

“Project Management Using Earned Value”
Case Study Solution 21.2

21.2

C A S E

**S
T
U
D
Y**

**Estimate
Modification**

“Project Management Using Earned Value”, Case Study Solution 21.2

SOLUTION

1 & 2 The categories are classified as follows:

	Fixed Costs	Variable Costs	Semi-Variable Costs
ONGOING SUPPORT			
Support Services	695K	0	0
Waste Acceptance	0	645K	0
Transportation	0	365K	0
Facilities Management	1,847K	0	0
ADMINISTRATIVE MANGEMENT	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	0	0	168K
	<hr/>	<hr/>	<hr/>
TOTALS	2,710K	3,382K	559K

“Project Management Using Earned Value”, Case Study Solution 21.2

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. There is not 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 the following maximum possible cut associated with the 50% reduction in waste handling activities are:

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 27.5%

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.