# Fan System Optimization Checklist [Copy 1]

***For fans over 50 hp that operate more than 4000 hours per year***

**Instructions**: Use this checklist to qualitatively select the top optimization projects for FSAT analysis. Make a copy of this list for each of your major systems, then go through the list and add up the points for the conditions that apply. **If there are any control, production & maintenance, or system effect indicators, then add points for size and run hours as follows:** *If the system operates more than 6000 hours add a point. **If the system is over 100 hp add a point per 100 hp (200 hp = 2 points, 300 hp = 3 pts, etc). Also add a point or points if production or maintenance problems are severe. Two or more points can indicate a good optimization opportunity. Four or more points probably indicate a very good opportunity. ***Note***: Fans with adjustable speed drives usually are not good candidates for optimization.

Fan System _____

Are there problems with the system?_____

Points** 1 ___ Motor _____ hp

Points* 1 ___ Operating hours _____

Tally the points _____

| Control | | Production & Maintenance | | System Effect | |
|---|---|---|---|---|---|
| Points | | Points | | Points | |
| 2 ___ | Motor overloads unless damper restricts flow | 2 ___ | Too much flow or pressure for production | 2 ___ | 90° turn *right at* fan outlet or inlet |
| 2 ___ | Spill or bypass | 2 ___ | Unstable or hard to control system | 1 ___ | 90° turn *near* fan outlet or inlet |
| 2 ___ | Discharge damper | 2 ___ | Unreliable system breaks down regularly | 2 ___ | Dirt leg at bottom of inlet duct |
| 1 ___ | Inlet damper | 1 ___ | Not enough flow or pressure for production | 1 ___ | No outlet duct |
| 1 ___ | Variable inlet vane | 1 ___ | System is excessively noisy | 1 ___ | Restricted or sharp inlet |
| 1 ___ | System damper | 1 ___ | Buildup on fan blades | | |
| 1 ___ | Damper is mostly closed | 1 ___ | Need to weld ductwork cracks regularly | | |
| | | 1 ___ | Radial fan handling clean air | | |

Facility/Contact/ phone/fax: _____