

New York State Department of Environmental Conservation

Division of Materials Management, Region 8

6274 East Avon-Lima Road, Avon NY 14414-9516

Phone: (585) 226-5411 • Fax: (585) 226-2909

Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Joe Martens  
Commissioner

October 18, 2011

Ms. Carla Jordan  
Environmental Manager  
Chemung Landfill, LLC  
P.O. Box 2178  
Elmira, NY 14903

Dear Ms. Jordan:

**RE: Chemung County Landfill MSW and C&D Landfill Environmental  
Monitoring Plan (EMP) APPENDIX E – Additional Considerations  
for Radionuclide Sampling Chemung (T) Chemung (C)**

The above referenced document was received by this office via e-mail on September 28, 2011. The document describes the sampling procedures and radiological analysis that will be used to monitor landfill leachate and leachate lagoon sediment. The information contained in the document is acceptable and the revision is hereby approved.

Be advised "Appendix E" is an addition to the existing approved Environmental Monitoring Plan and it replaces no existing section; as such, all sections of the currently approved EMP manual remain in effect.

If you have any questions or concerns regarding this letter, please contact me at (585) 226-5414, or Mark Domagala at (585) 226-5426.

Sincerely,

Gary M. Maslanka  
Environmental Engineer

cc: Michael Krusen      Chemung County  
Thomas Kump      Chemung County  
Scott Foti      NYSDEC  
Mark Domagala      NYSDEC  
Jennifer Bostaph      NYSDEC

## APPENDIX E – Additional Considerations for Radionuclide Sampling

In order to assess existing leachate radiological conditions, leachate samples will be collected and analyzed over the course of the next three years on a semi-annual basis for radioactivity, following the normal collection procedure for the type of water being sampled with the following provisions:

1. The first six sampling events will be conducted at the locations listed below according to the following schedule;

**January 2012** – Cells I/II/III, Cell IV, Leachate Lagoon

**June 2012** – Cell IV

**January 2013** – Cells I/II/III, Cell IV, Leachate Lagoon

**June 2013** – Cell IV

**January 2014** – Cells I/II/III, Cell IV, Leachate Lagoon

**June 2014** – Cell IV

Once the initial twelve (12) samples are obtained, the leachate sampling frequency will be reduced to an annual basis. The samples will then be obtained only from the leachate lagoon location during the month of June.

2. For a normal round of sampling, radionuclide analytes will include:
  - a. Radium-226 per EPA 903.1
  - b. Radium-228 per EPA 904.0
  - c. Total Uranium per EPA 908.0
  - d. Gamma Spectrum per EPA 901.1

If special investigation is necessary, isotopic thorium and/or isotopic uranium may be specified.

3. Before sampling, the laboratory will be contacted to determine:
  - a. how much water is necessary for analysis of each analyte; and
  - b. if acid (type and how much) should be added to the water to keep the radionuclides from absorbing to the wall of the container.

After this information is obtained, field technicians will ensure that the proper containers and reagents are available for use in the field

4. Two sets of samples will be collected: one to be filtered and one sent as unfiltered.
5. "Filtered" samples will be filtered using a 0.45 micron filter via the standard technique specified in this Plan. (Note: The presence of sediment or suspended solids in a sample can greatly affect the apparent radionuclide concentration and thus care should be used to ensure filtering is effective.)
6. Once the samples are appropriately obtained, the samples will be sent to the laboratory via ground shipping.

In addition to the leachate sampling outlined above, the Facility will also conduct radiological analysis on the leachate lagoon sludge on an annual basis. The sludge will be obtained from the lagoon during the month of June and sampled for the radionuclides referenced above under bullet number two.

The results of these analyses will be submitted to the NYSDEC Region 8 and Central Office as required.