

## RELATED TERMS

- Pre-Plan
- Target Folder
- Target Hazard Site



**Lessons Learned  
Information Sharing**  
www.LLIS.gov

## PRIMARY DISCIPLINES

- Emergency Management
- Occupational Safety and Health

# RESOURCE GUIDE

## Risk Assessment: Chemical and Nuclear Facilities

### DESCRIPTION

As they contain especially dangerous materials, chemical and nuclear facilities require extensive safety and security measures to ensure their protection. Proper evaluation of the risks to these facilities is an essential aspect of any effort to safeguard them against the threat of terrorism. For that purpose, the guides listed below offer different methodologies and tools for assessing risks to and from chemical and nuclear facilities.

### RESOURCES

#### ***Chemical Tools and Software***

#### **Federal Government**

[Department of Justice:](#)

[Office of Justice Programs:](#)

**[Method to Assess the Vulnerability of Chemical Facilities:](#)** This site contains the Department of Justice's official chemical facility vulnerability assessment methodology. This methodology identifies and assesses potential security threats, risks, and vulnerabilities and guides the chemical facility industry in making security improvements. ([LLIS.gov ID# 12737](#))

[Environmental Protection Agency \(EPA\):](#)

**[Computer-Aided Management of Emergency Operations \(CAMEO\):](#)** This contains information concerning the EPA's chemical emergency planning software tool. CAMEO gives first responders specific guidance on performing a safe response depending on the type of chemical involved in the emergency.

<http://www.epa.gov/ceppo/cameo>

**[Risk Management Plan \(RMP\) Computer Modeling Program:](#)** This free, downloadable program contains the EPA's offsite consequence analysis program for chemical facilities, which helps chemical facility operators perform the assessment required under the Risk Management Planning Rule of the 1990 Clean Air Act.

<http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/rmp-comp.htm>

**[Assorted Databases and Software:](#)** This site contains software tools and programs designed by private companies to assist chemical manufacturers in performing risk analysis and in preparing and submitting the results of that analysis to federal and state regulators.

<http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/ds-noep.htm>

**RMP Review Tool**: This is a free software program designed by the EPA for reviewing and analyzing Risk Management Plans (RMPs) submitted under the Clean Air Act, Section 112. The program can be downloaded from this website.

[http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/rmp\\_review.htm](http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/rmp_review.htm)

**RMP Submit Tool**: This free, EPA computer software is for facilities to use in submitting chemical Risk Management Plans (RMP) required under the Risk Management Program. Where the RMP Review program conducts the analysis, RMP Submit prepares that analysis for submission to the EPA.

<http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/ap-rmsb.htm>

**Tier II Chemical Inventory Reports**: EPA has developed a software program to help facilities prepare an electronic chemical inventory report. Any facility covered by the Emergency Planning and Community Right to Know Act (EPCRA) may use this software to submit the required annual emergency and hazardous chemical inventory form to state and local emergency planners and the local fire department.

<http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/tier2.htm>

## ***Nuclear/Radiological Tools and Software***

### **Federal Government**

#### Department of Energy (DOE):

**Center for Risk Excellence Tools/Methods**: DOE has produced a series of tools that are useful in evaluating dose levels from toxic or radiological substances.

[http://risk.lsd.ornl.gov/cre\\_tools.shtml](http://risk.lsd.ornl.gov/cre_tools.shtml)

#### Environmental Protection Agency (EPA):

**PRESTO (Prediction of Radiological Effects Due to Shallow Trench Operations)**: This is a computer model, created by the EPA, for evaluating radiation exposure from contaminated soil layers, including waste disposal, soil cleanup, agricultural land application, and land reclamation. The PRESTO program can be downloaded from the website.

<http://www.epa.gov/radiation/assessment/presto.html>

**Radiation Risk Assessment Software: CAP88 PC**: This computer software system may be used for calculating dose and risk from annual average releases of radionuclide to the air. The program is designed by the EPA to aid in compliance with federal radiation regulatory standards.

<http://www.epa.gov/radiation/assessment/CAP88/index.html>

#### National Laboratories:

##### Sandia National Laboratories:

**Risk Assessment Methodology for Disposal of Low-Level Radioactive Waste**: Sandia is developing this methodology for use in evaluating the post-closure performance of near-surface facilities for the disposal of low-level radioactive waste. Contact information and an outline of future progress on the methodology are provided.

<http://www.sandia.gov/E&E/risk/envir6.html>

**DISCLAIMER**

*Lessons Learned Information Sharing (LLIS.gov)* is the US Department of Homeland Security/Federal Emergency Management Agency's national online network of lessons learned, best practices, and innovative ideas for the emergency response and homeland security communities. The Web site and its contents are provided for informational purposes only, without warranty or guarantee of any kind, and do not represent the official positions of the US Department of Homeland Security. For more information on *LLIS.gov*, please email [Feedback@llis.dhs.gov](mailto:Feedback@llis.dhs.gov) or visit [www.llis.gov](http://www.llis.gov).