



Division of Public Works .
1000 South Houser St.
Muscatine, IA 52761

Recycling Center and Transfer Station

Phone (563) 263-9689

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MEMORANDUM

To: Mayor and City Council Members
Cc: Gregg Mandsager, City Administrator
From: David Popp, Solid Waste Manager
Date: November 30, 2018

Recycling Center
Transfer Station
Landfill Operations
Refuse Collection

Re: Proposal # 185628, Request to Approve additional monitoring well installation, monitoring well abandonment, and reporting as required by Iowa DNR to complete the Corrective Measures Report which is due December 30, 2019. This proposal is provided by Barker Lemar Engineering Consultants.

Introduction:

The City owns and operates the Muscatine County Sanitary Landfill. The City and Barker Lemar have an existing agreement in place to provide annual sampling of the monitoring wells at the Landfill in the spring and fall. Additional monitoring wells have been installed under the direction of the Iowa DNR in April and May of 2018. This proposal for services will provide the installation of additional sampling wells, measuring devices in the new wells and additional sampling as required by the Iowa DNR.

Background:

The propose this proposal is to provide additional ground water sampling as required by the Iowa DNR to verify compliance of groundwater management at the Muscatine County Sanitary Landfill. This proposal will approve the installation of additional equipment to provide data that is necessary to complete the Corrective Measures Report that is required by the DNR to verify leachate migration limits in the northwest landfill boundary.

Recommendation/Rationale:

Staff recommends that the council approve this request for additional charges related to ground water sampling equipment as proposed by Barker Lemar for the estimated cost of \$10,990.00. This cost will need to come out of the Solid Waste/landfill Budget.

Background Information:

Barker Lemar Engineering Consultants proposal no. 185628

**"I remember Muscatine for its sunsets. I have never seen any
on either side of the ocean that equaled them" — Mark Twain**



November 20, 2018

Dave Popp, Solid Waste Manager
Muscatine County Area Solid Waste Agency
1000 S. Houser St.
Muscatine, IA 52761

Re: Monitoring Well Installation Proposal
Muscatine County Sanitary Landfill Well Drilling Services
Permit No. 70-SDP-02-75P
Proposal No. 185628

Dear Dave:

BARKER LEMAR ENGINEERING CONSULTANTS (BARKER LEMAR) appreciates the opportunity to provide consulting services to the Muscatine County Solid Waste Agency (Client) for the Muscatine County Sanitary Landfill (Landfill).

1.0 PROJECT UNDERSTANDING

The project includes installation of two monitoring wells at the Muscatine County Sanitary Landfill, located at the corner of Highway 61 and County Road Y30 west of Blue Grass, Iowa. One of the proposed monitoring wells is required to bracket the benzene concentrations observed in monitoring wells MW-23, MW-31, and MW-37.

The second monitoring well will be utilized in conjunction with a permanent stage rod, to be installed in the pond northeast of the site. The marker will allow accurate pond water level measurements to be obtained to potentially confirm that groundwater flows south on the west side of the pond. The second monitoring well will be installed southeast of MW-38, in the direction of shallow groundwater flow and will be used to determine an appropriate attenuation zone point of compliance for groundwater remediation.

In a phone conversation with the Mike Smith (DNR), Barker Lemar requested permission to abandon monitoring well MW-19 as it is no longer a background well, having been replaced by MW-50BG. Mike Smith granted the request and asked for submittal of a variance to abandon the well without overdrilling the entire length of the well.

2.0 SCOPE OF SERVICES

Based on the above information, BARKER LEMAR proposes the following scope of services by task:

1. Drilling Activities
2. Monitoring Well Development and Low-Flow Equipment Installation
3. Survey Activities/DNR Reporting

Task 1 – Drilling Activities

BARKER LEMAR will:

- Submit a variance request that may allow monitoring well MW-19 to be overdrilled to 40 feet below ground surface instead of to 100 feet during abandonment.
- Abandon monitoring well MW-19 as described above.
- Install a permanent stage rod in the pond northeast of the site.
- Install monitoring well MW-52 approximately 200 feet southeast of MW-38. Monitoring well MW-52 will be approximately 20 feet deep.
- Install monitoring well MW-53 approximately 250 feet southeast of MW-37. Monitoring well MW-53 will be approximately 20 feet deep.
- Install protective casings and padlocks around the newly installed monitoring wells.
- Log the soil borings and submit well installation and abandonment documentation to DNR.

Task 2 – Monitoring Well Development and Low-Flow Equipment Installation

BARKER LEMAR staff will perform the following subtasks:

- Install permanent well tubing in the newly installed monitoring wells for sampling purposes. The static water level is presumed to be less than 25 feet; if static water level is greater than 25 feet, install well tubing and dedicated submersible pump in monitoring wells; and
- Install wellhead assemblies on newly-installed monitoring wells to accommodate low-flow groundwater sampling.

Note: The fee for this task is estimated based on recent groundwater levels taken by BARKER LEMAR staff during monitoring activities. The actual fee invoiced to the Client will be based on the groundwater level at the time of installation in accordance with the fee schedule included in Attachment A.

Low-flow equipment installation will not be performed on wells observed to be dry at the time of performing this work. Low-flow equipment may be required to be installed at a later date if well conditions change. Well development will take place in the same mobilization as low-flow equipment installation and will be performed using a non-dedicated stainless-steel submersible pump.

Task 3 – Survey Activities

Following completion of the well installations, BARKER LEMAR staff will perform a GPS survey to document the as-constructed location and elevations of the newly installed permanent marker and monitoring wells. The current site map will be updated to reflect the location of the new wells. Additionally, boring logs and monitoring well construction documentation will be prepared and submitted to the DNR after the survey activities are completed.

3.0 LIMITATIONS

Services not set forth in Section 2.0, Scope of Services, are excluded from this proposal. BARKER LEMAR has no responsibility to perform such excluded services and has no liability associated with the non-performance of such services.

4.0 SCHEDULE

BARKER LEMAR will begin these services upon receiving the signed Confirmation of Notice to Proceed, or the Client’s verbal authorization followed by the signed Notice to Proceed. Barring circumstances beyond BARKER LEMAR’s control, BARKER LEMAR anticipates completing the scope of services prior to the 1st 2018 semi-annual sampling event.

5.0 COMPENSATION

The fees for the proposed scope of services are shown in the Table 1 are valid for 60 days following the date of this proposal. Although the fees are shown by task, the compensation for individual tasks are not independent of each other and elimination of any task or part of a task shall justify a review and potential adjustment of the compensation for this proposal. Our invoices will be submitted monthly and will reflect the percentage complete of each task as of the date of the invoice.

**Table 1
Cost Estimate**

Task Number	Scope of Services Task	Unit Price	Unit	Fee
Task 1 Drilling Activities				
	Project Coordination	\$115/hour	3	\$345
	Mobilization	\$2,185/mobilization	1	\$2,185
	Monitoring Well Installation	\$2305/well	2	\$4,610 ⁽¹⁾
	Stage Rod Installation	\$500/installation	1	\$200
	Abandon MW-19	\$1,270/well	1	\$1,270 ⁽²⁾
Task 2	Monitoring Well Development and Low-Flow Equipment Installation		Lump Sum	\$1,130
Task 3	Survey Activities/DNR Reporting		Lump Sum	\$1,250
Total				\$10,990

(1) The monitoring well installations fee included in Table 1 will be billed based on the depth of the monitoring wells installed. This cost estimate assumes 2 monitoring wells with total depths of 20 feet installed. Additional footage charged at \$25.00 per foot.

(2) Abandonment fees assumes the variance request to complete overdrilling to 40 feet below grade is approved by DNR.

Payment terms are to be followed as stated in the attached Terms and Conditions. Should conditions be encountered that require significant changes or an increase in the scope of work, we will contact you and proceed further only with your authorization, followed by a signed Change Order.

6.0 HEALTH AND SAFETY

This proposal assumes that Level D safety precautions are adequate and confined space entry is not required. Level D safety attire generally consists of a normal work uniform including safety shoes, hard-hat where required, and appropriate eye protection. The costs will be adjusted accordingly if site-specific conditions require more stringent health and safety procedures.

7.0 CONDITIONS

Items to be provided by Client include access to information pertinent to the reviews and reports discussed herein. The scope of services in this proposal is based on the assumption that the permit-related information is currently available. We have enclosed our Terms and Conditions that should be considered part of this proposal.

CONFIRMATION OF NOTICE TO PROCEED

Proposal No. 185628

The above proposal and attached Terms and Conditions are understood and accepted.

BARKER LEMAR ENGINEERING CONSULTANTS (BARKER LEMAR) agrees to perform and complete the following Scope of Services for the Client at its facility located near Muscatine, Iowa.

The scope of services is described as monitoring well installation, abandonment, and reporting as further defined in Section 2.0 in this proposal.

BARKER LEMAR agrees to perform the above scope of services for compensation estimated to be \$10,990. Our invoices will be submitted monthly and will reflect the percentage complete of each task for lump sum items, actual quantities for unit priced items, and actual labor and expense for other items as of the date of the invoice. The compensation for the proposed scope of services is valid for 60 days following the date of this proposal.

If this proposal meets with your approval, sign two originals of this Confirmation of Notice to Proceed, retain one original for Client files, and return one original or copy via email, fax to 515.256.0572, or U.S. mail to BARKER LEMAR ENGINEERING CONSULTANTS, 1801 Industrial Circle, West Des Moines, IA 50265.

If you have questions regarding any of the information above, please contact one of the authorized signers below at 515.256.8814, or 800.707.4248.

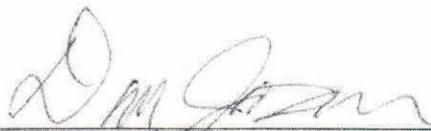
FOR: BARKER LEMAR ENGINEERING CONSULTANTS

FOR: CITY OF MUSCATINE



Leah Calvert, PG
Professional Geologist
Date: 11/20/2018
Email: lcalvert@barkerleamar.com

Dave Popp, Solid Waste Manager
dpopp@muscatineiowa.gov
Date:



Dan Jensen, E.I.
Project Engineer
Date: 11/20/2018
Email: djensen@barkerleamar.com

Copies: e-delivery
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