

# ENVIRONMENTAL SAMPLING CORPORATION

*Dedicated to Environmental Monitoring, Science & Technology*

September 30, 2021

Mr. David Buser  
Wisconsin Department of Natural Resources  
2300 N. Dr. Martin Luther King Jr. Drive  
Milwaukee, WI 53212

**Re: July 2021 Monitoring Event  
Emerald Park Landfill, LLC - WDNR License No. 03290  
Waukesha County, Wisconsin**

Dear Mr. Buser:

On behalf of Emerald Park Landfill (EPL), Environmental Sampling Corporation (ESC) is submitting the environmental monitoring data for the July 2021 monitoring event. A CD containing analytical results is also being submitted to the GEMS Data Submittal Contact at the WDNR Central Office. The quarterly monitoring conducted in July 2021 was performed by EPL and ESC personnel.

The July 2021 quarterly event includes the following monitoring:

- Collect one leachate sample,
- Record 16 leachate headwell elevations,
- Collect 13 surface water point samples,
- Measure 26 staff gauge elevations,
- Collect five gradient control sump samples,
- Collect readings from 77 landfill gas extraction wells,
- Collect readings from 11 landfill gas monitoring probes.

Information regarding the monitoring program conducted at EPL during the July 2021 event is provided in the following sections.

## **LEACHATE SAMPLE**

One leachate sample was collected in July 2021 by ESC personnel. A grab sample was collected using a Hach Autosampler. One trip blank prepared by the laboratory accompanied the leachate sample from the collection back to the laboratory. Leachate analytical results from the monitoring conducted during the July 2021 event was generally consistent with historical data. A discussion of leachate quality and trends can be found in the annual report submitted in April each year.

## **LEACHATE HEAD WELL ELEVATIONS**

Leachate head elevation measurements are required to be monitored monthly at 16 leachate head wells. As indicated in prior communication with the Department, it was determined in May 2020 that several leachate headwell levels exceeded the regulatory requirements. Since that time, weekly headwell readings have been taken by ESC and/or Tetra Tech personnel, beyond the scope of the monthly permit requirement. Leachate headwells have decreased since the issue was first identified in May 2020. During the July 2021 weekly monitoring events, there were two leachate headwells, LH-12 and LH-14, that had levels greater than one foot during one or more of the weekly readings. Average liquid levels across the facility have also decreased since May 2020 and averaged 0.27 ft. to 0.33 ft. in July 2021. Currently, as of

September 22, 2021 the average liquid level across the site is 0.27 ft. and leachate headwells (LH-12 and LH-14) indicate liquid levels greater than one foot. The leachate head elevation data is submitted to the WDNR quarterly under separate cover for upload to the GEMS database.

### **SURFACE WATER MONITORING**

Samples are collected quarterly from seven surface water locations and six sedimentation basins. Two additional surface water locations and three additional sedimentation basin will be added to the monitoring program following construction. Surface water samples were collected from six of the thirteen surface water locations and sedimentation basins in July 2021. The other seven sampling points were either dry, or contained an insufficient volume to collect a representative surface water sample.

Staff gauge readings are recorded quarterly at the seven surface water locations required by the facility permit. Staff gauge readings are also recorded at an additional 19 surface water locations beyond the scope of the permit as an internal request. During July 2021, staff gauge readings were recorded at all of the 26 locations.

### **GRADIENT CONTROL SYSTEM MONITORING**

Samples were collected from five gradient control sumps (GSUMP-6E, GSUMP-6W, GSUMP-7N, GSUMP-7SE, and GSUMP-7SC) in July 2021. As required, only field parameters (pH, conductivity, temperature, color, odor and turbidity) were collected. The field readings collected from the gradient control system sample locations in July 2021 were consistent with historic data; there is no indication that the landfill has affected the water quality in the gradient control system.

### **GAS EXTRACTION WELL AND BLOWER MONITORING**

The monitoring of the landfill gas blower for percent methane, oxygen, gas temperature, flow and header pressure was conducted at least twice monthly during the reporting period by EPL personnel. Percent methane, oxygen, gas temperature, flow, and well head pressure were measured in the headspace of 66 gas extraction wells by EPL personnel using an Envision gas meter in July 2021. Valve settings were also documented by EPL personnel. The landfill gas blower and gas extraction well data are submitted to the WDNR quarterly under separate cover for upload to the GEMS database.

### **GAS PROBE MONITORING**

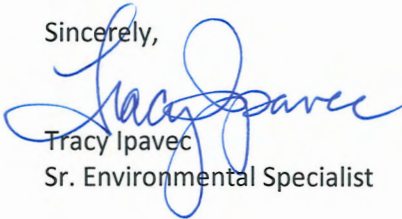
Eleven gas monitoring probes were measured by EPL personnel in July 2021 for percent methane, oxygen, carbon dioxide, and gas pressure using an Envision gas meter. EPL personnel also recorded ambient air temperature, barometric pressure, trend in barometric pressure, and ground conditions. No methane was detected in any of the gas probes during the reporting period. The gas probe monitoring results are submitted to the WDNR quarterly under separate cover for upload to the GEMS database.

### CONCLUSIONS AND RECOMMENDATIONS

Results from the gradient control and leachate samples collected during the July 2021 event were generally consistent with historic data. There was no methane detected in any of the gas probes and no deviations of the solid waste permit monitoring requirements for the vertical gas extraction wells or the gas blower during the July 2021 monitoring event. Any deviations of the air permit requirements during the reporting period, if applicable, are addressed under separate cover and provided to the WDNR Air Management Division.

This letter satisfies the reporting requirements for the July 2021 monitoring event. If you have any questions or comments regarding this submittal, please contact me at 414-427-5033.

Sincerely,



Tracy Ipavec  
Sr. Environmental Specialist

#### Attachments

cc: GEMS Data Submittal Contact: WDNR (w/CD)  
Ann Bekta: WDNR (electronic copy)  
WDNR Waukesha: File Copy  
Tim Curry: GFL Environmental-Midwest (electronic copy)  
Randy Frank: GFL Environmental-Midwest (electronic copy)  
Kari Rabideau: GFL Environmental-Midwest (electronic copy)  
EPL File Copy  
Dan Otzelberger: EPL (electronic copy)  
Chad Siegle: EPL (electronic copy)  
Scott Croft: EPL (electronic copy)  
John Paczkowski: EPL (electronic copy)  
Mark Torresani: Tetra Tech (electronic copy)  
Nick Dykstra: Tetra Tech (electronic copy)  
Jo Spear: JSA Environmental (electronic copy)  
Sherren Clark: SCS Engineers (electronic copy)  
EPL Standing Committee (electronic copy)  
Frank Perugini: ESC (electronic copy)