

Kenai Peninsula Borough

Solid Waste Department

MEMORANDUM

TO: Brent Johnson, Assembly President
Members, Kenai Peninsula Borough Assembly

THRU: Charlie Pierce, Mayor *CP*
Brandi Harbaugh, Finance Director *BH*
John Hedges, Purchasing and Contracting Director *JH*

FROM: Lee Frey, Solid Waste Director *LF*

DATE: May 5, 2022

RE: Resolution 2022-031 Authorizing the Sole Source Purchase of a LM-HT® Concentrator for Leachate Evaporation from Heartland Water Technology, Inc. for the Central Peninsula Landfill (Mayor)

Municipal solid waste received by the Central Peninsula Landfill (CPL) is deposited into lined cells. The cells are lined with impermeable liners to protect groundwater. One of the problems with such liners is that because they are impermeable, liquids (called leachate) from rain, snow and waste all collect in the cell. There are various methods to dispose of leachate, but CPL is currently producing more leachate than it has the capacity to dispose of on an annual basis, according to leachate modeling.

Because of this, in order to operate within our permit, the Solid Waste Department needs a larger evaporation system to dispose of leachate. This evaporator will be capable of evaporating 30,000 gallons per day (gpd), which is a significant increase in size over our current 12,000 gpd evaporator that started operation in 2014. This equipment would provide CPL with excess capacity to dispose of the existing leachate inventory.

The cost for the equipment from Heartland Water Technology, Inc. (Heartland) is \$2,999,000.00, plus shipping fees not to exceed \$50,000.00. This cost includes the new equipment, onsite construction administration and assistance (along with an engineering consultant) in the development of construction documents to reconfigure our existing evaporator building, to remove the existing evaporator, and replace it with the new unit. The

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construction/installation of the unit and the development of bid documents will be separate costs. Due to lead times, the new unit would be installed in spring of 2023. This unit is expected to provide the landfill with excess capacity for years to come and is the largest size unit that we can fit in the existing building with renovations.

The new evaporator will contain several features that needed upgrading on our existing evaporator. This includes an improved Supervisory Control and Data Acquisition (SCADA) system for better operations and controls, a gas flare capable of burning landfill gas or natural gas, and an acid injection system to decrease scaling.

Solid Waste recommends sole source to Heartland for several reasons. The existing evaporator from Heartland was approved and purchased through a waiver of formal bidding procedures after an analysis of three manufacturers of leachate evaporator systems. We have developed a relationship with Heartland over the years and have been satisfied with their service on our existing evaporator. We know their technology works and is effective in Alaska. The main problem with the existing unit is that it is not large enough for the amount of leachate present and accumulating. Heartland has experience using waste heat off of generator for leachate evaporation that could also be tied in with a future landfill gas cogeneration project. They are the only manufacturer with the ability to use a combination of landfill gas, natural gas or engine exhaust for evaporation. They are also the only evaporator with a single enclosed gas flare that can flare gas independently from the concentrator. This would be beneficial if we started collection of landfill gas. Lastly, there will be a minimal learning curve for our crews with the new equipment as the process will be similar for the larger equipment.


The Solid Waste Department recommends the sole source purchase of a new LM-HT[®] Concentrator and associated services for leachate evaporation from Heartland Water Technology, Inc. for a total cost of \$2,999,000.00 plus shipping costs not to exceed \$50,000.00.

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Funding for this purchase and project are expected to be a combination of American Rescue Plan Act (ARPA) grant funds already appropriated and a pending grant application currently in process of being accepted for the Central Peninsula Landfill Leachate Volume Reduction Project. We are requesting approval from the Assembly to provide approval for the entire amount, but will only award and encumber funds per phases completed by Heartland. This allows flexibility for use of the grant funds while working to accept the recent grant and secures the current price and lead time.

The Solid Waste Department recommends a sole source purchase of a LM-HT[®] Concentrator and associated services for leachate evaporation from Heartland Water Technology, Inc. for a total cost of \$2,999,000.00 plus shipping not to exceed \$50,000.00.

Your consideration of this resolution is appreciated.

FINANCE DEPARTMENT FUNDS VERIFIED	
Acct. No.: 411.32122.SLF02.43011	
Amount: \$3,049,000.00	
By: 	Date: 5/5/2022