Exercise 14-3 (15 minutes)

The equipment's net present value without considering the intangible benefits would be:

Item	*Year(s)*	*Amount of Cash Flows*	*20% Factor*	*Present Value of Cash Flows*
Cost of the equipment...	Now	$(2,500,000)	1.000	$(2,500,000)
Annual cost savings	1-15	$400,000	4.675	1,870,000
Net present value				$ (630,000)

The annual value of the intangible benefits would have to be great enough to offset a $630,000 negative present value for the equipment. This annual value can be computed as follows:

$$\frac{\text{Required increase in present value}}{\text{Factor for 15 years}} = \frac{\$630{,}000}{4.675} = \$134{,}759$$