



Ask Dr. ALOHA: Using CAMEO tools for RMP and EPCRA Hazard Analyses

If you're required to perform hazard analyses under the Risk Management Planning (RMP) rule or the Emergency Planning and Community Right-to-Know Act (EPCRA), then you can use some of the tools in the [CAMEO suite](#) to help you assess what might happen if a significant chemical release occurred.

- **For RMP**, you can use either [RMP*Comp](#) or [ALOHA](#).
- **For EPCRA**, you can use [CAMEO's](#) Screening & Scenarios module.

Note: Of these three software tools, you should only use ALOHA for emergency response.

The Risk Management Planning rule

The RMP rule implements Section 112(r) of the 1990 Clean Air Act. A chemical facility is subject to the rule if there is more than a threshold quantity of a regulated substance in any process at the facility. These regulated substances include toxic substances, flammable gases, volatile liquids, and high explosives.

If you're subject to the rule, you need to perform at least one hazard analysis to check whether your chemical process puts nearby populations at risk. The [RMP guidance document](#) describes the procedures for estimating the distance to endpoint that is required in the hazard analysis. You can either use the equations specified in the guidance or a model that meets the requirements listed in the guidance (even if it uses different equations).

Two tools in the CAMEO suite can be used for RMP hazard analyses:

- **RMP*Comp:** Simple tool that steps you through a short list of questions about the regulated substance (such as the amount released) and implements the procedures exactly as specified in the RMP guidance.
- **ALOHA:** More complex emergency response and planning tool. Note that ALOHA requires more scenario information than the RMP guidance does and that you may not be able to use ALOHA for some large releases. The next two sections in this series go step-by-step through the process of using ALOHA to generate the required output for the [worst-case](#) and [alternative analyses](#) for a fictional water treatment plant.

The Emergency Planning and Community Right-to-Know Act

EPCRA requires community planners to perform hazard analyses for local chemical facilities of note or those that have regulated chemicals onsite in quantities greater than the relevant threshold planning quantities. The "[Green Book](#)" provides step-by-step guidance for performing EPCRA hazard analyses.

Developed in 1987, the Green Book method uses simple calculations to estimate the size of the area around a chemical facility or along a transportation route that could be affected by an accidental chemical release. This area may be called a threat zone, vulnerable zone, or screening zone. Planners can use this to quickly determine the relative hazards of chemicals stored in their community. Once the worst hazards are identified, planners may analyze those locations more thoroughly.

Only one tool in the CAMEO suite can be used for EPCRA hazard analyses: CAMEO's Screening & Scenarios module. This module automates the Green Book procedures exactly, just as RMP*Comp implements the RMP guidance. CAMEO's Screening & Scenarios module is essentially a calculator that estimates the radius of a circular threat zone based on a few conditions you enter to describe an accidental chemical release.

Note: You cannot use ALOHA to complete your EPCRA hazard analyses, because you must use the exact equations specified in the Green Book. Although the Green Book scenario requirements may look similar to some of ALOHA's, you'll find that their threat distance estimates are often quite different because they use different equations. The third section in this series describes some of the key **differences between ALOHA and the Green Book** methods.

For More Information

- ALOHA: <http://response.restoration.noaa.gov/aloha>
- ALOHA Tools: <http://response.restoration.noaa.gov/alohatools>
- Ask Dr. ALOHA Articles: <http://www.response.restoration.noaa.gov/ADA/overview>
- Ask Dr. ALOHA - Using ALOHA to Perform an RMP Alternative Consequence Analysis: <http://response.restoration.noaa.gov/ADA/RMPalternative>
- Ask Dr. ALOHA - Using ALOHA to Perform an RMP Worst-Case Consequence Analysis: <http://response.restoration.noaa.gov/ADA/RMPworstcase>
- Ask Dr. ALOHA - Why is ALOHA Different from the Green Book? <http://response.restoration.noaa.gov/ADA/GreenBook>
- CAMEO: <http://response.restoration.noaa.gov/cameo>
- CAMEO Suite: <http://response.restoration.noaa.gov/cameosuite>
- EPCRA Overview: <http://www.epa.gov/OEM/content/epcra/index.htm>
- Green Book (PDF): <http://www.epa.gov/emergencies/docs/chem/tech.pdf>
- Risk Management Plan Guidance: http://www.epa.gov/emergencies/content/rmp/rmp_guidance.htm#OCA
- Risk Management Plan Overview: <http://www.epa.gov/emergencies/content/rmp/index.htm>
- Risk Management Plan Resources: <http://www.epa.gov/emergencies/guidance.htm#rmp>
- RMP*Comp: <http://response.restoration.noaa.gov/rmpcomp>

Technical Guidance for Hazards Analysis

Emergency Planning for
Extremely Hazardous Substances

U. S. Environmental Protection Agency
Federal Emergency Management Agency
U. S. Department of Transportation
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Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances quickly became known as the Green Book, a reference to the color of the book's cover.