



# Termite™ Performance Summary

*Athens-Clark County, GA Landfill*

*January 13, 2016*



The under-performance of many landfill gas (LFG) extraction wells results from insufficient perforation coverage, failed perforations, and non-perforated risers. Many of these wells can be restored by adding new perforations. Energyneering Solutions Inc. (ESI) developed a down-well technology to perforate, or re-perforate, existing vertical LFG extraction wells with a device known as the Termite. Following is a case study at a landfill located in Clark County, GA where the measured result was an improved overall LFG collection and power generation of over 50%.

The Athens Landfill Gas Collection and Control System (GCCS) consists of fifty-seven (57) vertical extraction wells, a flare station, and a single-engine landfill gas-to-energy (LFGTE) facility. The GCCS installed in a closed area of the landfill had historically collected enough gas to support 925 kW of power generation. Over time, the gas collection capacity degraded by approximately 25% - as to where the associated power generation had to be de-rated down to 700 kW. The Termite Service travelled to the Athens Landfill on two separate occasions. Six (6) vertical gas collection wells were initially *Terminated*. Resulting indications from the first service were positive enough with respect to improved gas collection that a second set of twenty-five (25) wells were *Terminated*. A total of thirty-one (31) wells were *Terminated* out of the landfill's cumulative fifty-seven (57) vertical extraction wells.

There was an immediate decrease in vacuum for the improved amount of gas being collected. In order to not over-pull the wellfield, the genset power generation was programmed to respond based on wellfield vacuum control. As the gas quality gradually improved due to the additional perforations, there was an associated increase in power generation. Over an approximate 6-month period, the Termite Service restored a significant number of under-performing wells that, ultimately, allowed the LFGTE facility to increase power output from the de-rated 700 kW to 1,200 kW (an increase of roughly 58% and growing).

## The Termite Service Outcome

- ⓔ Rejuvenated Gas Extraction Wells without Drilling Replacements,
- ⓔ Improved Gas Collection without Increased Vacuum Requirements,
- ⓔ Improved Compliance Management with Existing Extraction Wells, and
- ⓔ Increased Renewable Power Generation Capacity.

For more information on how the Termite Service can help improve your landfill gas collection system please contact any of our Termite Representatives at ESI, or one of our affiliated Termite Service Providers.

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