

## Secondary Parameters and Environmental Cost Analysis System

To make ECES more valuable to the estimators, managers, and analysts, additional cost driving parameters for all level 3 ECES elements must be identified. The purpose of secondary parameters is to identify and capture those characteristics that impact environmental management project cost.

Cost driving parameters are data that characterize activities or sub-activities and significantly effect cost. These cost driving parameters are readily available to the work managers who are acquainted with the work and can be included while reporting the cost data without requiring additional resources. As an example, element 4.18.01 (Phase 4) Extraction Wells will commonly have an associated parameter of each (i.e., \$X/each well). However, additional cost driving parameters are necessary to define this activity in a meaningful way. The additional cost driving parameters for this activity would include depth and diameter of the well, the construction material of the well, site conditions or physical state of media and other parameters. This information should be readily available to the work manager.

The cost driving parameters associated with level 3 elements of ECES are presented in a matrix format. The first row of the matrix identifies the secondary parameters or measures while the first four columns represents the ECES numbers and titles. The numbers marked within the matrix represents those ECES phases where these parameters are most applicable and the bolded numbers represent primary unit of measure. The numbers are used as a guideline, and users are free to use any parameters as appropriate. For example, the WBS element X.22.09, Tricking Filter, is marked with the numbers “4,5” in “Materials Used” column. This indicates that during both Phases 4 and 5, the materials used are one of the costs driving parameters.

For the parameter entitled “Techniques or Technologies,” we have identified a list of D&D technologies that can be used. This list is included at the end of this section.

While ECES provides the definition and structure for a standardized cost format, there still must be a system to collect, analyze, maintain, and distribute this data. The Environmental Cost Analysis System (ECAS) is a database and analysis tool that will use the ECES and the secondary parameters to capture cost of completed projects. In addition to the secondary parameters discussed here, ECAS will include other project information such as location of project, managing program, project start and end dates, and other project information. By developing the ECES, identifying those parameters that impact costs, and developing an electronic system to collect, analyze and distribute these data, the result is gathering of useful and comparable historical cost.