

# ENVIRONMENTAL SAMPLING CORPORATION

*Dedicated to Environmental Monitoring, Science & Technology*

April 6, 2022

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

**Re: January 2022 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 January 2022 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 January 2022 was performed by EPL, Tetra Tech, and ESC personnel.

The January 2022 quarterly event includes the following monitoring:

- Collect one leachate sample,
- Record 17 leachate headwell elevations,
- Collect 13 surface water point samples,
- Measure 7 staff gauge elevations,
- Collect five gradient control sump samples,
- Collect readings from 83 landfill gas extraction wells,
- Collect readings from 11 landfill gas monitoring probes.

Information regarding the monitoring program conducted at EPL during the January 2022 event is provided in the following sections.

## **LEACHATE SAMPLE**

One leachate sample was collected in January 2022 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 January 2022 event was generally consistent with leachate data collected during 2021, with the exception of an increase in the concentrations of BOD and COD. BOD and COD is conducted on a quarterly basis; future monitoring will help evaluate what, if any, trend exists. 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 17 leachate head wells. As indicated in prior communication with the Department, it was determined in May 2020 that several leachate head well levels exceeded the regulatory requirements. Since that time, weekly head well readings have been taken by ESC or Tetra Tech personnel, beyond the scope of the monthly permit requirement. Leachate head wells have decreased since the issue was first identified in May 2020. During the January 2022 weekly monitoring events, there were three leachate head wells, LH-12, LH-14, and LH-17, that had levels greater than

one foot during each of the weekly readings. Phase 7 head well LH-18 was first monitored during the last weekly event in January 2022. The liquid level was greater than one foot, likely due to frozen water in this open cell. The liquid level at LH-18 reduced to 0.01 ft. by the end of March 2022 after the ponded frozen water thawed and drained. Liquid levels across the facility averaged 0.63 ft. to 0.67 ft. throughout January 2022. 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. No surface water samples could be collected from the 13 surface water locations and sedimentation basins in January 2022. The sampling points were either dry or frozen.

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 January 2022, staff gauge readings were recorded at 25 of the 26 locations. Staff gauge SG-22, located in sedimentation basin SB-3, was removed for cleaning of the sed basin; no staff gauge reading could be obtained during the January 2022 event. The staff gauge at SG-22 will be replaced during the next quarterly event.

### **GRADIENT CONTROL SYSTEM MONITORING**

Samples were collected from five gradient control sumps (GSUMP-6E, GSUMP-6W, GSUMP-7N, GSUMP-7SE, and GSUMP-7SC) in January 2022. 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 January 2022 were consistent with historic data.

### **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 using an Envision gas meter. The headspace of 83 gas extraction wells were monitoring in January 2022 for percent methane, oxygen, gas temperature, flow, well head pressure, and valve settings 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. Additional supplemental gas extraction points were monitored in accordance with the air permit regulations and will be included in the next air operation permit semi-annual monitoring report.

### **GAS PROBE MONITORING**

Eleven gas monitoring probes were measured by EPL personnel in January 2022 for percent methane, oxygen, carbon dioxide, ambient air temperature, barometric pressure, trend in barometric pressure, ground conditions and gas pressure using an Envision gas meter. 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 January 2022 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 January 2022 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 January 2022 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)