

ATTACHMENT D

Updating Labor Rates

The Agency has updated the estimated wages, benefits and overhead for all labor categories for affected industries, state government, and EPA employees based on publicly available data from the US Bureau of Labor Statistics. The worksheets listed in this attachment describe the formulas used to estimate the labor rates and derive the fully loaded rates and overhead costs for this ICR renewal. This renewal uses **2019 base data**.

Methodology	The methodology uses data on each sector and labor type for an <i>Unloaded wage rate</i> (hourly wage rate) and calculates the <i>Loaded wage rate</i> (unloaded wage rate + benefits), and the <i>Fully loaded wage rate</i> (loaded wage rate + overhead). Fully loaded wage rates are used to calculate respondent costs. This renewal uses 2019 base data.
Unloaded Wage Rate	Wages are estimated for labor types (management, technical, and clerical) within applicable sectors. The Agency uses average wage data for the relevant sectors available in the National Industry-Specific Occupational Employment and Wage Estimates from the Bureau of Labor Statistics (BLS) at http://www.bls.gov/oes/current/oes_nat.htm .
Sectors	The specific North American Industry Classification System (NAICS) code and website for each sector is included in that sector's wage rate table (see Attachment G). Within each sector, the wage data are provided by Standard Occupational Classification (SOC). The SOC system is used by Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data (see http://www.bls.gov/oes/current/oes_stru.htm).
Loaded Wage Rate	Unless stated otherwise, all benefits represent 46% of unloaded wage rates, based on benefits for all civilian non-farm workers, from http://www.bls.gov/news.release/ecec.t01.htm . However, if other sectors are listed for which 46% is not applicable, the applicable percentage will be stated.
Fully Loaded Wage Rate	We multiply the loaded wage rate by 50% (EPA guidelines 20-70%) to get overhead costs.

Work Sheets to Calculate Industry and EPA Labor Costs

INDUSTRY LABOR COSTS

NAICS: 3250A1

Chemical Manufacturing (3251, 3252, 3253, and 3259 only)

Labor Category:	Formula	Managerial	Technical	Clerical
Unloaded Hourly Rate ¹	= W	\$66.36	\$34.86	\$22.65
Benefits Percentage ²	Lb = B/W	46%	46%	46%
Benefits per hour	B = W*Lb	\$30.53	\$16.04	\$10.42
Loaded Hourly Rate	Wb = W + B = W(1+Lb)	\$96.89	\$50.90	\$33.07
Overhead Percentage ³	Lo = OH/Wb	50%	50%	50%
Overhead per hour	OH = Wb*Lo	\$48.45	\$25.45	\$16.54
Fully Loaded Hourly Rate	Wf = Wb + OH = W + B + OH	\$145.34	\$76.35	\$49.61

1. Data Source: BLS https://www.bls.gov/oes/current/naics4_3250A1.htm **May 2019 data**

NAICS 3250A1 - Chemical Manufacturing (3251, 3252, 3253, and 3259 only)

Standard Occupational Codes:

Management: 11-0000, Management Occupations

Technical: 19-0000, Life, Physical, and Social Science Occupations

Clerical: 43-0000, Office and Administrative Support Occupations

2. Fringe benefits/wage per hour.

3. U. S. Environmental Protection Agency, *EPA Air Pollution Control Cost Manual, Sixth Edition*, EPA-452-02-001, January 2002, pg. 2-34. The loading for indirect costs is within the range of 20-70% of the load labor rate (wage + benefits) suggested in EPA guidance.

EPA LABOR COSTS

NAICS: 999100

Federal Executive Branch

Labor Category:	Formula	Managerial	Technical	Clerical
Unloaded Hourly Rate ¹	= W	\$49.52	\$36.35	\$21.05
Benefits Percentage ²	Lb = B/W	46%	46%	46%
Benefits per hour	B = W*Lb	\$22.78	\$16.72	\$9.68
Loaded Hourly Rate	Wb = W + B = W(1+Lb)	\$72.30	\$53.07	\$30.73
Overhead Percentage ³	Lo = OH/Wb	50%	50%	50%
Overhead per hour	OH = Wb*Lo	\$36.15	\$26.54	\$15.37
Fully Loaded Hourly Rate	Wf = Wb + OH = W + B + OH	\$108.45	\$79.61	\$46.10

1. Data Source: BLS http://www.bls.gov/oes/current/naics4_999100.htm **May 2019 data**
 NAICS 999100 - Federal Executive Branch
 Standard Occupational Codes:
 Management: 11-0000, Management Occupations
 Technical: 19-0000, Life, Physical, and Social Science Occupations
 Clerical: 43-0000, Office and Administrative Support Occupations
2. Fringe benefits/wage per hour.
3. U. S. Environmental Protection Agency, *EPA Air Pollution Control Cost Manual, Sixth Edition*, EPA-452-02-001, January 2002, pg. 2-34. The loading for indirect costs is within the range of 20-70% of the load labor rate (wage + benefits) suggested in EPA guidance.