

**SPECIFICATIONS
FOR
LANDFILL GAS OPERATIONS AND MAINTENANCE AT THE CITY OF
ALBUQUERQUE'S CERRO COLORADO LANDFILL**

1.0 OPERATIONS AND MAINTENANCE

1.1 General Description

The City of Albuquerque (the City) maintains a gas flare system at the Cerro Colorado Landfill in order to burn methane gas generated as a by-product of the landfill operation. A mandatory pre-bid conference will be at the Landfill as specified in the bid requirements.

The City requires a contractor who will be able to provide the following preventive maintenance and services in order to maintain the gas flare system in good operating condition:

- Routine operation, monitoring, and maintenance of the Landfill Gas (LFG) collection system and flaring unit in order to prevent and/or detect malfunctions or breakdowns,
- Prevent the general deterioration of flaring system equipment, including collection piping and valves, along with any discharges of landfill gas that could lead to non-compliance with applicable federal, state, and local regulations or pose a health or safety threat to the public or staff.

Applicable federal regulations shall specifically include the requirements specified under 40 CFR Part 62. Operation and maintenance of the Cerro Colorado landfill gas collection system shall be performed by the contractor for up to four (4) years (one (1) year with three (3) each possible 12-month terms following the contract award and subsequent notice to proceed as issued by the City. The system that will be maintained under this contract will be both the one currently established, and any additions to the system designed and constructed within the next four (4) years of the contract.

1.2 LFG Collection System Detailed Description

At this time, the LFG collection system at the Cerro Colorado landfill consists of 25 vertical and 21 remote extraction wells, varying in depth from 34 feet to approximately 120 feet, with a total drilled depth of 2,865 feet. In order for the Cerro Colorado landfill to maintain compliance with federal, state, and local regulations, it is possible that additional wells may be required.

The landfill flare station currently in use is an LFG Specialties Model PCF103018, equipped with a knock off pot, actuator valve, two (2) 40 h.p. blowers with adjusting butterfly valves, flow meter, Varec flame arrestor, pilot gas system, flare stack and a

Flame Trol III control center. At this time the flare station is operating at 350 to 450 cfm, with only one blower required to maintain vacuum. There is space for an additional blower to be installed on the flare skid, and the station is rated to handle up to 2100 cfm of LFG with all three (3) blowers in place and functional.

1.2.1 Existing Non-Performing. Existing non-performing wells will require re-drilling and subsequent connection to the LFG collection system within 2012, along with the connection of two (2) limited run horizontal collectors in the landfill's Cell 7.

1.2.2 Cell Closures. The City will be closing Cells 1 through 3. Therefore, modifications to the existing vertical wells and remote wells will be required within the span of this contract. The contractor may be expected to provide drilling services or other modifications, as required, for either new or replacement wells. Such service can be performed by the contractor directly or through a subcontractor. The contractor may be expected to provide such service in its entirety, or working in conjunction with the landfill staff, as appropriate. The contractor must be able to provide needed engineering services to facilitate all necessary design of any components of a gas collection and destruction system.

2.1 Detailed Scope of Work:

2.1.1 Monitoring

The Contractor shall provide the required instrumentation (Gastech or Landtec GEM 2000 or equal) for ongoing gas analysis and data collection of the LFG system at the Cerro Colorado Landfill.

- **Monthly.** Every 30 days, the LFG collection wells shall be monitored for methane, oxygen, carbon dioxide, and balance gas. Appropriate adjustments are to be made as described under "operation". Corrected wells shall be remonitored, as necessary, to facilitate system compliance and assure adequate overall performance of the system, as outlined under 40 CFR Part 60.
- **Quarterly.** Once every three (3) months, the contractor shall provide surface monitoring of the applicable portions of the Cerro Colorado Landfill. This shall be accomplished using either a flame ionization detector or a photo ionization detector as specified under 40 CFR 60.755. Areas of elevated readings are to be recorded and appropriate remediation taken in order to assure ongoing compliance with any federal, state, or local regulations or established conditions.

The surface emissions monitoring is to be conducted along a design pattern that traverses the landfill surface along 30 meter intervals, but only in those areas

with waste in place that is more than two (2) years in age. These areas will be identified by Landfill staff at contract award.

2.1.2 Operation

- **Monthly.** At least once every 30 days, adjustments will be made to the flow rate at each of the LFG extraction wells based on the information obtained during monitoring of the individual wells and at the flare station itself. Adjustments should insure that LFG will be collected at a rate that maintains a negative gauge pressure vacuum at all wellheads without an increase in oxygen, per 40 CFR 60.751.

As specified in the federal regulations, the parameters of concern are LFG composition, LFG pressure and/or vacuum, well-head temperature, and flow velocity. Adjustments to the vacuum and subsequent flow rate at the flare station are also required in order to maintain correct balance with the extraction system.

The primary purpose of the extraction monitoring and balancing is to minimize landfill surface emissions, and control the possible off-site migration of LFG in order to maintain regulatory compliance. If additional adjustments are required in a one (1)-month time frame in order to maintain proper system balance, or to ensure regulatory compliance, the contractor shall be responsible for such operational adjustments.

2.1.3 Maintenance

- **Monthly.** The contractor shall conduct visible inspection of all system components, to include wellheads, exposed lines, valves and port connections, and the flare system itself. Any problems noted should be immediately reported to the appropriate landfill staff, along with recommendations for repair and/or replacement as needed. The contractor shall ensure the proper operation of the Flame Trol III Control Center, including the functioning of the Raco Auto-Dialer.
- **Quarterly.** The contractor shall do the following:
 - * The contractor shall monitor the pressure drop across the mist extraction pad at maximum LFG flow, and clean the pad when the pressure drop has increased to twice the normal pressure drop for the clean pad condition.
 - * Ensure proper operation of the pneumatic valve actuator. Lubricate actuator and valve mechanism per manufacturer's recommendations.
 - * Start the non-operating blower monthly to prevent motor or bearing freeze-up.

- * Inspect the operational blower, listening for unusual noises and feeling for abnormal vibrations or excessive heat.
- * Lubricate the bearings on each of the blowers once each quarter of operation, using only the manufacturer's recommended lubricant .
- * Check the pressure drop across the flame arrestor. If the pressure drop exceeds two (2) inches of water column at maximum LFG flow, then the flame arrestor must be cleaned according to manufacturer's recommendations.
- * Ensure the proper operation of the propane fuel pilot ignition system, including removal and replacement of empty propane tanks, as needed.
- * Inspect the condition of the UV flame detector and replace the detector if damaged or not properly functioning.
- * Adjust the burner tip orifice to stabilize flare operation, as required. Confirm the calibration of the thermal flow sensor, using an independent Pitot tube. Inspect the control panel and test indicator lights for proper operation, and replace bulbs as required.

2.1.4 Reporting

All reporting shall conform to the requirements established under 40 CFR Part 63.

- **Monthly.** The contractor shall prepare a detailed report for the City containing the emissions data collected during the previous month and a summary of the activity performed during the previous month. Two (2) hard copies of the report shall be provided to the City, and the information maintained on a contractor database in order appropriately track any long term trends in the LFG collection system that would justify future operation modifications or additions. An ongoing log should be maintained of each inspection and site visit, with details of any deficiencies discovered and actions taken to remedy the problems.
- **Quarterly.** The contractor shall prepare a detailed report for the City. It shall contain the data collected during the required surface monitoring, to include instrument calibration and a surface monitoring log, along with appropriate weather data and other information, as required.

The contractor also shall prepare and submit an overall LFG system report that highlights all maintenance done during the previous quarter, including checks of all the system components. Two (2) hard copies of each of these reports shall be provided to the City, and the information maintained on a contractor held database in order to appropriately track any long term trends in the surface monitoring and/or repairs and maintenance.

2.1.5 24 Hour Emergency Response

The contractor shall be available on a 24-hour response notice for any problems or repairs required on any part of the Cerro Colorado LFG collection system. A contact list shall be provided **with the offer**, with appropriate names, positions and phone numbers in order for landfill staff to call for assistance, as needed.

2.1.6 Emergency Repairs

As part of the bid package, the respondent shall submit an hourly emergency billing rate for any technician's or engineer's time that the contractor feels might be necessary to facilitate repairs for any portion of the gas collection system. This would include all the rates appropriate for potential design, drilling, trenching, and collection system installation, and includes pricing for all subcontractors. Emergency is any time outside the normal operating hours of the Cerro Colorado Landfill from 7 a.m. to 6 p.m., and City holidays. Although a 24 hour turn-around response is reasonable for emergencies, this will be dealt with as emergencies shall arise.

2.1.7 Qualifications

Offeror must provide proof of all New Mexico contractor and subcontractor business licenses, and engineering licenses required to undertake management of the resulting contract, and repairs and maintenance to the gas collection system and flare. These licenses **MUST** be submitted with the offer to ensure that contractor is licensed in the state. This would include all federal, state, and local requirements for engineering, construction, and safety training. Licenses include, but are not limited to PE Licensed if applicable from the state of New Mexico, GB-98 if applicable from the state of New Mexico. Other licenses such as electrical, mechanical, plumbing: HDPE welding certification (for pipe repairs) and OSHA 40 HASWORP 1910 certification.

2.0 ADDITIONAL REQUIREMENTS

2.1 Offeror Identification

Name, address and nature of the organization must be provided. Sub-contractors must also be identified in a similar manner, to include names and telephone numbers of the appropriate persons in the bidder's office authorized to execute the proposed contract.

2.2 Prior Experience

The bidder is requested to state in their offer both their company's relevant experience and the experience of the personnel they are proposing to commit to this contract. Experience listing must include for whom such similar work was performed, the year(s) involved, and a reference person who can be contacted regarding what was performed.

The Offeror must have a minimum of three (3) years experience in the types of requirements of the RFB, including 40 CFR 60, 40 CFR 62 and 40 CFR 63.

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The Offeror shall demonstrate experience in providing operations and maintenance services for gas collection and flaring systems within the contiguous United States. At least three (3) professional references and phone numbers for such shall be provided with the offer.

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3.0 COSTS

The offeror must provide unit pricing with their offer for each item listed below per the specifications of this RFB. This must include all anticipated costs including applicable taxes and fees:

<u>Description</u>	<u>Unit Price Per Hour</u>
<u>Regular Hours</u>	
<i>Monthly Monitoring</i>	_____
<i>Quarterly Monitoring</i>	_____
<i>Monthly Operations</i>	_____
<i>Monthly Maintenance</i>	_____
<i>Quarterly Maintenance</i>	_____
<u>Overtime Hours: Anything over 40 hours per week</u>	
<i>Monthly Monitoring</i>	_____
<i>Quarterly Monitoring</i>	_____
<i>Monthly Operations</i>	_____
<i>Monthly Maintenance</i>	_____
<i>Quarterly Maintenance</i>	_____

***Emergency Repairs: Considered regular rate during normal business hours, but anything outside of normal business hours or on the weekends would be considered overtime hours.**

In addition, provide cost of parts & equipment (will not be counted in the bid evaluation), including freight.

List Price

List Price Less Discount
