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**To:** Solid Waste Disposal Site Permittees **Date:** January 27, 2012

**From:** Jim Harris  
Financial Analyst

**Subject:** Financial Assurance Update for Calendar Year 2012:  
Using Inflation Factors for Annual Updates of Closure  
and Post-Closure Cost Estimates

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This memorandum is meant to answer the question:

*“How should permittees respond to Department requests for annual updates of “worst-case” closure & post-closure cost estimates for financial assurance at their permitted facility/ies?”*

The Department concurs with the notion that contracting out for new estimates when the scope of work has not changed at a facility is unnecessary.

#### **COST ADJUSTMENTS**

Closure and post-closure cost estimates are adjusted annually for inflation until closure is completed. Since a dollar this year is not worth as much as a dollar last year, stating that a facility will cost ten million dollars to close raises the question, “which dollar should we use to make cost estimates?”

There are two ways owners and operators may address this issue. The more obvious and more cumbersome method would be to recalculate the cost estimates completely each year.

However, to save time and expense, a simpler method may be used. The Department of Commerce, Bureau of Economic Analysis (BEA), publishes an official figure, called the Implicit Price Deflator (IPD), which summarizes what a certain group of goods and services costs during that year. An owner and operator can then use the IPD to determine how much prices “went up” (the inflation factor) and make a percentage adjustment to the previous year’s closure and post-closure cost estimates.

**Owners and operators must still adjust cost estimates following any changes in scope to their closure or post-closure plan that would raise the costs involved.**

**For example, expansion of a surface impoundment might increase the amount of contaminated soil to be removed at closure. The closure and post-closure estimates must be recalculated to reflect the additional expenses.**

BEA’s website provides a way to get IPD indices through Table 1.1.9. Implicit Price Deflators for Gross Domestic Product available at <http://www.bea.gov><sup>1</sup>.

The “Actual” section of the following table was pulled from the BEA Table 1.1.9 on 1/27/2012. The projection for 2012 and the first quarter of 2013 assumes an annualized inflation rate of 1.40% (the average of the last twelve “actual” quarters). If you want to use the projection instead of looking up the current index on the BEA website, be sure to reference this letter in your calculation.

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Table 1.1.9. GDP Implicit Price Deflator				
Type	Year	Quarter	Value	Qtr-to-Qtr Rate, Annualized
Actual	2002	I	91.555	-
	2002	II	91.965	1.80%
	2002	III	92.363	1.74%
	2002	IV	92.894	2.32%
	2003	I	93.543	2.82%
	2003	II	93.815	1.17%
	2003	III	94.337	2.24%
	2003	IV	94.818	2.06%
	2004	I	95.643	3.53%
	2004	II	96.450	3.42%
	2004	III	97.149	2.93%
	2004	IV	97.874	3.02%
	2005	I	98.776	3.74%
	2005	II	99.437	2.70%
	2005	III	100.458	4.17%
	2005	IV	101.302	3.40%
	2006	I	102.055	3.01%
	2006	II	102.948	3.55%
	2006	III	103.724	3.05%
	2006	IV	104.186	1.79%
	2007	I	105.380	4.66%
	2007	II	106.098	2.75%
	2007	III	106.453	1.35%
	2007	IV	106.958	1.91%
	2008	I	107.591	2.39%
	2008	II	108.302	2.67%
	2008	III	109.162	3.21%
	2008	IV	109.300	0.51%
	2009	I	109.717	1.53%
	2009	II	109.594	-0.45%
	2009	III	109.658	0.23%
	2009	IV	109.943	1.04%
	2010	I	110.358	1.52%
	2010	II	110.793	1.59%
	2010	III	111.156	1.32%
	2010	IV	111.644	1.77%
	2011	I	112.398	2.73%
	2011	II	113.118	2.59%
	2011	III	113.836	2.56%
	2011	IV	113.946	0.39%
Projection	2012	I	114.343	1.40%
	2012	II	114.742	1.40%
	2012	III	115.142	1.40%
	2012	IV	115.543	1.40%
	2013	I	115.946	1.40%



## CALCULATION

To make an inflation adjustment **where the scope of work has not changed**, look up the GDP implicit price deflator for the current year and quarter for which you are making the calculation. Divide that by the price deflator for the year and quarter of the original estimate. Multiply that quotient by the \$ amount of the original estimate. The result represents the original cost estimate inflation-adjusted to current dollars.

Finally, to document the updated cost, be sure to show the original cost estimate, along with the years and indices used in the calculation.

### Example:

A closure-cost estimate completed in September of 2009 was \$1,500,000. The scope of work has not changed.

The inflation-adjusted cost for May 2012 is calculated as follows:

Implicit Price Deflator for 2012-II = 114.742

Implicit Price Deflator for 2009-III = 109.658

Quotient =  $114.742 \div 109.658 = 1.046360463$

Inflation-adjusted cost estimate in current dollars =

$\$1,500,000 \times 1.046360463 = \underline{\$1,569,541}$ .

Please let me know if you have any questions.

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<sup>1</sup>See <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=Y> and click on this link:

[Table 1.1.9. Implicit Price Deflators for Gross Domestic Product \(A\) \(Q\)](#)

