



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701

Department of Fire and Emergency Services


10 Main Street

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March 25, 2003

LF040203-04

TO: Maggie Paul, Legal Assistant
FROM: Frankie Hofer 
RE: Legal and Finance Agenda Item

Please place the following item on the agenda:

Request to authorize staff to advertise for bids to purchase a spectrometer per attached specs. This will be purchased through Fire Department (0202) funds, and reimbursed from Grant monies approved through Council on February 3, 2003, in the amount of \$90,000. Approximate purchase price should be \$47,000.

The analyzer must be a field FT-IR spectrometer with integrated computer capable of analyzing solids and liquids, including corrosive and abrasive samples. It must be capable of operation in the Hot Zone of an WMD incident.

The system must weigh less than 25 lbs and operate on a integrated battery system for at least two hours. Internal battery must be capable of being trickle-charged when the unit is plugged in AC power. Batteries must be inside the unit to protect from contamination. The unit must not have any exposed cables or require any external utilities for operation.

The system must have a Diamond ATR sampling interface for easy preparation of samples without concern for pH or hardness.

The system must have an integrated video capability to allow correct positioning of small samples on the diamond sensor.

The system must have a ZnSe beam splitter that is impervious to environmental conditions when field-deployed and must not require any utilities or dessicants to prevent moisture damage to the optical components.

The entire analyzer and integrated computer must be sealed so that it is completely waterproof for outdoor use. In addition, it must be capable of being submerged in a decontamination solution of bleach for decontamination purposes.

The analyzer must have the capability to hook to external computers via an Ethernet connection. This allows post-processing of data, report generation and Internet transmittal of spectra to the SensIR reachback team.

The analyzer must have the ability to accept an external keyboard and mouse when not in the hot zone.

The system must have the ability to write to a CD-RW, Flash Memory or floppy drive and to print, using an integrated USB connection.

The system must have an integrated wireless capability so that the spectrometer can communicate with a wireless-enabled laptop at Incident command, transfer data and also allow Incident Command to control the analyzer when appropriate.

24/7 reach-back capabilities to chemists for assistance in the identification of unknowns and troubleshooting system problems must be included for one year with a purchase of the analyzer.

When the system is being serviced, a loaner system must be available within one business day to ensure no down time.

The system must include a library collection of Weapons of Mass Destruction such as G and V agents, TICs, TIMS, Explosives, Drugs and Drug precursors in addition to ongoing development of libraries as the threat changes such as white powders.

The system purchase must include, for one year, access to a password-protected web site where HazMat responders can exchange spectra of unknowns, receive library and software updates, share tips on instrument usage and post questions for discussion.

The system purchase must include one day of HAZMAT training by a certified HazMat instructor where the attendees will be educated on where this technology fits in to the overall HazMat response.

The system must include custom software screens that allow the user to simply identify unknown compounds, without the need for spectroscopy knowledge. The software must tie into the NIOSH database so that the identity of the compound will trigger information about the correct level of protection, remediation steps etc. In addition, an automatic one-button "subtract and search" capability for dealing with mixtures must be available.

Software should be touch screen capable. All buttons should be large enough to be visible and used in Level A gear. Computer screen must be backlit for night-time use.

ADVERTISING AUTHORITY

This form must be completed and approved by the City Finance Office prior to presenting items to the Common Council and/or Committees of the Common Council. This covers all items, which require formal bids, currently anything over \$15,000 (except emergency and repair costs).

I. PROJECT ID NO.: _____

II. PROJECT NAME: Spectrometer

III. Project/Item(s) Description: _____

IV. BID LETTING DATE: _____

V. (IF APPLICABLE) Grant No.: _____
 Funding Source: _____
 Estimated Completion Date: _____
 Estimated Grant Receipt Date: _____

VI. ESTIMATED COST OF PROJECT/ITEM(S) \$ 47,000.

VII. BASIS OF PAYMENT

Assessed		Non-Assessed	
Single Payment		Partial Payment	

VIII. DISBURSEMENT SCHEDULE

Date	Amount	Amount	Amount	Amount	Amount
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$
Total	\$	\$	\$	\$	\$

IX. APPROPRIATION DATA

Fund					
Department					
Line Item					

X. DEPARTMENT/DIVISION: _____

Project Manager: *Walter Holman* Date 3-25-03

[Signature] Date 3-25-03

DEPARTMENT/DIVISION MANAGER Signature _____ Date _____

PUBLIC WORKS DIRECTOR Signatures _____ Date _____

FINANCE OFFICE USE ONLY			Approved		Carbon Copy
	Date	Initial	Yes	No	
Appropriation Cash Flow					Investment Desk Public Works Engineering Project Manager