

Brady Environmental saves time, money and the environment with Leister heaters.

## More Than Just Hot Air

From a spill dating back to the 1970s, Togiak Fisheries was faced with 70,000 tons of diesel- and gasoline-contaminated soil on the shores of Togiak Bay, Alaska.



The remote fish-processing facility wanted to sell, but the plant was stuck with the price tag of \$12 million to clean up the contaminated site. The cost was

overwhelming, yet so were the challenges that go into cleaning a 5-acre site this remote. Without any roadways, all supplies and equipment would have to be shipped in by barge or plane.

Brady Environmental was able to complete the project for \$4 million, dramatically lower than the \$12 million market rate, due to its patented system using Leister hot-air tools.



**Brady Environmental's patented Evaporative Desorption Thermal Soil Treatment System is a modular design in an airflow system that uses Leister heaters to evaporate contaminated soil.**



**Twelve of Leister's LE 40,000 heaters pump hot air into three of Brady Environmental's soil ovens. Each heater is supplied with one Airpack blower.**

### Taking a Different Approach with Leister Heaters

So how did the brownfield redevelopment and consulting company do it? Geologist Patrick Brady, president and owner of Sisters, Ore.-based Brady Environmental, found a better solution. He developed an Evaporative Desorption Thermal Soil Treatment System using hot air instead of an open flame — the traditional model — relying on high-quality Leister heaters to evaporate soil moisture and contaminants.

The expensive, traditional method of soil treatment uses an open flame to boil off the water, which creates contaminants that must first be cleaned before being released into the air. Plus, the operation, maintenance and fuel costs associated with open-flame technology greatly inflate the price of the cleaning process.

### Trust in Leister

During the research and design stages for the Evaporative Desorption Thermal Soil Treatment System, Brady stumbled upon Assembly Supplies Co., a distributor of Leister Process Technologies hot-air tools, such as heaters, blowers and controllers, among others. He soon chose to use Leister tools in his innovative system.

"After meeting with Dennis Van Grol (owner of Assembly Supplies Co.) and seeing other applications where the Leister tool was used, I felt very comfortable with it," said Brady. "I wanted to make sure it could be operated continuously because we turn on the oven for five months and never turn it off."

And, indeed, the Leister products stood the test of time. Today, Brady Environmental incorporates 12 of the Leister LE 40,000 heaters — Leister's most powerful device with 39kw — to pump hot air into three of its soil ovens. Each heater is supplied with one Airpack blower.

The Leister tool regulates the heat. By monitoring the system to ensure the temperature hovers around 1,000 degrees Fahrenheit, Brady can guarantee the air never reaches the oxidation temperature of 1,300 degrees, which produces emissions.

"Leister heaters are an integral tool in our patented process and it doesn't produce the pollution that other systems produce doing the same thing," said Brady.

### A Significant Cost Savings

In 2001, Brady and his twin brother, John, filed a patent application for the Evaporative Desorption Thermal Soil Treatment System. The U.S. patent was issued in December 2004. This soil oven is a modular design in an airflow system. Vapors are extracted and the contaminants they contain are destroyed before being released into the air.



*The Evaporative Desorption systems are in operation on-site at Togiak Bay, Alaska.*

"Others can go in and it costs them \$250 to \$600 a ton to clean the remote Arctic site, but I can clean the soil for \$50 or \$150 a ton," said Brady. "My machine is much more portable, so I can fly it to a particular spot for \$150,000, whereas the old technology would cost \$1.5 million to get it there by barge or truck."

### Results Driven

As a result of the Evaporative Desorption Thermal Soil Treatment System, Brady was able to cut down his labor pool by a third. "That dramatically cuts down my cost," he says.

But to Brady, it's not only about the money he saves; it's about the communities he revives.

"The secondary effect this system has is it stimulates the local economy and produces hundreds of jobs in these areas. It makes for a better community... it takes the smell away," says Brady. "Because the Leister tool is an integral part of the patent, it really does a lot of good beyond just saving me money. It's a thing called environmental justice."



*Brady Environmental prepares to clean the contaminated soil at Togiak Fisheries.*



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