

June 5, 2020  
File No. 07216156.00

Mr. Thomas Purcell  
City of Bellevue  
2901 115<sup>th</sup> Avenue NE  
Bellevue, Washington 98004

Subject: **Proposal and Estimated Costs for Repairs to the Landfill Gas Migration Control System at the Eastgate Landfill, Bellevue, Washington**

Dear Mr. Purcell:

This proposal summarizes the scope and costs for selected repair options identified in our original letter dated April 30, 2020. The selected options by the City of Bellevue (City) to repair the system will address the challenges associated with restricted flow and loss of vacuum to the extraction wells on the south side of the landfill. This condition is making it difficult to reduce the methane concentration in the nearby subsurface gas migration detection wells (gas probes).

During our recent meeting, we had discussed several options for providing remedies to the current conditions. Since our meeting, the City has reviewed and identified the options that are best suited for the City's current situation. The selected options for repair are:

- Option 2 - Replace the existing pipe with new HDPE pipe and condensate drain trap with new alignment and grade from CO-3 to CT-6
- Option 4 – Install permanent pumps for intermittent pumping of condensate with a portable air compressor.

Option 2 will provide a long-term solution to the issues with gas conveyance pipe to eliminate the bellies in the pipe and provide stabilized pipe slope to remove condensate from the pipe. Option 2 provides for new pipe at new grades that takes advantage of existing topography to minimize the pipe trench depth and associated costs.

Option 4, in conjunction with Option 2, will allow the condensate drain traps to be dewatered during the routine monthly monitoring events. Option 2 provides the air supply pipe with a single connection for the portable air compressor as well as the condensate discharge pipes that allow the condensate to be pumped to the nearby sewer manhole.

**Scope for Option 2** - Replace the existing pipe with new pipe, alignment, and grade. Install one new condensate drain trap.

This repair involves the following activities:

- Survey alignment and grade for new pipe



- Perform required notification and location of existing utilities in the vicinity of the proposed work area
- Purchase and Install 6" Dia. HDPE pipe along new alignment and grade (from CT-6 to CO-3)
- Purchase and Install 4" Dia. HDPE pipe along new alignment and grade (for EW-4, EW-3, EW-2, EW-18 and EW-17)
- Relocate isolation valves and cleanout access ports to new high point on pipe grade
- Import general fill for new high point, as needed
- Fabricate and install a condensate drain trap and purchase and install vault
- Connect to existing extraction wells (EW-4, EW-3, EW-2, EW-18, and EW-17) using 4-inch HDPE pipe
- Cut and cap the existing abandon HDPE pipe with HDPE caps
- Restore area to grade with hay and seed
- Refuse disposal including testing and permit. If garbage is encountered it will be contained in a separate drop box and evaluated for disposal
- Erosion and sediment control: install temporary fencing/ install waddles around drains

**Scope Option, 4**, Installation of permanent pumps with intermittent operations using a portable air compressor.

This repair involves the following activities:

- Purchase and install 2 low flow pneumatic pumps and associated hoses and fittings
- Purchase and install air supply valve train
- Purchase and install condensate discharge valve train
- Purchase and install 2" Dia. HDPE pipe for condensate discharge (in common trench with gas and air pipe)
- Purchase and install 2" Dia. HDPE pipe for air supply (in common trench with gas and condensate pipe)
- Connection to existing sewer manhole
- Condensate sampling, laboratory analysis, as required by the existing sewer discharge permit issued to the City (1 sampling event)

### **Assumptions**

- SCS has provided an allowance of \$2,200 for surveying and utility locates.
- SCS has provided an allowance of \$3,000 for a 20-yard drop box rental and disposal of 10 tons of non-hazardous refuse, including testing.
- SCS has provided an allowance of \$2,000 for importing and placing additional soil for the balance of excavated material removed from the site.
- SCS assumes 5 months of manual dewatering of the two- condensate traps. This will be performed during the routine visits each month during the winter.
- SCS has provided an allowance of \$500 for core drilling into the existing sewer manhole for the connection of the condensate discharge pipe.
- SCS has provided an allowance of \$800 for sampling and testing the condensate discharge to the sewer as required by the existing wastewater disposal permit.

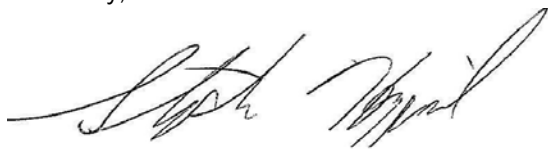
- SCS has provided an allowance of \$1,800 for preparing an Environmental Protection Plan and obtaining plan review and authorization from the King County Public Health Department (as required to excavate into the existing closed landfill).
- SCS will use HDPE SDR 17.0 for gas pipe, SDR 11.0 for condensate discharge pipe, and SDR 9.0 for air supply pipe.
- The City will be responsible for signing any manifests and/or permits for any offsite disposal of waste as a result of excavation activities.
- The connection to the sanitary sewer will be made without a flow meter to measure flow rate and totalize volume for the condensate discharge to the sanitary sewer. In lieu of this, a pulse/cycle counters will be included with each pump and used for reporting flow rate and monthly volume.
- At no time shall the title of any hazardous substances, solid wastes, petroleum contaminated or other regulated substances pass to SCS, nor shall any provision of an ensuing agreement between SCS and Client be interpreted to permit SCS to assume the status of "generator", or "transporter," or "treatment, storage or disposal facility" under state or federal law.

Below represents the estimate cost for the proposed work described above.

Estimated Costs for Repairs to the Landfill Gas Migration Control System		
Option No.	Description	Estimated Cost
2	Replace the existing pipe with new pipe, alignment, and grade from CT-6 to CT-4. Install new condensate drain trap and replace gas branch pipes and connections to EW-2, EW-3, EW-4, EW-17, and EW-18.	\$64,760.00
4	Install permanent pumps for intermittent manual pumping of condensate with a portable air compressor.	\$29,768.00
Total		\$94,528.00
Taxes not included.		

SCS appreciates the opportunity to be of assistance on this project. As you review the enclosed information, please contact Stephen Harquail at (503) 867-2369 or Ted Massart (425) 864-2146 if you have any questions or comments.

Sincerely,



Stephen Harquail  
Project Manager



Ted Massart  
Sr. Project Engineer

Mr. Thomas Purcell  
June 5, 2020  
Page 4

SCS Field Services

SCS Engineers

Accepted by: \_\_\_\_\_ Date: \_\_\_\_\_

Thomas Purcell

City of Bellevue

cc: Mark Schwisow – City of Bellevue  
Tony Svorinich – SCS Field Services  
Greg Helland – SCS Engineers

Encl.