	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/14/19 05:49	11/16/19 00:53	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/14/19 05:49	11/16/19 00:53	7439-92-1	
Magnesium, Dissolved	<b>45.6</b>	mg/L	0.25	0.031	1	11/14/19 05:49	11/16/19 00:53	7439-95-4	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	11/14/19 05:49	11/16/19 00:53	7439-96-5	
Nickel, Dissolved	<b>0.42J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 00:53	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.33</b>	Std. Units			1		11/05/19 11:10		
Field Specific Conductance	<b>776</b>	umhos/cm			1		11/05/19 11:10		
Turbidity	<b>N</b>	NTU			1		11/05/19 11:10		

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
 Pace Project No.: 40198877

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: W-23</b> <b>Lab ID: 40198877002</b> Collected: 11/05/19 11:10      Received: 11/08/19 15:15      Matrix: Water									
<b>Field Data</b> Analytical Method:									
Static Water Level	<b>929.35</b>	feet			1		11/05/19 11:10		
Apparent Color	<b>N</b>	no units			1		11/05/19 11:10		
Odor	<b>N</b>	no units			1		11/05/19 11:10		
Temperature, Water (C)	<b>11.5</b>	deg C			1		11/05/19 11:10		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>16.4</b>	mg/L	10.0	2.2	5		11/23/19 13:09	16887-00-6	
Sulfate, Dissolved	<b>115</b>	mg/L	10.0	2.2	5		11/23/19 13:09	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	11/12/19 12:11	11/12/19 17:45	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<b>0.30</b>	mg/L	0.25	0.059	1		11/15/19 10:39		

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: W-23A</b> <b>Lab ID: 40198877003</b> Collected: 11/05/19 12:00      Received: 11/08/19 15:15      Matrix: Water									
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	<b>0.41J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 01:00	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/14/19 05:49	11/16/19 01:00	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/14/19 05:49	11/16/19 01:00	7439-92-1	
Magnesium, Dissolved	<b>53.6</b>	mg/L	0.25	0.031	1	11/14/19 05:49	11/16/19 01:00	7439-95-4	
Manganese, Dissolved	<b>21.5</b>	ug/L	4.0	1.2	1	11/14/19 05:49	11/16/19 01:00	7439-96-5	
Nickel, Dissolved	<b>0.76J</b>	ug/L	1.0	0.28	1	11/14/19 05:49	11/16/19 01:00	7440-02-0	
<b>Field Data</b> Analytical Method:									
Field pH	<b>7.25</b>	Std. Units			1		11/05/19 12:00		
Field Specific Conductance	<b>959</b>	umhos/cm			1		11/05/19 12:00		
Turbidity	<b>N</b>	NTU			1		11/05/19 12:00		
Static Water Level	<b>923.38</b>	feet			1		11/05/19 12:00		
Apparent Color	<b>N</b>	no units			1		11/05/19 12:00		
Odor	<b>N</b>	no units			1		11/05/19 12:00		
Temperature, Water (C)	<b>12.5</b>	deg C			1		11/05/19 12:00		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>21.5</b>	mg/L	10.0	2.2	5		11/23/19 13:22	16887-00-6	
Sulfate, Dissolved	<b>133</b>	mg/L	10.0	2.2	5		11/23/19 13:22	14808-79-8	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Sample: W-23A Lab ID: 40198877003 Collected: 11/05/19 12:00 Received: 11/08/19 15:15 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<0.22	mg/L	0.73	0.22	1	11/12/19 12:11	11/12/19 17:46	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<0.059	mg/L	0.25	0.059	1		11/15/19 10:40		

Sample: WHITEHAUS DUP Lab ID: 40198877004 Collected: 11/05/19 10:45 Received: 11/08/19 15:15 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Magnesium	49.9	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:38	7439-95-4	
<b>200.8 MET ICPMS</b> Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Arsenic	<0.16	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:22	7440-38-2	N2
Chromium	<0.76	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:22	7440-47-3	N2
Lead	0.15J	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:22	7439-92-1	N2
Manganese	3.0	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 14:22	7439-96-5	N2
<b>Field Data</b> Analytical Method:									
Field pH	7.15	Std. Units			1		11/05/19 10:45		
Field Specific Conductance	1310	umhos/cm			1		11/05/19 10:45		
Turbidity	N	NTU			1		11/05/19 10:45		
Apparent Color	N	no units			1		11/05/19 10:45		
Odor	N	no units			1		11/05/19 10:45		
Temperature, Water (C)	11.3	deg C			1		11/05/19 10:45		
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Chloride	45.4	mg/L	2.0	0.43	1		11/25/19 23:31	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.42	mg/L	0.25	0.059	1		11/15/19 11:54		

Sample: B-96-13A Lab ID: 40199200001 Collected: 11/08/19 15:21 Received: 11/14/19 09:40 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020 Preparation Method: EPA 3010									
Arsenic, Dissolved	0.57J	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 02:12	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 02:12	7440-47-3	
Lead, Dissolved	<0.24	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 20:13	7439-92-1	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Sample: B-96-13A      Lab ID: 40199200001      Collected: 11/08/19 15:21      Received: 11/14/19 09:40      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Magnesium, Dissolved	57.0	mg/L	2.5	0.31	10	11/19/19 06:39	11/22/19 16:15	7439-95-4	P6
Manganese, Dissolved	63.1	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 02:12	7439-96-5	
Nickel, Dissolved	1.7	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 02:12	7440-02-0	
<b>Field Data</b> Analytical Method:									
Field pH	7.28	Std. Units			1		11/08/19 15:21		
Field Specific Conductance	1048	umhos/cm			1		11/08/19 15:21		
Turbidity	N	NTU			1		11/08/19 15:21		
Static Water Level	913.27	feet			1		11/08/19 15:21		
Apparent Color	N	no units			1		11/08/19 15:21		
Odor	N	no units			1		11/08/19 15:21		
Temperature, Water (C)	11.1	deg C			1		11/08/19 15:21		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	55.7	mg/L	10.0	2.2	5		11/27/19 19:19	16887-00-6	
Sulfate, Dissolved	133	mg/L	10.0	2.2	5		11/27/19 19:19	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<0.22	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 17:57	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<0.059	mg/L	0.25	0.059	1		11/21/19 12:13		

Sample: B-94-14R      Lab ID: 40199200002      Collected: 11/08/19 12:10      Received: 11/14/19 09:40      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	0.98J	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 02:40	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 02:40	7440-47-3	
Lead, Dissolved	<0.24	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 20:54	7439-92-1	
Magnesium, Dissolved	39.4	mg/L	0.25	0.031	1	11/19/19 06:39	11/23/19 02:40	7439-95-4	
Manganese, Dissolved	<1.2	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 02:40	7439-96-5	
Nickel, Dissolved	1.5	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 02:40	7440-02-0	
<b>Field Data</b> Analytical Method:									
Field pH	7.00	Std. Units			1		11/08/19 12:10		
Field Specific Conductance	858	umhos/cm			1		11/08/19 12:10		
Turbidity	N	NTU			1		11/08/19 12:10		
Static Water Level	925.73	feet			1		11/08/19 12:10		
Apparent Color	N	no units			1		11/08/19 12:10		
Odor	N	no units			1		11/08/19 12:10		

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Sample Project No.: 40198877

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: B-94-14R</b> <b>Lab ID: 40199200002</b> Collected: 11/08/19 12:10      Received: 11/14/19 09:40      Matrix: Water									
<b>Field Data</b> Analytical Method:									
Temperature, Water (C)	<b>6.9</b>	deg C			1		11/08/19 12:10		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>6.1J</b>	mg/L	10.0	2.2	5		11/27/19 20:02	16887-00-6	D3
Sulfate, Dissolved	<b>38.7</b>	mg/L	10.0	2.2	5		11/27/19 20:02	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>0.23J</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:00	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<b>0.43</b>	mg/L	0.25	0.059	1		11/21/19 12:16		

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: B-96-18A</b> <b>Lab ID: 40199200003</b> Collected: 11/08/19 10:10      Received: 11/14/19 09:40      Matrix: Water									
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	<b>&lt;0.28</b>	ug/L	1.0	0.28	1	12/02/19 06:33	12/03/19 08:49	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	12/02/19 06:33	12/03/19 08:49	7440-47-3	P4
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	12/02/19 06:33	12/03/19 08:49	7439-92-1	
Magnesium, Dissolved	<b>61.2</b>	mg/L	2.5	0.31	10	12/02/19 06:33	12/03/19 06:53	7439-95-4	P6
Manganese, Dissolved	<b>2.4J</b>	ug/L	4.0	1.2	1	12/02/19 06:33	12/03/19 08:49	7439-96-5	
Nickel, Dissolved	<b>0.35J</b>	ug/L	1.0	0.28	1	12/02/19 06:33	12/03/19 08:49	7440-02-0	
<b>Field Data</b> Analytical Method:									
Field pH	<b>7.13</b>	Std. Units			1		11/08/19 10:10		
Field Specific Conductance	<b>1408</b>	umhos/cm			1		11/08/19 10:10		
Turbidity	<b>N</b>	NTU			1		11/08/19 10:10		
Static Water Level	<b>931.45</b>	feet			1		11/08/19 10:10		
Apparent Color	<b>N</b>	no units			1		11/08/19 10:10		
Odor	<b>N</b>	no units			1		11/08/19 10:10		
Temperature, Water (C)	<b>9.7</b>	deg C			1		11/08/19 10:10		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>224</b>	mg/L	10.0	2.2	5		11/27/19 20:16	16887-00-6	
Sulfate, Dissolved	<b>44.0</b>	mg/L	10.0	2.2	5		11/27/19 20:16	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:00	7727-37-9	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-96-18A**      **Lab ID: 40199200003**      Collected: 11/08/19 10:10      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	2.5	mg/L	0.25	0.059	1		11/26/19 11:12		P4

**Sample: B-96-18B**      **Lab ID: 40199200004**      Collected: 11/08/19 10:55      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic, Dissolved	0.30J	ug/L	1.0	0.28	1	12/02/19 06:33	12/03/19 09:16	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	12/02/19 06:33	12/03/19 09:16	7440-47-3	
Lead, Dissolved	<0.24	ug/L	1.0	0.24	1	12/02/19 06:33	12/03/19 09:16	7439-92-1	
Magnesium, Dissolved	46.9	mg/L	0.25	0.031	1	12/02/19 06:33	12/03/19 09:16	7439-95-4	P4
Manganese, Dissolved	1.8J	ug/L	4.0	1.2	1	12/02/19 06:33	12/03/19 09:16	7439-96-5	
Nickel, Dissolved	4.3	ug/L	1.0	0.28	1	12/02/19 06:33	12/03/19 09:16	7440-02-0	

<b>Field Data</b>		Analytical Method:							
Field pH	7.26	Std. Units			1		11/08/19 10:55		
Field Specific Conductance	1297	umhos/cm			1		11/08/19 10:55		
Turbidity	N	NTU			1		11/08/19 10:55		
Static Water Level	931.57	feet			1		11/08/19 10:55		
Apparent Color	N	no units			1		11/08/19 10:55		
Odor	N	no units			1		11/08/19 10:55		
Temperature, Water (C)	9.5	deg C			1		11/08/19 10:55		

<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	224	mg/L	10.0	2.2	5		11/27/19 20:30	16887-00-6	
Sulfate, Dissolved	31.1	mg/L	10.0	2.2	5		11/27/19 20:30	14808-79-8	

<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2      Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<0.22	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:01	7727-37-9	

<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	4.1	mg/L	0.25	0.059	1		11/26/19 11:13		P4

**Sample: B-94-14A**      **Lab ID: 40199200005**      Collected: 11/08/19 14:30      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic, Dissolved	0.63J	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:07	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 03:07	7440-47-3	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

**Sample: B-94-14A**      **Lab ID: 40199200005**      Collected: 11/08/19 14:30      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 21:22	7439-92-1	
Magnesium, Dissolved	<b>66.8</b>	mg/L	0.25	0.031	1	11/19/19 06:39	11/23/19 03:07	7439-95-4	
Manganese, Dissolved	<b>54.2</b>	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 03:07	7439-96-5	
Nickel, Dissolved	<b>1.1</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:07	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.35</b>	Std. Units			1		11/08/19 14:30		
Field Specific Conductance	<b>1035</b>	umhos/cm			1		11/08/19 14:30		
Turbidity	<b>N</b>	NTU			1		11/08/19 14:30		
Static Water Level	<b>925.47</b>	feet			1		11/08/19 14:30		
Apparent Color	<b>N</b>	no units			1		11/08/19 14:30		
Odor	<b>N</b>	no units			1		11/08/19 14:30		
Temperature, Water (C)	<b>4.9</b>	deg C			1		11/08/19 14:30		
<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	<b>51.5</b>	mg/L	10.0	2.2	5		11/27/19 20:45	16887-00-6	
Sulfate, Dissolved	<b>171</b>	mg/L	10.0	2.2	5		11/27/19 20:45	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2    Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<b>0.54J</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:02	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/21/19 12:18		

**Sample: B-96-17**      **Lab ID: 40199200006**      Collected: 11/12/19 10:25      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>0.50J</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:14	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 03:14	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 21:29	7439-92-1	
Magnesium, Dissolved	<b>41.0</b>	mg/L	0.25	0.031	1	11/19/19 06:39	11/23/19 03:14	7439-95-4	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 03:14	7439-96-5	
Nickel, Dissolved	<b>0.67J</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:14	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.08</b>	Std. Units			1		11/12/19 10:25		
Field Specific Conductance	<b>968</b>	umhos/cm			1		11/12/19 10:25		
Turbidity	<b>N</b>	NTU			1		11/12/19 10:25		
Static Water Level	<b>930.54</b>	feet			1		11/12/19 10:25		
Apparent Color	<b>N</b>	no units			1		11/12/19 10:25		

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-96-17**      **Lab ID: 40199200006**      Collected: 11/12/19 10:25      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b> Analytical Method:									
Odor	<b>N</b>	no units			1		11/12/19 10:25		
Temperature, Water (C)	<b>5.4</b>	deg C			1		11/12/19 10:25		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>44.5</b>	mg/L	10.0	2.2	5		11/27/19 20:59	16887-00-6	
Sulfate, Dissolved	<b>47.6</b>	mg/L	10.0	2.2	5		11/27/19 20:59	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>0.32J</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:03	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<b>2.9</b>	mg/L	0.25	0.059	1		11/21/19 12:19		

**Sample: B-96-17A**      **Lab ID: 40199200007**      Collected: 11/12/19 09:45      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	<b>0.28J</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:35	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 03:35	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 21:36	7439-92-1	
Magnesium, Dissolved	<b>50.1</b>	mg/L	0.25	0.031	1	11/19/19 06:39	11/23/19 03:35	7439-95-4	
Manganese, Dissolved	<b>15.8</b>	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 03:35	7439-96-5	
Nickel, Dissolved	<b>0.82J</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:35	7440-02-0	
<b>Field Data</b> Analytical Method:									
Field pH	<b>6.99</b>	Std. Units			1		11/12/19 09:45		
Field Specific Conductance	<b>839</b>	umhos/cm			1		11/12/19 09:45		
Turbidity	<b>N</b>	NTU			1		11/12/19 09:45		
Static Water Level	<b>930.22</b>	feet			1		11/12/19 09:45		
Apparent Color	<b>N</b>	no units			1		11/12/19 09:45		
Odor	<b>N</b>	no units			1		11/12/19 09:45		
Temperature, Water (C)	<b>8.9</b>	deg C			1		11/12/19 09:45		
<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>21.1</b>	mg/L	10.0	2.2	5		11/27/19 21:13	16887-00-6	
Sulfate, Dissolved	<b>50.5</b>	mg/L	10.0	2.2	5		11/27/19 21:13	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:04	7727-37-9	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-96-17A**      **Lab ID: 40199200007**      Collected: 11/12/19 09:45      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>0.40</b>	mg/L	0.25	0.059	1		11/21/19 12:22		

**Sample: W-24**      **Lab ID: 40199200008**      Collected: 11/12/19 11:35      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>0.44J</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:42	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/19/19 06:39	11/23/19 03:42	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/19/19 06:39	11/21/19 21:43	7439-92-1	
Magnesium, Dissolved	<b>58.2</b>	mg/L	0.25	0.031	1	11/19/19 06:39	11/23/19 03:42	7439-95-4	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	11/19/19 06:39	11/23/19 03:42	7439-96-5	
Nickel, Dissolved	<b>2.9</b>	ug/L	1.0	0.28	1	11/19/19 06:39	11/23/19 03:42	7440-02-0	

<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.34</b>	Std. Units			1		11/12/19 11:35		
Field Specific Conductance	<b>1830</b>	umhos/cm			1		11/12/19 11:35		
Turbidity	<b>N</b>	NTU			1		11/12/19 11:35		
Static Water Level	<b>930.62</b>	feet			1		11/12/19 11:35		
Apparent Color	<b>N</b>	no units			1		11/12/19 11:35		
Odor	<b>N</b>	no units			1		11/12/19 11:35		
Temperature, Water (C)	<b>9.7</b>	deg C			1		11/12/19 11:35		

<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	<b>378</b>	mg/L	40.0	8.6	20		12/02/19 10:57	16887-00-6	
Sulfate, Dissolved	<b>44.5</b>	mg/L	10.0	2.2	5		11/27/19 21:28	14808-79-8	

<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2      Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	11/18/19 11:40	11/18/19 18:05	7727-37-9	

<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>2.5</b>	mg/L	0.25	0.059	1		11/21/19 12:22		

**Sample: B-15**      **Lab ID: 40199584001**      Collected: 11/19/19 09:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>12.6</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/02/19 19:42	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/25/19 07:37	12/02/19 19:42	7440-47-3	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

**Sample: B-15**      **Lab ID: 40199584001**      Collected: 11/19/19 09:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/02/19 19:42	7439-92-1	
Magnesium, Dissolved	<b>74.2</b>	mg/L	2.5	0.31	10	11/25/19 07:37	12/02/19 19:01	7439-95-4	P6
Manganese, Dissolved	<b>125</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/02/19 19:42	7439-96-5	
Nickel, Dissolved	<b>2.2</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/02/19 19:42	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.07</b>	Std. Units			1		11/19/19 09:55		
Field Specific Conductance	<b>1275</b>	umhos/cm			1		11/19/19 09:55		
Turbidity	<b>N</b>	NTU			1		11/19/19 09:55		
Static Water Level	<b>927.37</b>	feet			1		11/19/19 09:55		
Apparent Color	<b>N</b>	no units			1		11/19/19 09:55		
Odor	<b>N</b>	no units			1		11/19/19 09:55		
Temperature, Water (C)	<b>10.1</b>	deg C			1		11/19/19 09:55		
<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	<b>156</b>	mg/L	10.0	2.2	5		12/06/19 21:16	16887-00-6	
Sulfate, Dissolved	<b>59.9</b>	mg/L	10.0	2.2	5		12/06/19 21:16	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2    Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<b>1.6</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:50	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>0.087J</b>	mg/L	0.25	0.059	1		11/26/19 12:30		

**Sample: B-15A**      **Lab ID: 40199584002**      Collected: 11/19/19 10:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>0.32J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 09:50	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 09:50	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 09:50	7439-92-1	
Magnesium, Dissolved	<b>53.1</b>	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 09:50	7439-95-4	
Manganese, Dissolved	<b>128</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 09:50	7439-96-5	
Nickel, Dissolved	<b>0.35J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 09:50	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.57</b>	Std. Units			1		11/19/19 10:55		
Field Specific Conductance	<b>1055</b>	umhos/cm			1		11/19/19 10:55		
Turbidity	<b>Y</b>	NTU			1		11/19/19 10:55		
Static Water Level	<b>924.37</b>	feet			1		11/19/19 10:55		
Apparent Color	<b>N</b>	no units			1		11/19/19 10:55		

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-15A**      **Lab ID: 40199584002**      Collected: 11/19/19 10:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method:									
Odor	<b>N</b>	no units			1		11/19/19 10:55		
Temperature, Water (C)	<b>8.0</b>	deg C			1		11/19/19 10:55		
<b>300.0 IC Anions, Dissolved</b>									
Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>116</b>	mg/L	10.0	2.2	5		12/06/19 21:31	16887-00-6	
Sulfate, Dissolved	<b>67.7</b>	mg/L	10.0	2.2	5		12/06/19 21:31	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>									
Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:50	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/26/19 12:31		

**Sample: B-21**      **Lab ID: 40199584003**      Collected: 11/19/19 12:45      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	<b>0.40J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:04	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 10:04	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 10:04	7439-92-1	
Magnesium, Dissolved	<b>62.2</b>	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 10:04	7439-95-4	
Manganese, Dissolved	<b>931</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 10:04	7439-96-5	
Nickel, Dissolved	<b>14.5</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:04	7440-02-0	
<b>Field Data</b>									
Analytical Method:									
Field pH	<b>7.13</b>	Std. Units			1		11/19/19 12:45		
Field Specific Conductance	<b>1091</b>	umhos/cm			1		11/19/19 12:45		
Turbidity	<b>N</b>	NTU			1		11/19/19 12:45		
Static Water Level	<b>929.82</b>	feet			1		11/19/19 12:45		
Apparent Color	<b>N</b>	no units			1		11/19/19 12:45		
Odor	<b>N</b>	no units			1		11/19/19 12:45		
Temperature, Water (C)	<b>8.7</b>	deg C			1		11/19/19 12:45		
<b>300.0 IC Anions, Dissolved</b>									
Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>34.3</b>	mg/L	10.0	2.2	5		12/06/19 21:45	16887-00-6	
Sulfate, Dissolved	<b>101</b>	mg/L	10.0	2.2	5		12/06/19 21:45	14808-79-8	M0
<b>351.2 Diss. Kjeldahl Nitrogen</b>									
Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>&lt;0.22</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:51	7727-37-9	

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Sample: B-21									
Lab ID: 40199584003 Collected: 11/19/19 12:45 Received: 11/21/19 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	1.1	mg/L	0.25	0.059	1		11/26/19 12:34		

Sample: B-21A									
Lab ID: 40199584004 Collected: 11/19/19 12:10 Received: 11/21/19 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020 Preparation Method: EPA 3010									
Arsenic, Dissolved	<0.28	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:10	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 10:10	7440-47-3	
Lead, Dissolved	<0.24	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 10:10	7439-92-1	
Magnesium, Dissolved	40.4	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 10:10	7439-95-4	
Manganese, Dissolved	22.7	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 10:10	7439-96-5	
Nickel, Dissolved	0.98J	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:10	7440-02-0	

<b>Field Data</b> Analytical Method:									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Field pH	7.41	Std. Units			1		11/19/19 12:10		
Field Specific Conductance	856	umhos/cm			1		11/19/19 12:10		
Turbidity	N	NTU			1		11/19/19 12:10		
Static Water Level	929.83	feet			1		11/19/19 12:10		
Apparent Color	N	no units			1		11/19/19 12:10		
Odor	N	no units			1		11/19/19 12:10		
Temperature, Water (C)	9.9	deg C			1		11/19/19 12:10		

<b>300.0 IC Anions, Dissolved</b> Analytical Method: EPA 300.0									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Chloride, Dissolved	55.3	mg/L	10.0	2.2	5		12/08/19 14:30	16887-00-6	
Sulfate, Dissolved	48.0	mg/L	10.0	2.2	5		12/08/19 14:30	14808-79-8	

<b>351.2 Diss. Kjeldahl Nitrogen</b> Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Nitrogen, Kjeldahl, Total, Dissolved	<0.22	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:52	7727-37-9	

<b>353.2 Nitrogen, Dissolved Pres</b> Analytical Method: EPA 353.2									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Nitrogen, NO2 plus NO3, Dissolved	<0.059	mg/L	0.25	0.059	1		11/26/19 12:34		

Sample: B-94-25									
Lab ID: 40199584005 Collected: 11/19/19 14:50 Received: 11/21/19 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020 Preparation Method: EPA 3010									
Arsenic, Dissolved	0.34J	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:17	7440-38-2	
Chromium, Dissolved	<1.0	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 10:17	7440-47-3	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-94-25**      **Lab ID: 40199584005**      Collected: 11/19/19 14:50      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 10:17	7439-92-1	
Magnesium, Dissolved	<b>25.0</b>	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 10:17	7439-95-4	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 10:17	7439-96-5	
Nickel, Dissolved	<b>0.70J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:17	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.43</b>	Std. Units			1		11/19/19 14:50		
Field Specific Conductance	<b>809</b>	umhos/cm			1		11/19/19 14:50		
Turbidity	<b>N</b>	NTU			1		11/19/19 14:50		
Static Water Level	<b>925.67</b>	feet			1		11/19/19 14:50		
Apparent Color	<b>N</b>	no units			1		11/19/19 14:50		
Odor	<b>N</b>	no units			1		11/19/19 14:50		
Temperature, Water (C)	<b>12.0</b>	deg C			1		11/19/19 14:50		
<b>300.0 IC Anions, Dissolved</b>		Analytical Method: EPA 300.0							
Chloride, Dissolved	<b>97.8</b>	mg/L	10.0	2.2	5		12/08/19 15:13	16887-00-6	
Sulfate, Dissolved	<b>16.6</b>	mg/L	10.0	2.2	5		12/08/19 15:13	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2    Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total, Dissolved	<b>0.35J</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:53	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>0.44</b>	mg/L	0.25	0.059	1		11/26/19 12:35		

**Sample: B-94-25A**      **Lab ID: 40199584006**      Collected: 11/19/19 14:06      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020    Preparation Method: EPA 3010							
Arsenic, Dissolved	<b>35.4</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:24	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 10:24	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 10:24	7439-92-1	
Magnesium, Dissolved	<b>61.5</b>	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 10:24	7439-95-4	
Manganese, Dissolved	<b>8.3</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 10:24	7439-96-5	
Nickel, Dissolved	<b>0.64J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:24	7440-02-0	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.69</b>	Std. Units			1		11/19/19 14:06		
Field Specific Conductance	<b>1189</b>	umhos/cm			1		11/19/19 14:06		
Turbidity	<b>N</b>	NTU			1		11/19/19 14:06		
Static Water Level	<b>925.44</b>	feet			1		11/19/19 14:06		
Apparent Color	<b>N</b>	no units			1		11/19/19 14:06		

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

**Sample: B-94-25A**      **Lab ID: 40199584006**      Collected: 11/19/19 14:06      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method:									
Odor	<b>N</b>	no units			1		11/19/19 14:06		
Temperature, Water (C)	<b>10.3</b>	deg C			1		11/19/19 14:06		
<b>300.0 IC Anions, Dissolved</b>									
Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>168</b>	mg/L	10.0	2.2	5		12/08/19 16:10	16887-00-6	
Sulfate, Dissolved	<b>2.7J</b>	mg/L	10.0	2.2	5		12/08/19 16:10	14808-79-8	D3
<b>351.2 Diss. Kjeldahl Nitrogen</b>									
Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>2.8</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:56	7727-37-9	
<b>353.2 Nitrogen, Dissolved Pres</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3, Dissolved	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/26/19 12:36		

**Sample: B-94-25 DUP**      **Lab ID: 40199584007**      Collected: 11/19/19 14:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Arsenic, Dissolved	<b>0.36J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:31	7440-38-2	
Chromium, Dissolved	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	11/25/19 07:37	12/03/19 10:31	7440-47-3	
Lead, Dissolved	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	11/25/19 07:37	12/03/19 10:31	7439-92-1	
Magnesium, Dissolved	<b>26.6</b>	mg/L	0.25	0.031	1	11/25/19 07:37	12/03/19 10:31	7439-95-4	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	11/25/19 07:37	12/03/19 10:31	7439-96-5	
Nickel, Dissolved	<b>0.76J</b>	ug/L	1.0	0.28	1	11/25/19 07:37	12/03/19 10:31	7440-02-0	
<b>Field Data</b>									
Analytical Method:									
Field pH	<b>7.43</b>	Std. Units			1		11/19/19 14:55		
Field Specific Conductance	<b>809</b>	umhos/cm			1		11/19/19 14:55		
Turbidity	<b>N</b>	NTU			1		11/19/19 14:55		
Static Water Level	<b>925.67</b>	feet			1		11/19/19 14:55		
Apparent Color	<b>N</b>	no units			1		11/19/19 14:55		
Odor	<b>N</b>	no units			1		11/19/19 14:55		
Temperature, Water (C)	<b>12.0</b>	deg C			1		11/19/19 14:55		
<b>300.0 IC Anions, Dissolved</b>									
Analytical Method: EPA 300.0									
Chloride, Dissolved	<b>101</b>	mg/L	10.0	2.2	5		12/08/19 16:25	16887-00-6	
Sulfate, Dissolved	<b>16.7</b>	mg/L	10.0	2.2	5		12/08/19 16:25	14808-79-8	
<b>351.2 Diss. Kjeldahl Nitrogen</b>									
Analytical Method: EPA 351.2      Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total, Dissolved	<b>0.31J</b>	mg/L	0.73	0.22	1	12/03/19 12:25	12/03/19 17:57	7727-37-9	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

**Sample: B-94-25 DUP**      **Lab ID: 40199584007**      Collected: 11/19/19 14:55      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, Dissolved Pres</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3, Dissolved	<b>0.45</b>	mg/L	0.25	0.059	1		11/26/19 12:36		

**Sample: FIELD BLANK**      **Lab ID: 40199584008**      Collected: 11/19/19 15:00      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic	<b>&lt;0.28</b>	ug/L	1.0	0.28	1	12/02/19 06:11	12/03/19 22:03	7440-38-2	
Chromium	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	12/02/19 06:11	12/03/19 22:03	7440-47-3	
Lead	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	12/02/19 06:11	12/03/19 22:03	7439-92-1	
Magnesium	<b>&lt;0.031</b>	mg/L	0.25	0.031	1	12/02/19 06:11	12/03/19 22:03	7439-95-4	
Manganese	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	12/02/19 06:11	12/03/19 22:03	7439-96-5	
Nickel	<b>&lt;0.28</b>	ug/L	1.0	0.28	1	12/02/19 06:11	12/03/19 22:03	7440-02-0	
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>&lt;0.43</b>	mg/L	2.0	0.43	1		12/08/19 16:51	16887-00-6	
Sulfate	<b>&lt;0.44</b>	mg/L	2.0	0.44	1		12/08/19 16:51	14808-79-8	
<b>351.2 Total Kjeldahl Nitrogen</b>		Analytical Method: EPA 351.2      Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	<b>&lt;0.21</b>	mg/L	1.0	0.21	1	12/03/19 12:22	12/03/19 17:28	7727-37-9	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/26/19 11:03		

**Sample: EQUIPMENT BLANK**      **Lab ID: 40199584009**      Collected: 11/19/19 15:02      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020      Preparation Method: EPA 3010							
Arsenic	<b>&lt;0.28</b>	ug/L	1.0	0.28	1	12/02/19 06:11	12/03/19 22:10	7440-38-2	
Chromium	<b>&lt;1.0</b>	ug/L	3.4	1.0	1	12/02/19 06:11	12/03/19 22:10	7440-47-3	
Lead	<b>&lt;0.24</b>	ug/L	1.0	0.24	1	12/02/19 06:11	12/03/19 22:10	7439-92-1	
Magnesium	<b>0.12J</b>	mg/L	0.25	0.031	1	12/02/19 06:11	12/03/19 22:10	7439-95-4	
Manganese	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	12/02/19 06:11	12/03/19 22:10	7439-96-5	
Nickel	<b>0.31J</b>	ug/L	1.0	0.28	1	12/02/19 06:11	12/03/19 22:10	7440-02-0	B
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>&lt;0.43</b>	mg/L	2.0	0.43	1		12/08/19 17:18	16887-00-6	
Sulfate	<b>&lt;0.44</b>	mg/L	2.0	0.44	1		12/08/19 17:18	14808-79-8	

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

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**Sample: EQUIPMENT BLANK**      **Lab ID: 40199584009**      Collected: 11/19/19 15:02      Received: 11/21/19 08:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>351.2 Total Kjeldahl Nitrogen</b>									
Analytical Method: EPA 351.2    Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	<b>&lt;0.21</b>	mg/L	1.0	0.21	1	12/03/19 12:22	12/03/19 17:29	7727-37-9	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/26/19 11:04		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 533143

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 40198877004

METHOD BLANK: 2460434

Matrix: Water

Associated Lab Samples: 40198877004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	40198717001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198877004

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198877004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result							
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 342136 Analysis Method: EPA 6020  
QC Batch Method: EPA 3010 Analysis Description: 6020 MET  
Associated Lab Samples: 40199584008, 40199584009

METHOD BLANK: 1987196 Matrix: Water

Associated Lab Samples: 40199584008, 40199584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.28	1.0	12/03/19 21:56	
Chromium	ug/L	<1.0	3.4	12/03/19 21:56	
Lead	ug/L	<0.24	1.0	12/03/19 21:56	
Magnesium	mg/L	<0.031	0.25	12/03/19 21:56	
Manganese	ug/L	<1.2	4.0	12/03/19 21:56	
Nickel	ug/L	0.38J	1.0	12/03/19 21:56	

LABORATORY CONTROL SAMPLE: 1987197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	518	104	80-120	
Chromium	ug/L	500	478	96	80-120	
Lead	ug/L	500	467	93	80-120	
Magnesium	mg/L	5	5.2	103	80-120	
Manganese	ug/L	500	493	99	80-120	
Nickel	ug/L	500	480	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987198 1987199

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40200076011 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic	ug/L	60.0	500	500	544	561	97	100	75-125	3	20		
Chromium	ug/L	247	500	500	722	736	95	98	75-125	2	20		
Lead	ug/L	227	500	500	690	719	93	98	75-125	4	20		
Magnesium	mg/L	861000	5	5	806	846	-1100	-310	75-125	5	20	P6	
Manganese	ug/L	3840	500	500	4100	4250	53	82	75-125	3	20	P6	
Nickel	ug/L	233	500	500	678	687	89	91	75-125	1	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 340667 Analysis Method: EPA 6020  
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

METHOD BLANK: 1978166 Matrix: Water  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	11/15/19 22:51	
Chromium, Dissolved	ug/L	<1.0	3.4	11/15/19 22:51	
Lead, Dissolved	ug/L	<0.24	1.0	11/15/19 22:51	
Magnesium, Dissolved	mg/L	<0.031	0.25	11/15/19 22:51	
Manganese, Dissolved	ug/L	<1.2	4.0	11/15/19 22:51	
Nickel, Dissolved	ug/L	<0.28	1.0	11/15/19 22:51	

LABORATORY CONTROL SAMPLE: 1978167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	484	97	80-120	
Chromium, Dissolved	ug/L	500	458	92	80-120	
Lead, Dissolved	ug/L	500	450	90	80-120	
Magnesium, Dissolved	mg/L	5	4.8	96	80-120	
Manganese, Dissolved	ug/L	500	468	94	80-120	
Nickel, Dissolved	ug/L	500	472	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1978168 1978169

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198582005 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic, Dissolved	ug/L	2.8	500	500	507	517	101	103	75-125	2	20		
Chromium, Dissolved	ug/L	<1.0	500	500	476	480	95	96	75-125	1	20		
Lead, Dissolved	ug/L	<0.24	500	500	472	481	94	96	75-125	2	20		
Magnesium, Dissolved	mg/L	16600	5	5	21.4	21.9	97	106	75-125	2	20		
	ug/L												
Manganese, Dissolved	ug/L	64.2	500	500	551	560	97	99	75-125	2	20		
Nickel, Dissolved	ug/L	0.34J	500	500	482	483	96	97	75-125	0	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 341116 Analysis Method: EPA 6020  
 QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved  
 Associated Lab Samples: 40199200001, 40199200002, 40199200005, 40199200006, 40199200007, 40199200008

METHOD BLANK: 1980691 Matrix: Water  
 Associated Lab Samples: 40199200001, 40199200002, 40199200005, 40199200006, 40199200007, 40199200008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	11/21/19 19:59	
Chromium, Dissolved	ug/L	<1.0	3.4	11/22/19 16:01	
Lead, Dissolved	ug/L	<0.24	1.0	11/21/19 19:59	
Magnesium, Dissolved	mg/L	<0.031	0.25	11/22/19 16:01	
Manganese, Dissolved	ug/L	<1.2	4.0	11/22/19 16:01	
Nickel, Dissolved	ug/L	<0.28	1.0	11/22/19 16:01	

LABORATORY CONTROL SAMPLE: 1980692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	467	93	80-120	
Chromium, Dissolved	ug/L	500	478	96	80-120	
Lead, Dissolved	ug/L	500	469	94	80-120	
Magnesium, Dissolved	mg/L	5	5.1	102	80-120	
Manganese, Dissolved	ug/L	500	484	97	80-120	
Nickel, Dissolved	ug/L	500	475	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1980693 1980694

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199200001 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic, Dissolved	ug/L	0.57J	500	500	527	506	105	101	75-125	4	20		
Chromium, Dissolved	ug/L	<1.0	500	500	496	478	99	95	75-125	4	20		
Lead, Dissolved	ug/L	<0.24	500	500	504	481	101	96	75-125	5	20		
Magnesium, Dissolved	mg/L	57.0	5	5	66.5	60.8	191	77	75-125	9	20	P6	
Manganese, Dissolved	ug/L	63.1	500	500	563	538	100	95	75-125	4	20		
Nickel, Dissolved	ug/L	1.7	500	500	488	473	97	94	75-125	3	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341690 Analysis Method: EPA 6020  
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

METHOD BLANK: 1985059 Matrix: Water  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	12/02/19 18:47	
Chromium, Dissolved	ug/L	<1.0	3.4	12/02/19 18:47	
Lead, Dissolved	ug/L	<0.24	1.0	12/02/19 18:47	
Magnesium, Dissolved	mg/L	<0.031	0.25	12/02/19 18:47	
Manganese, Dissolved	ug/L	<1.2	4.0	12/02/19 18:47	
Nickel, Dissolved	ug/L	<0.28	1.0	12/02/19 18:47	

LABORATORY CONTROL SAMPLE: 1985060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	473	95	80-120	
Chromium, Dissolved	ug/L	500	464	93	80-120	
Lead, Dissolved	ug/L	500	452	90	80-120	
Magnesium, Dissolved	mg/L	5	4.9	98	80-120	
Manganese, Dissolved	ug/L	500	466	93	80-120	
Nickel, Dissolved	ug/L	500	466	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985061 1985062

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199584001 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic, Dissolved	ug/L	12.6	500	500	496	489	97	95	75-125	1	20		
Chromium, Dissolved	ug/L	<1.0	500	500	471	464	94	93	75-125	2	20		
Lead, Dissolved	ug/L	<0.24	500	500	469	463	94	93	75-125	1	20		
Magnesium, Dissolved	mg/L	74.2	5	5	80.9	78.8	135	93	75-125	3	20	P6	
Manganese, Dissolved	ug/L	125	500	500	602	596	95	94	75-125	1	20		
Nickel, Dissolved	ug/L	2.2	500	500	455	450	91	90	75-125	1	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 342139 Analysis Method: EPA 6020  
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved  
Associated Lab Samples: 40199200003, 40199200004

METHOD BLANK: 1987208 Matrix: Water  
Associated Lab Samples: 40199200003, 40199200004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	12/03/19 06:28	
Chromium, Dissolved	ug/L	<1.0	3.4	12/03/19 06:28	
Lead, Dissolved	ug/L	<0.24	1.0	12/03/19 06:28	
Magnesium, Dissolved	mg/L	<0.031	0.25	12/03/19 06:28	
Manganese, Dissolved	ug/L	<1.2	4.0	12/03/19 06:28	
Nickel, Dissolved	ug/L	<0.28	1.0	12/03/19 06:28	

LABORATORY CONTROL SAMPLE: 1987209

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	509	102	80-120	
Chromium, Dissolved	ug/L	500	493	99	80-120	
Lead, Dissolved	ug/L	500	473	95	80-120	
Magnesium, Dissolved	mg/L	5	5.1	102	80-120	
Manganese, Dissolved	ug/L	500	494	99	80-120	
Nickel, Dissolved	ug/L	500	493	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987210 1987211

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199200003 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic, Dissolved	ug/L	<0.28	500	500	511	518	102	104	75-125	1	20		
Chromium, Dissolved	ug/L	<1.0	500	500	488	492	97	98	75-125	1	20		
Lead, Dissolved	ug/L	<0.24	500	500	484	486	97	97	75-125	0	20		
Magnesium, Dissolved	mg/L	61.2	5	5	66.4	68.6	104	148	75-125	3	20	P6	
Manganese, Dissolved	ug/L	2.4J	500	500	492	494	98	98	75-125	1	20		
Nickel, Dissolved	ug/L	0.35J	500	500	472	474	94	95	75-125	0	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 340925 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions, Dissolved  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

METHOD BLANK: 1979556 Matrix: Water  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/23/19 09:06	
Sulfate	mg/L	<0.44	2.0	11/23/19 09:06	

LABORATORY CONTROL SAMPLE: 1979557

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.7	103	90-110	
Sulfate	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979558 1979559

Parameter	Units	40198876003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Chloride	mg/L	45.2	100	145	100	148	99	103	90-110	3	15	
Sulfate	mg/L	78.1	100	173	100	177	95	99	90-110	2	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979560 1979561

Parameter	Units	40198891007 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Chloride	mg/L	21.1	20	41.7	20	41.7	103	103	90-110	0	15	
Sulfate	mg/L	<0.44	20	21.4	20	22.5	107	112	90-110	5	15 M0	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341959 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions, Dissolved  
Associated Lab Samples: 40199200001, 40199200002, 40199200003, 40199200004, 40199200005, 40199200006, 40199200007, 40199200008

METHOD BLANK: 1986055 Matrix: Water  
Associated Lab Samples: 40199200001, 40199200002, 40199200003, 40199200004, 40199200005, 40199200006, 40199200007, 40199200008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/27/19 09:45	
Sulfate	mg/L	<0.44	2.0	11/27/19 09:45	

LABORATORY CONTROL SAMPLE: 1986056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.2	101	90-110	
Sulfate	mg/L	20	20.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1986057 1986058

Parameter	Units	40199200001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	55.7	100	100	157	158	102	102	90-110	0	15	
Sulfate	mg/L	133	100	100	228	227	95	95	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1986059 1986060

Parameter	Units	40199203001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.5	100	100	126	127	105	106	90-110	1	15	
Sulfate	mg/L	105	100	100	208	208	103	103	90-110	0	15	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 342323 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions, Dissolved  
Associated Lab Samples: 40199584001, 40199584002, 40199584003

METHOD BLANK: 1987792 Matrix: Water  
Associated Lab Samples: 40199584001, 40199584002, 40199584003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/06/19 10:14	
Sulfate	mg/L	<0.44	2.0	12/06/19 10:14	

LABORATORY CONTROL SAMPLE: 1987793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.5	93	90-110	
Sulfate	mg/L	20	18.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987794 1987795

Parameter	Units	40199532028		1987794		1987795		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	131	100	100	238	237	107	90-110	0	15	
Sulfate	mg/L	39.6	100	100	147	146	107	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987796 1987797

Parameter	Units	40199584003		1987796		1987797		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	34.3	100	100	139	138	104	90-110	0	15	
Sulfate	mg/L	101	100	100	212	210	112	90-110	1	15 M0	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 342614 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions,Dissolved  
Associated Lab Samples: 40199584004, 40199584005, 40199584006, 40199584007

METHOD BLANK: 1989404 Matrix: Water  
Associated Lab Samples: 40199584004, 40199584005, 40199584006, 40199584007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/08/19 13:04	
Sulfate	mg/L	<0.44	2.0	12/08/19 13:04	

LABORATORY CONTROL SAMPLE: 1989405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.6	93	90-110	
Sulfate	mg/L	20	18.8	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989406 1989407

Parameter	Units	40199584004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	55.3	100	154	156	99	100	90-110	1	15		
Sulfate	mg/L	48.0	100	147	149	99	101	90-110	1	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989408 1989409

Parameter	Units	40199871009 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	27.2	100	129	129	102	101	90-110	0	15		
Sulfate	mg/L	17.3	100	120	121	103	103	90-110	1	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 340928

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 40198877004

METHOD BLANK: 1979575

Matrix: Water

Associated Lab Samples: 40198877004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:28	

LABORATORY CONTROL SAMPLE: 1979576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979577 1979578

Parameter	Units	40198846001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	14.1J	400	400	431	428	104	103	90-110	1	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979579 1979580

Parameter	Units	40198860004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	276	400	400	692	685	104	102	90-110	1	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 342253 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 40199584008, 40199584009

METHOD BLANK: 1987546 Matrix: Water

Associated Lab Samples: 40199584008, 40199584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/08/19 12:41	
Sulfate	mg/L	<0.44	2.0	12/08/19 12:41	

LABORATORY CONTROL SAMPLE: 1987547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	
Sulfate	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987548 1987549

Parameter	Units	40199547001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	42.4	100	143	147	100	104	90-110	3	15		
Sulfate	mg/L	17.0	100	115	120	98	103	90-110	5	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987550 1987551

Parameter	Units	40199657002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	16.3	100	117	117	101	101	90-110	0	15		
Sulfate	mg/L	29.1	100	130	129	101	100	90-110	0	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 342345 Analysis Method: EPA 351.2  
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN  
Associated Lab Samples: 40199584008, 40199584009

METHOD BLANK: 1987865 Matrix: Water  
Associated Lab Samples: 40199584008, 40199584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.21	1.0	12/03/19 17:03	

LABORATORY CONTROL SAMPLE: 1987866

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	5	4.5	90	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987867 1987868

Parameter	Units	40199914001		1987867		1987868		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Nitrogen, Kjeldahl, Total	mg/L	1.3	5	5	6.0	5.9	95	93	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987869 1987870

Parameter	Units	40199547001		1987869		1987870		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Nitrogen, Kjeldahl, Total	mg/L	12.2	50	50	58.4	58.6	92	93	90-110	0	20	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

QC Batch: 340459 Analysis Method: EPA 351.2  
 QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN Dissolved  
 Associated Lab Samples: 40198877001, 40198877002, 40198877003

METHOD BLANK: 1976800 Matrix: Water

Associated Lab Samples: 40198877001, 40198877002, 40198877003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	0.73	11/12/19 17:39	

LABORATORY CONTROL SAMPLE: 1976801

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976802 1976803

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	1.2	5	5	5	6.7	6.8	109	111	90-110	2	20	M0

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341010 Analysis Method: EPA 351.2  
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN Dissolved  
Associated Lab Samples: 40199200001, 40199200002, 40199200003, 40199200004, 40199200005, 40199200006, 40199200007, 40199200008

METHOD BLANK: 1980372 Matrix: Water  
Associated Lab Samples: 40199200001, 40199200002, 40199200003, 40199200004, 40199200005, 40199200006, 40199200007, 40199200008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	0.73	11/18/19 17:48	

LABORATORY CONTROL SAMPLE: 1980373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	5	5.4	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1980374 1980375

Parameter	Units	40199332001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	5	5	5.4	5.0	107	99	90-110	8	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1980376 1980377

Parameter	Units	40199200001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	5	5	5.3	5.3	101	101	90-110	0	20	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 342347 Analysis Method: EPA 351.2  
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN Dissolved  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

METHOD BLANK: 1987874 Matrix: Water  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	0.73	12/03/19 17:30	

LABORATORY CONTROL SAMPLE: 1987876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	5	4.6	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987877 1987878

Parameter	Units	40199635001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	0.25J	5	5	4.8	4.6	91	88	90-110	4	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987879 1987880

Parameter	Units	40199727001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total, Dissolved	mg/L	<0.22	5	5	4.8	4.8	93	93	90-110	0	20	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 340849 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198877004

METHOD BLANK: 1979079 Matrix: Water  
Associated Lab Samples: 40198877004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 11:39	

LABORATORY CONTROL SAMPLE: 1979080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979081 1979082

Parameter	Units	40198846004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.0	2.5	2.0	78	80	90-110	3	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979083 1979084

Parameter	Units	40198882001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.3	2.5	2.3	91	91	90-110	0	20	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341857 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40199584008, 40199584009

METHOD BLANK: 1985627 Matrix: Water  
Associated Lab Samples: 40199584008, 40199584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/26/19 10:50	

LABORATORY CONTROL SAMPLE: 1985628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985629 1985630

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40199507001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrogen, NO2 plus NO3	mg/L	2.2	2.5	2.5	4.8	4.8	104	105	90-110	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985631 1985632

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40199616001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrogen, NO2 plus NO3	mg/L	0.41J	12.5	12.5	13.4	13.5	103	104	90-110	1	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 340846 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrogen, Dissolved, preserved  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

METHOD BLANK: 1979061 Matrix: Water  
Associated Lab Samples: 40198877001, 40198877002, 40198877003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	0.25	11/15/19 10:31	

LABORATORY CONTROL SAMPLE: 1979062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979063 1979064

Parameter	Units	40198877003		1979063		1979064		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	2.5	2.5	2.5	2.4	2.4	96	95	90-110	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979065 1979066

Parameter	Units	40198891010		1979065		1979066		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Nitrogen, NO2 plus NO3, Dissolved	mg/L	0.54	2.5	2.5	2.5	2.9	2.9	95	93	90-110	2	20

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341416 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrogen, Dissolved, preserved  
Associated Lab Samples: 40199200001

METHOD BLANK: 1982557 Matrix: Water  
Associated Lab Samples: 40199200001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	0.25	11/21/19 11:51	

LABORATORY CONTROL SAMPLE: 1982558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982559 1982560

Parameter	Units	40199132025		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrogen, NO2 plus NO3, Dissolved	mg/L	0.17J	2.5	2.5	2.5	2.5	94	93	90-110	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982561 1982562

Parameter	Units	40199200001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	2.5	2.5	2.4	2.4	95	95	90-110	1	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341418 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrogen, Dissolved, preserved  
Associated Lab Samples: 40199200002, 40199200005, 40199200006, 40199200007, 40199200008

METHOD BLANK: 1982567 Matrix: Water  
Associated Lab Samples: 40199200002, 40199200005, 40199200006, 40199200007, 40199200008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	0.25	11/21/19 12:15	

LABORATORY CONTROL SAMPLE: 1982568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982569 1982570

Parameter	Units	40199200008		1982570		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.5	2.5	4.8	4.8	91	92	90-110	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982571 1982572

Parameter	Units	40199264017		1982572		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, NO2 plus NO3, Dissolved	mg/L	6.3	2.5	2.5	8.6	8.5	90	88	90-110	0	20 M0

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341859 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrogen, Dissolved, preserved  
Associated Lab Samples: 40199200003, 40199200004

METHOD BLANK: 1985636 Matrix: Water  
Associated Lab Samples: 40199200003, 40199200004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	0.25	11/26/19 11:11	

LABORATORY CONTROL SAMPLE: 1985637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985638 1985639

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199513008 Result	Spike Conc.	Spike Conc.	Conc.								
Nitrogen, NO2 plus NO3, Dissolved	mg/L	3.8	2.5	2.5	2.5	6.3	6.2	102	98	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985640 1985641

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199635003 Result	Spike Conc.	Spike Conc.	Conc.								
Nitrogen, NO2 plus NO3, Dissolved	mg/L	0.12J	2.5	2.5	2.5	2.6	2.7	100	102	90-110	1	20	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

QC Batch: 341862 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrogen, Dissolved, preserved  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

METHOD BLANK: 1985654 Matrix: Water  
Associated Lab Samples: 40199584001, 40199584002, 40199584003, 40199584004, 40199584005, 40199584006, 40199584007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	0.25	11/26/19 12:19	

LABORATORY CONTROL SAMPLE: 1985655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3, Dissolved	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985656 1985657

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199532029 Result	Spike Conc.	Spike Conc.	Conc.								
Nitrogen, NO2 plus NO3, Dissolved	mg/L	<0.059	2.5	2.5	2.1	2.2	85	89	90-110	5	20	M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985658 1985659

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199584007 Result	Spike Conc.	Spike Conc.	Conc.								
Nitrogen, NO2 plus NO3, Dissolved	mg/L	0.45	2.5	2.5	3.0	3.0	103	103	90-110	0	20		

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198877

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P4 Sample field preservation does not meet EPA or method recommendations for this analysis.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198877004	WHITEHAUS DUP	EPA 200.7	533143	EPA 200.7	533846
40198877004	WHITEHAUS DUP	EPA 200.8	533238	EPA 200.8	533475
40199584008	FIELD BLANK	EPA 3010	342136	EPA 6020	342235
40199584009	EQUIPMENT BLANK	EPA 3010	342136	EPA 6020	342235
40198877001	B-94-19A	EPA 3010	340667	EPA 6020	340790
40198877002	W-23	EPA 3010	340667	EPA 6020	340790
40198877003	W-23A	EPA 3010	340667	EPA 6020	340790
40199200001	B-96-13A	EPA 3010	341116	EPA 6020	341224
40199200002	B-94-14R	EPA 3010	341116	EPA 6020	341224
40199200003	B-96-18A	EPA 3010	342139	EPA 6020	342236
40199200004	B-96-18B	EPA 3010	342139	EPA 6020	342236
40199200005	B-94-14A	EPA 3010	341116	EPA 6020	341224
40199200006	B-96-17	EPA 3010	341116	EPA 6020	341224
40199200007	B-96-17A	EPA 3010	341116	EPA 6020	341224
40199200008	W-24	EPA 3010	341116	EPA 6020	341224
40199584001	B-15	EPA 3010	341690	EPA 6020	341803
40199584002	B-15A	EPA 3010	341690	EPA 6020	341803
40199584003	B-21	EPA 3010	341690	EPA 6020	341803
40199584004	B-21A	EPA 3010	341690	EPA 6020	341803
40199584005	B-94-25	EPA 3010	341690	EPA 6020	341803
40199584006	B-94-25A	EPA 3010	341690	EPA 6020	341803
40199584007	B-94-25 DUP	EPA 3010	341690	EPA 6020	341803
40198877001	B-94-19A				
40198877002	W-23				
40198877003	W-23A				
40198877004	WHITEHAUS DUP				
40199200001	B-96-13A				
40199200002	B-94-14R				
40199200003	B-96-18A				
40199200004	B-96-18B				
40199200005	B-94-14A				
40199200006	B-96-17				
40199200007	B-96-17A				
40199200008	W-24				
40199584001	B-15				
40199584002	B-15A				
40199584003	B-21				
40199584004	B-21A				
40199584005	B-94-25				
40199584006	B-94-25A				
40199584007	B-94-25 DUP				
40198877004	WHITEHAUS DUP	EPA 300.0	340928		
40199584008	FIELD BLANK	EPA 300.0	342253		
40199584009	EQUIPMENT BLANK	EPA 300.0	342253		

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198877001	B-94-19A	EPA 300.0	340925		
40198877002	W-23	EPA 300.0	340925		
40198877003	W-23A	EPA 300.0	340925		
40199200001	B-96-13A	EPA 300.0	341959		
40199200002	B-94-14R	EPA 300.0	341959		
40199200003	B-96-18A	EPA 300.0	341959		
40199200004	B-96-18B	EPA 300.0	341959		
40199200005	B-94-14A	EPA 300.0	341959		
40199200006	B-96-17	EPA 300.0	341959		
40199200007	B-96-17A	EPA 300.0	341959		
40199200008	W-24	EPA 300.0	341959		
40199584001	B-15	EPA 300.0	342323		
40199584002	B-15A	EPA 300.0	342323		
40199584003	B-21	EPA 300.0	342323		
40199584004	B-21A	EPA 300.0	342614		
40199584005	B-94-25	EPA 300.0	342614		
40199584006	B-94-25A	EPA 300.0	342614		
40199584007	B-94-25 DUP	EPA 300.0	342614		
40199584008	FIELD BLANK	EPA 351.2	342345	EPA 351.2	342413
40199584009	EQUIPMENT BLANK	EPA 351.2	342345	EPA 351.2	342413
40198877001	B-94-19A	EPA 351.2	340459	EPA 351.2	340507
40198877002	W-23	EPA 351.2	340459	EPA 351.2	340507
40198877003	W-23A	EPA 351.2	340459	EPA 351.2	340507
40199200001	B-96-13A	EPA 351.2	341010	EPA 351.2	341105
40199200002	B-94-14R	EPA 351.2	341010	EPA 351.2	341105
40199200003	B-96-18A	EPA 351.2	341010	EPA 351.2	341105
40199200004	B-96-18B	EPA 351.2	341010	EPA 351.2	341105
40199200005	B-94-14A	EPA 351.2	341010	EPA 351.2	341105
40199200006	B-96-17	EPA 351.2	341010	EPA 351.2	341105
40199200007	B-96-17A	EPA 351.2	341010	EPA 351.2	341105
40199200008	W-24	EPA 351.2	341010	EPA 351.2	341105
40199584001	B-15	EPA 351.2	342347	EPA 351.2	342414
40199584002	B-15A	EPA 351.2	342347	EPA 351.2	342414
40199584003	B-21	EPA 351.2	342347	EPA 351.2	342414
40199584004	B-21A	EPA 351.2	342347	EPA 351.2	342414
40199584005	B-94-25	EPA 351.2	342347	EPA 351.2	342414
40199584006	B-94-25A	EPA 351.2	342347	EPA 351.2	342414
40199584007	B-94-25 DUP	EPA 351.2	342347	EPA 351.2	342414
40198877004	WHITEHAUS DUP	EPA 353.2	340849		
40199584008	FIELD BLANK	EPA 353.2	341857		
40199584009	EQUIPMENT BLANK	EPA 353.2	341857		
40198877001	B-94-19A	EPA 353.2	340846		
40198877002	W-23	EPA 353.2	340846		

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198877

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198877003	W-23A	EPA 353.2	340846		
40199200001	B-96-13A	EPA 353.2	341416		
40199200002	B-94-14R	EPA 353.2	341418		
40199200003	B-96-18A	EPA 353.2	341859		
40199200004	B-96-18B	EPA 353.2	341859		
40199200005	B-94-14A	EPA 353.2	341418		
40199200006	B-96-17	EPA 353.2	341418		
40199200007	B-96-17A	EPA 353.2	341418		
40199200008	W-24	EPA 353.2	341418		
40199584001	B-15	EPA 353.2	341862		
40199584002	B-15A	EPA 353.2	341862		
40199584003	B-21	EPA 353.2	341862		
40199584004	B-21A	EPA 353.2	341862		
40199584005	B-94-25	EPA 353.2	341862		
40199584006	B-94-25A	EPA 353.2	341862		
40199584007	B-94-25 DUP	EPA 353.2	341862		


### REPORT OF LABORATORY ANALYSIS

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 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: Kapw

**WO#: 40198877**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20.1 / Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 11/8/19  
Initials: CS

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 11/9/19



### Sample Preservation Receipt Form

Client Name: KAPUR & Associates Inc Project # 4019000

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Initial when completed: DLW Date/Time:

Lab Lot# of pH paper: 10U53581 Lab Std #ID of preservation (if pH adjusted):

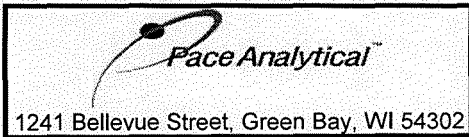
Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)						
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN			
001										-	-	-																		X				X		2.5 / 5 / 10
002										-	-	-																		X				X		2.5 / 5 / 10
003										-	-	-																		X				X		2.5 / 5 / 10
004										-	-	-																		X				X		2.5 / 5 / 10
005										-	-	-																		X				X		2.5 / 5 / 10
006										-	-	-																		X				X		2.5 / 5 / 10
007										-	-	-																		X				X		2.5 / 5 / 10
008										-	-	-																		X				X		2.5 / 5 / 10
009																																				2.5 / 5 / 10
010																																				2.5 / 5 / 10
011																																				2.5 / 5 / 10
012																																				2.5 / 5 / 10
013																																				2.5 / 5 / 10
014																																				2.5 / 5 / 10
015																																				2.5 / 5 / 10
016																																				2.5 / 5 / 10
017																																				2.5 / 5 / 10
018																																				2.5 / 5 / 10
019																																				2.5 / 5 / 10
020																																				2.5 / 5 / 10

*Handwritten notes:*  
K/1/1/1/1  
DLW

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WIDRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	





Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-GB-C-031-Rev.07**

Document Revised: 25Apr2018  
 Issuing Authority:  
 Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #

**WO# : 40199200**



Client Name: Kapur + Associates Inc

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other Zip locks

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:

Date: 11/14/19

Initials: [Signature]

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>PO # / invoice phone</u> <u>11/14/19</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Sample 004 ID on COC B-96-18A</u> <u>11/14/19</u>
-Includes date/time/ID/Analysis Matrix: <u>W</u>		<u>ID on Sample B-96-18B (collection time match COC)</u>
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

[Signature]

Date: 11/15/19

(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6668  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *[Signature]*  
 PO #: \_\_\_\_\_ Regulatory Program: \_\_\_\_\_



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

COC No. 40199584

### CHAIN OF CUSTODY

\*Preservation Codes  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
PRESERVATION  
(CODE)\*

Y / N	Y	Y	Y	N	N	N
Pick Letter	A	D	C	A	D	C
Analyses Requested	Chloride, Sulfate	As, Pb, Ni, Mn, Mg, Cr	Nitrate + Nitrite, TKN	Chloride, Sulfate	As, Pb, Ni, Mn, Mg, Cr	Nitrate + Nitrite, TKN

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y / N	Y	Y	Y	N	N	N
		DATE	TIME								
001	B-15	11/19/19	9:55	GW		X	X	X			
002	B-15A	11/19/19	10:55	GW		X	X	X			
003	B-21	11/19/19	12:45	GW		X	X	X			
004	B-21A	11/19/19	12:10	GW		X	X	X			
005	B-94-25	11/19/19	14:50	GW		X	X	X			
006	B-94-25A	11/19/19	14:06	GW		X	X	X			
007	B-94-25 Dup	11/19/19	14:55	GW		X	X	X			
008	Field Blank	11/19/19	15:00	DI					X	X	X
009	Equipment Blank	11/19/19	15:02	DI					X	X	X

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above  
**Invoice To Phone:** \_\_\_\_\_  
**CLIENT COMMENTS** | **LAB COMMENTS (Lab Use Only)** | **Profile #**

**Rush Turnaround Time Requested - Prelims**  
 (Rush TAT subject to approval/surcharge)  
 Date Needed: \_\_\_\_\_

Relinquished By: *[Signature]* Date/Time: 11/20/19 14:05  
 Received By: *Mary Fannin* Date/Time: 11/20/19 14:05

Transmit Prelim Rush Results by (complete what you want):  
 Relinquished By: *Mary Fannin* Date/Time: 11/20/19 15:00  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Email #1: \_\_\_\_\_  
 Email #2: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax: \_\_\_\_\_

Relinquished By: *CS Logistics* Date/Time: 11/19 08:45  
 Received By: *Quinn Ryan Pace* Date/Time: 11/19 08:45

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Samples on HOLD are subject to special pricing and release of liability

PACE Project No. 40199584  
 Receipt Temp = \_\_\_\_\_ °C  
 Sample Receipt pH OK / Adjusted  
 Cooler Custody Seal Present / Not Present Intact / Not Intact





Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-GB-C-031-Rev.07**

Document Revised: 25Apr2018  
 Issuing Authority:  
 Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #: \_\_\_\_\_

Client Name: Kapvr & Associates Inc

**WO#: 40199584**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - N/A Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT / Corr: -

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/21/19  
 Initials: gm

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 11/21/19



December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 15, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199296

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199296001	BERGHAMMER	Water	11/08/19 13:20	11/15/19 09:40

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199296

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199296001	BERGHAMMER	EPA 200.7	RAM	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

**Sample: BERGHAMMER**      **Lab ID: 40199296001**      Collected: 11/08/19 13:20      Received: 11/15/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>37.7</b>	mg/L	0.21	0.064	1	11/25/19 05:51	12/02/19 12:09	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>&lt;0.16</b>	ug/L	0.52	0.16	1	11/21/19 09:10	11/21/19 17:55	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/21/19 09:10	11/21/19 17:55	7440-47-3	N2
Lead	<b>0.45</b>	ug/L	0.36	0.11	1	11/21/19 09:10	11/21/19 17:55	7439-92-1	N2
Manganese	<b>1.6</b>	ug/L	0.28	0.083	1	11/21/19 09:10	11/21/19 17:55	7439-96-5	1q,N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.53</b>	Std. Units			1		11/08/19 13:20		
Field Specific Conductance	<b>834</b>	umhos/cm			1		11/08/19 13:20		
Turbidity	<b>N</b>	NTU			1		11/08/19 13:20		
Apparent Color	<b>N</b>	no units			1		11/08/19 13:20		
Odor	<b>N</b>	no units			1		11/08/19 13:20		
Temperature, Water (C)	<b>9.6</b>	deg C			1		11/08/19 13:20		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>65.5</b>	mg/L	10.0	2.2	5		12/03/19 02:49	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.73</b>	mg/L	0.25	0.059	1		11/21/19 11:10		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

QC Batch: 535010 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40199296001

METHOD BLANK: 2469454 Matrix: Water  
Associated Lab Samples: 40199296001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/02/19 11:32	

LABORATORY CONTROL SAMPLE: 2469455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.7	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2469456 2469457

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199191001	Result	Spike Conc.	Spike Conc.								
Magnesium	mg/L	40.8	40.8	10	10	51.3	54.4	106	136	70-130	6	20	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

QC Batch: 534463 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40199296001

METHOD BLANK: 2466361 Matrix: Water  
Associated Lab Samples: 40199296001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/21/19 17:09	N2
Chromium	ug/L	<0.76	2.5	11/21/19 17:09	N2
Lead	ug/L	<0.11	0.36	11/21/19 17:09	N2
Manganese	ug/L	<0.083	0.28	11/21/19 17:09	N2

LABORATORY CONTROL SAMPLE: 2466362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.1	98	85-115	N2
Chromium	ug/L	40	41.7	104	85-115	N2
Lead	ug/L	40	40.6	102	85-115	N2
Manganese	ug/L	40	42.8	107	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2466363 2466364

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199317001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	17.2	40	40	58.7	58.4	104	103	70-130	1	20 N2
Chromium	ug/L	<0.76	40	40	39.0	39.2	97	97	70-130	1	20 N2
Lead	ug/L	0.71	40	40	40.8	41.3	100	101	70-130	1	20 N2
Manganese	ug/L	14.1	40	40	52.5	53.1	96	97	70-130	1	20 N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199296

QC Batch: 341965	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40199296001	

METHOD BLANK: 1986084 Matrix: Water  
Associated Lab Samples: 40199296001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/02/19 23:14	

LABORATORY CONTROL SAMPLE: 1986085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1986086 1986087

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40199282001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	390	400	400	803	806	103	104	90-110	0	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199296

QC Batch: 341414 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40199296001

METHOD BLANK: 1982545 Matrix: Water  
Associated Lab Samples: 40199296001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/21/19 11:08	

LABORATORY CONTROL SAMPLE: 1982546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982547 1982548

Parameter	Units	50241900004		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Nitrogen, NO2 plus NO3	mg/L	2.0	2.5	2.5	2.5	4.5	4.4	100	96	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982549 1982550

Parameter	Units	40199532026		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Nitrogen, NO2 plus NO3	mg/L	0.67	2.5	2.5	2.5	3.0	3.0	92	94	90-110	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199296

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

1q Analyte was detected in the interference check standard at a concentration greater than the MDL. 11-22-19 caw

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199296

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199296001	BERGHAMMER	EPA 200.7	535010	EPA 200.7	536022
40199296001	BERGHAMMER	EPA 200.8	534463	EPA 200.8	534683
40199296001	BERGHAMMER				
40199296001	BERGHAMMER	EPA 300.0	341965		
40199296001	BERGHAMMER	EPA 353.2	341414		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6688  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *Jennifer Skweres*



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2436

COC No. 40199296

### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y/N	N	N	N							
Pick Letter	A	C	D							
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite							

Quote #:   
 Mail To Contact: Travis Peterson  
 Mail To Company: Kapur & Associates Inc.  
 Mail To Address: 7711 N Port Washington Rd. Milwaukee, WI 53217  
 Invoice To Contact: same  
 Invoice To Company: as  
 Invoice To Address: above  
 Invoice To Phone:   
 CLIENT COMMENTS  
 LAB COMMENTS (Lab Use Only)  
 Profile #

PO #:   
 Regulatory Program:   
**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV  
**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample  
**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe


PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	Berghammer	11/08/19	13:20	DW

*PL*

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>Jennifer Skweres</i> Date/Time: 11/15/19 14:35	Received By: <i>Jennifer Skweres</i> Date/Time: 11/15/19 09:40	PACE Project No. 40199296 Receipt Temp = 20.1 °C Sample Receipt pH <input checked="" type="checkbox"/> Adjusted Cooler Custody Seal Present / Not Present Intact / Not Intact
Transmit Prelim Rush Results by (complete what you want):	Relinquished By: <i>CS Logistics</i> Date/Time: 11/14/19 09:40	Received By: <i>Jennifer Skweres</i> Date/Time: 11/14/19 09:40	
Email #1:	Relinquished By:	Received By:	
Email #2:	Relinquished By:	Received By:	
Telephone:	Relinquished By:	Received By:	
Fax:	Relinquished By:	Received By:	
Samples on HOLD are subject to special pricing and release of liability			





 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: <b>F-GB-C-031-Rev.07</b>	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: KAPUR & ASSOCIATED INC

**WO#: 40199296**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no <sup>11/14/19</sup> Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other zip lock

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Rot /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/15/19  
 Initials: SW

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Samples received 11/14/19 COC received 11/15/19</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 11/17/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198880

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

---

### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198880001	CHRISTIANSEN	Water	11/04/19 11:15	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198880001	CHRISTIANSEN	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198880

**Sample: CHRISTIANSEN**      **Lab ID: 40198880001**      Collected: 11/04/19 11:15      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>44.2</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 12:00	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>4.2</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:52	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:52	7440-47-3	N2
Lead	<b>0.58</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:52	7439-92-1	N2
Manganese	<b>18.4</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 17:53	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.35</b>	Std. Units			1		11/04/19 11:15		
Field Specific Conductance	<b>1092</b>	umhos/cm			1		11/04/19 11:15		
Turbidity	<b>N</b>	NTU			1		11/04/19 11:15		
Apparent Color	<b>N</b>	no units			1		11/04/19 11:15		
Odor	<b>N</b>	no units			1		11/04/19 11:15		
Temperature, Water (C)	<b>10.7</b>	deg C			1		11/04/19 11:15		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>28.1</b>	mg/L	10.0	2.2	5		11/25/19 20:08	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 11:59		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

QC Batch: 533143	Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7	Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 40198880001	

METHOD BLANK: 2460434 Matrix: Water  
Associated Lab Samples: 40198880001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	40198717001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198880

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198880001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198880001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

QC Batch: 340929	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40198880001	

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198880001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001		1979588		1979589		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001		1979590		1979591		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

QC Batch: 340849	Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2	Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 40198880001	

METHOD BLANK: 1979079 Matrix: Water  
Associated Lab Samples: 40198880001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 11:39	

LABORATORY CONTROL SAMPLE: 1979080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979081 1979082

Parameter	Units	40198846004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.0	2.0	78	80	90-110	3	20	M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979083 1979084

Parameter	Units	40198882001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.3	2.3	91	91	90-110	0	20		

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198880

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198880001	CHRISTIANSEN	EPA 200.7	533143	EPA 200.7	533846
40198880001	CHRISTIANSEN	EPA 200.8	533238	EPA 200.8	533475
40198880001	CHRISTIANSEN				
40198880001	CHRISTIANSEN	EPA 300.0	340929		
40198880001	CHRISTIANSEN	EPA 353.2	340849		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6668  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *[Signature]*  
 PO #: \_\_\_\_\_ Regulatory Program: \_\_\_\_\_



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

COC No. 40198880

# CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y/N	N	N	N							
Pick Letter	A	C	D							
Analyses Requested	Chloride			As, Pb, Cr, Mn, Mg			Nitrate + Nitrite			
	X	X	X							

Quote #: \_\_\_\_\_  
 Mail To Contact: Travis Peterson  
 Mail To Company: Kapur & Associates Inc.  
 Mail To Address: 7711 N Port Washington Rd. Milwaukee, WI 53217  
 Invoice To Contact: same  
 Invoice To Company: as  
 Invoice To Address: above  
 Invoice To Phone: \_\_\_\_\_  
 CLIENT COMMENTS: \_\_\_\_\_  
 LAB COMMENTS (Lab Use Only): \_\_\_\_\_  
 Profile #: \_\_\_\_\_

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 SI = Sludge WP = Wipe


PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	Christiansen	11/04/19	11:15	DW

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed: \_\_\_\_\_  
 Transmit Prelim Rush Results by (complete what you want): \_\_\_\_\_  
 Email #1: \_\_\_\_\_  
 Email #2: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Samples on HOLD are subject to special pricing and release of liability

Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 10:22	Received By: <i>[Signature]</i> Date/Time: 11/8/19 10:22
Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 15:15	Received By: <i>[Signature]</i> Date/Time: 11/8/19 15:15
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

PACE Project No. 40198880  
 Receipt Temp = *pa* °C  
 Sample Receipt pH *OK / Adjusted*  
 Cooler Custody Seal Present / Not Present Intact / Not Intact



 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: Kapuw

WO#: 40198880

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA    Type of Ice:  Wet  Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature    Uncorr: RD1 /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no    Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review: [Signature]

Date: 11/9/19



December 05, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-16-00157  
Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Certification #: 200074  
Indiana Certification #: C-49-06  
Kansas/NELAP Certification #: E-10177  
Kentucky UST Certification #: 80226  
Kentucky WW Certification #: 98019  
Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065  
Oklahoma Certification #: 9204  
Texas Certification #: T104704355  
West Virginia Certification #: 330  
Wisconsin Certification #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199191001	HEUN	Water	11/12/19 16:30	11/14/19 09:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199191

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199191001	HEUN	EPA 200.7	RAM	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199191

**Sample: HEUN**      **Lab ID: 40199191001**      Collected: 11/12/19 16:30      Received: 11/14/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>40.8</b>	mg/L	0.21	0.064	1	11/25/19 05:51	12/02/19 11:39	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>&lt;0.16</b>	ug/L	0.52	0.16	1	11/21/19 09:10	11/21/19 17:34	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/21/19 09:10	11/21/19 17:34	7440-47-3	N2
Lead	<b>0.58</b>	ug/L	0.36	0.11	1	11/21/19 09:10	11/21/19 17:34	7439-92-1	N2
Manganese	<b>0.55</b>	ug/L	0.28	0.083	1	11/21/19 09:10	11/21/19 17:34	7439-96-5	1q,N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.55</b>	Std. Units			1		11/12/19 16:30		
Field Specific Conductance	<b>943</b>	umhos/cm			1		11/12/19 16:30		
Turbidity	<b>N</b>	NTU			1		11/12/19 16:30		
Apparent Color	<b>N</b>	no units			1		11/12/19 16:30		
Odor	<b>N</b>	no units			1		11/12/19 16:30		
Temperature, Water (C)	<b>12.1</b>	deg C			1		11/12/19 16:30		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>88.9</b>	mg/L	10.0	2.2	5		11/26/19 04:56	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.69</b>	mg/L	0.25	0.059	1		11/21/19 11:05		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

QC Batch: 535010 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40199191001

METHOD BLANK: 2469454 Matrix: Water  
Associated Lab Samples: 40199191001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/02/19 11:32	

LABORATORY CONTROL SAMPLE: 2469455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.7	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2469456 2469457

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199191001 Result	Spike Conc.	Spike Conc.	Conc.								
Magnesium	mg/L	40.8	10	10	10	51.3	54.4	106	136	70-130	6	20	P6

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199191

QC Batch: 534463 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40199191001

METHOD BLANK: 2466361 Matrix: Water  
Associated Lab Samples: 40199191001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/21/19 17:09	N2
Chromium	ug/L	<0.76	2.5	11/21/19 17:09	N2
Lead	ug/L	<0.11	0.36	11/21/19 17:09	N2
Manganese	ug/L	<0.083	0.28	11/21/19 17:09	N2

LABORATORY CONTROL SAMPLE: 2466362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.1	98	85-115	N2
Chromium	ug/L	40	41.7	104	85-115	N2
Lead	ug/L	40	40.6	102	85-115	N2
Manganese	ug/L	40	42.8	107	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2466363 2466364

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199317001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	17.2	40	40	58.7	58.4	104	103	70-130	1	20 N2
Chromium	ug/L	<0.76	40	40	39.0	39.2	97	97	70-130	1	20 N2
Lead	ug/L	0.71	40	40	40.8	41.3	100	101	70-130	1	20 N2
Manganese	ug/L	14.1	40	40	52.5	53.1	96	97	70-130	1	20 N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

QC Batch: 341664 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40199191001

METHOD BLANK: 1984718 Matrix: Water  
Associated Lab Samples: 40199191001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/26/19 01:38	

LABORATORY CONTROL SAMPLE: 1984719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1984720 1984721

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40199132042	Result	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
Chloride	mg/L	57.6	100	100	166	162	108	104	90-110	3	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

QC Batch: 341413 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40199191001

METHOD BLANK: 1982539 Matrix: Water  
Associated Lab Samples: 40199191001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/21/19 10:47	

LABORATORY CONTROL SAMPLE: 1982540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982541 1982542

Parameter	Units	50241508004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	2.6	2.5	2.5	5.0	5.1	98	102	90-110	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982543 1982544

Parameter	Units	40199440001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	0.93	2.5	2.5	3.4	3.4	99	99	90-110	0	20		

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199191

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above LOD.  
J - Estimated concentration at or above the LOD and below the LOQ.  
LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.  
LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay  
PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

1q Analyte was detected in the interference check standard at a concentration greater than the MDL. 11-22-19 caw  
N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.  
P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199191

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199191001	HEUN	EPA 200.7	535010	EPA 200.7	536022
40199191001	HEUN	EPA 200.8	534463	EPA 200.8	534683
40199191001	HEUN				
40199191001	HEUN	EPA 300.0	341664		
40199191001	HEUN	EPA 353.2	341413		

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-GB-C-031-Rev.07**

Document Revised: 25Apr2018  
 Issuing Authority:  
 Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: KAPUR + Associates INC

**WO# : 40199191**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_



40199191

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other Zip lock

Thermometer Used SR - NA Type of Ice Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/14/19  
 Initials: JW

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>po # / phone invoice 11/14/19 JW</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <u>11/14/19</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

If checked, see attached form for additional comments

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

Project Manager Review: *[Signature]*

Date: 11/15/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198884

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198884001	KOWIS	Water	11/05/19 09:30	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198884

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198884001	KOWIS	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

**Sample: KOWIS**      **Lab ID: 40198884001**      Collected: 11/05/19 09:30      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>43.2</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:31	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>2.2</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:18	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:18	7440-47-3	N2
Lead	<b>&lt;0.11</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:18	7439-92-1	N2
Manganese	<b>29.1</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 14:18	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.52</b>	Std. Units			1		11/05/19 09:30		
Field Specific Conductance	<b>902</b>	umhos/cm			1		11/05/19 09:30		
Turbidity	<b>N</b>	NTU			1		11/05/19 09:30		
Apparent Color	<b>N</b>	no units			1		11/05/19 09:30		
Odor	<b>N</b>	no units			1		11/05/19 09:30		
Temperature, Water (C)	<b>12.4</b>	deg C			1		11/05/19 09:30		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>40.1</b>	mg/L	10.0	2.2	5		11/25/19 20:47	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 12:41		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

QC Batch: 533143 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40198884001

METHOD BLANK: 2460434 Matrix: Water  
Associated Lab Samples: 40198884001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	40198717001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198884001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198884001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MSD Result	% Rec	MSD % Rec					
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

QC Batch: 340929 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40198884001

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198884001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001		1979588		1979589		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001		1979590		1979591		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198884

QC Batch: 340903 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198884001

METHOD BLANK: 1979275 Matrix: Water  
Associated Lab Samples: 40198884001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 12:39	

LABORATORY CONTROL SAMPLE: 1979276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979277 1979278

Parameter	Units	40198935004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.3	2.3	93	94	90-110	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979279 1979280

Parameter	Units	40198937004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.1	2.2	85	85	90-110	1	20	M0	

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198884

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198884

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198884001	KOWIS	EPA 200.7	533143	EPA 200.7	533846
40198884001	KOWIS	EPA 200.8	533238	EPA 200.8	533475
40198884001	KOWIS				
40198884001	KOWIS	EPA 300.0	340929		
40198884001	KOWIS	EPA 353.2	340903		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Jennifer Skweres  
**Sampled By (Sign):** *[Signature]*  
**PO #:** \_\_\_\_\_



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

COC No. 40198884

Page 12 of 14

### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y / N	N	N	N								
Pick Letter	A	C	D								
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite								
	X	X	X								

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
061	Kowis	11/05/19	9:30	DW

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above *OR*  
**Invoice To Phone:** \_\_\_\_\_  
**CLIENT COMMENTS**      **LAB COMMENTS (Lab Use Only)**      **Profile #**

<b>Rush Turnaround Time Requested - Prelims</b> (Rush TAT subject to approval/surcharge) Date Needed: _____ Transmit Prelim Rush Results by (complete what you want): _____	Relinquished By: <i>[Signature]</i> Date/Time: 11/5/19 10:22 Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 1515	Received By: <i>[Signature]</i> Date/Time: 11/8/19 1022 Received By: <i>[Signature]</i> Date/Time: 11/8/19 1:51	PACE Project No. 40198884 Receipt Temp = 20 °C Sample Receipt pH (OK) Adjusted Cooler Custody Seal Present / Not Present Intact / Not Intact
	Relinquished By: _____ Date/Time: _____ Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____ Received By: _____ Date/Time: _____	
<b>Email #1:</b> _____ <b>Email #2:</b> _____ <b>Telephone:</b> _____ <b>Fax:</b> _____	Relinquished By: _____ Date/Time: _____ Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____ Received By: _____ Date/Time: _____	Samples on HOLD are subject to special pricing and release of liability



# Sample Preservation Receipt Form

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302

Client Name: Kapw

Project # 4019884

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 10653581

Lab Std #ID of preservation (if pH adjusted):

Initial when completed: [Signature]

Date/Time:

Page 13 of 14


Pace Lab #	Glass							Plastic							Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN										
001																																				2.5 / 5 / 10
002																																				2.5 / 5 / 10
003																																				2.5 / 5 / 10
004																																				2.5 / 5 / 10
005																																				2.5 / 5 / 10
006																																				2.5 / 5 / 10
007																																				2.5 / 5 / 10
008																																				2.5 / 5 / 10
009																																				2.5 / 5 / 10
010																																				2.5 / 5 / 10
011																																				2.5 / 5 / 10
012																																				2.5 / 5 / 10
013																																				2.5 / 5 / 10
014																																				2.5 / 5 / 10
015																																				2.5 / 5 / 10
016																																				2.5 / 5 / 10
017																																				2.5 / 5 / 10
018																																				2.5 / 5 / 10
019																																				2.5 / 5 / 10
020																																				2.5 / 5 / 10

9/10/11/8/10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WIDRO, Phenolics, Other:

Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

**Client Name:** Kapw

WO#: 40198884

**Courier:**  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



**Tracking #:** \_\_\_\_\_

**Custody Seal on Cooler/Box Present:**  yes  no    **Seals intact:**  yes  no

**Custody Seal on Samples Present:**  yes  no    **Seals intact:**  yes  no

**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other

**Thermometer Used** SR - NA    **Type of Ice:**  Wet  Blue Dry None     Samples on ice, cooling process has begun

**Cooler Temperature**    Uncorr: RDI /Corr: \_\_\_\_\_

**Temp Blank Present:**  yes  no    **Biological Tissue is Frozen:**  yes  no

<b>Person examining contents:</b>
Date: <u>11/8/19</u>
Initials: <u>[Signature]</u>

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
<b>Short Hold Time Analysis (&lt;72hr):</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
<b>Rush Turn Around Time Requested:</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

**Project Manager Review:** \_\_\_\_\_ [Signature]

**Date:** 11/9/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198883

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198883

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198883001	MEYER	Water	11/04/19 15:00	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198883001	MEYER	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

**Sample: MEYER**      **Lab ID: 40198883001**      Collected: 11/04/19 15:00      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>45.2</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:46	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>14.7</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:39	7440-38-2	N2
Chromium	<b>16.9</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:39	7440-47-3	N2
Lead	<b>2.0</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:39	7439-92-1	N2
Manganese	<b>30.0</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 17:40	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.43</b>	Std. Units			1		11/04/19 15:00		
Field Specific Conductance	<b>796</b>	umhos/cm			1		11/04/19 15:00		
Turbidity	<b>N</b>	NTU			1		11/04/19 15:00		
Apparent Color	<b>N</b>	no units			1		11/04/19 15:00		
Odor	<b>N</b>	no units			1		11/04/19 15:00		
Temperature, Water (C)	<b>11.5</b>	deg C			1		11/04/19 15:00		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>24.1</b>	mg/L	10.0	2.2	5		11/25/19 20:34	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 12:40		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

QC Batch: 533143	Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7	Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 40198883001	

METHOD BLANK: 2460434 Matrix: Water  
Associated Lab Samples: 40198883001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198717001 Result	Spike Conc.	Spike Conc.	Conc.								
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198883

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198883001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198883001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Conc.	Result	Result						
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

QC Batch: 340929	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40198883001	

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198883001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001		1979588		1979589		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001		1979590		1979591		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198883

QC Batch: 340903 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198883001

METHOD BLANK: 1979275 Matrix: Water  
Associated Lab Samples: 40198883001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 12:39	

LABORATORY CONTROL SAMPLE: 1979276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979277 1979278

Parameter	Units	40198935004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.3	2.3	93	94	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979279 1979280

Parameter	Units	40198937004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.1	2.2	85	85	90-110	1	20	M0

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198883

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198883001	MEYER	EPA 200.7	533143	EPA 200.7	533846
40198883001	MEYER	EPA 200.8	533238	EPA 200.8	533475
40198883001	MEYER				
40198883001	MEYER	EPA 300.0	340929		
40198883001	MEYER	EPA 353.2	340903		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

Page 12 of 14

COC No. **40198883**

Company Name:	Kapur & Associates Inc.
Branch/Location:	Glendale, WI
Project Contact:	Travis Peterson
Phone:	(414) 351-6668
Project Number:	20.0039.01
Project Name:	Barrett Landfill
Project State:	Wisconsin
Sampled By (Print):	Jennifer Skweres
Sampled By (Sign):	<i>Jennifer Skweres</i>
PO #:	
Regulatory Program:	

### CHAIN OF CUSTODY

**\*Preservation Codes\***  
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:		
Mail To Contact:		Travis Peterson
Mail To Company:		Kapur & Associates Inc.
Mail To Address:		7711 N Port Washington Rd. Milwaukee, WI 53217
Invoice To Contact:		same
Invoice To Company:		as
Invoice To Address:		above
Invoice To Phone:		
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #

FILTERED?  
(YES/NO)  
PRESERVATION  
(CODE)\*

Y/N	N	N	N									
				Pick Letter	A	C	D					
Analyses Requested												
	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite									
	X	X	X									

<b>Data Package Options</b> (billable) <input type="checkbox"/> EPA Level III <input type="checkbox"/> EPA Level IV	<b>MS/MSD</b> <input type="checkbox"/> On your sample (billable) <input type="checkbox"/> NOT needed on your sample	<b>Matrix Codes</b> A = Air W = Water B = Biota DW = Drinking Water C = Charcoal GW = Ground Water O = Oil SW = Surface Water S = Soil WW = Waste Water Sl = Sludge WP = Wipe
--	---	---

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	N	N	N									
		DATE	TIME														
<i>001</i>	Meyer	11/04/19	15:00	DW		X	X	X									

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>Travis Peterson</i> Date/Time: <i>11/8/19 10:22</i>	Received By: <i>[Signature]</i> Date/Time: <i>11/18/19 10:22</i>
	Relinquished By: <i>[Signature]</i> Date/Time: <i>11/8/19 15:15</i>	Received By: <i>[Signature]</i> Date/Time: <i>11/19/19 11:15</i>
	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

Transmit Prelim Rush Results by (complete what you want):	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Email #1:	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Email #2:	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Telephone:	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Fax:	Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

PACE Project No. <b>40198883</b>
Receipt Temp = <i>20</i> °C
Sample Receipt pH <input checked="" type="checkbox"/> / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

**Sample Preservation Receipt Form**

Pace Analytical Services, LLC  
 1241 Bellevue Street, Suite 9  
 Green Bay, WI 54302

Client Name: Kapur

Project # 40198823

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 10WS3581

Lab Std #ID of preservation (if pH adjusted):

Initial when completed: [Signature]

Date/Time:


Pace Lab #	Glass								Plastic							Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤	pH after adjusted	Volume (mL)					
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN												
001										/		/																			✓						2.5 / 5 / 10	
002																																						2.5 / 5 / 10
003																																						2.5 / 5 / 10
004																																						2.5 / 5 / 10
005																																						2.5 / 5 / 10
006																																						2.5 / 5 / 10
007																																						2.5 / 5 / 10
008																																						2.5 / 5 / 10
009																																						2.5 / 5 / 10
010																																						2.5 / 5 / 10
011																																						2.5 / 5 / 10
012																																						2.5 / 5 / 10
013																																						2.5 / 5 / 10
014																																						2.5 / 5 / 10
015																																						2.5 / 5 / 10
016																																						2.5 / 5 / 10
017																																						2.5 / 5 / 10
018																																						2.5 / 5 / 10
019																																						2.5 / 5 / 10
020																																						2.5 / 5 / 10

*VOA 11/12/12*

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b>	1 liter amber glass	<b>BP1U</b>	1 liter plastic unpres	<b>DG9A</b>	40 mL amber ascorbic	<b>JGFU</b>	4 oz amber jar unpres
<b>AG1H</b>	1 liter amber glass HCL	<b>BP2N</b>	500 mL plastic HNO3	<b>DG9T</b>	40 mL amber Na Thio	<b>WGFU</b>	4 oz clear jar unpres
<b>AG4S</b>	125 mL amber glass H2SO4	<b>BP2Z</b>	500 mL plastic NaOH, Znact	<b>VG9U</b>	40 mL clear vial unpres	<b>WPFU</b>	4 oz plastic jar unpres
<b>AG4U</b>	120 mL amber glass unpres	<b>BP3U</b>	250 mL plastic unpres	<b>VG9H</b>	40 mL clear vial HCL		
<b>AG5U</b>	100 mL amber glass unpres	<b>BP3B</b>	250 mL plastic NaOH	<b>VG9M</b>	40 mL clear vial MeOH	<b>SP5T</b>	120 mL plastic Na Thiosulfate
<b>AG2S</b>	500 mL amber glass H2SO4	<b>BP3N</b>	250 mL plastic HNO3	<b>VG9D</b>	40 mL clear vial DI	<b>ZPLC</b>	ziploc bag
<b>BG3U</b>	250 mL clear glass unpres	<b>BP3S</b>	250 mL plastic H2SO4			<b>GN:</b>	



 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

**Client Name:** Kapuw

**Courier:**  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

WO#: 40198883



**Tracking #:** \_\_\_\_\_

**Custody Seal on Cooler/Box Present:**  yes  no    **Seals intact:**  yes  no

**Custody Seal on Samples Present:**  yes  no    **Seals intact:**  yes  no

**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other

**Thermometer Used** SR - NA    **Type of Ice:** Wet Blue Dry None  Samples on ice, cooling process has begun

**Cooler Temperature**    Uncorr: 20.1 / Corr: \_\_\_\_\_

**Temp Blank Present:**  yes  no    **Biological Tissue is Frozen:**  yes  no

**Person examining contents:**

Date: 11/8/19  
 Initials: [Signature]

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

**Project Manager Review:** [Signature]

**Date:** 11/9/19

December 13, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200053

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40200053001	RHYNER	Water	11/26/19 09:55	11/27/19 15:18

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40200053001	RHYNER	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	DMT	4	PASI-I
			CDH	3	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

**Sample: RHYNER**      **Lab ID: 40200053001**      Collected: 11/26/19 09:55      Received: 11/27/19 15:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>48.2</b>	mg/L	0.21	0.064	1	12/11/19 05:55	12/12/19 15:17	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>1.2</b>	ug/L	0.99	0.30	1	12/05/19 09:23	12/06/19 09:10	7440-38-2	N2
Chromium	<b>&lt;0.98</b>	ug/L	3.3	0.98	1	12/05/19 09:23	12/06/19 09:10	7440-47-3	N2
Lead	<b>2.3</b>	ug/L	0.097	0.029	1	12/05/19 09:23	12/06/19 09:10	7439-92-1	N2
Manganese	<b>26.9</b>	ug/L	0.24	0.073	1	12/05/19 09:23	12/06/19 09:10	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.40</b>	Std. Units			1		11/26/19 09:55		
Field Specific Conductance	<b>850</b>	umhos/cm			1		11/26/19 09:55		
Temperature, Water (C)	<b>9.6</b>	deg C			1		11/26/19 09:55		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>46.4</b>	mg/L	10.0	2.2	5		12/09/19 19:01	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		12/06/19 13:41		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

QC Batch: 537138

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 40200053001

METHOD BLANK: 2478359

Matrix: Water

Associated Lab Samples: 40200053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/12/19 13:48	

LABORATORY CONTROL SAMPLE: 2478360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	10.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2478361 2478362

Parameter	Units	40200126003		2478361		2478362		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Magnesium	mg/L	22.9	10	10	31.0	31.4	81	85	70-130	1	20

MATRIX SPIKE SAMPLE: 2481896

Parameter	Units	40200398001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	77.1	10	91.1	140	70-130	P6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200053

QC Batch: 536481 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40200053001

METHOD BLANK: 2475158 Matrix: Water  
Associated Lab Samples: 40200053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.30	0.99	12/06/19 08:20	N2
Chromium	ug/L	<0.98	3.3	12/06/19 08:20	N2
Lead	ug/L	<0.029	0.097	12/06/19 08:20	N2
Manganese	ug/L	<0.073	0.24	12/06/19 09:01	N2

LABORATORY CONTROL SAMPLE: 2475159

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	80	80.0	100	85-115	N2
Chromium	ug/L	80	81.7	102	85-115	N2
Lead	ug/L	80	82.3	103	85-115	N2
Manganese	ug/L	80	82.8	104	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2475160 2475161

Parameter	Units	40200054001		2475161		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Arsenic	ug/L	<0.30	80	80	80.7	79.7	101	100	70-130	1	20	N2
Chromium	ug/L	<0.98	80	80	81.2	80.5	101	100	70-130	1	20	N2
Lead	ug/L	<0.029	80	80	83.7	82.3	105	103	70-130	2	20	N2
Manganese	ug/L	1.8	80	80	83.9	82.3	103	101	70-130	2	20	B0,N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200053

QC Batch: 342617 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40200053001

METHOD BLANK: 1989423 Matrix: Water  
Associated Lab Samples: 40200053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/09/19 17:20	

LABORATORY CONTROL SAMPLE: 1989424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989425 1989426

Parameter	Units	40200041001		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	43.9	100	100	145	145	101	101	90-110	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989427 1989428

Parameter	Units	40199868001		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	271	400	400	701	679	107	102	90-110	3	15		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200053

QC Batch: 342769 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40200053001

METHOD BLANK: 1990324 Matrix: Water  
Associated Lab Samples: 40200053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	12/06/19 13:37	

LABORATORY CONTROL SAMPLE: 1990325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990326 1990327

Parameter	Units	40199807005 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.5	2.5	100	102	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990328 1990329

Parameter	Units	40199868001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	3.8	2.5	2.5	6.4	6.4	101	104	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

B0 Analyte was detected in an associated blank at a concentration greater than the MDL.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200053

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40200053001	RHYNER	EPA 200.7	537138	EPA 200.7	538192
40200053001	RHYNER	EPA 200.8	536481	EPA 200.8	536959
40200053001	RHYNER				
40200053001	RHYNER	EPA 300.0	342617		
40200053001	RHYNER	EPA 353.2	342769		

**REPORT OF LABORATORY ANALYSIS**

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Ashley Wagner  
**Sampled By (Sign):** *[Signature]*  
**PO #:**   
**Regulatory Program:**



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

COC No. 40200053

# CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=D1 Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y/N	N	N	N							
Pick Letter	A	C	D							
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite							
	X	X	X							

**Quote #:**   
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above  
**Invoice To Phone:**

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	N	N	N						
		DATE	TIME											
001	Rhyner	11/26/19	9:55	DW		X	X	X						

**CLIENT COMMENTS**  
GEMS ID 240

**LAB COMMENTS (Lab Use Only)**

**Profile #**

**Rush Turnaround Time Requested - Prelims**  
 (Rush TAT subject to approval/surcharge)  
 Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:  
 Email #2:  
 Telephone:  
 Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By: *[Signature]* Date/Time: 11/27/19 12:50  
 Relinquished By: *[Signature]* Date/Time: 11/27/19 1335  
 Relinquished By: *[Signature]* Date/Time: 11/27/19 1516  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: *[Signature]* Date/Time: 11/27/19 1250  
 Received By: *[Signature]* Date/Time: 11/27/19 1335  
 Received By: *[Signature]* Date/Time: 11/27/19 1516  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

PACE Project No. 40200053  
 Receipt Temp = *[Signature]* °C  
 Sample Receipt pH *[Signature]* / Adjusted  
 Cooler Custody Seal Present / Not Present  
 Intact / Not Intact





Document Name:  
Sample Condition Upon Receipt (SCUR)  
Document No.:  
F-GB-C-031-Rev.07

Document Revised: 25Apr2018  
Issuing Authority:  
Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: Kapur

Project #: \_\_\_\_\_

WO#: 40200053



Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used SR - N/A Type of Ice:  Wet  Blue Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RDI / Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 11-27-19  
Initials: SKW

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: CK

Date: 12/2/19



December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198885

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198885001	SANCHEZ	Water	11/05/19 14:55	11/08/19 15:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198885001	SANCHEZ	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	DMT	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

**Sample: SANCHEZ**      **Lab ID: 40198885001**      Collected: 11/05/19 14:55      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>45.6</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:35	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>4.7</b>	ug/L	0.99	0.30	1	11/15/19 12:35	11/17/19 22:40	7440-38-2	N2
Chromium	<b>&lt;0.98</b>	ug/L	3.3	0.98	1	11/15/19 12:35	11/17/19 22:40	7440-47-3	N2
Lead	<b>4.1</b>	ug/L	0.097	0.029	1	11/15/19 12:35	11/17/19 22:40	7439-92-1	N2
Manganese	<b>54.0</b>	ug/L	0.24	0.073	1	11/15/19 12:35	11/17/19 22:40	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.53</b>	Std. Units			1		11/05/19 14:55		
Field Specific Conductance	<b>777</b>	umhos/cm			1		11/05/19 14:55		
Turbidity	<b>N</b>	NTU			1		11/05/19 14:55		
Apparent Color	<b>N</b>	no units			1		11/05/19 14:55		
Odor	<b>N</b>	no units			1		11/05/19 14:55		
Temperature, Water (C)	<b>10.5</b>	deg C			1		11/05/19 14:55		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>38.2</b>	mg/L	10.0	2.2	5		11/25/19 21:00	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 12:41		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198885

QC Batch: 533143 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40198885001

METHOD BLANK: 2460434 Matrix: Water  
Associated Lab Samples: 40198885001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	40198717001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198885

QC Batch: 533239 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198885001

METHOD BLANK: 2460883 Matrix: Water  
Associated Lab Samples: 40198885001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.30	0.99	11/17/19 22:31	N2
Chromium	ug/L	<0.98	3.3	11/17/19 22:31	N2
Lead	ug/L	<0.029	0.097	11/17/19 22:31	N2
Manganese	ug/L	<0.073	0.24	11/17/19 22:31	N2

LABORATORY CONTROL SAMPLE: 2460884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	102	85-115	N2
Chromium	ug/L	40	41.3	103	85-115	N2
Lead	ug/L	40	40.1	100	85-115	N2
Manganese	ug/L	40	41.3	103	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460885 2460886

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198885001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	4.7	40	40	45.6	45.0	102	101	70-130	1	20 N2
Chromium	ug/L	<0.98	40	40	39.9	39.8	99	98	70-130	0	20 N2
Lead	ug/L	4.1	40	40	44.5	44.4	101	101	70-130	0	20 N2
Manganese	ug/L	54.0	40	40	92.9	92.2	97	95	70-130	1	20 N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198885

QC Batch: 340929 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40198885001

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198885001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

QC Batch: 340903

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Associated Lab Samples: 40198885001

METHOD BLANK: 1979275

Matrix: Water

Associated Lab Samples: 40198885001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 12:39	

LABORATORY CONTROL SAMPLE: 1979276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979277 1979278

Parameter	Units	40198935004		1979277		1979278		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.3	2.3	93	94	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979279 1979280

Parameter	Units	40198937004		1979279		1979280		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.1	2.2	85	85	90-110	1	20 M0	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198885

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198885001	SANCHEZ	EPA 200.7	533143	EPA 200.7	533846
40198885001	SANCHEZ	EPA 200.8	533239	EPA 200.8	533476
40198885001	SANCHEZ				
40198885001	SANCHEZ	EPA 300.0	340929		
40198885001	SANCHEZ	EPA 353.2	340903		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-GB-C-031-Rev.07**

Document Revised: 25Apr2018  
 Issuing Authority:  
 Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #: \_\_\_\_\_

Client Name: Kapur

**WO# : 40198885**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RO1 / Corr: \_\_\_\_\_

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:

Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: CS

Date: 11/9/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198878

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198878

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198878001	SANFELIPPO	Water	11/04/19 09:55	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198878001	SANFELIPPO	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

**Sample: SANFELIPPO**      **Lab ID: 40198878001**      Collected: 11/04/19 09:55      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>40.8</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:42	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>4.7</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:27	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:27	7440-47-3	N2
Lead	<b>1.1</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:27	7439-92-1	N2
Manganese	<b>104</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 14:27	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.37</b>	Std. Units			1		11/04/19 09:55		
Field Specific Conductance	<b>1422</b>	umhos/cm			1		11/04/19 09:55		
Turbidity	<b>N</b>	NTU			1		11/04/19 09:55		
Apparent Color	<b>N</b>	no units			1		11/04/19 09:55		
Odor	<b>Y</b>	no units			1		11/04/19 09:55		
Temperature, Water (C)	<b>11.9</b>	deg C			1		11/04/19 09:55		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>17.7</b>	mg/L	2.0	0.43	1		11/25/19 23:45	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 11:57		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

QC Batch: 533143

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 40198878001

METHOD BLANK: 2460434

Matrix: Water

Associated Lab Samples: 40198878001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198717001 Result	Spike Conc.	Spike Conc.	Conc.								
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198878

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198878001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198878001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MSD Result	% Rec	MSD % Rec					
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

QC Batch: 340928	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40198878001	

METHOD BLANK: 1979575 Matrix: Water  
Associated Lab Samples: 40198878001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:28	

LABORATORY CONTROL SAMPLE: 1979576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979577 1979578

Parameter	Units	40198846001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	14.1J	400	400	431	428	104	103	90-110	1	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979579 1979580

Parameter	Units	40198860004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	276	400	400	692	685	104	102	90-110	1	15		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198878

QC Batch: 340849 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198878001

METHOD BLANK: 1979079 Matrix: Water  
Associated Lab Samples: 40198878001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 11:39	

LABORATORY CONTROL SAMPLE: 1979080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979081 1979082

Parameter	Units	40198846004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.0	2.0	78	80	90-110	3	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979083 1979084

Parameter	Units	40198882001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.3	2.3	91	91	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198878001	SANFELIPPO	EPA 200.7	533143	EPA 200.7	533846
40198878001	SANFELIPPO	EPA 200.8	533238	EPA 200.8	533475
40198878001	SANFELIPPO				
40198878001	SANFELIPPO	EPA 300.0	340928		
40198878001	SANFELIPPO	EPA 353.2	340849		

**REPORT OF LABORATORY ANALYSIS**

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Jennifer Skweres  
**Sampled By (Sign):** *Jennifer Skweres*  
**PO #:** \_\_\_\_\_ **Regulatory Program:** \_\_\_\_\_



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

COC No. **40198878**

# CHAIN OF CUSTODY

**\*Preservation Codes**  
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
**PRESERVATION  
(CODE)\***

Analyses Requested	Y/N	N	N	N						
	Pick Letter	A	C	D						
Chloride										
As, Pb, Cr, Mn, Mg										
Nitrate + Nitrite										

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd.  
Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above *OK*  
**Invoice To Phone:** \_\_\_\_\_

**Data Package Options (billable)**  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
A = Air W = Water  
B = Biota DW = Drinking Water  
C = Charcoal GW = Ground Water  
O = Oil SW = Surface Water  
S = Soil WW = Waste Water  
Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Analyses Requested
		DATE	TIME		
501	Sanfelippo	11/04/19	9:55	DW	X X X

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #

**Rush Turnaround Time Requested - Prelims**  
(Rush TAT subject to approval/surcharge)  
Date Needed: \_\_\_\_\_

Transmit Prelim Rush Results by (complete what you want):  
**Email #1:** \_\_\_\_\_  
**Email #2:** \_\_\_\_\_  
**Telephone:** \_\_\_\_\_  
**Fax:** \_\_\_\_\_

Relinquished By: <i>Jennifer Skweres</i> Date/Time: <b>11/8/19 10:22</b>	Received By: <i>[Signature]</i> Date/Time: <b>11/8/19 10:22</b>
Relinquished By: <i>[Signature]</i> Date/Time: <b>11/8/19 15:15</b>	Received By: <i>[Signature]</i> Date/Time: <b>11/8/19 15:15</b>
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

**PACE Project No.**  
**40198878**

Receipt Temp = **20.0** °C

Sample Receipt pH  
 OK Adjusted

**Custody Seal**  
Present / Not Present  
Intact / Not Intact

Samples on HOLD are subject to special pricing and release of liability

### Sample Preservation Receipt Form

Client Name: Kapw Project # 40198878

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 10WS3581

Lab Std #ID of preservation (if pH adjusted):

Initial when completed: JP

Date/Time:


Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)						
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN			
001																												<input checked="" type="checkbox"/>								2.5 / 5 / 10
002																																				2.5 / 5 / 10
003																																				2.5 / 5 / 10
004																																				2.5 / 5 / 10
005																																				2.5 / 5 / 10
006																																				2.5 / 5 / 10
007																																				2.5 / 5 / 10
008																																				2.5 / 5 / 10
009																																				2.5 / 5 / 10
010																																				2.5 / 5 / 10
011																																				2.5 / 5 / 10
012																																				2.5 / 5 / 10
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015																																				2.5 / 5 / 10
016																																				2.5 / 5 / 10
017																																				2.5 / 5 / 10
018																																				2.5 / 5 / 10
019																																				2.5 / 5 / 10
020																																				2.5 / 5 / 10

*Handwritten note:* 015 11/8/14

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_

Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b>	1 liter amber glass	<b>BP1U</b>	1 liter plastic unpres	<b>DG9A</b>	40 mL amber ascorbic	<b>JGFU</b>	4 oz amber jar unpres
<b>AG1H</b>	1 liter amber glass HCL	<b>BP2N</b>	500 mL plastic HNO3	<b>DG9T</b>	40 mL amber Na Thio	<b>WGFU</b>	4 oz clear jar unpres
<b>AG4S</b>	125 mL amber glass H2SO4	<b>BP2Z</b>	500 mL plastic NaOH, Znact	<b>VG9U</b>	40 mL clear vial unpres	<b>WPFU</b>	4 oz plastic jar unpres
<b>AG4U</b>	120 mL amber glass unpres	<b>BP3U</b>	250 mL plastic unpres	<b>VG9H</b>	40 mL clear vial HCL		
<b>AG5U</b>	100 mL amber glass unpres	<b>BP3B</b>	250 mL plastic NaOH	<b>VG9M</b>	40 mL clear vial MeOH	<b>SP5T</b>	120 mL plastic Na Thiosulfate
<b>AG2S</b>	500 mL amber glass H2SO4	<b>BP3N</b>	250 mL plastic HNO3	<b>VG9D</b>	40 mL clear vial DI	<b>ZPLC</b>	ziploc bag
<b>BG3U</b>	250 mL clear glass unpres	<b>BP3S</b>	250 mL plastic H2SO4			<b>GN:</b>	

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #: \_\_\_\_\_

Client Name: Kapuw

**WO# : 40198878**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20 /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

Project Manager Review: CS

Date: 11/2/19

December 13, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200055

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200055

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40200055001	SCHMIDT	Water	11/26/19 09:25	11/27/19 15:18

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200055

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40200055001	SCHMIDT	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	DMT	4	PASI-I
			CDH	3	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200055

**Sample: SCHMIDT**      **Lab ID: 40200055001**      Collected: 11/26/19 09:25      Received: 11/27/19 15:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>45.7</b>	mg/L	0.21	0.064	1	12/11/19 05:55	12/12/19 15:21	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>9.2</b>	ug/L	0.99	0.30	1	12/05/19 09:23	12/06/19 09:14	7440-38-2	N2
Chromium	<b>2.0J</b>	ug/L	3.3	0.98	1	12/05/19 09:23	12/06/19 09:14	7440-47-3	N2
Lead	<b>0.66</b>	ug/L	0.097	0.029	1	12/05/19 09:23	12/06/19 09:14	7439-92-1	N2
Manganese	<b>22.7</b>	ug/L	0.24	0.073	1	12/05/19 09:23	12/06/19 09:14	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.66</b>	Std. Units			1		11/26/19 09:25		
Field Specific Conductance	<b>779</b>	umhos/cm			1		11/26/19 09:25		
Temperature, Water (C)	<b>9.1</b>	deg C			1		11/26/19 09:25		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>31.4</b>	mg/L	10.0	2.2	5		12/09/19 19:15	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		12/06/19 13:41		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

QC Batch: 537138 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40200055001

METHOD BLANK: 2478359 Matrix: Water  
Associated Lab Samples: 40200055001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/12/19 13:48	

LABORATORY CONTROL SAMPLE: 2478360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	10.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2478361 2478362

Parameter	Units	40200126003		2478361		2478362		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Magnesium	mg/L	22.9	10	10	31.0	31.4	81	85	70-130	1	20

MATRIX SPIKE SAMPLE: 2481896

Parameter	Units	40200398001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	77.1	10	91.1	140	70-130	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

QC Batch: 536481 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40200055001

METHOD BLANK: 2475158 Matrix: Water  
Associated Lab Samples: 40200055001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.30	0.99	12/06/19 08:20	N2
Chromium	ug/L	<0.98	3.3	12/06/19 08:20	N2
Lead	ug/L	<0.029	0.097	12/06/19 08:20	N2
Manganese	ug/L	<0.073	0.24	12/06/19 09:01	N2

LABORATORY CONTROL SAMPLE: 2475159

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	80	80.0	100	85-115	N2
Chromium	ug/L	80	81.7	102	85-115	N2
Lead	ug/L	80	82.3	103	85-115	N2
Manganese	ug/L	80	82.8	104	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2475160 2475161

Parameter	Units	40200054001		2475161		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Arsenic	ug/L	<0.30	80	80	80.7	79.7	101	100	70-130	1	20 N2
Chromium	ug/L	<0.98	80	80	81.2	80.5	101	100	70-130	1	20 N2
Lead	ug/L	<0.029	80	80	83.7	82.3	105	103	70-130	2	20 N2
Manganese	ug/L	1.8	80	80	83.9	82.3	103	101	70-130	2	20 B0, N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

QC Batch: 342617 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40200055001

METHOD BLANK: 1989423 Matrix: Water  
Associated Lab Samples: 40200055001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/09/19 17:20	

LABORATORY CONTROL SAMPLE: 1989424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989425 1989426

Parameter	Units	40200041001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
Chloride	mg/L	43.9	100	100	145	145	101	101	90-110	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1989427 1989428

Parameter	Units	40199868001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
Chloride	mg/L	271	400	400	701	679	107	102	90-110	3	15		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

QC Batch: 342769 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40200055001

METHOD BLANK: 1990324 Matrix: Water  
Associated Lab Samples: 40200055001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	12/06/19 13:37	

LABORATORY CONTROL SAMPLE: 1990325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990326 1990327

Parameter	Units	40199807005 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits			
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.5	2.5	100	102	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990328 1990329

Parameter	Units	40199868001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits			
Nitrogen, NO2 plus NO3	mg/L	3.8	2.5	2.5	6.4	6.4	101	104	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40200055

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

B0 Analyte was detected in an associated blank at a concentration greater than the MDL.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40200055

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40200055001	SCHMIDT	EPA 200.7	537138	EPA 200.7	538192
40200055001	SCHMIDT	EPA 200.8	536481	EPA 200.8	536959
40200055001	SCHMIDT				
40200055001	SCHMIDT	EPA 300.0	342617		
40200055001	SCHMIDT	EPA 353.2	342769		

**REPORT OF LABORATORY ANALYSIS**

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Ashley Wagner  
**Sampled By (Sign):** *Ashley Wagner*  
**PO #:** \_\_\_\_\_  
**Regulatory Program:** \_\_\_\_\_



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2436

COC No. 40200055

### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y / N	N	N	N									
Pick Letter	A	C	D									
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite									
	X	X	X									

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above  
**Invoice To Phone:** \_\_\_\_\_  
**CLIENT COMMENTS:** GEMS ID 952  
**LAB COMMENTS (Lab Use Only):** \_\_\_\_\_  
**Profile #:** \_\_\_\_\_

**Data Package Options (billable)**  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	Schmidt	11/26/19	9:25	DW

**Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)**  
 Date Needed: \_\_\_\_\_

**Transmit Prelim Rush Results by (complete what you want):**

Relinquished By: <i>Josh Kogman</i> Date/Time: 11/27/19 12:50	Received By: <i>Mary Famin</i> Date/Time: 11/27/19 12:50	PACE Project No. 40200055	
Relinquished By: <i>Mary Famin</i> Date/Time: 11/29/19 13:35	Received By: <i>ASO</i> Date/Time: 11/27/19 13:35		Receipt Temp = <i>ROI</i>
Relinquished By: <i>SW</i> Date/Time: 11/27/19 15:18	Received By: <i>Sweet Wife</i> Date/Time: 11/27/19 15:18		Sample Receipt pH <input checked="" type="radio"/> OK <input type="radio"/> Adjusted
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	Cooler Custody Seal Present / <input checked="" type="radio"/> Not Present Intact / Not Intact	

Samples on HOLD are subject to special pricing and release of liability

### Sample Preservation Receipt Form

Client Name: Kapur

Project # 40200055

All containers needing preservation have been checked and noted below:  Yes  No  N/A


Lab Lot# of pH paper: 10453581 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: SCW Date/Time:

Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H <sub>2</sub> SO <sub>4</sub> pH ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO <sub>3</sub> pH ≤	pH after adjusted	Volume (mL)			
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001																												X			X		2.5 / 5 / 10
002																																2.5 / 5 / 10	
003																																2.5 / 5 / 10	
004																																2.5 / 5 / 10	
005																																2.5 / 5 / 10	
006																																2.5 / 5 / 10	
007																																2.5 / 5 / 10	
008																																2.5 / 5 / 10	
009																																2.5 / 5 / 10	
010																																2.5 / 5 / 10	
011																																2.5 / 5 / 10	
012																																2.5 / 5 / 10	
013																																2.5 / 5 / 10	
014																																2.5 / 5 / 10	
015																																2.5 / 5 / 10	
016																																2.5 / 5 / 10	
017																																2.5 / 5 / 10	
018																																2.5 / 5 / 10	
019																																2.5 / 5 / 10	
020																																2.5 / 5 / 10	


Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO <sub>3</sub>	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H <sub>2</sub> SO <sub>4</sub>	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H <sub>2</sub> SO <sub>4</sub>	BP3N	250 mL plastic HNO <sub>3</sub>	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H <sub>2</sub> SO <sub>4</sub>			GN:	

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

**Client Name:** Kapur  
**Courier:**  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

**Project #:** \_\_\_\_\_  
**WO# : 40200055**  
  
 40200055

**Tracking #:** \_\_\_\_\_  
**Custody Seal on Cooler/Box Present:**  yes  no    **Seals intact:**  yes  no  
**Custody Seal on Samples Present:**  yes  no    **Seals intact:**  yes  no  
**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other  
**Thermometer Used** SR - N/A    **Type of Ice:**  Wet  Blue Dry None  Samples on ice, cooling process has begun  
**Cooler Temperature** Uncorr: RDI / Corr: \_\_\_\_\_

**Temp Blank Present:**  yes  no    **Biological Tissue is Frozen:**  yes  no

**Person examining contents:**  
 Date: 11-27-19  
 Initials: SKW

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

**Project Manager Review:** OK    **Date:** 12/2/19



December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198882

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198882

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198882

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198882001	SERVI	Water	11/04/19 11:50	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198882

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198882001	SERVI	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198882

**Sample: SERVI**      **Lab ID: 40198882001**      Collected: 11/04/19 11:50      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>54.6</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:53	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>0.18J</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:48	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:48	7440-47-3	N2
Lead	<b>0.20J</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:48	7439-92-1	N2
Manganese	<b>32.8</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 17:48	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.3</b>	Std. Units			1		11/04/19 11:50		
Field Specific Conductance	<b>1685</b>	umhos/cm			1		11/04/19 11:50		
Turbidity	<b>N</b>	NTU			1		11/04/19 11:50		
Apparent Color	<b>N</b>	no units			1		11/04/19 11:50		
Odor	<b>N</b>	no units			1		11/04/19 11:50		
Temperature, Water (C)	<b>11.2</b>	deg C			1		11/04/19 11:50		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>254</b>	mg/L	10.0	2.2	5		11/25/19 20:21	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 11:59		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198882

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198882001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198882001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2	
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2	
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2	
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198882

QC Batch: 340929 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40198882001

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198882001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198882

QC Batch: 340849 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198882001

METHOD BLANK: 1979079 Matrix: Water  
Associated Lab Samples: 40198882001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 11:39	

LABORATORY CONTROL SAMPLE: 1979080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979081 1979082

Parameter	Units	40198846004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.0	2.0	78	80	90-110	3	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979083 1979084

Parameter	Units	40198882001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.3	2.3	91	91	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198882

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay  
PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198882

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198882001	SERVI	EPA 200.7	533143	EPA 200.7	533846
40198882001	SERVI	EPA 200.8	533238	EPA 200.8	533475
40198882001	SERVI				
40198882001	SERVI	EPA 300.0	340929		
40198882001	SERVI	EPA 353.2	340849		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6668  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *[Signature]*  
 PO #:



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2436

COC No. 40198882

### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO)	PRESERVATION (CODE)*	Y/N	N	N	N						
			Pick Letter	A	C	D					
			Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite						
			X	X	X						

Quote #:   
 Mail To Contact: Travis Peterson  
 Mail To Company: Kapur & Associates Inc.  
 Mail To Address: 7711 N Port Washington Rd. Milwaukee, WI 53217  
 Invoice To Contact: same  
 Invoice To Company: as  
 Invoice To Address: above  
 Invoice To Phone:   
 CLIENT COMMENTS:   
 LAB COMMENTS (Lab Use Only):   
 Profile #:

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
051	Servi	11/04/19	11:50	DW

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed:   
 Transmit Prelim Rush Results by (complete what you want):

Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 10:22	Received By: <i>[Signature]</i> Date/Time: 11/8/19 10:22	PACE Project No. 40198882 Receipt Temp = 20 °C Sample Receipt pH <u>OK</u> / Adjusted Cooler Custody Seal Present / Not Present Intact / Not Intact
Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 15:15	Received By: <i>[Signature]</i> Date/Time: 11/8/19 15:15	
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	

Samples on HOLD are subject to special pricing and release of liability



### Sample Preservation Receipt Form

Client Name: Kapw

Project # 40198888

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 10WS3581

Lab Std #ID of preservation (if pH adjusted):

Initial when completed: JMP


Date/ Time:

Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)								
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN					
001																																						2.5 / 5 / 10
002																																						2.5 / 5 / 10
003																																						2.5 / 5 / 10
004																																						2.5 / 5 / 10
005																																						2.5 / 5 / 10
006																																						2.5 / 5 / 10
007																																						2.5 / 5 / 10
008																																						2.5 / 5 / 10
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014																																						2.5 / 5 / 10
015																																						2.5 / 5 / 10
016																																						2.5 / 5 / 10
017																																						2.5 / 5 / 10
018																																						2.5 / 5 / 10
019																																						2.5 / 5 / 10
020																																						2.5 / 5 / 10

10/11/14

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WIDRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	ZPLC	ziploc bag
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	GN:	
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4				

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: Kapw

WO#: 40198882

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA    Type of Ice:  Wet  Blue  Dry  None     Samples on ice, cooling process has begun

Cooler Temperature    Uncorr: RO1 /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:

Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: CS

Date: 11/9/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199297

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 15, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

---

### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	Water	11/08/19 11:35	11/15/19 09:40

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	EPA 200.7	RAM	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

**Sample:** SRI LAKSHMI NARASHIMHA TEMPLE      **Lab ID:** 40199297001      Collected: 11/08/19 11:35      Received: 11/15/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>47.2</b>	mg/L	0.21	0.064	1	11/25/19 05:51	12/02/19 11:59	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>2.2</b>	ug/L	0.52	0.16	1	11/21/19 09:10	11/21/19 17:43	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/21/19 09:10	11/21/19 17:43	7440-47-3	N2
Lead	<b>&lt;0.11</b>	ug/L	0.36	0.11	1	11/21/19 09:10	11/21/19 17:43	7439-92-1	N2
Manganese	<b>74.7</b>	ug/L	0.28	0.083	1	11/21/19 09:10	11/21/19 17:43	7439-96-5	1q,N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.77</b>	Std. Units			1		11/08/19 11:35		
Field Specific Conductance	<b>1107</b>	umhos/cm			1		11/08/19 11:35		
Turbidity	<b>N</b>	NTU			1		11/08/19 11:35		
Apparent Color	<b>N</b>	no units			1		11/08/19 11:35		
Odor	<b>N</b>	no units			1		11/08/19 11:35		
Temperature, Water (C)	<b>11.5</b>	deg C			1		11/08/19 11:35		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>169</b>	mg/L	10.0	2.2	5		12/03/19 03:04	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/21/19 11:12		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199297

QC Batch: 535010 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 40199297001

METHOD BLANK: 2469454 Matrix: Water  
Associated Lab Samples: 40199297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/02/19 11:32	

LABORATORY CONTROL SAMPLE: 2469455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.7	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2469456 2469457

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199191001 Result	Spike Conc.	Spike Conc.	Conc.								
Magnesium	mg/L	40.8	10	10	10	51.3	54.4	106	136	70-130	6	20	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199297

QC Batch: 534463 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40199297001

METHOD BLANK: 2466361 Matrix: Water  
Associated Lab Samples: 40199297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/21/19 17:09	N2
Chromium	ug/L	<0.76	2.5	11/21/19 17:09	N2
Lead	ug/L	<0.11	0.36	11/21/19 17:09	N2
Manganese	ug/L	<0.083	0.28	11/21/19 17:09	N2

LABORATORY CONTROL SAMPLE: 2466362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.1	98	85-115	N2
Chromium	ug/L	40	41.7	104	85-115	N2
Lead	ug/L	40	40.6	102	85-115	N2
Manganese	ug/L	40	42.8	107	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2466363 2466364

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199317001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	17.2	40	40	58.7	58.4	104	103	70-130	1	20 N2
Chromium	ug/L	<0.76	40	40	39.0	39.2	97	97	70-130	1	20 N2
Lead	ug/L	0.71	40	40	40.8	41.3	100	101	70-130	1	20 N2
Manganese	ug/L	14.1	40	40	52.5	53.1	96	97	70-130	1	20 N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199297

QC Batch: 341965 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40199297001

METHOD BLANK: 1986084 Matrix: Water  
Associated Lab Samples: 40199297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/02/19 23:14	

LABORATORY CONTROL SAMPLE: 1986085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1986086 1986087

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199282001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	390	400	400	400	803	806	103	104	90-110	0	15	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199297

QC Batch: 341414 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40199297001

METHOD BLANK: 1982545 Matrix: Water  
Associated Lab Samples: 40199297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/21/19 11:08	

LABORATORY CONTROL SAMPLE: 1982546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982547 1982548

Parameter	Units	50241900004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	2.0	2.5	2.5	4.5	4.4	100	96	90-110	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982549 1982550

Parameter	Units	40199532026		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	0.67	2.5	2.5	3.0	3.0	92	94	90-110	2	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

1q Analyte was detected in the interference check standard at a concentration greater than the MDL. 11-22-19 caw

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199297

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	EPA 200.7	535010	EPA 200.7	536022
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	EPA 200.8	534463	EPA 200.8	534683
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE				
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	EPA 300.0	341965		
40199297001	SRI LAKSHMI NARASHIMHA TEMPLE	EPA 353.2	341414		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6668  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *[Signature]*  
 PO #: \_\_\_\_\_ Regulatory Program: \_\_\_\_\_



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2436

COC No.

### CHAIN OF CUSTODY

**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y/N	N	N	N							
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite							
	X	X	X							

Quote #: \_\_\_\_\_  
 Mail To Contact: Travis Peterson  
 Mail To Company: Kapur & Associates Inc.  
 Mail To Address: 7711 N Port Washington Rd. Milwaukee, WI 53217  
 Invoice To Contact: same  
 Invoice To Company: as  
 Invoice To Address: above  
 Invoice To Phone: \_\_\_\_\_  
 CLIENT COMMENTS: \_\_\_\_\_  
 LAB COMMENTS (Lab Use Only): *[Signature]*  
 Profile #: \_\_\_\_\_

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Blota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 St = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	Sri Lakshmi Narasimha Temple	11/08/19	11:35	DW

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed: \_\_\_\_\_

Relinquished By: <i>[Signature]</i> Date/Time: 11/15/19 14:35	Received By: _____ Date/Time: _____	PACE Project No. 40199297 Receipt Temp = <i>20T</i> °C Sample Receipt pH <input checked="" type="radio"/> Adjusted Cooler Custody Seal Present / <input checked="" type="radio"/> Not Present Intact / Not Intact
Relinquished By: CS Logistics 11/14/19 0940	Received By: <i>[Signature]</i> 11/14/19 0940	
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	

Samples on HOLD are subject to special pricing and release of liability





1241 Bellevue Street, Green Bay, WI 54302

Document Name:  
Sample Condition Upon Receipt (SCUR)

Document Revised: 25Apr2018

Document No.:  
F-GB-C-031-Rev.07

Issuing Authority:  
Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project # \_\_\_\_\_

Client Name: KAPUR & ASSOCIATED INC

WO#: **40199297**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no <sup>11/15/19</sup> Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other Zip lock

Thermometer Used SR-NA Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Rot /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 11/15/19  
Initials: JW

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Samples received 11/14/19 COC received 11/15/19</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: 11/17/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199294

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 15, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199294

---

### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-16-00157  
Federal Fish & Wildlife Permit #: LE51774A-0

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Certification #: 200074  
Indiana Certification #: C-49-06  
Kansas/NELAP Certification #: E-10177  
Kentucky UST Certification #: 80226  
Kentucky WW Certification #: 98019  
Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065  
Oklahoma Certification #: 9204  
Texas Certification #: T104704355  
West Virginia Certification #: 330  
Wisconsin Certification #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199294001	WERNING	Water	11/08/19 14:00	11/15/19 09:40

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199294001	WERNING	EPA 200.7	RAM	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

**Sample: WERNING**      **Lab ID: 40199294001**      Collected: 11/08/19 14:00      Received: 11/15/19 09:40      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>43.8</b>	mg/L	0.21	0.064	1	11/25/19 05:51	12/02/19 11:55	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>&lt;0.16</b>	ug/L	0.52	0.16	1	11/21/19 09:10	11/21/19 17:39	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/21/19 09:10	11/21/19 17:39	7440-47-3	N2
Lead	<b>0.83</b>	ug/L	0.36	0.11	1	11/21/19 09:10	11/21/19 17:39	7439-92-1	N2
Manganese	<b>0.24J</b>	ug/L	0.28	0.083	1	11/21/19 09:10	11/21/19 17:39	7439-96-5	1q,N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.44</b>	Std. Units			1		11/08/19 14:00		
Field Specific Conductance	<b>951</b>	umhos/cm			1		11/08/19 14:00		
Turbidity	<b>N</b>	NTU			1		11/08/19 14:00		
Apparent Color	<b>N</b>	no units			1		11/08/19 14:00		
Odor	<b>N</b>	no units			1		11/08/19 14:00		
Temperature, Water (C)	<b>8.2</b>	deg C			1		11/08/19 14:00		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>82.9</b>	mg/L	10.0	2.2	5		12/03/19 02:35	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.61</b>	mg/L	0.25	0.059	1		11/21/19 11:09		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

QC Batch: 535010	Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7	Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 40199294001	

METHOD BLANK: 2469454 Matrix: Water  
Associated Lab Samples: 40199294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	12/02/19 11:32	

LABORATORY CONTROL SAMPLE: 2469455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.7	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2469456 2469457

Parameter	Units	2469456		2469457		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199191001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Magnesium	mg/L	40.8	10	10	51.3	54.4	106	136	70-130	6	20	P6	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

QC Batch: 534463	Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8	Analysis Description: 200.8 MET
Associated Lab Samples: 40199294001	

METHOD BLANK: 2466361 Matrix: Water  
Associated Lab Samples: 40199294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/21/19 17:09	N2
Chromium	ug/L	<0.76	2.5	11/21/19 17:09	N2
Lead	ug/L	<0.11	0.36	11/21/19 17:09	N2
Manganese	ug/L	<0.083	0.28	11/21/19 17:09	N2

LABORATORY CONTROL SAMPLE: 2466362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.1	98	85-115	N2
Chromium	ug/L	40	41.7	104	85-115	N2
Lead	ug/L	40	40.6	102	85-115	N2
Manganese	ug/L	40	42.8	107	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2466363 2466364

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199317001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	17.2	40	40	58.7	58.4	104	103	70-130	1	20 N2
Chromium	ug/L	<0.76	40	40	39.0	39.2	97	97	70-130	1	20 N2
Lead	ug/L	0.71	40	40	40.8	41.3	100	101	70-130	1	20 N2
Manganese	ug/L	14.1	40	40	52.5	53.1	96	97	70-130	1	20 N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199294

QC Batch: 341965 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40199294001

METHOD BLANK: 1986084 Matrix: Water  
Associated Lab Samples: 40199294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	12/02/19 23:14	

LABORATORY CONTROL SAMPLE: 1986085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1986086 1986087

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199282001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	390	400	400	400	803	806	103	104	90-110	0	15	

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40199294

QC Batch: 341414 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40199294001

METHOD BLANK: 1982545 Matrix: Water  
Associated Lab Samples: 40199294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/21/19 11:08	

LABORATORY CONTROL SAMPLE: 1982546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982547 1982548

Parameter	Units	50241900004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	2.0	2.5	2.5	4.5	4.4	100	96	90-110	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1982549 1982550

Parameter	Units	40199532026		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, NO2 plus NO3	mg/L	0.67	2.5	2.5	3.0	3.0	92	94	90-110	2	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

1q Analyte was detected in the interference check standard at a concentration greater than the MDL. 11-22-19 caw

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40199294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199294001	WERNING	EPA 200.7	535010	EPA 200.7	536022
40199294001	WERNING	EPA 200.8	534463	EPA 200.8	534683
40199294001	WERNING				
40199294001	WERNING	EPA 300.0	341965		
40199294001	WERNING	EPA 353.2	341414		

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Jennifer Skweres  
**Sampled By (Sign):** *Jennifer Skweres*  
**PO #:** \_\_\_\_\_ **Regulatory Program:** \_\_\_\_\_



**UPPER MIDWEST REGION**  
 MN: 612-607-1700 WI: 920-469-2436

COC No. **40199294**

### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

**FILTERED? (YES/NO)**  
**PRESERVATION (CODE)\***

Y/N	N	N	N															
Pick Letter	A	C	D															
Analyses Requested	Chloride			As, Pb, Cr, Mn, Mg			Nitrate + Nitrite											
	X	X	X															

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above  
**Invoice To Phone:** \_\_\_\_\_

**Data Package Options (billable)**  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	N	N	N											
		DATE	TIME																
601	Werning	11/08/19	14:00	DW	X	X	X												

**CLIENT COMMENTS** \_\_\_\_\_  
**LAB COMMENTS (Lab Use Only)** *PL*  
**Profile #** \_\_\_\_\_

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>Jennifer Skweres</i>	Date/Time: 11/11/19 14:35	Received By: _____	Date/Time: _____	PACE Project No. <b>40199294</b>
	Transmit Prelim Rush Results by (complete what you want): <i>CS Logistics</i>	Date/Time: 11/11/19 0740	Received By: <i>Jennifer Skweres</i>	Date/Time: 11/14/19 0940	
Email #1:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH <b>OK Adjusted</b> Cooler Custody Seal Present / Not Present Intact / Not Intact
Email #2:	Relinquished By:	Date/Time:	Received By:	Date/Time:	
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:	
Fax:	Relinquished By:	Date/Time:	Received By:	Date/Time:	

# Sample Preservation Receipt Form

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302

Client Name: Kapur & Associates Inc

Project # 5099274

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Initial when completed: JL

Date/Time: \_\_\_\_\_

Lab Lot# of pH paper: 1053521

Lab Std #ID of preservation (if pH adjusted): \_\_\_\_\_


Pace Lab #	Glass							Plastic							Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤	NaOH+Zn Act pH ≥ 9	NaOH pH ≥ 12	HNO3 pH ≤	pH after adjusted	Volume (mL)									
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN															
001											-	-	-																						✓				X		2.5 / 5 / 10
002																																								2.5 / 5 / 10	
003																																								2.5 / 5 / 10	
004																																								2.5 / 5 / 10	
005																																								2.5 / 5 / 10	
006																																								2.5 / 5 / 10	
007																																								2.5 / 5 / 10	
008																																								2.5 / 5 / 10	
009																																								2.5 / 5 / 10	
010																																								2.5 / 5 / 10	
011																																								2.5 / 5 / 10	
012																																								2.5 / 5 / 10	
013																																								2.5 / 5 / 10	
014																																								2.5 / 5 / 10	
015																																								2.5 / 5 / 10	
016																																								2.5 / 5 / 10	
017																																								2.5 / 5 / 10	
018																																								2.5 / 5 / 10	
019																																								2.5 / 5 / 10	
020																																								2.5 / 5 / 10	

11/15/17  
sl

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_

Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b> 1 liter amber glass	<b>BP1U</b> 1 liter plastic unpres	<b>DG9A</b> 40 mL amber ascorbic	<b>JGFU</b> 4 oz amber jar unpres
<b>AG1H</b> 1 liter amber glass HCL	<b>BP2N</b> 500 mL plastic HNO3	<b>DG9T</b> 40 mL amber Na Thio	<b>WGFU</b> 4 oz clear jar unpres
<b>AG4S</b> 125 mL amber glass H2SO4	<b>BP2Z</b> 500 mL plastic NaOH, Znact	<b>VG9U</b> 40 mL clear vial unpres	<b>WPFU</b> 4 oz plastic jar unpres
<b>AG4U</b> 120 mL amber glass unpres	<b>BP3U</b> 250 mL plastic unpres	<b>VG9H</b> 40 mL clear vial HCL	<b>SP5T</b> 120 mL plastic Na Thiosulfate <b>ZPLC</b> ziploc bag <b>GN:</b>
<b>AG5U</b> 100 mL amber glass unpres	<b>BP3B</b> 250 mL plastic NaOH	<b>VG9M</b> 40 mL clear vial MeOH	
<b>AG2S</b> 500 mL amber glass H2SO4	<b>BP3N</b> 250 mL plastic HNO3	<b>VG9D</b> 40 mL clear vial DI	
<b>BG3U</b> 250 mL clear glass unpres	<b>BP3S</b> 250 mL plastic H2SO4		

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: <b>F-GB-C-031-Rev.07</b>	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

**Client Name:** KAPUR & ASSOCIATED INC

WO#: 40199294

**Courier:**  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



40199294

**Tracking #:** \_\_\_\_\_

**Custody Seal on Cooler/Box Present:**  yes  no **Seals intact:**  yes  no

**Custody Seal on Samples Present:**  yes  no **Seals intact:**  yes  no

**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other Zip lock

**Thermometer Used** SR - NA **Type of Ice:**  Wet  Blue Dry None  Samples on ice, cooling process has begun

**Cooler Temperature** Uncorr: 20.1 / Corr: -

**Temp Blank Present:**  yes  no **Biological Tissue is Frozen:**  yes  no

**Person examining contents:**  
 Date: 11/15/19  
 Initials: JW

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Samples received 11/14/19 COC received 11/15/19</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Project Manager Review:** \_\_\_\_\_ *[Signature]*

**Date:** 11/15/19



December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198879

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198879

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198879001	WHITEHAUS	Water	11/04/19 10:45	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198879001	WHITEHAUS	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	CAW	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

**Sample: WHITEHAUS**      **Lab ID: 40198879001**      Collected: 11/04/19 10:45      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>51.5</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:49	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>&lt;0.16</b>	ug/L	0.52	0.16	1	11/15/19 12:35	11/18/19 14:44	7440-38-2	N2
Chromium	<b>&lt;0.76</b>	ug/L	2.5	0.76	1	11/15/19 12:35	11/18/19 14:44	7440-47-3	N2
Lead	<b>0.54</b>	ug/L	0.36	0.11	1	11/15/19 12:35	11/18/19 14:44	7439-92-1	N2
Manganese	<b>3.9</b>	ug/L	0.28	0.083	1	11/15/19 12:35	11/18/19 17:44	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.15</b>	Std. Units			1		11/04/19 10:45		
Field Specific Conductance	<b>1310</b>	umhos/cm			1		11/04/19 10:45		
Turbidity	<b>N</b>	NTU			1		11/04/19 10:45		
Apparent Color	<b>N</b>	no units			1		11/04/19 10:45		
Odor	<b>N</b>	no units			1		11/04/19 10:45		
Temperature, Water (C)	<b>11.3</b>	deg C			1		11/04/19 10:45		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>45.2</b>	mg/L	10.0	2.2	5		11/25/19 19:28	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.43</b>	mg/L	0.25	0.059	1		11/15/19 11:58		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

QC Batch: 533143

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 40198879001

METHOD BLANK: 2460434

Matrix: Water

Associated Lab Samples: 40198879001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198717001 Result	Spike Conc.	Spike Conc.	Conc.								
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

QC Batch: 533238 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198879001

METHOD BLANK: 2460878 Matrix: Water  
Associated Lab Samples: 40198879001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.16	0.52	11/18/19 12:24	N2
Chromium	ug/L	<0.76	2.5	11/18/19 12:24	N2
Lead	ug/L	<0.11	0.36	11/18/19 12:24	N2
Manganese	ug/L	<0.083	0.28	11/18/19 12:24	N2

LABORATORY CONTROL SAMPLE: 2460879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.3	98	85-115	N2
Chromium	ug/L	40	43.2	108	85-115	N2
Lead	ug/L	40	41.4	104	85-115	N2
Manganese	ug/L	40	44.1	110	85-115	N2

MATRIX SPIKE SAMPLE: 2460880

Parameter	Units	40198948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.95	40	41.6	102	70-130	N2
Chromium	ug/L	<0.76	40	41.4	103	70-130	N2
Lead	ug/L	<0.11	40	41.8	104	70-130	N2
Manganese	ug/L	6.6	40	49.2	107	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460881 2460882

Parameter	Units	50241508004		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec							
Arsenic	ug/L	0.38J	40	40	41.0	39.7	101	98	70-130	3	20	N2			
Chromium	ug/L	3.0	40	40	42.2	41.5	98	96	70-130	2	20	N2			
Lead	ug/L	<0.11	40	40	40.7	39.6	102	99	70-130	3	20	N2			
Manganese	ug/L	0.59	40	40	40.9	40.2	101	99	70-130	2	20	N2			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

QC Batch: 340929

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 40198879001

METHOD BLANK: 1979586

Matrix: Water

Associated Lab Samples: 40198879001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001		1979588		1979589		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	45.2	100	100	145	144	100	99	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001		1979590		1979591		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	608	400	400	1020	1050	102	110	90-110	3	15

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198879

QC Batch: 340849 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198879001

METHOD BLANK: 1979079 Matrix: Water  
Associated Lab Samples: 40198879001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 11:39	

LABORATORY CONTROL SAMPLE: 1979080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979081 1979082

Parameter	Units	40198846004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.0	2.0	78	80	90-110	3	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979083 1979084

Parameter	Units	40198882001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.3	2.3	91	91	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198879

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198879

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198879001	WHITEHAUS	EPA 200.7	533143	EPA 200.7	533846
40198879001	WHITEHAUS	EPA 200.8	533238	EPA 200.8	533475
40198879001	WHITEHAUS				
40198879001	WHITEHAUS	EPA 300.0	340929		
40198879001	WHITEHAUS	EPA 353.2	340849		

**REPORT OF LABORATORY ANALYSIS**

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(Please Print Clearly)

Company Name: Kapur & Associates Inc.  
 Branch/Location: Glendale, WI  
 Project Contact: Travis Peterson  
 Phone: (414) 351-6668  
 Project Number: 20.0039.01  
 Project Name: Barrett Landfill  
 Project State: Wisconsin  
 Sampled By (Print): Jennifer Skweres  
 Sampled By (Sign): *[Signature]*  
 PO #:



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

COC No. 40198879

# CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

Y/N	N	N	N								
Pick Letter	A	C	D								
Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite								
	X	X	X								

Quote #:   
 Mail To Contact: Travis Peterson  
 Mail To Company: Kapur & Associates Inc.  
 Mail To Address: 7711 N Port Washington Rd. Milwaukee, WI 53217  
 Invoice To Contact: same  
 Invoice To Company: as  
 Invoice To Address: above  
 Invoice To Phone:   
 CLIENT COMMENTS:   
 LAB COMMENTS (Lab Use Only):   
 Profile #:

*[Handwritten: OK]*

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Analyses Requested	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite																	
		DATE	TIME																						
<i>[Handwritten: 001]</i>	Whitehaus	11/04/19	10:45	DW											X	X	X								


Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed:   
 Transmit Prelim Rush Results by (complete what you want):

Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 10:22	Received By: <i>[Signature]</i> Date/Time: 11/8/19 10:22
Relinquished By: <i>[Signature]</i> Date/Time: 11/8/19 15:15	Received By: <i>[Signature]</i> Date/Time: 11/8/19 15:15
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

PACE Project No. 40198879  
 Receipt Temp = *[Handwritten: 20]* °C  
 Sample Receipt pH *[Handwritten: OK]* Adjusted  
 Cooler Custody Seal Present / Not Present Intact / Not Intact






 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

WO#: 40198879



40198879

**Client Name:** KADW

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA    Type of Ice Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature    Uncorr: 20 /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no    Biological Tissue is Frozen:  yes  no

**Person examining contents:**  
 Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ CS

Date: 11/9/19

December 03, 2019

Travis Peterson  
Kapur & Associates, Inc.  
7711 N. Port Washington Road  
Milwaukee, WI 53217

RE: Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198887

Dear Travis Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Kapur Environmental, Kapur & Associates, Inc.  
Ashley Wagner, Kapur & Associates



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Certification #: 200074

Indiana Certification #: C-49-06

Kansas/NELAP Certification #: E-10177

Kentucky UST Certification #: 80226

Kentucky WW Certification #: 98019

Michigan Department of Environmental Quality, Laboratory  
#9050

Ohio VAP Certification #: CL0065

Oklahoma Certification #: 9204

Texas Certification #: T104704355

West Virginia Certification #: 330

Wisconsin Certification #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198887001	WYSZKOWSKI	Water	11/07/19 07:30	11/08/19 15:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198887001	WYSZKOWSKI	EPA 200.7	KJE	1	PASI-I
		EPA 200.8	DMT	4	PASI-I
			CDH	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 353.2	DAW	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

**Sample: WYSZKOWSKI**      **Lab ID: 40198887001**      Collected: 11/07/19 07:30      Received: 11/08/19 15:15      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Magnesium	<b>43.9</b>	mg/L	0.21	0.064	1	11/15/19 06:14	11/19/19 11:56	7439-95-4	
<b>200.8 MET ICPMS</b>		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Arsenic	<b>&lt;0.30</b>	ug/L	0.99	0.30	1	11/15/19 12:35	11/17/19 23:03	7440-38-2	N2
Chromium	<b>&lt;0.98</b>	ug/L	3.3	0.98	1	11/15/19 12:35	11/17/19 23:03	7440-47-3	N2
Lead	<b>0.30</b>	ug/L	0.097	0.029	1	11/15/19 12:35	11/17/19 23:03	7439-92-1	N2
Manganese	<b>12.2</b>	ug/L	0.24	0.073	1	11/15/19 12:35	11/17/19 23:03	7439-96-5	N2
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.43</b>	Std. Units			1		11/07/19 07:30		
Field Specific Conductance	<b>785</b>	umhos/cm			1		11/07/19 07:30		
REDOX	<b>N</b>	mV			1		11/07/19 07:30		
Apparent Color	<b>N</b>	no units			1		11/07/19 07:30		
Odor	<b>N</b>	no units			1		11/07/19 07:30		
Temperature, Water (C)	<b>11.1</b>	deg C			1		11/07/19 07:30		
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Chloride	<b>18.4</b>	mg/L	10.0	2.2	5		11/25/19 21:14	16887-00-6	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		11/15/19 12:42		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

QC Batch: 533143	Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7	Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 40198887001	

METHOD BLANK: 2460434 Matrix: Water  
Associated Lab Samples: 40198887001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Magnesium	mg/L	<0.064	0.21	11/19/19 10:54	

LABORATORY CONTROL SAMPLE: 2460435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/L	10	9.0	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460436 2460437

Parameter	Units	40198717001		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Magnesium	mg/L	150J ug/L	10	10	9.5	9.4	93	93	70-130	0	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198887

QC Batch: 533239 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Associated Lab Samples: 40198887001

METHOD BLANK: 2460883 Matrix: Water  
Associated Lab Samples: 40198887001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.30	0.99	11/17/19 22:31	N2
Chromium	ug/L	<0.98	3.3	11/17/19 22:31	N2
Lead	ug/L	<0.029	0.097	11/17/19 22:31	N2
Manganese	ug/L	<0.073	0.24	11/17/19 22:31	N2

LABORATORY CONTROL SAMPLE: 2460884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	102	85-115	N2
Chromium	ug/L	40	41.3	103	85-115	N2
Lead	ug/L	40	40.1	100	85-115	N2
Manganese	ug/L	40	41.3	103	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2460885 2460886

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40198885001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	4.7	40	40	45.6	45.0	102	101	70-130	1	20 N2
Chromium	ug/L	<0.98	40	40	39.9	39.8	99	98	70-130	0	20 N2
Lead	ug/L	4.1	40	40	44.5	44.4	101	101	70-130	0	20 N2
Manganese	ug/L	54.0	40	40	92.9	92.2	97	95	70-130	1	20 N2

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198887

QC Batch: 340929 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40198887001

METHOD BLANK: 1979586 Matrix: Water  
Associated Lab Samples: 40198887001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	11/25/19 09:54	

LABORATORY CONTROL SAMPLE: 1979587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979588 1979589

Parameter	Units	40198879001		1979588		1979589		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Chloride	mg/L	45.2	100	100	100	145	144	100	99	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979590 1979591

Parameter	Units	40199181001		1979590		1979591		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Chloride	mg/L	608	400	400	400	1020	1050	102	110	90-110	3	15

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### QUALITY CONTROL DATA

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198887

QC Batch: 340903 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40198887001

METHOD BLANK: 1979275 Matrix: Water  
Associated Lab Samples: 40198887001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	11/15/19 12:39	

LABORATORY CONTROL SAMPLE: 1979276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979277 1979278

Parameter	Units	40198935004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.3	2.3	93	94	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979279 1979280

Parameter	Units	40198937004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrogen, NO2 plus NO3	mg/L	<0.25	2.5	2.5	2.1	2.2	85	85	90-110	1	20	M0

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## QUALIFIERS

Project: 20.0039.01 BARRETT LANDFILL  
Pace Project No.: 40198887

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above LOD.  
J - Estimated concentration at or above the LOD and below the LOQ.  
LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.  
LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay  
PASI-I Pace Analytical Services - Indianapolis

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.  
N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0039.01 BARRETT LANDFILL

Pace Project No.: 40198887

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198887001	WYSZKOWSKI	EPA 200.7	533143	EPA 200.7	533846
40198887001	WYSZKOWSKI	EPA 200.8	533239	EPA 200.8	533476
40198887001	WYSZKOWSKI				
40198887001	WYSZKOWSKI	EPA 300.0	340929		
40198887001	WYSZKOWSKI	EPA 353.2	340903		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** Kapur & Associates Inc.  
**Branch/Location:** Glendale, WI  
**Project Contact:** Travis Peterson  
**Phone:** (414) 351-6668  
**Project Number:** 20.0039.01  
**Project Name:** Barrett Landfill  
**Project State:** Wisconsin  
**Sampled By (Print):** Jennifer Skweres  
**Sampled By (Sign):** *[Signature]*



**UPPER MIDWEST REGION**  
MN: 612-607-1700 WI: 920-469-2436

COC No. **40198887**

## CHAIN OF CUSTODY

**\*Preservation Codes**  
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

**Regulatory Program:**  
**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV  
**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample  
**Matrix Codes**  
A = Air W = Water  
B = Biota DW = Drinking Water  
C = Charcoal GW = Ground Water  
O = Oil SW = Surface Water  
S = Soil WW = Waste Water  
SI = Sludge WP = Wipe

FILTERED? (YES/NO)	PICK LETTER	Y/N	N	N	N														
		ANALYSES REQUESTED	Chloride	As, Pb, Cr, Mn, Mg	Nitrate + Nitrite														
PRESEV CODE			A	C	D														
COLLECTION DATE	TIME	MATRIX																	

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	N	N	N																
		DATE	TIME																					
001	Wyszkowski	11/07/19	7:30	DW		X	X	X																

**Quote #:**  
**Mail To Contact:** Travis Peterson  
**Mail To Company:** Kapur & Associates Inc.  
**Mail To Address:** 7711 N Port Washington Rd. Milwaukee, WI 53217  
**Invoice To Contact:** same  
**Invoice To Company:** as  
**Invoice To Address:** above  
**Invoice To Phone:**  
**CLIENT COMMENTS:**  
**LAB COMMENTS (Lab Use Only):**  
**Profile #:**

**Rush Turnaround Time Requested - Prelims**  
(Rush TAT subject to approval/surcharge)  
**Date Needed:**  
**Transmit Prelim Rush Results by (complete what you want):**  
**Email #1:**  
**Email #2:**  
**Telephone:**  
**Fax:**

**Relinquished By:** *[Signature]* **Date/Time:** 11/8/19 10:22  
**Relinquished By:** *[Signature]* **Date/Time:** 11/8/19 1515  
**Relinquished By:** **Date/Time:**  
**Relinquished By:** **Date/Time:**

**Received By:** *[Signature]* **Date/Time:** 11/8/19 1022  
**Received By:** *[Signature]* **Date/Time:** 11/8/19 1515  
**Received By:** **Date/Time:**  
**Received By:** **Date/Time:**

**PACE Project No.:** 40198887  
**Receipt Temp =** 20 °C  
**Sample Receipt pH:** (OK) Adjusted  
**Cooler Custody Seal:**  
**Present / Not Present:** Present  
**Intact / Not Intact:** Intact

**Sample Preservation Receipt Form**

Client Name: Kapw

Project # 40PP8887

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 10WS3581

Lab Std #ID of preservation (if pH adjusted):


Initial when completed: [Signature]

Date/ Time:

Pace Lab #	Glass							Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H <sub>2</sub> SO <sub>4</sub> pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO <sub>3</sub> pH ≤2	pH after adjusted	Volume (mL)								
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T								ZPLC	GN						
001																													<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>		2.5 / 5 / 10		
002																																							2.5 / 5 / 10
003																																							2.5 / 5 / 10
004																																							2.5 / 5 / 10
005																																							2.5 / 5 / 10
006																																							2.5 / 5 / 10
007																																							2.5 / 5 / 10
008																																							2.5 / 5 / 10
009																																							2.5 / 5 / 10
010																																							2.5 / 5 / 10
011																																							2.5 / 5 / 10
012																																							2.5 / 5 / 10
013																																							2.5 / 5 / 10
014																																							2.5 / 5 / 10
015																																							2.5 / 5 / 10
016																																							2.5 / 5 / 10
017																																							2.5 / 5 / 10
018																																							2.5 / 5 / 10
019																																							2.5 / 5 / 10
020																																							2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b> 1 liter amber glass	<b>BP1U</b> 1 liter plastic unpres	<b>DG9A</b> 40 mL amber ascorbic	<b>JGFU</b> 4 oz amber jar unpres
<b>AG1H</b> 1 liter amber glass HCL	<b>BP2N</b> 500 mL plastic HNO3	<b>DG9T</b> 40 mL amber Na Thio	<b>WGFU</b> 4 oz clear jar unpres
<b>AG4S</b> 125 mL amber glass H <sub>2</sub> SO <sub>4</sub>	<b>BP2Z</b> 500 mL plastic NaOH, Znact	<b>VG9U</b> 40 mL clear vial unpres	<b>WPFU</b> 4 oz plastic jar unpres
<b>AG4U</b> 120 mL amber glass unpres	<b>BP3U</b> 250 mL plastic unpres	<b>VG9H</b> 40 mL clear vial HCL	
<b>AG5U</b> 100 mL amber glass unpres	<b>BP3B</b> 250 mL plastic NaOH	<b>VG9M</b> 40 mL clear vial MeOH	<b>SP5T</b> 120 mL plastic Na Thiosulfate
<b>AG2S</b> 500 mL amber glass H <sub>2</sub> SO <sub>4</sub>	<b>BP3N</b> 250 mL plastic HNO3	<b>VG9D</b> 40 mL clear vial DI	<b>ZPLC</b> ziploc bag
<b>BG3U</b> 250 mL clear glass unpres	<b>BP3S</b> 250 mL plastic H <sub>2</sub> SO <sub>4</sub>		<b>GN:</b>

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: Kapw

**WO#: 40198887**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 201 / Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 11/8/19  
 Initials: CS

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: CS

Date: 11/9/19