

**Table 3A: Work Practice Costs
(without baseline adjustments – 2013\$)**

Cost Type	Units	Labor & Materials Cost Per Unit	Cost Per Job (1,800 ft² uncarpeted interior & 10,000 ft² 2-story exterior)	Source
Lead-Based Paint XRF Testing (fixed)	Each	\$150.00-\$160.00	\$150.00-\$160.00	HomeSave Environmental. 2013 Minnesota Lead Testers. 2012 Cenkan. 2014
Lead-Based Paint XRF Testing (per-component)	Per component	\$1.33	\$130.34	
Occupant protection (post signs)	Each	\$10.12	\$20.24	RSMMeans. 2013a
Prohibited and restricted practices				
Power sanding HEPA attachment	Each	\$3.50	\$3.50	U.S EPA. 2008 FESTOOL. 2014
Switch from torching to heat gun	Square feet	\$3.21	\$3,268.53	U.S EPA. 2008
Interior renovations				
Contain the work area				
2a) Ground: Cover surfaces with polyethylene sheeting	Square feet	\$0.22	\$435.60	RSMMeans. 2013a
2b) Doors: Cover surfaces with polyethylene sheeting	Square feet	\$0.28	\$11.20	RSMMeans. 2013a
2c) Other objects: cover surfaces with polyethylene sheeting	Square feet	\$0.22	\$39.60	RSMMeans. 2013a
2d) Remove objects from workspace	Per room	\$14.09	\$14.09	CPR. 2013
Waste disposal				
3a) Tack pad	Each	\$0.52	\$2.60	American Floor Mats. 2013
3b) Pair of disposable shoe covers	Each	\$0.33	\$9.90	Builders Site Protection. 2013
3c) Roll down and bag polyethylene sheeting	Square feet	\$0.22	\$484.00	RSMMeans. 2013a
Interior cleaning				
7a) HEPA vacuum for work area	Each	\$21.28	\$21.20	RSMMeans. 2013a (<i>vacuum</i>) RSMMeans. 2013c (<i>filter</i>) TruTech Tools (<i>beater bar</i>)
7b) HEPA vacuum (floor)	Square feet	\$0.02	\$19.80	RSMMeans. 2013c

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Cost Type	Units	Labor & Materials Cost Per Unit	Cost Per Job (1,800 ft² uncarpeted interior & 10,000 ft² 2-story exterior)	Source
7c) HEPA vacuum (walls)	Square feet	\$0.32	\$434.45	RSMMeans. 2013a
7d) HEPA vacuum (clothes)	Each	\$9.99	\$24.98	RSMMeans. 2013a. Base rate for skilled workers (10 minutes per worker)
7e) Wet wipe (cleaning)	Square feet	\$0.31	\$613.80	RSMMeans. 2013b (labor) EZ-ier. 2013 (material)
7f) Wet wipe (verification)	Square feet	\$0.31	\$982.08	RSMMeans. 2013b (labor) EZ-ier. 2013 (material)
7g) Dry wipe (verification)	Square feet	\$0.31	\$11.05	RSMMeans. 2013b (labor) Sentinel. 2013 (material)
7h) Electrostatic cloth sweeper	Each	\$0.01	\$0.01	Swiffer. 2013
Exterior Renovations				
Contain the work area				
Ground: Cover surfaces with polyethylene sheeting	Square feet	\$0.22	\$710.25	RSMMeans. 2013a
Doors: Cover surfaces with polyethylene sheeting	Square feet	\$0.28	\$22.40	RSMMeans. 2013a
Vertical containment: Polyethylene sheeting	Square feet	\$0.21	\$1,442.33	RSMMeans. 2013a
Vertical containment: Plastic tape	Square feet	\$0.09	\$73.95	MyTarp.com. 2013
Roll down and bag polyethylene sheeting	Square feet	\$0.21	\$2,137.10	RSMMeans. 2013a
Verification	Each	\$35.34	\$35.34	RSMMeans. 2013a

**Table 3B: Calculation of Work Practice Unit Costs
(2013\$)**

Cost Type	Units	Base Labor Rate (including fringe benefits)	Labor-Hours¹	Overhead Rate²	Total Labor Cost per Unit³	Total Material Cost per Unit	Total Cost per Unit
Lead-Based Paint XRF Testing (fixed)	Each	NA	NA	NA	\$150.00-\$160.00 ⁴	\$ -	\$150.00-\$160.00
Lead-Based Paint XRF Testing (per-component)	Per component	NA	NA	NA	\$1.33	\$ -	\$1.33
Occupant protection (post signs)	Each	\$46.20	0.167	0.297	\$10.01	\$0.11	\$10.12
Prohibited and restricted practices							
Power sanding HEPA attachment	Each	\$ -	-	-	\$ -	\$3.50	\$3.50
Switch from torching to heat gun	Square feet	NA	NA	NA	\$3.21	\$ -	\$3.21
Contain the work area							
2a) Ground: Cover surfaces with polyethylene sheeting	Square feet	\$46.20	0.003	0.297	\$0.18	\$0.04	\$0.22
2b) Doors: Cover surfaces with polyethylene sheeting	Square feet	\$46.20	0.004	0.297	\$0.24	\$0.04	\$0.28
2c) Other objects: cover surfaces with polyethylene sheeting	Square feet	\$46.20	0.003	0.297	\$0.18	\$0.04	\$0.22
2d) Remove objects from workspace	Per room	\$46.20	0.45	0.297	\$26.96	\$ -	\$26.96
Waste disposal	NA	NA	NA	NA	NA	NA	NA
3a) Tack pad	Each	\$ -	-	-	\$ -	\$0.52	\$0.52
3b) Pair of disposable shoe covers	Each	\$ -	-	-	\$ -	\$0.33	\$0.33
3c) Roll down and bag polyethylene sheeting	Square feet	\$46.20	0.003	0.297	\$0.18	\$0.04	\$0.22
Interior cleaning							
7a) HEPA vacuum for work area	Each	\$ -	-	-	\$ -	\$21.28	\$21.28
7b) HEPA vacuum (floor)	Square feet	\$46.20	0.00027	0.297	\$0.02	\$ -	\$0.02
7c) HEPA vacuum (walls)	Square feet	\$46.20	0.005	0.297	\$0.30	\$0.02	\$0.32
7d) HEPA vacuum (clothes)	Each	\$46.20	0.167	0.297	\$9.99	\$ -	\$9.99
7e) Wet wipe (cleaning)	Square feet	\$46.20	0.01	0.297	\$0.30	\$0.01	\$0.31
7f) Wet wipe (verification)	Square feet	\$46.20	0.01	0.297	\$0.30	\$0.01	\$0.31

Table 3B: Calculation of Work Practice Unit Costs (2013\$)							
Cost Type	Units	Base Labor Rate (including fringe benefits)	Labor-Hours ¹	Overhead Rate ²	Total Labor Cost per Unit ³	Total Material Cost per Unit	Total Cost per Unit
7g) Dry wipe (verification)	Square feet	\$46.20	0.01	0.297	\$0.30	\$0.01	\$0.31
7h) Electrostatic cloth sweeper	Each	\$ -	-	-	\$ -	\$0.01	\$0.01
Contain the work area							
Ground: Cover surfaces with polyethylene sheeting	Square feet	\$46.20	0.003	0.297	\$0.18	\$0.04	\$0.22
Doors: Cover surfaces with polyethylene sheeting	Square feet	\$46.20	0.004	0.297	\$0.24	\$0.04	\$0.28
Vertical containment: Polyethylene sheeting	Square feet	\$46.21	0.002	0.297	\$0.12	\$0.09	\$0.21
Vertical containment: Plastic tape	Square feet	\$ -	-	-	\$ -	\$0.09	\$0.09
Roll down and bag polyethylene sheeting	Square feet	\$46.21	0.002	0.297	\$0.12	\$0.09	\$0.21
Verification	Each	\$46.21	.5	0.53	\$35.34	\$ -	\$35.34
¹ Labor-Hours is the amount of labor required to perform one unit of work. Source: RSMMeans 2013a ² Overhead includes workers compensation insurance. Source: RSMMeans 2013a ³ Total labor cost is the product of the base labor rate, labor-hours, and (1+overhead rate) ⁴ \$10 ladder surcharge for buildings 3 stories or greater							

Table 3 & 4 Notes:

- **HEPA vacuum:**

- 2008 EA (\$0.63): Average cost for HEPA vacuum=\$626 (assume lasts for 1,000 events). Cost generated from review of price lists on the internet.
- Currently (\$21.28): RSMMeans vacuum=\$1,200 (assume lasts for 1,000 events). In addition to just the vacuum itself, costs were included for: HEPA beater bar (\$0.08/event) and HEPA vacuum filter (\$20/event).

- **HEPA vacuum (floor):**

- 2008 EA (\$0.05): 2005 RSMMeans lists labor hours as 0.002, and May 2004 OES data from BLS lists a loaded wage rate=\$20.62 (2005\$) for mean the wages of 3 construction laborers and one supervisor.
- Currently (\$0.01): 2013 RSMMeans lists 0.00027 labor hours at \$46.47 per hour for common laborers (2013\$)

- **HEPA vacuum (clothes):** \$20.62 is the wage rate, whereas \$9.99 refers to the cost per job.
 - 2008 EA (\$3.44): Loaded wages= \$20.62 (2005\$) from May 2004 OES data from BLS. Assume 10 minutes per worker.
 - Currently (\$9.99): Loaded wages=\$59.92 (2013\$) for skilled workers from RSMMeans. Assume 10 minutes per worker.

Table 3 & 4 References

- American Floor Mats. 2013. Clean Room Sticky Mats, 18" x 36". Available at: www.americanfloormats.com/clean-room-sticky-mats/ (Accessed November 18, 2013).
- Builders Site Protection. 2013. Polypropylene Shoe Covers (Case of 150 pairs) Size XL. Available at: buildsitepro.com/polypropylene-shoe-covers-xl-case-of-150.html (Accessed November 18, 2013).
- Cenkan. 2014. Prices. Available at <http://www.cenkan.com/html/prices.html> (Accessed September 30, 2014)
- CPR. 2013. GeneralCOST Estimator, Free Trial. Finishes, 099001294. Accessed August 8, 2013.
- EZ-ier Specialty Containment Supply. 2013. D-Wipe® Towels. Available at: www.ez-ier.com/store/pc/viewPrd.asp?idproduct=9&idcategory=6#details (Accessed November 27, 2013).
- FESTOOL. 2014. "Frequently Asked Questions about Festool's CT HEPA Dust Extractor Compliance with EPA RRP Regulations." Retrieved Jul. 29, 2014, from <http://www.eparrpheapavacuum.com/hepa-vacuums/EPA-RRP-Certified-HEPA-Vacuum/epa-rrp-faq.aspx>.
- HomeSave Environmental. (2013). "Frequently Asked Questions." Retrieved May 13, 2014, from <http://www.leadpro.com/faq.html>.
- Minnesota Lead Testers. 2012. "Faq's." Retrieved May 14, 2014, from <http://www.mnleadtesters.com/faqs.html#question2>.
- MyTarp.com. 2013. 2" x 36 Yards Clear Polyethylene Tape. Available at: www.mytarp.com/2-x-36-yards-clear-poly-tape.aspx (Accessed November 26, 2013).
- RSMMeans. 2013a. Commercial Renovation Cost Data, 34th edition. Norwell, MA: RSMMeans
- RSMMeans. 2013b. Residential Cost Data, 32nd edition. Norwell, MA: RSMMeans
- RSMMeans. 2013c. Facilities Construction Cost Data, Free Trial. Accessed June 26, 2013.
- Sentinel. 2013. Sentinel #CSS-50 Dry Wipes in Packs of 50 Wipes Each. Available at: www.amerisafe.net (Accessed November 27, 2013).
- Swiffer. 2013. Swiffer® Sweeper. Available at: <http://www.swiffer.com/products/swiffer-sweeper> (Accessed November 18, 2013).
- TruTechTools. 2013. Air-Driven Beater Bar (optional for HEPA vacuum). Available at: http://www.trutechtools.com/Air-Driven-Beater-Bar-optional-for-HEPA-Vacuum_p_925.html (Accessed November 18, 2013).
- U.S. EPA. 2008. Economic Analysis for the TSCA Lead Renovation, Repair, and Painting Program Final Rule for Target Housing and Child-Occupied Facilities.