



## Brunswick Landfill Hydrogen Sulfide Monitoring Data

The data presented in these spreadsheets and charts was obtained from stationary Honeywell Analytics MDA Single Point Monitors. The monitors are placed at specific locations in a subdivision to the north of the Brunswick landfill to record continuous ambient air quality data. The monitors collect data for hydrogen sulfide gas only. Based on risk assessment work completed at a similar facility in Maine, hydrogen sulfide is the primary issue of concern in the ambient air related to potential public health impacts and is most likely the primary cause of off-site odor impacts around a landfill. In general, monitor locations were selected taking into consideration odor complaints and accessibility.

The data is presented in units of parts per billion (ppb). The monitors are able to quantify hydrogen sulfide levels between 4 ppb and 100 ppb, with an accuracy of +/- 25 percent. The Chemcassette<sup>®</sup> tapes are capable of detecting hydrogen sulfide levels down to 2 ppb. Therefore, in the attached data, there is a column labeled “Qualifier” beside the column listing the hydrogen sulfide results from the monitor. A “Qualifier” labeled “U” means that hydrogen sulfide was not detected above the 2 ppb lower detection limit (MDL) as applicable. A “Qualifier” labeled “J” means that hydrogen sulfide was detected above the 2 ppb MDL, but below the 4 ppb reporting limit (RL). The RL is the lowest numerical value that can be determined with suitable precision and accuracy. Therefore, a listed result between 2 ppb and 4 ppb is an estimated value. Results above 4 ppb are listed without any qualifiers since the result is within the specified range of the monitors.

The Department performs routine maintenance and checks on the monitors to ensure that they are operating properly. The proper operation of these monitors requires monthly verification of the system’s response. These “system response checks” can be seen in the data and on the attached charts resulting in a peak value around 40 ppb. *Please note that these points are labeled as such on the charts, and are not hydrogen sulfide results attributable to the landfill.*

We have also included the weather data collected from the onsite weather station. This data is used to aid in data validation. The readings obtained from the monitors, during any given time period, are compared to the corresponding wind speed, wind direction, and ambient temperature in order to determine whether the landfill is the likely source of the reading. Other sources, such as diesel fuel exhaust, can also cause elevated readings.