

SOIL-THERM
Patented Technology!

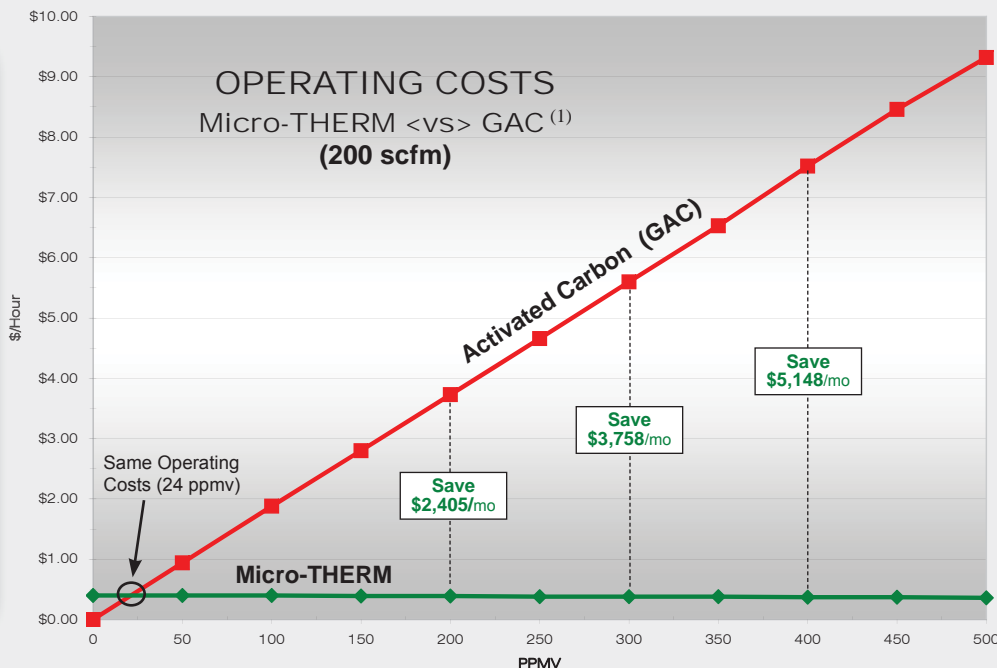
OPERATING COST COMPARISON

Micro-THERM Catox w/H.E. <vs> GAC

We recently asked equipment operators what VOC concentrations they "switch over" to Granulated Activated Carbon (GAC) to finish cleaning their site. Most told us they swap out their thermal oxidizer or electric oxidizer for an SVE blower with GAC vessels at VOC concentrations from 200 - 500 ppmv. The chart below provides an operating cost comparison between our latest **Micro-THERM** SVE catalytic oxidizer and an SVE blower skid using GAC vessels for emissions control.

Micro-THERM Features

- Small size systems : 4-ft x 3-ft.
- Gas Fired Catalytic Oxidizer with H.E.
- Operates from 0 - 3500 ppmv.
- BEST energy savings & economical from start to completion.
- No GAC needed.
- Quiet with complete SVE system.
- A "permanent destruction technology".
- Destruction > 99%.
- Very low Greenhouse Emissions.
- Low operating costs over full range:
 - 3000 ppmv: \$0.12/hr
 - 2500 ppmv: \$0.22/hr
 - 1000 ppmv: \$0.32/hr
 - 200 ppmv: \$0.40/hr



OPERATING COSTS⁽¹⁾. This chart clearly shows how GAC stacks up against our latest **Micro-THERM** oxidizer system in hourly operating costs. We found that once you get over 100 ppmv VOC's, the cost of GAC gets very expensive quickly:

- At 78 ppmv, GAC and **Micro-THERM** system have equal operating costs
- At 200 ppmv, GAC is ~\$2,405 more per month to operate
 - Annual Savings: \$28,860 per year
- At 300 ppmv, GAC is ~\$3,758 more per month to operate
 - Annual Savings: \$45,096 per year
- At 400 ppmv, GAC is ~\$5,148 more per month to operate
 - Annual Savings: \$61,776 per year

Consider this: If you have a site to cleanup -- start out using our energy efficient **Micro-THERM** system. Once concentrations drop to 500 ppmv or less, don't change out to GAC, just keep running your **Micro-THERM** until site closure. You won't have to hassle with installing a new SVE blower skid, no worrying about space for the GAC vessels, and no messy GAC drums plugging up your site or the owners parking spaces! Give us a call to learn more:

Disadvantages of GAC

- Excessive GAC costs >50 ppmv
- Unsightly GAC vessels at site.
- Limited operating range 0 - 500 ppmv.
- Unpredictable usage costs.
- Requires scheduled changeouts.
- Potential Air Permit breakthrough violations.
- Difficult to fit in space limited locations.
- Not a "permanent destruction technology".
- GAC disposal responsibilities.

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(1) Energy costs are based on operation at 200 scfm (we assumed SVE blower electricity equal for both systems), pre-cat temp at 650F, natural gas @ \$0.90/therm, GAC cost at \$1.00/#, 15% retention. Above costs are estimates only, actual results may vary.