Tactic 3
Aligning EHS Activities with Activity-Based Management

There are many different ways to use activity-based costing (ABC) and activity-based management (ABM). This tactic demonstrates one way that is consistent with the hierarchical process mapping and accounting sheets generated in Tactic 1.

Step 1. Prepare activity accounting sheets

You can complete an activity accounting sheet for each work step at the lowest level in the hierarchical process map for the MAIN PROCESS (see the Attachment).

Above the work step box, list all the EHS activities that are necessary in order for the work in the main process to be conducted. This might include activities such as obtaining a permit or providing operator safety training.

Below the work step box, list all the EHS activities that are necessary to manage the “losses.” These losses include all waste, discharges, spills, emissions and other losses or resources from the process at that work step. For the health and safety side the activities might include managing the files for near misses or lost time injuries.

The supporting processes for these activities will include other activities such as legal reviews, medical reviews, management reviews, recordkeeping, and filing.

Step 2. Prepare lists of EHS activities

In order to rank-order the activities, it is useful to prepare lists for comparison purposes. You should first make a list of the three sets of activities from the activity accounting sheets as shown in Step One.

Referring back to the Resource Accounting Sheet for the same work step, determine the EHS activities that are associated with each of the listed supporting processes. You may have to prepare hierarchical process maps of some of these supporting processes to make sure your list is complete. You only need to do this if the work step is a significant user of that supporting process. Some companies allocate the cost of the EHS activities in the supporting processes back to the main process steps in proportion to their total contribution. You should make a note on your activity accounting sheets of significant EHS activities required for the supporting process that is linked to the work step under consideration.

Step 3. Rank-order the activities by potential cost

Rank-ordering involves the use of Pareto Analysis (also called the 80/20 Rule). Some say it separates the vital few from the trivial many. For each of the lists prepared, you should identify the 20% of the EHS activities that create about 80% of the total activity cost. You should make this determination with a small team of people familiar with the process and with EHS costs in general. The team members should take into account the amount of labor, materials, and machine costs associated with each of these activities. They should not worry about being precise at this point (plus or minus 20% is adequate for this first screening). This rank-ordering exercise will help reduce the number of activities for which costing needs to be determined.

The team should also look back at the activity accounting sheets and determine the 20% of the work steps that have 80% of the approximate EHS activity cost associated with them. Do the items...
in the ranking done on the lists fall in these boxes? If so, these are the work steps that may become the focus of process improvement with Tactic 1. If the items identified from the supporting processes are in activity accounting sheets that are not in the 20% range, the team needs to decide if this is an important outlier. The team may also be able to determine which supporting processes need to be focused on separately in the process improvement program.

**Step 4. Determine the activity-based costs**

Once you have a list of the key EHS activities that are adding significant cost to the process, prepare a hierarchical process map of the activity itself using the information in Tactic 1. This process map will help you cost the activity more accurately. There are five components of the cost of the activity:

1. Labor (fully burdened)
2. Resources (associated with that activity)
3. Space
4. Utilities
5. Services and fees

The labor (often referred to as *indirect* labor) can be determined by directly measuring the time it takes to perform that activity or can be estimated based on the knowledge of what is necessary for the successful completion of that activity. Resources (often referred to as *indirect* materials) can be determined from purchasing records and knowledge of the activity. Space represents the cost per square foot of space required for EHS controls (e.g., hazardous waste storage area, flammable substance storage cabinets). Services and fees are the amount of money paid to consultants, laboratories, and as fees to regulatory agencies. The accuracy of these calculations are usually plus or minus 5% to 10%.

**Step 5. Use the activity-based costs to manage these costs**

Using the approach in Tactic 1, assign a team to examine the process work step responsible for these activity-based costs. Questions that should be considered include:

- What regulatory requirement or other consideration triggered the need for these activities?
- Is overtime work required at this work step?
- Why did specific people work on this activity?
- Under what circumstances could staffing or one of the other cost items be reduced on this activity?
- Can the work step be changed in such a way that the driver for the activity is eliminated or changed?

Using the tools in the Systems Approach, prepare an action plan to change the situations that caused these activity-based costs. You will be doing activity-based management with this project. You can then use the cost/benefit calculations in Tactic 2 to determine the value to the company as a result of this project.
**ATTACHMENT**

**ACTIVITY ACCOUNTING SHEET**

**Description of the Work Step**

Describe the activity in the work step.

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**Supporting Processes**

List all “things people do” to support the activities cited above.