

TITLE: EMERGENCY CONSEQUENCE ASSESSMENT TOOL (ECAT)

CHARGE QUESTIONS

1. We developed the ECAT prototype to meet the needs of three types of users with different backgrounds and informational needs: (1) risk assessors/health advisors, (2) on-scene responders, and (3) risk managers/decision-makers. Do you believe that ECAT prototype adequately meets the needs of these users? Do you believe that an expanded version of ECAT should attempt to meet the needs of all these potential users or should it focus on a subset of potential users? Or a new group of potential users?
2. The ECAT prototype takes an all-hazards approach using readily available published data (from EPA, CDC, NAS, etc). The ECAT prototype includes agents and scenarios that include toxic industrial chemicals, chemical warfare agents, biological agents, biological disease, floodwater contaminants, and radiological agents. The all-hazards approach of the prototype was intended to test the versatility of ECAT. Do you believe that this broad, all-hazards scope is appropriate? Do you believe that ECAT can adequately handle such diverse types of hazards? Are there any hazards that you believe should be either eliminated or added to the next version of ECAT?
3. The ECAT prototype was designed using seven guiding principles: (1) organize information by the risk paradigm, (2) organize information by scenarios and agents, (3) utilize the best information that is currently available, (4) be transparent with sources of information, (5) keep things simple wherever feasible, (6) make the prototype broadly applicable, and (7) develop ECAT in three stages - build the prototype, evaluate the prototype, then build the expanded version. Are these principles appropriate? Does the ECAT prototype remain sufficiently true to them?
4. Our intent in designing the ECAT prototype was to make it broadly applicable many types of emergencies by including: (1) natural catastrophes in addition to terrorist attack scenarios, (2) chemical, biological, and radiological agents, (3) indoor and outdoor releases of agents, (4) information addressing risk assessment, risk management, and (to a lesser extent) risk communication. Do you believe that this broad scope is appropriate?
5. The ECAT prototype attempts to handle scientific uncertainties and limitations by presenting the most currently available data and methods even though they might not be formally endorsed. Is this appropriate for the emergency situations where ECAT would be used? Is there adequate transparency describing the sources and limitations of information?

6. The ECAT prototype uses several types of exposure models. The dirty bomb scenario uses the Hotspot model for estimating radiation dose from emersion in the cesium cloud, inhalation, and groundshine. The indoor air/subway car air model was developed in-house by Tetra Tech EMI and makes simple calculations assuming a well mixed system and simple diffusion/decay solutions. The indoor and outdoor stadium models are handled by the SLAB atmospheric dispersion model, which estimates exposure point concentration of denser-than-air contaminants along a gradient. The water model is an in-house model developed by Tetra Tech EMI that uses a simple triangular distribution method to route the agent across each of the model components (river, water treatment plant, clearwells, dedicated storage and distribution system). Because ECAT is to be used as a screening tool, these models are versatile yet relatively simple in comparison to other models. Given that the real-world emergencies that ECAT is designed to address, are these models used appropriately?
7. We intend to make ECAT available to federal, state, and local officials as well as consultants and contractors. Although the ECAT prototype does not contain any classified or restricted information, we may consider developing a version that does. Do you have any opinions or suggestions about access to ECAT?
8. Is the ECAT prototype sufficiently user-friendly? Will it be understandable during the stress and confusion of an emergency? Is the User Manual adequate? Are the simulation exercises helpful? What features are particularly useful? What needs to be improved?
9. Do you have any other recommendations related to the ECAT prototype and its future development?