WORK ASSIGNMENT
EP-D-10-042/SC&A
WA NO: 1-04

I. WORK ASSIGNMENT TITLE

Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings

II. WORK ASSIGNMENT MANAGER

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III. PERIOD OF PERFORMANCE

Date of Contracting Officer Approval through March 26, 2011

IV. BACKGROUND

The Office of Radiation and Indoor Air (ORIA) promulgated a National Emission Standard for a Hazardous Air Pollutant (NESHAP) for radon emissions from operating uranium mill tailings impoundments (Subpart W) on 12/15/1989. Subpart W includes two separate standards. First, existing sources must ensure emissions from tailings impoundments not exceed 20 pCi/m^2-sec of radon-222. Second, new sources must comply with the requirements for constructing one of two types of impoundment structures. Subpart W requires that existing sources file an annual report of the facility's emissions. Section 112(q) of the Clean Air Act, as amended (CAAA) requires EPA to review, and if appropriate, revise, this standard on a timely basis (10 year interval). The Agency has not reviewed this standard in the period allotted and now desires to do so.

V. PURPOSE

The purpose of this work assignment is to obtain contractor support for the revision of the risk assessment for the National Emission Standards for Radionuclides from uranium mill tailing facilities. These facilities include mill tailing operations, in situ leach mining facilities, and potentially heap leach facilities.. Specifically, the contractor will use their knowledge of these operational sites, and projections on potential future milling, in situ leach and heap leach mining sites to revise the risks that were conducted in the final environmental impact statements conducted for this portion of the NESHAPs standard only. Risk assessments will be conducted for all existing facilities required to meet the Subpart W provisions and the contractor will develop risk assessment scenarios for select representative future milling and mining operation sites. The information developed in this work assignment will be used by the Agency in the determination of whether the existing standards for Subpart W need revising, and, if so, what may represent reasonable revisions to the standard.

VI. SCOPE OF WORK

In meeting the requirements of this work assignment, the contractor shall be in a support role, and will not be involved in the development of EPA policy, nor in any other activity that is an "inherently governmental function."

Task 1: Prepare work plan and cost proposal. The contractor shall submit a work plan that details the contractor's approach for accomplishing the Work Assignment, including a schedule of deliverables, staffing plan (with statements of experience), estimated labor hours and a detailed cost proposal, with relevant ODCs, on a task by task basis. In developing the work plan, the contractor shall review the original risk assessment material (provided by EPA or available on the World Wide Web) used to make the risk standard determination, included in the final Environmental Impact Statement – NESHAPS for Radionuclides, Background Information Document – Volumes 1, 2, and 3 (EPA/520/1-89-005, EPA/520/1-89-006-1 & 2, and EPA/520/1-89-007 September 1989). The work plan shall identify those portions of the previous risk assessment that are applicable to Subpart W, and shall propose an approach for updating these portions.

Task 2: Prepare a Quality Assurance Project Plan and a Quality Assurance Report. The Contractor's QA Manager shall prepare a brief Quality Assurance Project Plan (QAPP) that will include:

1. Two reviews of the deliverables listed in tasks 4 and 5 to determine the reliability of the information provided in the two reports.
2. A QA appendix will be attached to each report from task 4 and task 5 which documents the verification activities performed by the contractor's QA organization.

The QAPP must be approved by the Contractor's QA Manager before any work can begin on task 4. The QAPP must be approved by the EPA WAM and EPA QA Coordinator.

The QA Report shall include all required reviews to make the product meet Agency QA standards.

Task 3: Risk Assessment Model. The final EIS uses AIRDOS to calculate dose and risk to the public. The contractor shall review the appropriateness of using AIRDOS to calculate individual and population dose and risk. The contractor shall also use their knowledge of existing models to determine if other models exist for calculating dose and risk from the management of uranium byproduct materials from the processing of uranium ores. The contractor will provide a recommendation to the WAM on the best model for use in presenting findings on individual and population dose and risk. This task shall be completed prior to proceeding with Task 4.

Task 4: Detailed Risk Estimates. The contractor shall develop detailed risk estimates for each source of emission regulated by Subpart W from the management of uranium byproduct

materials from the processing of uranium ores. These estimates were presented on a facility-by-facility basis in the 1989 EIS, and they shall be conducted in the same format for this analysis. In addition to existing facilities, the contractor shall identify two or three representative facilities that shall be used to approximate conditions of new facilities. This shall be done to accommodate the recognition that several new processing facilities are expected to apply for licenses in the near future. The contractor shall develop revised text that address the following topics: (1) the source category, the processes that result in the releases of radionuclides into the environment, and existing controls, (2) the bases for the risk estimate, including reported emissions, source terms used, and other site parameters relevant to the dose assessment, (3) the results of the dose and risk calculation, along with an extrapolation to the entire category, and (4) a description of supplementary emissions controls and their cost and effectiveness in reducing dose and risk. Also included in this report, the contractor shall provide the inputs for each calculation and the methodology used to calculate the costs and effectiveness of earthen covers to control radon emissions from area sources. The results shall be included in a report along with a detailed explanation of the scenario and the basis of all parameters included in the analysis.

Task 5: Radon Emissions from Evaporation Ponds – The contractor shall develop a scenario to bound radon emissions from evaporation/settling ponds in a worst case scenario. This bounding emission calculation shall be based on the highest concentrations of contaminants in the ponds and shall model upset conditions which include reasonable time periods for turbulent flow conditions. The results shall be included in a report along with a detailed explanation of the scenario and the basis of all parameters included in the analysis.

VII. SCHEDULE AND DELIVERABLES

TASK NO:	DELIVERABLE	DUE DATE
Task 1:	Work Plan	Within 20 days after receipt of Work Assignment
Task 2:	QAPP QA Report	Within 10 days after work plan approval No later than February 28, 2011
Task 3:	Draft Risk Assessment Model Report	No later than 30 days after work plan approval
Task 4:	Draft Report on Detailed Risk Estimates	No later than 90 days after work plan approval
Task 5:	Draft Report on Emissions from Ponds	No later than 120 days after work plan approval

The contractor shall provide two hard copies of all deliverables and an IBM PC compatible compact disk (CD) copy in Microsoft Word 2003 to the Work Assignment Manager.

The Work Assignment Manager (WAM) is authorized to provide technical direction which clarifies the statement of work as set forth in this work assignment. Technical direction will be issued in writing or confirmed in writing, by the WAM, within five (5) calendar days after verbal issuance.

The WAM will forward a copy of the technical direction memorandum to the Contracting Officer and a copy to the Project Officer. Technical direction must be within the contract **and** the work assignment statement of work. Technical direction includes (1) direction to the contractor which assists the contractor in accomplishing the Statement of Work and (2) comments on and approval of reports and other deliverables.