

Hemlo Gold – Million Dollar Baby



SIMPLE CHANGE IN PRACTICES – IMPRESSIVE DELIVERY OF RESULTS

MEMS 2006 – Denver Colorado

Jon Feldman



Success

Achieved so far

- Energy use 10% below target
- Energy bill reduction: **\$1,700,000**
- Specific confirmed annual savings
 - Heating & Ventilation: **\$500,000**
 - Compressed Air: **\$50,000**
 - Water: **\$140,000**
- Projected savings 2006: **\$2,400,000**

Best Practices not Large Capital






Practices

Doing Things Differently


- Formal commitment from Mine Manager
- Site Energy Champion
- Energy Steering Committee
- Energy reduction target
- Energy monitoring & tracking
- Focus Teams (Plan – Do – Review)
 - Heating & Ventilation
 - Compressed air
 - General opportunities
 - Water
- Improved general energy awareness



Journey

The Review Process


- Energy Management Practices Diagnostic
- Energy Review
- Evaluation Workshop



Review

Management Practices

- Site leadership team
- 22 Elements of best practices
- 2 Star rating (out of 5)
- International benchmark
- 5 Priority improvement areas
- 7% to 11% estimated savings potential

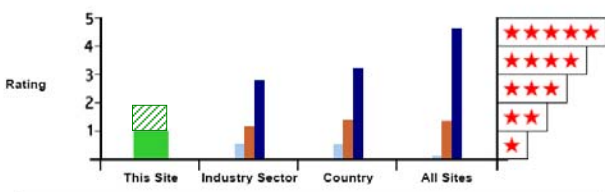


Rankings

International Benchmark


★ ★ ★ ★ ★
One-Five
Benchmarking Summary

Williams Operating Company
 Industry Sector: Gold Ore Mining
 This Site's International Benchmark Rating is 1.03
 One-Five Star Rating is 2 stars



	Industry Sector	Country	All Sites
	Rating	Rating	Rating
Maximum Score	2.79	3.20	4.62
Average Score	1.16	1.38	1.36
Minimum Score	0.54	0.50	0.12

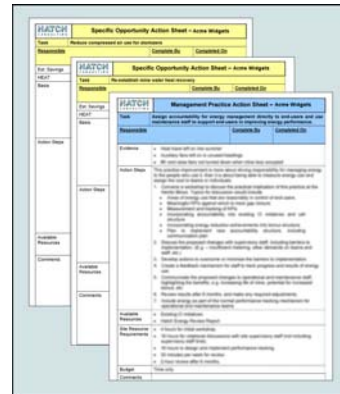
▨ Projected Improvement



Review

Site Review

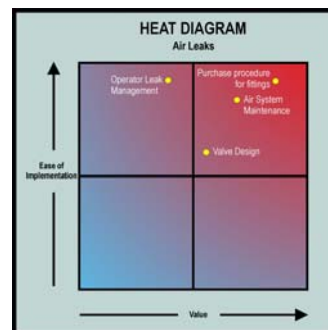
- Identify critical focus areas
- Physical site review
- Personnel interviews
- List of energy saving opportunities
- Action Plan development
 - Practice improvement
 - Opportunity projects




Review

Workshop

- Prioritize opportunities
- Identify implementation barriers & enablers
- Devise solutions to overcome barriers
- Obtain buy-in from site personnel






Savings

Heating & Ventilation Team

- Re-commissioned mine water heat exchanger
- Re-commissioned mill heat recovery
- Installed VFDs on shaft intake fans
- Reduced/optimized u/g fan utilization
- Reduced vent flow to u/g between shifts




Savings

Compressed Air Team

- Leak & Consumption cost posters
- New style atomizers
- Operations driven leak tagging program
- Electronic compressor control
- Air saver valves on vent doors







Savings

General Energy Team


- Energy cost and use awareness
- Lighting and heating control
- Secondary ventilation practices



Savings

Water Team

- Replaced mine de-watering pumps
- Reducing pump sizes
- Reducing mill water pressure
- Consumption awareness





Keys

Lessons Learned

- Management Support is paramount
- Cross functional Steering Committee
- Integration with existing processes
- Team based approach
- Measure, track & target
 - for focus & results
- Create workforce enthusiasm
 - through education and awareness.
- “Low hanging fruit”
 - generate quick wins and engagement



Quote

Kent Cook – CI Coach

“We’ve found that education and awareness have earned the biggest bang for our buck. In people’s minds, energy efficiency is now seen as a necessary part of doing business. Our success is more about best practices and optimization than capital investment.”





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