



February 12, 2016

Ms. Jackie Drummond
North Carolina Department of Environmental Quality
Division of Waste Management, Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

**RE: Soil Assessment Plan
Yancey-Mitchell Transfer Facility; Permit No. 100-03T.
JOYCE Project No. 890.1601.12, Tasks No. 04**

Dear Ms. Drummond:

On behalf of Republic Services of North Carolina, LLC, Joyce Engineering (JOYCE) submits this *Soil Assessment Plan* for the Yancey-Mitchell Transfer Facility, which Republic operates under Solid Waste Permit Number 100-03T. This *Soil Assessment Plan* is in response to a Notice of Violation (NOV) issued by the North Carolina Department of Environmental Quality (DEQ) on December 4, 2015. The NOV was issued due to evidence of a release of leachate from a flooded transfer station receiving bay across the access road and into the stormwater ditch on the *EnergyXchange* side of the road observed during facility inspections conducted by the DEQ in December 2015.

Background

The Yancey and Mitchell Counties and Republic Services, Inc. (d.b.a. Garbage Disposal Services, Inc. (GDS)) Transfer Facility is owned by Yancey County and operated by GDS. The transfer station is located in Burnsville, North Carolina. During an inspection of the facility on December 4, 2015, the DEQ inspector observed a release of leachate from the north end of the transfer station receiving bay across the access road and into to the stormwater ditch. The December 4th NOV called for the Owners/Operator to Submit a Plan for review and approval to the Solid Waste Section that details a proposed soil assessment for the area impacted by the leachate release.

Apparent Impact Area

According to the December 4, 2015 *Inspection Report*, the area of apparent impact from the leachate release is the stormwater ditch on the *EnergyXchange* side of the road. The nearest surface water is the North Toe River located over a quarter mile northwest of the apparent impact area. Groundwater is estimated to be at least 60 feet deep in the vicinity of the apparent impact.

Proposed Soil Sample locations

In order to document the extent of possible impacted soil and the concentration of leachate constituents in the soil, we propose collecting soil samples from four locations, three in the apparent impact area plus one upgradient background sample. Figure 1 shows the proposed sample locations on an aerial photo of the facility. The proposed locations are approximate and may be adjusted in the field based on observed soil staining or other evidence of impact. At the each location, we will collect one sample from a depth of 12-24 inches.

Soil Sampling Protocol

All sampling will be conducted under the supervision of a licensed professional geologist and will be conducted by trained field personnel. The soil samples will be collected using a stainless-steel hand auger. The sampling equipment will be thoroughly decontaminated before sampling and between samples. The decontamination procedure will include the following steps:

- Wash the equipment with a solution of Alconox, or similar phosphate-free detergent, using a brush to remove particulate matter and surface films;
- Rinse with organic-free water or distilled water twice;
- Air dry on aluminum foil; and
- If not used immediately, wrap equipment in aluminum foil.

Personnel will wear disposable latex or nitrile gloves when handling soil samples. All samples will be placed in laboratory-prepared sample containers (e.g. Terra Core samplers, jars, etc.) and put immediately into a cooler with ice for transport to the laboratory.

Soil Analyses

The samples will be transported to a North Carolina-certified laboratory under chain-of-custody control for analysis. The soil samples will be analyzed for the NC Appendix I list of leachate constituents, including metals by EPA Method 6010, and volatile organic compounds (VOCs) by EPA Method 5035/8260. The soil samples will also be analyzed for pH.

Reporting

A letter report presenting the results of the soil assessment will be submitted to the DEQ. The report will include a description of the soil-sampling event, a summary of the analytical results, the complete laboratory analytical report and chain-of custody, and a discussion of the results. The report will compare the analytical results to the NC-DEQ Inactive Hazardous Sites Branch Preliminary Soil Remediation Goals (PSRGs). The report may also offer recommendations for additional sampling, remediation of the impacted soil, or other actions as appropriate based on the results of the soil assessment.

Ms. Jackie Drummond
February 12, 2016
Page 3 of 3

Schedule

Soil samples will be collected within 10 workdays (14 calendar days) of DEQ approval of this Soil Assessment Plan. Soil samples will be submitted to a NC-certified laboratory within analytical method hold times.

The Soil Assessment Report will be submitted to DEQ electronically within 15 workdays (21 calendar days) of receipt of the final laboratory analytical report. If you wish to have a hard copy of the report, we will be happy to provide it upon your request.

Please feel free to contact me at (336) 323-0092 if you have any questions or comments regarding this plan. Thank you.

Sincerely,
JOYCE ENGINEERING



Van Burbach, Ph.D., P.G
Technical Consultant

Attachments

Copy: Ray Hoffman, Republic Services, Inc.

Attachment

Figure 1



DESIGNED _____ HK DRAWN _____ RWH CHECKED _____ HK APPROVED _____ HK DATE _____ 2/10/16		REVISIONS AND RECORD OF ISSUE NO. BY CK APP	
JOYCE ENGINEERING 2211 W. MEADOWVIEW ROAD GREENSBORO, NC 27407 PHONE: (336) 325-0992 NC CORP LIC: C-4782		PROJECT NO. 890	
YANCEYVILLE MITCHELL LANDFILL BURNSVILLE, NORTH CAROLINA		SCALE AS SHOWN	
PROPOSED SOIL SAMPLE LOCATION MAP		FIGURE 1	