

STATEMENT OF WORK

Exposure Assessments for Toxic Substances

BACKGROUND

The purpose of this requirement is to provide for the performance of exposure assessments, utilizing existing procedures, and for the development of relevant information necessary for EPA to develop new exposure assessment procedures in order to fulfill the requirements of the Toxic Substance Control Act (TSCA), the Pollution Prevention Act, and any Executive Order or other legislative requirements made of the Office of Pollution Prevention and Toxics (OPPT). This requirement also provides support for the performance of exposure assessments and support for the development of new exposure assessment procedures to other Agency offices under other statutes. Simply stated, an exposure assessment is the combination of data on the source, location, and characteristics of the chemical or biological agent with information on the location and habits of populations. An exposure assessment developed to support OPPT activities may range from a streamlined, integrated process for ranking and prioritizing chemical and biological agents on the basis of relative risk to a very comprehensive, complex and detailed analysis. It may include the development and refinement of models which are then used to predict exposure of defined populations to a variety of chemicals. It may require monitoring studies to collect much-needed field data to define exposure with more certainty. It involves the constant study and search for information on the fate and transport properties of chemicals and their physical, chemical and biological properties.

OBJECTIVES

The contractor shall submit a quality assurance project plan to EPA for approval for any work assignments involving environmental activities.

(A) When exposure assessments are developed, EPA and/or OPPT exposure and risk assessment policies and practices must be followed, and the assessment must be tailored to the particular needs of the EPA. The results of the assessment, including all assumptions made and limitations of the assessment, references used, populations and exposure scenarios included within the assessment, and recommendations based on the assessment must be clearly communicated within the report. To fulfill this requirement, the contractor shall: develop the assessment in accordance with established exposure and risk assessment methods and peer review procedures, provide information and documentation to support the assessment, and tailor the assessment to the specific needs of the EPA. The assessment shall include reasonable assumptions and be based on scientifically sound methods which shall be consistent with similar assessments where possible and shall be based on current and reliable data and information. The report shall be developed using plain language where possible.

B) When models are used to predict exposure, assumptions are often needed to define the scenario to be modeled and data are needed to characterize the scenario and the chemical or biological agent of interest. The more credible the assumptions and the more complete and current the supporting data, the better the exposure assessment. Consequently, to fulfill this requirement the contractor shall: provide information to the Government sufficient to support these modeling exercises, and shall refine and update analytical tools necessary to accomplish this objective. Electronic deliverables shall be Section 508 compliant unless EPA determines that Section 508 compliance will create an undue burden on the Agency. The requirement for compliance will be determined through the standard work assignment process.

(C) When monitoring or laboratory studies are required, the contractor shall follow EPA and/or OPPT procedures to develop a sampling plan. The contractor shall make all necessary arrangements to assure the success of the monitoring study.

SCOPE OF WORK

The contractor shall provide information to the Government sufficient to support the development of exposure assessments for situations that are not necessarily specific to any one chemical. This involves the development of innovative and creative procedures to assess exposure to clusters of chemicals, chemicals contained in marketable products and genetically engineered microorganisms defined to be chemicals for the purposes of the Toxic Substance Control Act. Further, the contractor shall provide assessments either for existing chemicals where the values obtained are estimates of actual exposure or for new chemicals (or projected changes in production/use/disposal patterns of existing chemicals), where the values obtained are estimates of potential future exposures. In support of assessments, the contractor shall prepare technical materials, provide technical representation, and compile technical proceedings for meetings and conferences.

DELINEATION OF CONTRACTOR TASKS

The contractor shall perform work on a work assignment basis.

TASK 1. The contractor shall complete work assignments requiring identification of the human and nonhuman populations exposed to chemicals, products containing chemicals, genetically engineered microorganisms and micro biocides under scrutiny by the Office of Prevention, Pesticides and Toxic Substances and shall describe and quantify these exposures. This exposure assessment report shall include an evaluation of the chemical's distribution in the environment through application of materials balance techniques (e.g., tracking the chemical through production, use, transportation, spills and emissions from point and nonpoint sources). In assessing exposure, the contractor shall for each chemical or predefined cluster of chemicals, identify its environmental transport and transformation (fate); its actual or potential presences in air, land, water, sediment, food, drinking water, sludge, marketable products or indoor air. The contractor shall use monitoring data or techniques or prediction tools to accomplish this. The contractor shall estimate the number and distribution of individuals potentially or actually exposed. Finally, the contractor shall submit a report that details all data, assumptions and results.

TASK 2. The contractor shall conduct literature searches, compile and assimilate research findings into current exposure assessment methodologies, collect information necessary to develop scenarios by which EPA will assess exposure (for the various types of exposure assessments conducted by the Agency), collect data through monitoring or laboratory studies and conduct modeling activities, resulting in a report which EPA will utilize to conduct exposure assessments. The contractor shall develop all or part of the following information: pertinent physical, chemical, toxicological, biological and fate properties of chemicals; the environmental materials balance of chemicals; monitoring data; laboratory data; estimates of concentrations of chemicals in air, land, water, ground water, sediment, food, drinking water, sludge, marketable products or indoor air; environmental pathways for chemical; population studies; exposure factors to be used in calculating exposures, especially for those populations that may have exposures different from those of the general population; human activity patterns; estimates of chemical concentrations discharged from industrial facilities, publicly-owned treatment works, households, consumer products, building materials, hazardous

waste sites and nonpoint sources of pollution.

TASK 3. The contractor shall identify, compile and develop case studies and informational materials illustrating how actions taken by EPA and others have reduced exposure to chemicals or clusters of chemicals. In particular, these case studies shall reflect pollution prevention activities and those made within the framework of the Design for the Environment program.

TASK 4. In support of tasks 1, 2, and 3, the contractor shall prepare technical materials, shall provide technical representation, and shall compile technical proceedings for meetings and conferences, as needed. The required services shall be ordered through the standard work assignment process. When attending meetings or conferences, contractor employees shall be required to wear name tags which clearly identify their names and the companies they represent. They shall also verbally identify themselves and the companies they represent before meetings begin.