



Bid Waiver Form

Revised 04/2021

| | | | | | |
|--|---|-------------------|----------------------------------|--------------|--|
| Short Description of Goods/Services | RNG Plant - Pipeline Integrity Services | Total Cost | \$112,000 | | |
| Vendor Name | LAKE SUPERIOR CONSULTII | MUNIS # | 32495 | Req # | |
| Purchasing Officer | Pete Patten | Date | 12/30/2021 | | |
| Department | Waste & Renewables | Email | Wienkes.Roxanne@countyofdane.com | | |
| Name | Roxanne Wienkes | Phone | 608.509.6681 | | |

A VENDOR QUOTE MUST BE ATTACHED TO THE WAIVER FOR APPROVAL

Provide a detailed description of the goods/services intended to be purchased:

Lake Superior Consulting (LSC) will provide engineering, technical consulting, and construction support services related to the RNG Plant high pressure carbon steel piping. Services expected to include:

Conduct desktop documentation review and gap analysis:

Piping design and MAOP review; Establish MAOP factoring in key records (materials, pressure test, design) and operating conditions; If MAOP cannot be established with given documentation, produce a list of additional actions to be taken to establish MAOP; Produce a list of recommendations to fully assess above and below grade piping condition

Cathodic protection design:

Conduct soil resistivity testing; Engineering of CP system; Produce as-built drawings

Cathodic protection installation:

Install six isolation flanges (one set for each line); Bond two parallel lines; Install ~5 mag anodes on each section

Above-grade piping condition assessment:

Conduct targeted inspection of above-grade piping (in and around compressor building) utilizing UT/RT and VT for coating. Assessing for internal and external corrosion. Document in a report.

Below-grade piping condition assessment:

Indirect Inspection of welds, coating defects; Support In Line Internal (ILI) inspection using pipeline pig

Integrity Management Plan:

Document the most likely threats to the system; Document baseline assessment approach; Document assessment methods; Document reassessment interval

Engineering Design of New Pipeline Segments (optional):

Engineering design for full replacement of below ground pipe segments covered in this review. Design to include 30%, 60%, IFC, and AFC stamped drawings.

Service contract, as necessary, will be routed internally as required for review and approval.

Send to a Purchasing Officer Once Completed



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Procurement Exception List

- Emergency Procurement
- Unique and specific technical qualifications are required
- A special adaptation for a special purpose is required
- A unique or opportune buying condition exists
- Only one vendor possesses the unique and singularly available ability to meet the Department's requirements

Provide a detailed explanation as to why the competitive bidding (RFB/RFP) process cannot be used. Also provide a detailed justification in relation to the Procurement Exception(s) chosen:

Dane County Department of Waste & Renewables (W&R) owns and operates a Renewable Natural Gas (RNG) Plant that converts landfill gas (LFG) to pipeline quality RNG that is injected into the interstate transmission pipeline. The RNG is transferred to the interconnect at pressures in excess of 900 psig and presents specific and technical challenges for the safe and efficient operation of the W&R owned pipeline segments.

LSC consulting possesses all technical capability required by Dane County to evaluate, design, and implement pipeline integrity and protection measures. LSC provided substantially similar services for the interstate pipeline company owned pipeline, as part of the RNG Plant project and installed on Dane County Landfill property. They possess site specific detailed knowledge of the RNG project, our facilities, and continue to support the interstate pipeline company at the Dane County RNG pipeline interconnect.

Bid Waiver Approval (For Purchasing Use Only)

Under \$37,000 (Controller)

\$37,000+ (Personnel & Finance Committee)

Date Approved:

Send to a Purchasing Officer Once Completed

Business Proposal

▶ **Dane County**

▶ **Landfill**

Biogas Piping Corrosion Control and Integrity Management



LSC Project # 64022200064
Submittal Date 12/29/2021



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Executive Summary

Dane County Landfill requested a proposal for MAOP verification, corrosion control design/install and integrity management for some short piping segments in their facility.

LSC will utilize broad engineering and design background to complete this work and leverage our knowledge of oil and gas piping to give Dane County confidence in the integrity of their piping going forward.

◆ Key Milestones

Milestone 1: Complete desktop review
2/1/2022

Milestone 2: Complete CP Design
2/28/2022

Milestone 3: Complete CP Install
3/31/2022

Milestone 4: Complete Integrity Assessments
5/31/2022

Milestone 5: Complete IMP
6/30/2022

*LSC provides this estimated schedule and will work with Dane County Landfill on an official project schedule upon award. This

◆ Project Cost

| Description | Total |
|----------------------------|------------------|
| CP Testing | \$9,000 |
| CP Design | \$8,000 |
| CP Install | \$32,000 |
| Desktop Review | \$10,000 |
| Above-grade Assessment | \$14,000 |
| Below-grade Assessment | \$10,000 |
| IMP | \$11,000 |
| Piping Design and Drafting | \$18,000 |
| Total | \$112,000 |

*This is our best estimate for the overall cost of the project on a time and materials basis, not to exceed the quoted price.

◆ Terms and Conditions

The start of this work will be contingent upon coming to mutually agreeable terms and conditions.

◆ Project Contact



Sean Connolly

Integrity Engineering Supervisor

218-349-5971

Scope and Work Plan

Dane County Landfill has requested a proposal on maximum allowable operating pressure (MAOP) verification, corrosion control installation and integrity management for the following piping segments in their landfill yard:

- 75' of 4" below-grade piping from biogas unit to compressor building
- Dual 60' below-grade piping runs from decant to compressor building
- Above-grade, high-pressure (950 psi), carbon steel piping in and around compressor building

LSC proposes the following approach to establishing MAOP, implementing corrosion control measures and managing the integrity of the piping.

◆ A – Implementing corrosion control

In one visit, LSC will conduct field testing and install electrical isolation (on 6 flange sets) to provide data for the design of a cathodic protection (CP) system. Field testing will include:

- Soil resistivity – for CP design
- Direct current voltage gradient (DCVG) – for coating assessment

LSC will then design and install a CP system to oil and gas industry best practices and produce as-built drawings. LSC will bond the two parallel runs electrically and install the number of anodes as required by the design.

◆ B – MAOP Verification and Integrity Management

This portion of the work will begin with a desktop review of all records pertaining to the system and will inform the integrity approach. At this time the following approach is proposed but may need to be adjusted as more information is gained and research is conducted. Following desktop review, LSC will conduct condition assessments on above and below-grade pipe. The results will be utilized to understand active threats to the line (internal corrosion, external corrosion, etc.), to understand remaining life and set a reassessment interval. This info will be utilized to generate an integrity management plan to ensure reliability of the piping into the future.

- a) Desktop review of all records with the intent of establishing MAOP and developing a plan for piping assessment
 - a. Key records that will be needed to verify MAOP include materials, pressure test and design records and drawings.
 - b. Includes a scope trip to visit the site
 - c. If MAOP cannot be confidently established with documentation, LSC will produce a list of recommendations to establish MAOP.
 - d. LSC will produce a list of actions to assess current condition of above and below grade-piping and to manage integrity going forward.
- b) Assess condition of above-grade piping
 - a. Conduct targeted inspection of above-grade piping (in and around compressor building) utilizing UT/RT and VT for coating. Will document results in a report. Will require inspection specialist on-site for 4 days and 2 days of RT inspection.
- c) Assess condition of below-grade piping

- a. In-line inspection or hydrotest or a combination of both would be an acceptable and effective means of proving current integrity without digging up the entire line. Hydrotest would also serve as MAOP reconfirmation. LSC would provide field resource to ensure assessment is conducted properly and document the results.
- d) Develop integrity management plan
 - a. LSC will utilize the results of the condition assessments to comment on the present condition of the line, discuss the active threats to the line, discuss mitigation of those threats and present a plan for maintaining pipe integrity into the future. This will require 1 engineer working remotely.

◆ Other

Dane County also requested an estimate to complete piping design and drafting in the case they decide to replace the lines. Design to include 30%, 60%, IFC and as-built stamped drawings. This will require 1 engineer and 1 CAD drafter working remotely.

◆ Deliverables

Table 1 Deliverables

| # | Deliverable | Date |
|---|---|-----------|
| 1 | CP design as-built | 3/31/2022 |
| 2 | List of recommendations for MAOP verification and piping integrity management | 2/1/2022 |
| 3 | Above-grade piping assessment report | 5/31/2022 |
| 4 | Below-grade piping assessment report | 5/31/2022 |
| 5 | Integrity management plan | 6/30/2022 |
| 6 | Piping design drawing packages | |

Assumptions and Exceptions

◆ Assumptions

1. This cost estimate is for the scope of work as defined in this proposal. Scope changes or resource additions will be approved in writing by both the client and LSC and will be billed according to the attached rate sheet (Appendix 1).
2. 5 galvanic anodes will be required per each of the two sections for cathodic protection that meets industry criteria. This may change as CP design data is gained.

◆ Exceptions

1. Flatwork (concrete and asphalt repair) are not included in this this scope of work.
2. Hydro-excavation not included in this scope of work.
3. Does not include materials or equipment for executing hydrotest or for hiring an ILI vendor.

Schedule

Assuming kickoff January 1, 2022, some estimated milestone dates follow.

Milestone 1: Complete desktop review

2/1/2022

Milestone 2: Complete CP Design

2/28/2022

Milestone 3: Complete CP Install

3/31/2022

Milestone 4: Complete Integrity Assessments

5/31/2022

Milestone 5: Complete IMP

6/30/2022

Cost Estimate

Table 2 - Statement of Fees

| # | Description | Rate | Unit | Qty | Total |
|--------------|---|-------------|----------|-----|---------------------|
| 1 | Corrosion Control - Field Testing and Isolation Install | \$9,000.00 | Estimate | 1 | \$9,000.00 |
| 2 | Corrosion Control - CP Design | \$8,000.00 | Estimate | 1 | \$8,000.00 |
| 3 | Corrosion Control - CP Installation | \$32,000.00 | Estimate | 1 | \$32,000.00 |
| 4 | IM - Desktop Review | \$10,000.00 | Estimate | 1 | \$10,000.00 |
| 5 | IM - Above-grade Condition Assessment | \$14,000.00 | Estimate | 1 | \$14,000.00 |
| 6 | IM - Below-grade Condition Assessment | \$10,000.00 | Estimate | 1 | \$10,000.00 |
| 7 | IM - Develop Integrity Management Plan | \$11,000.00 | Estimate | 1 | \$11,000.00 |
| 8 | Piping Engineering and Drafting | \$18,000.00 | Estimate | 1 | \$18,000.00 |
| Total | | | | | \$112,000.00 |

Appendix 1 – Rate Sheet

Set with proposal

Customer: Dane County Landfill

Effective: January 1, 2022 – December 31, 2022

Appendix 2 – Key Company Contacts



Ryan Swor
Vice President and General
Manager
Email: rswor@lsconsulting.com



Michael Berg
Vice President of Integrity
Management
Email: mberg@lsconsulting.com



Mark Cadle
Director of Core Services
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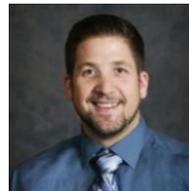
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◆ **Contact Us**

Lake Superior Consulting, LLC

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info@lsconsulting.com

218.727.3141



01. Engineering

| | |
|------------------------|-------------------|
| Engineering Technician | \$80.00 |
| Associate Engineer | \$100.00 |
| Engineer | \$130.00 |
| Lead/Staff Engineer | \$165.00 |
| Senior Engineer | \$195.00 |
| Principal Engineer | \$275.00 |
| Expert Witness | Call for Proposal |

02. Computer Aided Design

| | |
|---------------------|----------|
| CAD Technician | \$80.00 |
| CAD Designer | \$95.00 |
| Senior CAD Designer | \$115.00 |

03. Geographic Information Systems

| | |
|----------------|----------|
| GIS Specialist | \$90.00 |
| GIS Analyst | \$100.00 |
| GIS Manager | \$130.00 |

04. Survey Services

| | |
|--------------------------|----------|
| Survey Support | \$65.00 |
| Survey Lead | \$105.00 |
| 4-Way Sweep Lead | \$125.00 |
| Registered Land Surveyor | \$135.00 |

05. Trenchless Technologies

| | |
|---|----------|
| Generalist - Trenchless Technologies | \$100.00 |
| Specialist - Trenchless Technologies | \$155.00 |
| Senior Specialist - Trenchless Technologies | \$195.00 |

06. Commissioning / Start Up Support

| | |
|---------------------------------|----------|
| Commissioning Specialist | \$110.00 |
| Senior Commissioning Specialist | \$140.00 |

07. Welding Inspection

| | |
|-----------------------------|----------|
| Welding Specialist, AWS CWI | \$110.00 |
|-----------------------------|----------|

08. Integrity Management Services

| | |
|--|----------|
| Associate, Integrity Management | \$100.00 |
| Specialist I, Integrity Management | \$130.00 |
| Specialist II, Integrity Management | \$165.00 |
| Senior Specialist, Integrity Management | \$195.00 |
| Principal Engineer, Integrity Management | \$275.00 |

09. Cathodic Protection

| | |
|--|----------|
| Cathodic Protection Technician | \$80.00 |
| Cathodic Protection Technician I, NACE Certified | \$100.00 |
| Cathodic Protection Technician II, NACE Certified | \$120.00 |
| Cathodic Protection Technician III, NACE Certified | \$140.00 |
| Senior Cathodic Protection Technician | \$140.00 |
| Cathodic Protection Technician IV, NACE Certified | \$185.00 |
| AC Mitigation Modeling | \$220.00 |

10. Coating Inspection

| | |
|---------------------------|----------|
| CIP I | \$105.00 |
| CIP II | \$125.00 |
| CIP III | \$185.00 |
| Senior Coating Specialist | \$210.00 |

11. Tool Tracking

| | |
|----------------------------|---------|
| Tracking Technician | \$70.00 |
| Senior Tracking Technician | \$85.00 |

12. Geological / Environmental

| | |
|---------------------|----------|
| Associate Geologist | \$100.00 |
| Geologist | \$135.00 |
| Senior Geologist | \$180.00 |

13. Nondestructive Testing

| | |
|--------------------------------|-------------------|
| NDT Technician I | \$90.00 |
| NDT Technician II, Limited | \$110.00 |
| NDT Technician II | \$130.00 |
| NDT Technician II (Shear Wave) | \$140.00 |
| NDT Technician II (PAUT) | \$150.00 |
| NDT Technician III | \$185.00 |
| NDT Auditor | Call for proposal |

14. Construction / Inspection Services

| | |
|----------------------------------|----------|
| Craft Inspector | \$75.00 |
| Craft Inspector II | \$105.00 |
| Senior Craft Inspector / Foreman | \$130.00 |
| Construction Technician | \$80.00 |
| Lead Construction Technician | \$100.00 |
| Construction Specialist | \$110.00 |
| Construction Advisor | \$120.00 |
| Construction Superintendent | \$135.00 |
| Operator | \$95.00 |
| Senior Operator | \$120.00 |

15. Project Management / Other Services

| | |
|---|----------|
| Project Management Generalist | \$75.00 |
| Project Coordinator | \$100.00 |
| Associate Project Manager | \$125.00 |
| Project Manager | \$150.00 |
| Senior Project Manager | \$185.00 |
| Senior Program Manager | \$225.00 |
| Scheduler I | \$100.00 |
| Scheduler II | \$115.00 |
| Scheduler III | \$135.00 |
| Office Clerk | \$55.00 |
| Technical Communications Editor | \$80.00 |
| Project Accountant | \$85.00 |
| Buyer | \$95.00 |
| Technical Records Auditor | \$95.00 |
| Quality Auditor | \$105.00 |
| Project Controls Specialist | \$115.00 |
| Contracts / Procurement Specialist | \$115.00 |
| Senior Technical Records / Compliance Auditor | \$115.00 |
| Senior Quality Auditor | \$120.00 |
| Contracts / Procurement Lead | \$135.00 |

16. Software / Database Services

| | |
|----------------------------|----------|
| Data Entry Clerk | \$65.00 |
| Data Technician | \$85.00 |
| Senior Data Technician | \$115.00 |
| Database Administrator | \$130.00 |
| Network Analyst | \$90.00 |
| Network Analyst II | \$105.00 |
| Software Programmer I | \$95.00 |
| Software Programmer II | \$120.00 |
| Senior Software Programmer | \$150.00 |
| Security Analyst | \$160.00 |
| Security Analyst II | \$185.00 |

17. Specialty Services

| | |
|-------------------|--|
| Call for Proposal | |
|-------------------|--|

▶ Customer: City of Duluth

▶ Effective: January 1, 2022

18. Vehicles / Heavy Equipment

| | |
|--|--------------------|
| 4X4 Vehicle (Plus Mileage) | \$125.00 |
| ARGO | \$300.00 |
| ATV | \$150.00 |
| DOT Truck (Plus Mileage) | \$150.00 |
| Job Trailer | \$150.00 |
| Mileage | IRS Published Rate |
| Mini Excavator | \$350.00 |
| Skid Steer | \$350.00 |
| Skid Steer Attachment | \$200.00 |
| Snowmobile | \$150.00 |
| Technician Vehicle (Includes Small Tools) (Plus Mileage) | \$185.00 |
| Trailer Single Axle | \$50.00 |
| Trailer Dual Axle | \$100.00 |
| UTV | \$180.00 |
| Vibratory Plow | \$825.00 |

19. Equipment Packages

| | |
|--|----------|
| Commissioning E&I Package (Includes: 4x4, Commissioning Tools) | \$200.00 |
| CIS Equipment Package (Includes Field Data Logger, GPS, Line Locator, 2 Stationary Data Loggers) | \$350.00 |
| DCVG Survey Equipment Package (Includes DCVG Equip, Generator, Portable Current Source, GPS, Line Locator) | \$370.00 |
| HDD Survey Equipment Package (Includes 1 Current Interrupter, Generator, GPS, Multi Meter, Portable Current Source, Soil Resistivity Meter, Zero Resistance Ammeter) | \$310.00 |
| Direct Exam Equipment Package (Includes Direct Inspection Equipment, Coating Inspection Kit, Generator, Soil Resistivity Meter) | \$175.00 |

20. Other Items

| | |
|---|------------|
| Equipment Rental / Consumables / Other Direct Costs | 15% markup |
| Materials | 15% markup |
| Magnetic Particle Consumables (Per 16 Oz Can) | \$30.00 |
| Outside Services | 15% markup |
| Nonstandard Photocopies / Document Assembly (Per Copy) | \$0.15 |
| Per Diem (High/Low Substantiation Method – Overnight [Gt 65 | \$165.00 |
| Per Diem M&I (High/Low Substantiation Method – Long Hours [Gt | \$45.00 |
| Postage / Overnight / Express Shipping / Freight Charges | 10% markup |
| Special Insurance Requirements | COST |
| Travel And Living Expenses (Where Per Diem Does Not Apply) | 10% markup |
| Ultrasonic Couplant | \$10.00 |

21. Equipment

| | |
|---|----------|
| 4 Gas Detector | \$25.00 |
| Abrasive Blasting Equipment | \$180.00 |
| Air Mover - Venturi 2" | \$100.00 |
| Air Vac / Air Lance (without Compressor) | \$375.00 |
| Coating Inspection Kit | \$100.00 |
| Creaform 3D Laser Equipment | \$800.00 |
| Current Interrupter | \$40.00 |
| DCVG / ACVG or PCM Survey Equipment | \$100.00 |
| Electrical Resistivity Meter | \$150.00 |
| Field Data Logger | \$100.00 |
| Flame Ionization Detector | \$100.00 |
| Flyke Scope Meter | \$50.00 |
| Gas Sniffers | \$75.00 |
| Generator | \$40.00 |
| GPS Equipment | \$100.00 |
| HV Holiday Detector | \$110.00 |
| Hydrotest Data Recorder | \$100.00 |
| Insulated Flange Testing Equipment | \$30.00 |
| Key Hole Tool | \$125.00 |
| Leica RTC360 Laser Scanner | \$900.00 |
| Leica BLK360 Laser Scanner | \$125.00 |
| Line Locator | \$70.00 |
| LV Holiday Detector | \$50.00 |
| Multi Meter | \$20.00 |
| Phased Array | \$350.00 |
| Pin Brazer | \$185.00 |
| PMI Gun | \$325.00 |
| Portable Current Source | \$60.00 |
| RTK GPS | \$210.00 |
| Soil Resistivity / Grounding Meter | \$60.00 |
| Stationary Data Logger | \$40.00 |
| Stray Current Mapper | \$175.00 |
| Telebrineller | \$30.00 |
| Thermal Imaging Infrared Camera - Electrical / Mechanical | \$45.00 |
| Total Station | \$50.00 |
| Total Station - Robotic | \$200.00 |
| Ultra Sonic Thickness Gauge (UT Straight Beam) | \$50.00 |
| Ultra Sonic Thickness Gauge (UT Shear Wave) | \$250.00 |
| Vibratory Plate Compactor | \$150.00 |
| Zero Resistance Ammeter | \$50.00 |

* All rates charged daily unless otherwise noted

* In lieu of Per Diem: In regions where hotels are extraordinarily high LSC may bill hotel expense plus Per Diem M&I