



State of Ohio Environmental Protection Agency

STREET ADDRESS:

MAILING ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

P.O. Box 1049
Columbus, Ohio 43216-1049

Knox County Commissioners
117 East High Street
Mount Vernon, Ohio 43050

**RE: Knox County Landfill, Knox County
Approval of Alternative Method to Update Background Data**

Dear Commissioners:

The Ohio Environmental Protection Agency (Ohio EPA), Central District Office (CDO) received a request from Bennett & Williams, Inc., on behalf of the Knox County Commissioners (Commissioners), to use an alternative method of updating background ground water data at the closed Knox County Landfill (Facility). The request was submitted pursuant to Ohio Administrative Code (OAC) Rule 3745-27-10(C)(7)(g), which states:

Background data can be added only in blocks of data resulting from the analysis of four or more statistically independent samples after the data have been statistically compared to the current background data and no statistical differences are detected, unless another method is deemed acceptable to the director.

Currently, the Facility is following a Ground Water Quality Monitoring Plan (Plan) that was revised in May 2004. In accordance with the Plan, the Commissioners are sampling well CW12 and well CW20 semiannually. In the request, the Commissioners propose that background measurements collected from well CW12 and well CW20 during each semiannual sampling event be added to the background database immediately after each sampling event provided that no statistical differences are detected between the most recent measurements and the existing background data.

Ohio EPA has reviewed the Commissioners' request to use another method of updating background data and has determined that this method is acceptable. Therefore, pursuant to OAC Rule 3745-27-10(C)(7)(g), I hereby authorize the Commissioners to update background data at the Facility using the method proposed in the request. As part of this authorization, the Commissioners are subject to the following conditions:

Bob Taft, Governor
Jennette Bradley, Lieutenant Governor
Joseph P. Koncelik, Director

CONDITIONS

1. For wells CW12 and CW20 a Wilcoxon rank-sum test or Mann-Whitney test shall be performed each time there is to be a background data update for an Appendix I inorganic parameter used in the statistical analysis of downgradient wells. The test shall be performed at a 0.05 α -level for the data (proposed and existing background) from the background wells being tested. If the proposed background data pass the statistical test, the data may be added to the background database. Should the proposed background data fail the statistical test, the background database shall not be updated unless the Commissioners can demonstrate to the satisfaction of the Director of Ohio EPA (Director) that proposed background data point concentration is not a result of impact from the Facility, or caused by failures in purging/sampling protocol, lack of well integrity, or laboratory contamination or transcription error. No statistical test is required if the proposed background concentration is below the method detection limit.
2. If requested by Ohio EPA, the Commissioners shall run a trend test to check for slow changes in background concentrations for Appendix I inorganic constituents used for purposes of statistical evaluation. The trend test shall be performed as an intrawell test on each background well by combining the four most recent data points with the existing background concentration for each well. The Mann-Kendall, Sen's estimate of slope, and/or Spearman's trend test(s) shall be used. The trend shall be evaluated at a 0.05 α -level. Should a statistically significant trend be identified, the current background for the well shall be further evaluated to determine the cause of the trend. If the trend is not a result of impact from the Facility, no further action is required and the current data may remain in the background database.
3. Should an Appendix I organic compound be detected above its quantitation limit and confirmed in a background well, the Facility shall enter the ground water quality assessment program pursuant to OAC Rule 3745-27-10(E) unless the Director issues an approval to remain in the detection monitoring program pursuant to OAC Rule 3745-27-10(D)(7)(c).

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission (Commission) pursuant to Ohio Revised Code Section 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director within three (3) days of filing with the Commission. An appeal may be filed with the Commission at the following address:

Knox County Commissioners
Background Data
Page 3 of 3

Environmental Review Appeals Commission
309 South Fourth Street
Room 222
Columbus, OH 43215

If you have any questions regarding this letter, please contact Laura Parkinson of Ohio EPA, CDO at (614) 728-3889.

Sincerely,

Joseph P. Koncelik
Director

JPK/JS/LP/sw

cc: Knox County Health Department
Bennett & Williams, Inc.
DDAGW-CDO
CDO file

JK/LP/slj variancereq