DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 11 1979

MEMORANDUM FOR: Robert S. Brown, Jr.
Assistant to the Director
and Chief, Program Support Branch, NMSS

FROM: John B. Martin, Director
Division of Waste Management

SUBJECT: TECHNICAL ASSISTANCE WORK
ORDER TO BPNL

You are requested to issue a technical assistance work order to Battelle Pacific Northwest Laboratories (BPNL) - Physical Sciences Department to provide radiological analytical support at a site near Gallup, New Mexico as described in the enclosed statement of work (SOW).

This work is urgently needed to effect a requested environmental impact assessment of a uranium mill tailings dam failure by Health Department personnel of an Agreement State.

The staff estimates the funding required for this level of effort at about $40,000, and this is consistent with our conversations with BPNL personnel.

The duration of the work will be approximately three months and should be completed by December 31, 1979.

Robert E Browning /for
John B. Martin, Director
Division of Waste Management

Enclosure:
Statement of Work

1336 192

7911150 198

C

STATEMENT OF WORK (SOW)

ANALYTICAL SUPPORT FOR THE EVALUATION OF THE ENVIRONMENTAL IMPACT OF THE CHURCHROCK URANIUM MILL TAILINGS DAM FAILURE NEAR GALLUP, NEW MEXICO

FIN No. B2214-9
B&R No. 50-19-03-02-0

1.0 Background

On July 16, 1979, the Churchrock New Mexico uranium mill tailings dam failed and the resultant spill released about 1,100 tons of mill tailings materials and over 100 million gallons of radioactive waste water into the nearby Rio Puerco waterway. Radioactive material has been reported as far as 75 miles downstream -- across the Arizona border. At the present time, the United Nuclear Corporation (owner and operator of the uranium mine and mill complex) is still attempting to evaluate the full extent of environmental contamination and is working to decontaminate the affected areas around the Rio Puerco. The town of Gallup, New Mexico and certain areas of the Navajo Nation have been impacted by this accidental release of radioactive waste materials and a great deal of public concern has been expressed regarding the local water supplies and the radiation exposure to nearby residents.

The NRC's Office of Nuclear Material Safety and Safeguards (NMSS) requires technical assistance in supporting the environmental evaluation of this incident being conducted by the New Mexico Environmental Improvement Division (NMEID). The Battelle Pacific Northwest Laboratories (BPNL) has this immediate analytical capability and could provide the necessary project support at a selected site near Gallup, New Mexico.

2.0 Work Required

The specific task objective is to provide immediate on-site (i.e., in the Gallup, New Mexico area) analytical support to the New Mexico Environmental Improvement Division (NMEID) to aid in the rapid radiological evaluation of samples collected to define the extent of the environmental contamination and also to verify decontamination efforts in the Rio Puerco and other affected areas. Soil, sediment and water samples are to be prepared and analyzed for their natural uranium, thorium-230, radium-226 and lead-210 contents as requested by NRC or NMEID personnel. (Only selected samples will require all radionuclide analyses.) Analytical detection capabilities should range from typical background levels to a few "hotter" samples of several thousands of picocuries per sample. Specific analytical capabilities must be able to verify radium-226 levels less than 10pCi/g

and thorium-230 levels less than 30pCi/g -- the clean-up criteria for soil and sediment samples. About 100 samples per day will be submitted for analysis, and the total number of samples to be analyzed is expected not to exceed 5,000 total samples. Selected samples may require more sensitive radiochemical analysis at Battelle (about 100 samples). The above described analytical capabilities can be done with existing BPNL equipment, with no further funding for supplies or new equipment.

3.0 Reporting Requirements

a) Sample results are to be reported immediately upon completion to the on-site NRC or NMEID representative to assist in the evaluation of work in progress. Sample results should be documented giving sample description, date/time of collection and analysis, and radionuclide concentration. Soil and sediment samples should be reported in units of pCi/g (wet or dry weight), and water samples in pCi/l (total water).

b) Weekly analytical reports shall be provided to:

   (1) Mr. Ross Scarano, NMSS (3 copies)
   (2) Mr. Theodore Wolff, NMEID (1 copy)

c) The weekly analytical report should also contain the personnel time expenditures and costs for the week.

4.0 Period of Performance

The work specified herein shall commence on September 10, 1979, and continue no later than December 31, 1979.

5.0 Technical Direction

G. G. Eadie (FTS 427-4103) is designated the NMSS Project Manager (PM) for the purpose of assuring that the services required under this SOW are delivered in accordance herewith. All technical instructions to BPNL shall be issued through the NMSS PM. As used herein, technical instructions are those which provide details, suggest possible lines of inquiry, or otherwise complete the general scope of work set forth herein. Technical instruction shall not constitute new assignments of work or changes of such nature as to justify an adjustment in cost or period of performance. Direction for changes in cost or period of performance will be provided by the DOE Operations Office after receipt of an appropriate Standard Order for DOE Work (SOEW) (NRC Form 173) from the Director of the NMSS.

6.0 Special Requirements

NRC is required to report "actual cost" to process each application. Legal counsel has advised that actual cost must be determined from bills paid by NRC. Therefore, each periodic bill presented for payment to NRC must itemize billing cost by task.