Tim O'Connor & Company, LLC environmental consultation

March 3, 2017

Mr. Mark Dennen Supervising Environmental Scientist Rhode Island Department of Environmental Management 235 Promenade Street Providence, Rhode Island 02908-5767

Re: Site Monitoring Plan

Former Portsmouth Landfill

Dear: Mr. Dennen:

This Site Monitoring Plan is submitted on behalf of AP Enterprise, LLC (APE) regarding the Portsmouth Landfill (the Site). APE is prepared to implement this plan upon Rhode Island Department of Environmental Management (RIDEM) approval. This submittal was prompted by a request from RIDEM to initiate site monitoring to the extent practical given the status of the capping project.

Monitoring Stations

As the landfill cap is not yet entirely completed not all of the monitoring points proposed herein can be installed at this time. Attached is a site plan titled "Landfill Monitoring Plan" prepared by DiPrete Engineering which shows all proposed monitoring points. The monitoring points proposed for installation at this time are identified as Phase 1. Those that will be installed at the completion of the cap are identified as Phase 2.

At each monitoring station a groundwater and soil gas monitoring point will be established. Both points will be installed using Direct Push Technology. The groundwater monitoring wells will be installed so as to straddle the groundwater table. Each groundwater monitoring well will be 2 inches inside diameter and contain at least 10 feet of well screen.

The soil gas monitoring points will be established approximately 2 feet above the groundwater table elevation and contain 1 foot of screen. The soil gas monitoring points will be equipped with a Geo Probe Post Run Tubing System (PRT) or similar equipment, and will be connected to a vapor sampling implant screen.

Each boring will be logged by an environmental scientist, who will document soil properties and periodically screen soils using an organic vapor meter. The groundwater monitoring wells will be developed within a few days of installation.

Sampling Methods

Groundwater samples will be collected in a manner consistent with USEPA Low Stress (Low Flow) Purging and Sampling Procedures. After purging, soil gas samples will be collected directly from the PRT using a real time gas monitoring meter capable of determining lower explosive limit (LEL), percent methane and hydrogen sulfide.

Monitoring Parameters

Groundwater samples will be analyzed by a Rhode Island Department of Health licensed laboratory for the constituents listed in Appendix A of RIDEM Solid Waste Regulation No. 2. Volatile organics will be analyzed using EPA method 8260. The totals metals analysis will be done using either EPA method 6010 or a method from the 7000 series of EPA methods.

The soil gas samples will be analyzed in the field using a hand held device.

Investigation Derived Waste

All investigation derived waste will be placed on the uncapped portion of the landfill.

Reporting

The results of the monitoring will be included in the quarterly report which APE has been submitting since the start of the capping project.

Schedule

The monitoring points will be installed within one month of RIDEM approval and the first round of sampling will be conducted shortly thereafter and the results reported in the next quarterly report.

Please feel free to contact me should you have any questions regarding this matter.

Sincerely

TIM O'CONNOR & COMPANY, LLC

Timothy M. O'Connor, PE, LEED-AP

Principal