

September 3, 2024

Mr. Geoffrey Spain
Land Quality Bureau
Iowa Department of Natural Resources
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321



**RE: Request for Modification of the HMSP
Plymouth County Sanitary Landfill
75-SDP-01-74P**

Dear Mr. Spain:

On behalf of Plymouth County Sanitary Landfill, we request that the currently approved Hydrologic Monitoring System Plan (HMSP) dated February 28, 2023 (Doc #105974) be augmented to include the use of No-Purge sample collection methods as appropriate. We request that the use of low-flow and/or low-stress sample collection methods (as currently approved) remain in the HMSP.

No other changes to the HMSP are proposed and the conditions included in Special Provision 4 of the current permit shall apply.

The details of the proposed No-Purge sample collection procedures are included in Attachment A.

Please indicate approval of the No-Purge sample collection methods in the HMSP.

Respectfully Submitted,
HLW Engineering Group

A handwritten signature in blue ink, appearing to read "Todd Whipple", is written over the company name.

Todd Whipple, CPG
Project Manager

cc: *Mr. Kent Herbold, Director*

Attachment A

No-Purge Sample Collection Procedures

No-Purge Sample Collection Methods

Groundwater Sampling

No-Purge Sampling Method – No-purge sample collection will utilize a Solinst® Model 429 Point Source Sampler. The point source sampler employed is 1.5-inch in inside diameter by four (4.0) feet in length. This point source sampler yields a sample volume of 970 mL, or 242 mL per foot.

A static water level will be obtained and recorded for each well prior to commencement of any sampling in the well. The water level (to the nearest 0.01 ft) will be obtained using a Solinst® Model 101 water level tape (or equivalent) measured from the top of PVC casing.

The point source sampler will be deployed to an approximate depth equal to one (1.0) foot above the bottom of the screen interval using a 4.0 ft by 1.5-inch diameter point source sampler. In order to accurately obtain this desired bottom depth of the sampler, the cordage will be accurately measured and cut to be 5.0 feet less than the previous well depth measurement (less 1 ft above bottom and less 4 ft for sampler length).

The sampler will slowly be lowered in the monitoring well to the desired sampling depth. Once final depth is reached, the sampler will be raised to the surface at a steady rate.

Holding the point source sampler vertical, the sample retrieval device will be inserted into the bottom of the point source sampler. The outlet of the sample retrieval device will be directed into the laboratory supplied container. Once the outlet is properly directed to the laboratory sample container, the trigger on the top of the point source sampling device will be pushed and the sample will be allowed to drain from the sampler into the laboratory containers.

The containers for water quality sampling will be filled in the following order:

- 120 mL into 3x40 mL glass vials (VOC compounds)
- 10 mL into the 10 mL glass vial (field NTU)
- 250 mL into the 250 mL nitric preserved plastic (metals)
- 250 mL into the 250 mL sulfuric preserved plastic (ammonia, COD)
- 250 mL into the 250 mL non-preserved plastic (chloride)

The sample volume that remains in the point source sampler (approximately 90 mL) will be retained until the collected sample containers are properly stored on ice in the sample transport ice chest and the field measurement of turbidity is completed. Upon successful storage of the sample container set, the excess sample water in the point source sampler will be discarded.

Upon completion of sample collection, the well depth will be measured and recorded for reference at the next sampling event and in order to meet IAC 113.10(2)"F"3.

The formation that is open to the monitoring well is defined herein to be equal to the screened portion of the well. No wells currently exist that have a screen length of less than 5.0 feet. No future wells are planned that will have a screen length of less than 5.0 feet.

No-purge sampling methods utilizing the 4.0 ft by 1.5-inch diameter point source sample is appropriate at all wells that have a screen length of 4.0 feet, or more. At this site, this includes all HMSP monitoring wells.