EXHIBIT A
SCOPE OF SERVICES
Rapid City Landfill Permit 2018
Project No. 18-2448 / CIP 51202
Contract Amendment No. 1

The City of Rapid City has determined the need to procure additional professional engineering services to complete an updated inventory of the above-ground elements of the Landfill Gas Collection and Control System (GCCS). This amendment modifies Task 1.04 paragraphs D and E, and Task 1.10 paragraphs I and J.

The original tasks assumed that the record drawings for the GCCS system would be complete and accurate to allow the Consultant to create a complete GCCS system drawing for the Landfill. After completing the task and stitching together multiple project drawings from varying consultants, it has become apparent that there are too many discrepancies to create an overall GCCS system drawing for the Landfill without additional effort. The purpose of this amendment is to quantify the additional effort required to complete an overall GCCS system drawing and to identify areas of concern where irregularities indicate additional effort in the form of exploratory excavation by City crews may be necessary.

This amendment shall modify Task 1.10.1 by adding the following work items:

- Conduct a protocol and data collection meeting with City staff: The Consultant shall meet with City staff to detail the amended scope and tasks. The meeting shall consist of summarizing the amendment tasks and final deliverables. Features that will be inventoried and protocol for data collection will also be identified. The Consultant shall prepare an agenda, take minutes, and distribute minutes. A survey form will be developed to be used during the survey.

  Review the survey form and list of features to be surveyed to ensure that the information collected includes all the attributes of interest to the City and Landfill operations.

  Prioritize GCCS zones for survey work and coordinate schedule and timing with City staff for marking or flagging of GCCS surface features described below.

- Perform site surveys: This task consists of services required to perform a thorough GCCS system survey of surface features.

  Perform site surveys sufficient for GCCS inventory. The survey shall be in NAD 83 (2011) NAVD 88 South Dakota State Plane South Zone. This task shall also include coordination with Landfill operations to ensure all pertinent surface features are identified. Photo documentation of each element surveyed will also be recorded. Survey data collection will identify surface features only, no underground locating services will be used as it is assumed that there is no cost-efficient way to identify the underground features of the GCCS. City staff shall mark or flag GCCS zone surface features for each GCCS zone prior to actual survey work.
This amendment shall modify Task 1.10.J by adding the following work items:

- The Consultant shall provide three (3) copies and a PDF version of the GCCS Inventory drawings. It is anticipated the GCCS Inventory drawings shall contain the following sheets at a minimum:
  - Survey Control Sheet, including Legend and Survey Point Data
  - GCCS Inventory Layout

  Plan sheets shall be prepared utilizing the latest City of Rapid City Drafting Standards. Establish standard sheet size of 22x34 1” = 20’ H & 1” = 5’ V typical or applicable scale.

- The Consultant shall evaluate and compare the surveyed system to the Record Drawings. The existing record drawings will be overlaid on the recent GCCS inventory to evaluate the integrity of the record drawings and identify irregularities. Irregularities between recent survey and record drawings will be identified and summarized. Conclusions and recommendations regarding the integrity and irregularities between the survey and record drawings will then be summarized in a memorandum to the City. The memorandum may identify areas where subsurface exploratory excavation is warranted for confirmation of the infrastructure location, valve locations, locations of tees and branches, etc.

- Optional Task – Compile surveyed GPS features into comprehensive geodatabase: Compile GPS survey information in a geodatabase to assist the City in placing the GCCS in the City GIS.

**SCHEDULE MILESTONE DATES**

The amendment’s effective date shall be September 30, 2019 and the following schedule is anticipated. A refined schedule with interim milestones will be presented at the protocol and data collection meeting.

**Landfill GCCS Inventory**

GCCS Final Inventory Submittal  December, 2019