

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. AMENDMENT/MODIFICATION NO. ONE (1)	2. EFFECTIVE DATE JUN 30 1980	3. REQUISITION/PURCHASE REQUEST NO. RFPA NO. OSP-80-311	4. PROJECT NO. (If applicable)
5. ISSUED BY U.S. NUCLEAR REGULATORY COMMISSION DIVISION OF CONTRACTS WASHINGTON, D.C. 20555		6. ADMINISTERED BY (If other than block 5)	

7. CONTRACTOR NAME AND ADDRESS Colorado Department of Health Radiation and Hazardous Waste Control 4210 East 11th Avenue Denver, Colorado 80220	8. AMENDMENT OF SOLICITATION NO. DATED _____ (See block 9) MODIFICATION OF CONTRACT/ORDER NO. NRC-06-80-311 DATED January 17, 1980 (See block 11)
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9. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in block 12. The hour and date specified for receipt of Offers is extended, is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended, by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If, by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

10. ACCOUNTING AND APPROPRIATION DATA (If required)

B&R	FIN	APPROPRIATION	INCREASE
80-19-08-03	BT652	31X0200.800	\$38,975.00

11. THIS BLOCK APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS

(a) This Change Order is issued pursuant to _____
The Changes set forth in block 12 are made to the above numbered contract/order.

(b) The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in block 12.

(c) A Supplemental Agreement is entered into pursuant to authority of P.L. 95-604, Section 207 of URANIUM MILL TAILINGS RADIATION CONTROL ACT
It modifies the above numbered contract as set forth in block 12.

12. DESCRIPTION OF AMENDMENT/MODIFICATION

The purpose of this modification is to add additional money to amount granted on December 19, 1979.

- Under Section 14 FUNDING SOURCES AND ALLOCATION TO PROJECT TIME UNITS, change the total amount from \$56,025.00 to \$95,000.00.
- Under Section 16, REMARKS, delete that in its entirety and substitute the following in lieu thereof:
"This Grant Award of \$95,000.00 has been made in accordance with the following:

1) Preparation of Legislation and Regulations and Development of Administrative Procedures	\$47,775.00
2) Training of State Employees	\$ 8,250.00
3) Procurement of Equipment	\$38,975.00
	\$95,000.00

POOR ORIGINAL

Except as provided herein, all terms and conditions of the document referenced in block 8, as heretofore changed, remain unchanged and in full force and effect.

13. CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

14. NAME OF CONTRACTOR/OFFEROR BY _____ (Signature of person authorized to sign)	17. UNITED STATES OF AMERICA BY <u>M. J. Mattia</u> (Signature of Contracting Officer)		
15. NAME AND TITLE OF SIGNER (Type or print)	16. DATE SIGNED	18. NAME OF CONTRACTING OFFICER (Type or print) MARY JO MATTIA	19. DATE SIGNED JUN 30 1980

3) Add the following Section 21;

"21. Attached is a copy of Uranium Mill Instruments, (TABLE 1). Priority must be given in the expenditure of the Equipment funds to the acquisition of any equipment that is identified therein and not already available."

Table 1

Uranium Mill Instruments

1. Radiation Instruments

- A. A portable, battery-powered high voltage supply with ratemeter and scaler functions is recommended and may be used with G.M., gamma scintillation, or proportional counter probes.
- B. Survey Meter with end-window probe.
- C. Alpha scintillation survey meter.
- D. Radon daughter survey meter.
- E. Additional survey meter as B. above, with NaI crystal for gamma scintillation measurements would be useful. (1"x1")

2. Air Sampling Equipment

- A. Area Air Samplers - High volume air samplers should be provided at strategic locations in the mill whereby any fugitive dust is likely to concentrate.
- B. Personal Air Samplers - Portable, lapel type. Worker breathing zone samples to be acquired with an air flow approx. 3-7 LPM.
- C. Radon Air Sampling Equipment

Radon/Radon Daughter Detector to have the following capabilities:

1. Simultaneous sampling and detection of Rn-222 and Radon daughters.
2. Thoron detection.
3. Ability to determine Ra-226 and Rn-222 in water and effluents.
4. Sensitivity to 0.01 working levels when used with a ZnS (Ag) scintillator.
5. Linear response.
6. Portability for field measurements.

3. Calibration Equipment

- A. Gamma calibrator or irradiator
- B. Alpha calibrator
- C. Air Flow calibrator

If the above are not feasible, evidence that instruments have been calibrated by a recognized facility is acceptable.

VII. INSTRUMENTATION

- A. The State, as a minimum, should have available both field and laboratory instrumentation sufficient to ensure the licensee's control of materials and to validate the licensee's measurements.

The minimum field type instrumentation which should be available for such measurements is as shown in Table 1. By referring to specifications sheets on the suggested equipment, one can determine the requirements needed for any other survey equipment which will provide equivalent data and measurements to those listed in Table 1.

Additionally, arrangements should be made for calibrating such equipment. Back-up instrumentation should also be considered so that the necessary equipment is available for emergency situations.

- B. Laboratory type instrumentation should be available in a State agency or through a commercial service which has the capability for quantitative and qualitative analysis of radionuclides associated with natural uranium and its decay chain, primarily; U-238, Ra-226, Th-230, Pb-210, Po-210, and Rn-222, in a variety of sample media such as will be encountered from an environmental sampling program.

Analysis and data reduction from laboratory analytical facilities should be available to the licensing and inspecting authorities in a timely manner. Normally, the data should be available within 30 days of submittal. State acceptability of QA programs should also be established for the analytical laboratories.

- C. Arrangements should also be completed so that a large number of samples in a variety of sample media resulting from a major accident can be analyzed in a time frame that will allow timely decisions to be made regarding public health and safety.

- D. Medical consultants recognized for their expertise in emergency medical matters relating to the intake of uranium and its diagnosis thereof associated with a uranium concentrator should be identified and available to the State for advice and direct assistance.