



NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL GUIDANCE DOCUMENT

11-009

March, 2011

COST ESTIMATE UPDATES FOR HAZARDOUS WASTE FACILITIES

The Nebraska Administrative Code [[Title 128-Nebraska Hazardous Waste Regulations](#)] and the Title 40 Code of Federal Regulations (CFR) require operators/owners of hazardous waste treatment, storage, and disposal facilities (TSDs) to annually update cost estimates and financial assurance demonstrations for closure and/or post-closure care. These requirements can be found at Title 40 CFR §264.143; §264.145; §265.143; and §265.145 as referenced by Title 128, Chapter 21, 008 and Chapter 22, 008.

Cost estimates for closure and post-closure care for TSD facilities must be updated annually for inflation during the active life of the facility. Post-closure cost estimates are not required to be updated during the post-closure period by regulation; however, in Nebraska most of the post-closure permits include permit conditions that require annual inflation updates during the post-closure period. Annual cost estimate updates may be made by recalculation of the maximum costs of closure and the most expensive costs for post-closure in current dollars or by using an inflation factor.

Timeline for Updating Cost Estimates

Inflation updates to the cost estimates for closure and post-closure must be revised within 60 days prior to the anniversary date of the financial assurance mechanism or within 30 days after the close of the firm's fiscal year, if a financial test or corporate guarantee is used as the financial assurance mechanism.

Submittal of Adjusted Financial Assurance Mechanism

The updated cost estimates and adjusted financial assurance mechanism must be submitted to the Nebraska Department of Environmental Quality (NDEQ). Updated cost estimates and adjusted financial assurance mechanisms must be submitted to NDEQ each year within 60 days after the cost estimates have been increased due to inflation updates or within 90 days after the close of the firm's fiscal year, if a financial test or corporate guarantee is used as the financial assurance mechanism.

Calculation of the Inflation Factor

The inflation factor for updating cost estimates is derived from the most recent annual “Implicit Price Deflator” for Gross Domestic Product published by the U.S. Department of Commerce’s, Bureau of Economic Analysis, in the year for which the adjustment is being made. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The Implicit Price Deflator is found at http://www.bea.gov/iTable/index_nipa.cfm

After entering the web site, do the following:

- Choose: Gross Domestic Product (GDP);
- Choose: Interactive Tables: GDP and the National Income and Product Account (NIPA) Historical Tables;
- Choose: a table from a list of Selected NIPA Tables;
- Choose from Section 1 - Domestic Product and Income: Table 1.1.9 Implicit Price Deflator;
- Click on the Annual (A) button and the two most recent years;
- Click on the Refresh Table button;
- Use Line 1- Gross Domestic Product and divide the most recent year’s Deflator by the previous year’s Deflator to determine the current inflation factor. Round off the number to four (4) decimals.
- Multiply the most current cost estimate by the latest annual inflation factor. The result is the inflation adjusted cost estimate.

Choosing the Correct Inflation Data

Annual inflation factors are used in Nebraska instead of quarterly factors to reflect an accurate inflation rate for the previous year and to provide consistency in the annual submittals. Quarterly factors may provide more recent information; however, for consistency, NDEQ prefers to use the annual Implicit Price Deflator information. Usually the preliminary annual Implicit Price Deflator factors are published for the most recent year at the end of January. The January data is preliminary and may be adjusted over time; however, the adjustments are usually minor and do not have a major impact on the annual cost estimate.

In accordance with the U. S. Environmental Protection Agency Memorandum dated March 8, 1996, the NDEQ uses the Gross Domestic Product Deflator instead of the Gross National Product Deflator referenced in the regulations. The Deflator is a statistical series that measures inflation in the economy and the Gross Domestic Product provides a more accurate assessment of U. S. inflation using data that considers internal or domestic information.

The statistical series is periodically updated by the U.S. Commerce Department and assigns a new base year for the new series. The inflation factor calculation must use the Deflators from within the same series and should not cross over and use a Deflator from a different series with a different base year. This would result in an inaccurate calculation.

Example Inflation Factor Calculation

After the preliminary factors are published by the U.S. Department of Commerce, NDEQ calculates the inflation factor and sends a notice to permitted TSDs informing them of the previous year's inflation factor. NDEQ also accepts the calculations used by some facilities that are submitting updates to cost estimates and financial assurance mechanisms in several states, if their calculation does not vary significantly from the NDEQ calculation. Once the inflation factor is determined the cost estimate dollar value must be multiplied by the inflation factor for the most recent year. For example:

- If the Closure Cost Estimate for 2010 is \$1,000,000; and
- The 2009 Deflator from the U.S. Department of Commerce tables is 109.615 and the 2008 Deflator is 108.619
- The Inflation Factor to use in 2010 cost estimate calculations is $109.615/108.619 = 1.0092$;
- Take $\$1,000,000 \times 1.0092 = \$1,009,200$.

(Remember to use four decimal places in the inflation factor)

Other Methods for Updating Cost Estimates

If any changes to the cost estimates occur due to modifications to the facility or changes occur to the closure and/or post-closure plans, the cost estimates must be revised and the changes must be submitted to NDEQ no later than 30 days after NDEQ has approved the request to modify the closure and/or post-closure plans. Approval of changes in cost estimates that are not related to inflation updates must be based on documentation submitted to NDEQ to verify the cost estimates are valid. This documentation may include numerous resources such as cost estimating handbooks, workups consisting of unit costs based on the consultant's experience at other facilities, EPA guidance manuals, or actual bids for similar work done for other projects.