

**Indian River County, Florida
Solid Waste Disposal District
Board Memorandum**

Date: September 24, 2021

To: Jason E. Brown, County Administrator

From: Matthew Jordan, Interim Director of Utility Services

Prepared By: Himanshu H. Mehta, PE, Managing Director, Solid Waste Disposal District

Subject: Work Order No. 44 to Kimley-Horn for Landfill Gas Flare Skid Improvements and Pipeline Extension

Descriptions and Conditions:

The Solid Waste Disposal District (SWDD) has been operating a voluntary “low-pressure” Landfill Gas (LFG) Collection and Control System since 2004. Over the past 17 years, the system has incurred routine wear and tear with certain items being refurbished or replaced.

The voluntary LFG system continues to serve its purpose in reducing odors, reducing the potential for fires and protecting the environment by the thermal conversion of methane gas to carbon dioxide, which is 21 times less harmful. Most recently, SWDD, through the 2nd Amendment to the LFG Agreement with Indian River EcoDistrict (IRED), is committed to selling the LFG to IRED for a Renewable Natural Gas (RNG) project. IRED has provided the attached reference letter for Biogas Engineering (BGE) as the firm that they are utilizing for the RNG project.

Prior to the RNG project going on line, SWDD has also committed to providing LFG for the evaporation of landfill leachate through an agreement with the Indian River Sustainability Center, LLC (IRSC). Once the RNG project is line, the IRSC will utilize pipeline gas from Florida City Gas for the evaporation project. Per a recent request for a change order from IRSC, they have indicated that they need “high-pressure” LFG to the Evaporation Project. Their proposal was to install a “Booster Blower” system for \$315,000 to convert our low-pressure gas to high-pressure gas. IRSC also has pledged to provide an approximate credit not to exceed \$240,000 for SWDD providing the design, permitting and construction of the LFG line from our flare system to the evaporation system.

Our current LFG Flare Skid system was recently evaluated by Biogas Engineering (BGE) under a purchase order for \$19,000 in December 2020. BGE recommends that SWDD replace the current LFG Flare Skid by improving the blower system from a “low-pressure” to a “high-pressure” system, convert the mechanical relays to a programmable logic controller and install a new flare that is properly sized for current and future needs. Based on this evaluation and recommendation, staff rejected the proposal from IRSC for a Booster Blower.

To facilitate this project, staff requested a proposal from Kimley-Horn and Associates, Inc. (KHA) utilizing BGE as a sub-consultant. The combined effort of both firms is ideal as KHA has the local experience with

the landfill facility and coordination with local survey and geotechnical firms while incorporating the critical integration element of BGE for both the RNG and the Evaporation projects.

Analysis:

KHA has prepared Work Order No. 44, per the Continuing Consulting Engineering Services Agreement for Professional Services, provided in Attachment 1, for engineering services detailing the scope of work, budget, and schedule for each of the tasks. The tasks are listed below showing the scope and their estimated fees. The project is estimated to take four months to complete.

PHASE 1	DESCRIPTION	KIMLEY-HORN	SUBCONSULTANT	OTHER EXPENSES *	TOTAL AMOUNT
Task 1	Landfill Gas Pipeline Extension	\$31,280	\$60,500	\$0	\$91,780
Task 2	Landfill Flare Skid Improvements	\$14,340	\$112,300	\$8,000	\$134,640
TOTAL =		\$45,620	\$172,800	\$8,000	\$226,420
<i>* Other Expenses are for travel to be billed on a time and materials basis.</i>					

The Phase 1 work includes design and procurement services to be followed by the recommendation of bids for the equipment/installation of Work Order 44 under Phase 2. The overall estimated cost for both Phase 1 and Phase 2 is approximately \$1,300,000. In term of the two projects, the Landfill Gas Pipeline Extension work is estimated to be \$300,000 and the Landfill Gas Flare Skid Improvements are estimated to be \$1,000,000.

Funding:

Funding for the SWDD LFG project for the evaporation of leachate is budgeted and available in the Landfill SWDD/Engineering Services Account, number 41121734-033130, for \$91,780, which is funded from SWDD assessments and user fees. The Landfill Gas Flare Skid Improvements are considered a “closure activity” and, as such, is funded from an escrow account long established per Florida Department of Environmental Protection (FDEP) requirements, which has the funds available in the SWDD/Accrued Closure – I, II & Infill Account, number 411-239006, for \$134,640.

Description	Account Number	Amount
SWDD/Engineering Services	41121734-033130	\$91,780
SWDD/Accrued Closure – I, II & Infill Account (Escrow)	411-239006	\$134,640

Recommendation:

Solid Waste Disposal District (SWDD) staff recommends that its Board approve the following:

- a) Approve Work Order No. 44 with Kimley-Horn and Associates, Inc. for \$226,420 to provide engineering services related to the Landfill Gas Pipeline Extension and Skid Improvements.
- b) Authorize the Chairman to execute the same, as presented.

Attachment:

- 1. Reference letter from IRED
- 2. Work Order No. 44 – KHA