

Qualifications Matrix
Candidates for Peer Review - Radionuclide BPRG Calculator
U.S. EPA Draft
February 16, 2006

Candidate ID	Expertise in radiological risk assessment	Expertise in building risk assessment and familiarity with WTC risk model	Other expertise in exposure, dose-response, and/or risk assessment (non-rad)	National recognition and peer review experience	Affiliation and general perspective	Education and Years of Professional Experience
Candidate A	<p>Site/field experience: Prepared baseline and screening level human health risk assessments involving low-level radioactive waste for remedial investigation, treatability evaluation, and corrective action investigation at DOE installation.</p>	<p>Site/field experience: Evaluated indoor surface pesticide residues, developed a risk-based approach for determining PRGs and cleanup standards, and evaluated acceptable residual pesticide concentrations in support of litigation for private client</p>	<p>Site/field experience: Prepared human health risk assessments and/or provided risk assessment review and support for four DoD facilities. Provided baseline human health risk assessment for one waste site. Provided risk and exposure modeling services in support of litigation for four private clients (not EPA, DOE, and DoD) in addition to above.</p>	Leadership role in Society for Risk Analysis	Consultant to DOE and private clients; former employee of DOE lab; ongoing academic affiliation	Ph.D., Biochemistry (20 years prof. experience)
	<p>Other experience: Team member of the DOE-sponsored consortium to evaluate risks and risk management options at DOE facilities complex. Team member of council responsible for integration, identification, and evaluation of risk assessment issues DOE facilities.</p>	---	<p>Other experience: Provided toxicological review support and assistance in selection of external peer reviewers in support of EPA Integrated Risk Information System (IRIS) program</p>			
Candidate B	<p>Site/field experience: Conducted NRC license reviews and inspected licensee facilities, including hospitals, universities, military applications, radiography, and uranium recovery facilities.</p>	---	---	NRC representative to the IAEA's Biosphere Modeling and Assessment Methods (BIOMASS) program.	Employee of NRC	B.S., Nuclear Engineering (15 years prof. experience)
	<p>Other experience: Reviewed EPA analyses and programs such as the radionuclides calculator for soil, MEPAS, RESRAD, and other generally used programs. Conducted biosphere modeling for high-level waste disposal, low-level waste disposal, decommissioning activities, and uranium recovery wastewater disposal operations. Technical reviewer for operational health physics.</p>	---	---			
Candidate C	Eliminated based on potential COI					
Candidate D	<p>Site/field experience: Science advisor for toxicologic review and dose reconstruction project to evaluate the possible offsite health impacts of radionuclide and chemical emissions from the Rocky Flats Nuclear Weapons Facility.</p>	<p>Site/field experience: Conducted analysis of how to determine whether WTC dust had entered an office building and possible associated health risks; conducted three risk analyses associated with residential exposure to hazardous substances in buildings; conducted at least eight additional risk and/or epidemiological analyses associated with occupational exposure to hazardous substances in building environments.</p>	<p>Site/field experience: Conducted, oversaw, and/or provided advisory services for risk assessments associated with over 40 sites/facilities and/or regional contamination issues, including NPL sites</p>	In addition to panels identified in columns A and B, served on at least 24 national, state, or international advisory panels and/or peer review panels addressing environmental toxicology and public health issues.	Consultant to EPA, DOE, and private clients, including parties regulated under CERCLA	Ph.D., Environmental Toxicology (32 years prof. experience)
	<p>Other experience: Charter member of Scientific Committee of the National Council on Radiation Protection (NCRP); selected member of DOE Science Panel charged with evaluating the radiological and chemical hazards posed by the storage of the nuclear submarines in the former USSR; served on International Atomic Energy Commission to identify an international approach to classify hazardous wastes; participated in EPA SAB hearings on radionuclide emissions from phosphorous processing facilities and participated in development of risk assessment used to develop proposed rule; conducted original research to determine radon emanation rate from building materials and performed risk assessment that considered the resulting airborne radon concentration in typical homes, as well as background.</p>	<p>Other experience: Served as an expert on EPA Oversight Panel on World Trade Center; member of EPA-sponsored Science Advisory Panel to address the risks of dusts in buildings near the World Trade Center; conducted two risk analyses associated with residential exposure to non-radioactive hazardous substances in equipment or building materials; conducted at least 13 risk analyses of occupational exposures to specific equipment, settings, or job functions in building environments.</p>	<p>Other experience: Conducted at least seven risk analyses of occupational exposures to specific equipment, settings, or job functions in non-building environments. Conducted risk assessments, toxicological/exposure-related analyses, epidemiological studies, hazard analyses of materials and settings, and evaluation of emissions, deposition, discharges, and land/pest management for approximately 30 projects. Activities conducted in context of regulatory standards, methods, planning/facility siting, and health assessment.</p>			

Candidate E	Site/field experience: Prepared verification test plans for the decontamination and decommissioning (D&D) of a plutonium processing facility.	Site/field experience: Conducted study of environmental impact of the collapse of the World Trade Center on the adjacent residential structures; consultant regarding biocidal treatment of anthrax endospores in Senate office building ventilation systems; conducted and/or directed hundreds of indoor environmental quality investigations in office buildings, schools, hospitals, and residential structures involving microbiological contaminants and chemical toxins; conducted over 200 health hazard evaluations for NIOSH addressing occupational hazards in the workplaces, including office buildings, schools, electronics manufacturing, chemical manufacturing and production, ferrous and nonferrous metal production, machining, and fabrication, automobile and aircraft component manufacturing, paint manufacturing, and electrical transformer maintenance; NIOSH principal investigator on 15 incidents involving the assessment of PCBs, dioxin, and furan contamination in buildings resulting from fires and failures involving PCB-containing electrical equipment.	Site/field experience: Evaluated fugitive emissions of asbestos fibers during the demolition of asbestos-containing orphaned buildings; developed QAPP to assess the potential release of asbestos fibers from quarrying operations; provided comprehensive occupational and environmental assessments as project manager on multi-year contract with USAF; served on the US Navy expert advisory panel regarding the assessment and remediation of PCB, PCDD, and PCDF contamination at the Naval Air Base in Norfolk, VA.	Refer to column C.	Consultant to EPA, DoD, other public agencies, and private parties; former employee of NIOSH	M.S., Industrial Hygiene (33 years prof. experience)
	---	Other experience: Served on four expert panels associated with WTC disaster, including review EPA's plan for the assessment and remediation of indoor air quality in lower Manhattan, peer review of <i>Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks</i> document, scientific input regarding the applicability of using asbestos as a surrogate to determine the risk by residents around the WTC, and review of NCEA document, <i>Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster</i> ; served on EPA-appointed panel regarding vermiculite attic insulation (VAI) sampling and analysis method development for assessment of asbestos in homes; designed and conducted more than 15 research projects concerning asbestos exposure, including evaluation of exposure from resilient flooring and carpet during floor care maintenance procedures; conducted studies to assess worker and consumer exposures to volatile components of polyvinyl acetate (PVA) emulsion paint.	Other experience: Designed and conducted research projects to evaluate fugitive emissions of asbestos fibers during the demolition of asbestos-containing earthquake damaged buildings; conducted feasibility assessments for occupational health studies of suspect carcinogenic chemicals; designed industry-wide study to assess occupational exposures to petroleum asphalt and petroleum asphalt fumes during road paving;			
Candidate F	Site/field experience: Previously conducted risk assessments related to mixed and radioactive wastes for clients, including DOE.	---	Site/field experience: Reviewed, critiqued, and approved human health and ecological risk assessments at least 36 military facilities, other hazardous waste sites, and permitted facilities in California; previously conducted risk assessments associated with chemical wastes for clients in the public and private sectors.	Panel member for joint EPA-ACC Voluntary Children's Chemical Evaluation Program; member of expert panel reviewing health effects of non-lethal weapons for DoD and DOJ; peer reviewer for ACC proposals on methods of assessing cumulative risk for chemical mixtures; peer reviewer of TERA-produced toxicity criteria for 18 hazardous substances.	Employee of California EPA Department of Toxic Substances Control; former work as private sector consultant for EPA, DOE, DoD, and industrial clients	Ph.D., Biological Science (27 years prof. experience)
	---	Other experience: Panel member reviewing USEPA's evaluation of chemicals of potential concern for indoor air following the attack on the World Trade Center; Departmental expert on modeling of blood lead from environmental exposures, including exposure via dietary intake, drinking water, soil and dust ingestion, inhalation, and dermal contact.	Other experience: Departmental expert on ambient concentrations of metals in CA soils; construct multi-pathway risk assessment to identify numerical criteria for classifying hazardous levels of metals and organic chemicals in waste; principal author or reviewer for 17 statewide allowable exposure criteria for evaluating risk at hazardous waste sites.			

Candidate G	<p><u>Site/field experience:</u> Project director of dose reconstruction projects for Los Alamos National Laboratory, Oak Ridge Reservation, and Rocky Flats Plant, including activities to assess risks from radioactive and chemical releases and contamination; evaluated impacts to properties from effluent and sludge from a former nuclear laundry; evaluated human health and ecological risks associated with former radioactive waste disposal site; consulted regarding radiological conditions and development/conversion associated with former Hunters Point Shipyard, Treasure Island Naval Station, and McClellan Air Force Base; assessed risk associated chemical and radionuclide contamination at 2,700-acre aeronautics, nuclear, and general research facility.</p>	---	<p><u>Site/field experience:</u> See column B (some work addresses exposures to non-radioactive substances)</p>	<p>Worked closely representatives of CDC, state health departments of Colorado, Tennessee, and New Mexico, IAEA, NRC, and DOE; has presented summaries of dose reconstruction methods and results before scientific and technical societies, and has published in peer-reviewed journals such as Health Physics.</p>	<p>Consultant to public and private sector clients</p>	<p>M.S., Health Physics/Occupational Health (25 years prof. experience)</p>
	<p><u>Other experience:</u> Assists in evaluation of worker claims filed under program that compensates workers associated with U.S. nuclear weapons complex; assists landfill operator in implementation of procedures to ensure that radioactive materials are not received that would violate permits or result in unacceptable public or worker exposures; created and operated radioactivity measurement laboratory; prepared a source book of hazard analyses for commonly licensed radionuclides and uranium fuel cycle compounds; performed radiological surveillance and assisted with radioactive waste management programs for university labs; participated on project group contracted to prepare a technical support document on waste classification for DOE National Low-Level Waste Strategy Document.</p>	<p><u>Other experience:</u> see column B (some work includes assessment of occupational exposures)</p>	---			
Candidate H	---	---	<p><u>Site/field experience:</u> Directed technical research and development efforts related to munitions and explosives of concern (MEC) and unexploded ordnance (UXO), conducting data evaluations, completing exposure/toxicity/risk assessments, and carrying out risk calculations; completed quantitative human health risk assessments.</p>	---	<p>Consultant with DoD and other clients; former employee of Oak Ridge National Lab</p>	<p>M.S., Environmental Science and Management (15 years prof. experience)</p>
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Candidate I	<p><u>Site/field experience:</u> Managed independent verification surveys at NRC and DOE sites; planned environmental radiological surveys, supervised teams of health physics technicians that performed radiological surveys, and evaluated data relative to regulatory criteria; previously project manager/health physicist for D&D projects encompassing all aspects of operational health physics; as former employee of DOE plant and lab, responsible for tritium effluent sampling, internal and external dosimetry program, and decommissioning tritium process equipment, whole-body counting mission, failed-fuel detection program for medical research reactor, environmental pathway analysis for dose assessment from air and water effluent and stack sampling accelerator effluent.</p>	<p><u>Other experience:</u> see column B (some work includes assessment of occupational exposures)</p>	---	<p>Member of Health Physics Society Board of Directors.</p>	<p>Employee of Oak Ridge Institute for Science and Education, a DOE Institute</p>	<p>M.S., Radiological Sciences and Protection (15 years prof. experience)</p>

	<p><u>Other experience:</u> Program Director for Oak Ridge Institute for Science and Education's Radiological Safety, Assessment, and Training (RSAT) program, which performs radiological surveys for the DOE and NRC to provide independent verification of building and land area remediation; provided technical assistance for survey protocols, supported guidance, and provided training; provided technical assistance to NRC and DOE in various aspects of decommissioning survey protocols and instrumentation, including contributions to the preparation of the Multiagency Radiation Survey and Site Investigation Manual.</p>	---	---			
Candidate J	<p><u>Site/field experience:</u> Performed and reviewed health risk assessments, radiological dose calculations, soil cleanup criteria derivation, radionuclide transport modeling, and radionuclide leaching studies; provided and applied mathematical models, analytical methodology, computational tools, and database for <u>radiological impact assessments.</u></p>	---	---	<p>Program Manager with Argonne National Lab, representing DOE in multi-agency and international initiatives; author or co-author of more than 200 publications, including 22 journal articles, 3 book chapters, and more than 170 reports.</p>	<p>Employee of Argonne National Lab</p>	<p>Ph.D., Nuclear Engineering (22 years prof. experience)</p>
	<p><u>Other experience:</u> Manager of Argonne National Laboratory's RESRAD program, managing a computer model designed to estimate radiation doses and risks from residual radioactive materials; developed RESRAD family of codes; managed derivation of radiological dispersion device operational guidelines for consequence management, working with multiple agencies and DOE's Federal Radiological Monitoring and Assessment Center; managed project to model transport of radionuclides from sewage sludge to the environment, working with interagency steering committee on radiation standards, including DOE, EPA, and NRC; developed a general nuclide transport model to predict radionuclide migration in geologic media under saturated/unsaturated and homogeneous/fractured conditions.</p>	---	---			