City of Albuquerque
1CIVIC PLAZA NW
ALBUQUERQUE, NEW MEXICO 87102

Martin Chavez, Mayor

REQUEST FOR INFORMATION

RFI2006-008-GJ

"Landfill Gas Use Alternatives"

DUE DATE: 24 February 2006 by 4:00 PM (MST)

City of Albuquerque

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ALBUQUERQUE, NEW MEXICO 87102

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Request for Information (RFI) No. RFI-2006-008-GJ
Landfill Gas Use Alternatives
City of Albuquerque, Solid Waste Management Department

To All Interested Vendors and/or Parties:

The City of Albuquerque's Department of Finance and Management, Purchasing Division, in conjunction with the City of Albuquerque's Solid Waste Management Department, Disposal Division, is in the process of developing a Request for Proposals (RFP) or Request for Bid (RFB) for the design of an alternative use for the landfill gas (LFG) currently being flared at the Cerro Colorado Municipal Waste Landfill about 9 miles west of Albuquerque.

Current Anticipated Alternatives:

Alternatives currently being considered for possible uses of the Cerro Colorado LFG include the following:

1) Simplified sale of the gas in-situ
2) Royalties or other benefits to the city based on the possible LFG utilization and development by private entities
3) LFG exportation to the adjacent Metropolitan Detention Center for use as a fuel in their equipment
4) LNG or CNG manufacturing for use in city vehicles or equipment, or possible sale to a private fleet
5) Digester construction to improve methane quality for use in powering engines for electrical production to be used on site, to power nearby facilities, or for re-sale to the power grid, as appropriate
6) Electrical production through either turbine, micro-turbines, or engine(s),as financially appropriate, to either be used on site, to power nearby facilities, or for re-sale to the power grid
7) LFG utilization as a fuel for new manufacturing or other developments intended to take advantage of the available fuel source
8) LFG utilization for production of hydrogen fuel to power city vehicles or equipment, or possible sale to a private fleet
9) LFG utilization for brackish groundwater remediation, to possibly incorporate removal of metals or other contamination

Any alternative use of the LFG should incorporate the significant destruction of all non-methane organic compounds (NMOC) contained in the fuel, which is the reason for the original development of the gas collection system in the first place as required by the U.S. code of federal regulations (CFRs).

Purpose of the Request for Information (RFI):

The intent of this RFI is to obtain qualified information regarding feasible uses for the LFG that can be followed with a mechanism for evaluating and awarding any of the following that the city should deem appropriate:

1) turnkey design of a system for the City of Albuquerque
2) Installation and operation by private party through management contract
3) Conventional contracts between the city and other entities
4) “performance based” contracts
5) Joint ventures, as deemed appropriate and legal
6) Management agreements
7) And other appropriate mechanisms deemed acceptable, financially beneficial, and environmentally sound for the parties involved and the affected citizenry as a whole

An important aspect of this RFI is a design or development approach that will allow the ongoing operation and development of the Cerro Colorado Landfill, which serves not only the City of Albuquerque, but several surrounding counties and pueblos as well. All proposals or information regarding development of LFG usage at the landfill must be compliant with the conditions established under all applicable Federal EPA Regulations and locally established operating permits for LFG mitigation. Federal, State, and local permitting and appropriate zoning requirements should be considered when responding to this RFI. All information provided and suggestions by interested parties should be practical, realistic, and of sound environmental benefit.

Anticipated Project Development:

It is anticipated that following the receipt of all available information regarding this development, that the City of Albuquerque’s Solid Waste Management Department will proceed as follows:

1) Release a request for Proposal or request for Bid
2) Award and completion of a detailed feasibility study
3) Active grant and funding source development

The following is a basic overview of the project as anticipated. Based on the response available from vendors, contractors, and engineers, an appropriate

RFP or RFB will be developed. The RFP/RFB will be submitted to interested parties in 2006.

Project Overview:

The Cerro Colorado Landfill has been in operation since 1990, and serves as the primary municipal waste landfill serving the City of Albuquerque, Bernalillo County, and other surrounding rural and urban areas.

The landfill is located about 9 miles west of Albuquerque on the east side of the Rio Puerco valley, and about 3 miles south of I-40. The landfill covers a total of about 900 acres, with 395 acres designated as municipal waste disposal cells. There are 18 municipal waste cells at about 20 to 25 acres apiece, and each cell is estimated to last 2 to 4 years, depending on the disposal acceptance rate. The landfill also has an intermediate processing facility (recycling facility), vehicle maintenance facility, contaminated soils land farm, and other sundry support buildings and water containment facilities. There is a deep well on site that provides non-potable water for municipal use and dust control.

The Cerro Colorado began accepting municipal waste in 1989, and currently cells 1 through 6 are partially completed, with another 70 to 100 feet of airspace to fill in those six cells, and cell #7 in the process of construction with anticipated lining to occur in January-February of 2006. The Cerro Colorado landfill receives approximately 475,000 tons of waste annually, and the estimated life span of the facility is 50 to 60 years. There is currently about 6.2 million tons of waste under cover in six twenty acre cells. The Cerro Colorado is open 7 days per week from 6:00 a.m. to 5:00 p.m. and handles between 250-300 city and commercial vehicles each weekday.

Tier II sampling from several years ago indicated that the Cerro Colorado landfill was above the 50 megagram per year threshold for NMOC, and that a control system was required. A gas collection system was installed during the last part of 2003 and the first 6 months of 2004. The system became operational in July 2004, with an LFG open flare system for emissions control. The current in-place flare is designed for a throughput of 2150 cfm of landfill gas with an operating methane content of 50 to 55%. Currently, the flaring system is operating at about 350 to 390 cfm, with a 55% methane content as indicated by a calibrated GEM 2000 regularly in use at the landfill. A performance test conducted in December 2004 indicated a 35% methane content in the LFG from three one hour grab bag samples which were then lab analyzed. This performance testing indicated a gross heating value of 368 BTU/SCF, or 4886 BTU/lb, although this was based on the grab bag sampling, which did not indicate the same methane levels in the LFG as the ongoing monitoring and adjustment of the system would indicate. As is typical with most all landfill gas collection systems, the individual methane

production rate from each section and well of the landfill varies. Based on the grab bag samples taken in December 2004, the moisture F factor was found to be 2029 SCF of H2O/mmBTU of fuel burned, and the combustion moisture was 16.85 % water by volume in the flue gas at 0% excess air. However, these figures are concurrent with the lower methane content numbers indicated by the EPA Method 3c grab bag sampling.

The finished depth of the waste in the Cerro Colorado landfill varies from around 130 to 150 ft at full profile, with limited leachette production (40 to 60 thousand gallons per year). The landfill is permitted for municipal solid waste, and a few other limited special wastes, including:

1) wastewater treatment plant sludge
2) petroleum contaminated soils
3) industrial waste (TCLP and paint filter limited)
4) non-infectious waste
5) treated formerly characterized hazardous waste (TFCH)
6) packing house and killing plant offal

Although the Cerro Colorado landfill is permitted to accept these wastes, wastewater treatment plant sludge is not disposed of at the landfill; petroleum contaminated soils are disposed of at a special contaminated soils area distant to the current MSW landfill cells; there is currently no active source delivering packing house and killing plant offal to the landfill; non-infectious waste is accepted on a daily basis; industrial waste is accepted and manifested as required by the State of New Mexico Environment Department; and there are very limited sources of TFCH.

Applicability of Environmental Regulations:
Any information or proposals submitted in regards to this RFI must be cognizant of the federal, state, and local requirements governing the operation of a municipal solid waste facility and gas collection system. The gas collection and flaring system are subject to the conditions established in Authority to Construct Permit # 1713 as issued by the City of Albuquerque Air Quality Division, and the regulations established in 40 CFR Part 60 and 62, as enforced by EPA Region Six, in Dallas, Texas.

Landfill Gas Master Plan short-term and long-term:

Any information forthcoming from vendors, engineers, or contractors in response to this RFI should bear in mind that the Cerro Colorado Landfill is estimated to remain in active status for at least another 30 to 40 years, with a significant increase in gas production during that time frame due to the increased amount of waste under cover, and due to the improved anaerobic conditions within the landfill contributing to better methane production. In addition, methane production normally peaks after about 30 years or so under cover, so the landfill itself may

well remain an active energy source for another 60 years or more from this point in time. Ultimate gas production is estimated to be 7050 scfm.

CLARIFICATIONS:

If any interested parties require further information or clarification of the information provided, please contact **Walter Jaramillo, Senior Buyer, City of Albuquerque Purchasing. (505)768-3347 or 761-8128. Fax (505)768-3355 E-Mail wjaramillo@cabq.gov**

ALL RESPONSES TO THIS REQUEST FOR INFORMATION (RFI) must be received by the City of Albuquerque's Purchasing Division no later than 4:00 P.M. MST, on February 24, 2006.

City of Albuquerque
Walter Jaramillo, Senior Buyer
City of Albuquerque DFAS/Purchasing Division
1 Civic plaza, NW Room 7012
Albuquerque, New Mexico 87103

OR
Fax# (505)768-3355

OR
Electronic Mail to: wjaramillo@cabq.gov

GENERAL REQUIREMENTS:

To be considered, all responses shall comply with the requirements as shown above.

No obligation: This Request for Information (RFI) in no manner obligates the City of Albuquerque, or any of its departments to pursue any contractual relationship with an entity that submits an Acknowledgement. The City further reserves the right to cancel this RFI at any time when it is deemed to be in best interest of the City.

Response Preparation Cost: Any cost incurred in responding to this Request For Information (RFI) is borne solely by the interested entity.

Proprietary Data:

This RFI and the responses received will be open to public inspection, except to the extent that the offeror designates trade secrets or other proprietary information or data to be confidential in nature. Material so designated shall accompany the response to the RFI and each page shall be clearly marked and readily separable from the main body of the RFI in order to facilitate public inspection of the remainder (non-confidential portion) of the RFI. The City of Albuquerque will endeavor to restrict distribution of the material designated as confidential or proprietary to only those individuals involved in the review and analysis of the RFI. Offerors are cautioned that materials designated as confidential may never-the-less be subject to disclosure under the New Mexico Inspection of Public Records Act (Sections14-2-1 et seq, NMSA 1978).