

# R&D Scorecard

If your company performs any of the example activities, R&D credits may be available to your Company.

### **Product or Process Concept Creation**

- Development meetings that generate the new or improved concept, including the involvement from marketing, purchasing, operations, management, as well as engineering
- ☐ Concept validation through theoretical modeling, computer simulation, or preliminary sketches
- Contract a third party designer to identify initial design specifications

# **Product Development**

- ☐ Manufacturing efforts in support of new product development
- Design and development of unique packaging and packaging systems for all new products or redesign of existing packaging to improve product function, preserve product integrity, increase efficiency, or comply with certain governmental mandates
- Certain components of quality assurance such as analyzing experimental samples and developing new product specifications in new product development
- ☐ Technology used to comply with EPA requirements and environmental remediation
- Development of new product and process analytical methods

# **Prototypes & Trials**

- ☐ Analysis generated during trial runs to determine whether the product design is appropriate.
- Manufacture of experimental batches and pilot runs for the R&D Department relating to new formulations, new products, improved products, etc.
- ☐ Trial production runs, including related labor and materials

## **Manufacturing Process Development**

- ☐ Creating specialized tools using new technology or developing prototype tooling
- Developing specialized machinery or fixtures using new technology
- ☐ Setting up a new factory or production line where new technology is employed or new manufacturing techniques are used
- ☐ Use of new technology in a production process to increase the quality of the product coming off the line, or to reduce waste, scrap, spoilage or defects
- Using computers or digital technology to perform tasks that in the past were done by humans or were done electro-mechanically or using analog technology
- $\hfill\Box$  Design and construction of prototype machines
- ☐ Scale-up design and development efforts
- Designing methods and procedures to improve the process of manufacturing or construction

### **Process Improvements**

- ☐ Improvements made to a production process, or to the materials used in a manufacturing process, that result in lower environmental contaminants.
- ☐ Changing a traditional straight-line production process to cellular manufacturing
- □ Developing computerized product testing
- Process changes made in order to utilize improved materials
- Process improvements to achieve cost reduction goals
- Cross-functional process improvement teams, including production and maintenance employee activities as well as continuous improvement initiatives
- ☐ Six Sigma, Lean, and Kaizen activities toward improving manufacturing reliability and throughput