

on a fixed total estimate of bottled water production in the United States. Therefore, except for rounding, our compliance cost estimate is not dependent on the number of facilities. We do expect that fewer facilities treating a larger amount of water would lead to lower per volume costs, but our most accurate estimate cannot take this into account, and this uncertainty does not affect the ranking of alternatives. We

assume costs are incurred every year indefinitely into the future. The annual volume of bottled water consumed in the United States increased by an average of 7 percent over the past 11 years (Ref. 3), but again since the cost of treating water is subject to considerable economies of scale (Ref. 2) we assume that per year compliance costs will be roughly constant in the future. The discount rate used is 7

percent. We use the average of all four estimates of the middle value to construct the measure of central tendency, and the average of the two rounded lowest values and the two rounded highest values to construct the uncertainty interval. According to this analysis, total present value compliance costs will average approximately \$1,085,000, with a range of \$61,000–\$2,660,000 for both options 1 and 2.

TABLE 2.—COMPLIANCE COST FOR EPA METHODS 1 AND 2

EPA Calculation Method	No. of Facilities	Cost /83,000 Gallons (\$)	Cost Per Facility (\$)	Total Annual (\$)	Present Value (\$)
1	22	100 (10–190)	4,200 (300–7,900)	92,000 (7,000–174,000)	1,406,000 (107,000–2,660,000)
1	13	100 (10–190)	7,200 (500–13,400)	94,000 (7,000–174,000)	1,437,000 (107,000–2,660,000)
2	14	80 (10–190)	3,600 (300–7,900)	50,000 (4,000–111,000)	764,000 (61,000–1,697,000)
2	8	80 (10–190)	6,000 (500–13,400)	48,000 (4,000–107,000)	734,000 (61,000–1,636,000)

**Monitoring Costs.** FDA has collected several estimates for uranium testing cost, ranging from \$25–\$150 per sample.<sup>2</sup> We will use the average of these testing costs of \$105 as a most likely value and the entire range to define uncertainty. EPA and FDA required testing frequencies under options 1 and 2 differ substantially, as explained below.

**Option 1 (EPA) Testing Frequency.** Under the EPA testing regime, the 914 or 1,550 facilities would have to adopt a test for the uranium standard. According to the Radionuclides Rule (65 FR 76708 at 76711), all facilities would have to first perform four consecutive quarterly samples. We assume that bottled water facilities would test these samples in the first year after adoption. Based on the average results of these samples, facilities would have to sample once every 3 years (average greater than 50 percent of MCL), once every 6 years (average less than 50 percent of MCL), or once every 9 years (not detected). We

assume one-third of facilities would fall in each of these categories, and that future tests would be uniformly distributed across years; for example, one-third of the facilities that only have to test once every 3 years will conduct the test in any one year.

**Option 2 (FDA) Testing Frequency.** Under § 129.35(a)(3), bottled water producers are required to test their source water for radiological contaminants at least once every 4 years unless exempted from such testing under § 129.35(a)(4). For example, one possible exemption is that the 25 percent of bottled water facilities that use a public water source already subject to EPA regulations may substitute public water system testing results for source water testing. We assume that no facilities that use a public water source will need to test their source water for uranium, and that all bottled water producers using nonpublic water will need to test their source water. All bottled water

producers are required to test their final bottled water product for radiological contaminants at least once per year under § 129.80(g)(2).

Table 3 of this document presents the calculations for each option. The low bound is calculated by the low facility count multiplied by the low testing cost estimate, the high bound is calculated by the high facility count multiplied by the high testing cost estimate, and the middle value is the average of the low and high facility counts multiplied by the average of the testing cost estimates. Multiplying all low and high estimates together probably renders the low and high bounds extremely unlikely, but since we do not have a probability distribution associated with these values we have no other method of defining uncertainty. The present value is calculated as if all testing were to be continued indefinitely, with a discount rate of 7 percent.

TABLE 3.—MONITORING COST ESTIMATES

Options	Year 1 tests	Year 1 Cost (\$)	Subsequent year tests	Subsequent year cost (\$)	Present Value (\$)
Option 1 (EPA)	4	517,000 (91,000–930,000)	.61	79,000 (14,000–142,000)	1,645,000 (291,000–2,956,000)
Option 2 (FDA)	1.19	154,000 (27,000–277,000)	1.19	154,000 (27,000–277,000)	2,353,000 (416,000–4,229,000)

<sup>2</sup> A private lab called General Engineering Laboratories (GEL) in Charleston, SC, provides uranium testing of private wells at a cost of \$25 per sample: <http://www.scdhec.net/eqc/water/html/>

urtest2.html, accessed August 15, 2002. The New Hampshire Department of Environmental Services charges \$140 per uranium test: <http://www.des.state.nh.us/factsheets/ws/ws-3-11.htm>,

accessed August 15, 2002. The Maine Health and Environmental Testing Laboratory charges \$150 per uranium test: <http://www.state.me.us/dhs/etl/pubgd99w.html>, accessed August, 15, 2002.