

**“Project Management Using Earned Value”
Case Study Solution 23.2**



23.2

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**Estimate
Modification**

SOLUTION

1 & 2. The categories are classified as follows:

ONGOING SUPPORT			
Support Services	695K	0	0
Waste Acceptance	0	645K	0
Transportation	0	365K	0
Facilities Management	1,847K	0	0
ADMINISTRATIVE MANAGEMENT	0	0	391K
TRAINING	23K	0	0
AUDITS	25K	0	0
NON-CONFORMANCE ACTION	5K	0	0
PIT AND SHAFT EXCAVATION	0	2,336K	0
WASTE RECEIPT	0	19K	0
WASTE REPLACEMENT	0	9K	0
WASTE BURIAL	0	8K	0
INSPECTIONS	2K	0	0
CAPITAL EQUIP./WORK ORDERS	112K	0	0
CERTIFICATION/ ASSESSMENT	1K	0	0
MATERIALS AND SUPPLIES	<u>0</u>	<u>0</u>	<u>168K</u>
TOTALS	2,710K	3,382K	559K

SOLUTION (continued)

2. By definition, all fixed costs will not be affected by the change in waste load. So the first conclusion is that \$3,101K cannot be reduced at all. The variable costs should be directly related to the throughput of the process, so a reduction of 50% in waste handling should result in 50% less cost. That would be the maximum possible reduction there. In the category of semi variable costs, a portion would not be affected by the change in waste load handling while the remaining portion would be. We do not have enough information to make an exact determination, but a good starting estimate would be that no more than 50% of the semi variable cost is affected by the changed workload. Furthermore, the reduction of 50% would be applied against that. So, in effect, there is a 25% (50% of 50%) reduction in that category of costs.

Calculating the totals, we see the following **MAXIMUM** possible cut associated with the 50% reduction in waste handling activities:

Fixed Costs:	Reduce 0% of \$2,710K = \$ 0K
Variable Costs:	Reduce 50% of \$3,382K = \$1,691K
Semi variable Costs:	Reduce 25% of \$559K = \$140K

Total Reduction = \$1,831K or a 27.5% reduction

Of course, in another example the percentage of fixed costs might be much higher, resulting in an even lower percentage reduction for the 50% cutback in waste handling activities.