

'Mining' for Gas Takes Team Effort

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The continuing drought in Eastern Washington at the end of 2002 affected more than the agricultural economy.

Landfill methane production depends on the amount of moisture present in the landfill. As the drought continued, and the landfill at the regional disposal site near Roosevelt dried out, the fuel source—methane gas—for the H. W. Hill Landfill Gas Power Plant steadily declined to an all-time low.

In electrical terms, the power plant owned by Klickitat PUD was capable of producing 10 megawatts (mw). However, the wellfield would only be able to support about 5.7 mw of electrical production by the end of 2002.

To increase the plant's efficiency, the power plant landfill staffs joined forces in a major effort to dig into the gas system and "mine out" anything that would draw out more methane gas from the landfill.

Combined management and engineering staffs—Matt Henry, landfill manager; Tom Svendsen, now KPUD general manager; Bill Borlaug, landfill engineer; Rick Burk, power station site supervisor; Darby Hanson, KPUD project engineer; Art Mains, landfill environmental manager; Clyde Moore, Faralon, Inc., landfill consultant—met regularly to develop a plan.

Darby and Art led the wellfield improvements team. Their plans ranged from simple "low-tech" approaches to more sophisticated ideas in recovering fuel supply.



Jeff Link, left, regional disposal site technician, and Travis Gray, Klickitat PUD technician, inspect wellfield collection lines.

It was the job of the "miners"—RDC wellfield construction crew, RDC technician Travis Gray and KPUD technician Jeff Link—to turn the plan into a success.

The construction crew connected lines, repaired leaks and improved the overall condition of the wellfield lines and drainage system.

Travis and Jeff increased their rounds of measuring and adjusting of more than 100 supply connections from monthly to every two weeks. They cleared low points—called "sags"—propped up lines to keep gas flowing and, using updated monitoring methods, were able to recover several of the connection points thought to be inactive.

The power station operation and maintenance staff monitored incoming gas concentrations every three hours. Based on these read-

ings, they adjusted fuel consumption and electrical output to maintain gas production at desired conditions.

The combined management and engineering staffs met monthly to evaluate progress and keep everyone on track. This cooperative team effort paid off with a steady, measurable increase in production from the power plant.

The team sees more possibilities and continues to "mine" for efficiency. The crew paused Saturday, May 15, to celebrate the station's reaching and maintaining full output capacity of 10 mw.

Teamwork is the hallmark of the H.W. Hill Landfill Gas Power Plant's success. ■