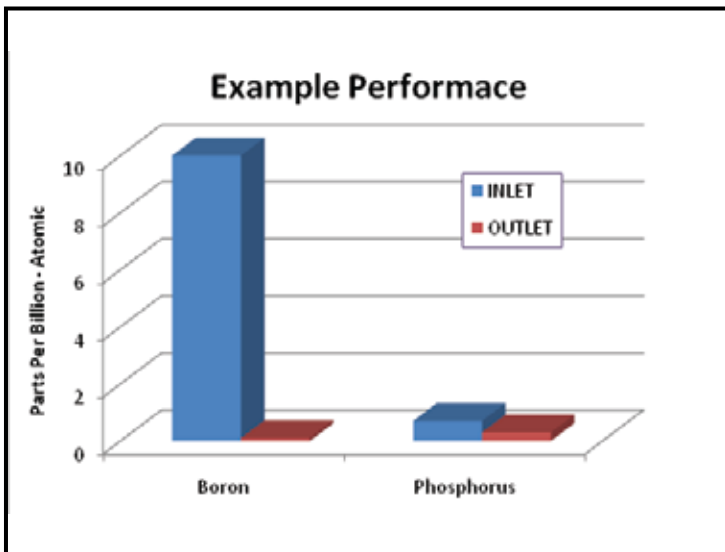


# Adsorption Technology

Silicon Chemical Corporation's (SCC) proprietary adsorption technology is a great way to improve product purity with minimal capital and operating expense. Small concentration impurities are best removed with the adsorption unit, free from the complex control and utility costs of the distillation process. SCC can determine the optimal configuration of the plant with our adsorption bed by evaluating and modeling the production process, as either a retrofit to an existing plant or an addition to new construction.

## Features:

- No moving parts in bed for low maintenance
- Easy to integrate into existing process, simply connect and use
- Reduces capital/energy costs compared to distillation
- Small footprint
- The redundant fixed bed design results in no system downtime during maintenance
- Minimal production of solids for disposal
- Reduces low grade purges in purification
- Can be used to improve recycle loop purity
- Large capacity bed gives a high throughput with only a small pressure drop



## Performance:

- Low unit maintenance and long adsorbent lifetime (typical usage requires recharge only once per year) results in low maintenance cost
- No complex control system and no continuous utility usage (no heating or cooling during operation)
- Improves purities of trichlorosilane or silicon tetrachloride by removing donor (e.g. phosphorus), acceptor (e.g. boron), and metal impurities