



## Hazardous Material Technology for Rail Planning and Decision Making

A rail incident, whether it is freight or passenger, is a low frequency / high impact event that can overwhelm a municipality. Even though rail resources will be dispatched, local first responders will be the first on the scene and will be responsible to manage the incident until other assets arrive. To help with local preparation, we've summarized **ten** free technologies and their links for you to download, request and use for your incident planning and decision making.

### 2016 Emergency Response Guidebook (ERG) and App

First responders refer to this guide as the ERG; it's a go-to manual to help manage hazardous material incidents for the first 15 minutes to an hour. It's compiled by DOT/PHMSA and distributed federally to the states to the local jurisdictions. Every jurisdiction should have an ERG in every vehicle that responds to incidents. The book is updated every four years; 2016 is the most current edition. It's available for PDF download and as a free, mobile web app from the Apple iTunes store (iPhones) and the Google Play website (Android devices). For further information, visit [www.phmsa.dot.gov/hazmat/erg-mobile-app](http://www.phmsa.dot.gov/hazmat/erg-mobile-app). Source: U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA)

### WISER

The Wireless Information System for Emergency Responders (WISER) is a system designed to assist emergency responders in hazardous material incidents. WISER provides a wide range of information on hazardous substances, including substance identification support, physical characteristics, human health information, and containment and suppression advice. WISER is a product of the U.S. National Institute of Health (NIH) and is available for download as a standalone application on Microsoft Windows PC, Apple iPhone and iPads, Google Android and BlackBerry devices. WISER download information can be found at [www.wiser.nlm.nih.gov](http://www.wiser.nlm.nih.gov).

### CAMEO Chemical Database

The Computer-Aided Management of Emergency Operations (CAMEO) was developed by the U.S. Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA). CAMEO is one of three software applications designed to work together as a suite. CAMEO is a system of software applications used to plan for and respond to chemical/hazardous materials emergencies and to assist first responders (private industry/emergency management/first responders [fire/police/EMS]). CAMEO can assist, store, and evaluate information critical for developing emergency plans. CAMEO also supports regulatory compliance by helping users meet the chemical inventory reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA, also known as Superfund Amendments and Reauthorization Act (SARA) Title III). For additional CAMEO details including download information go to [www.epa.gov/cameo](http://www.epa.gov/cameo).

### ALOHA Software

Areal Locations of Hazardous Atmospheres (ALOHA) is the hazard modeling software program for the CAMEO software suite, which is used widely to plan for and respond to chemical/hazardous materials emergencies. Details about a real or potential chemical/hazardous materials release can be entered into ALOHA and it will generate threat zone estimates for various types of hazards. ALOHA can model toxic

gas clouds, flammable gas clouds, BLEVEs (Boiling Liquid Expanding Vapor Explosions), jet fires, pool fires and vapor cloud explosions. The threat zone estimates are shown on a grid in ALOHA and they can also be plotted on maps in MARPLOT, Esri's<sup>1</sup> ArcMap, Google Earth and Google Maps. The red threat zone represents the worst hazard level; the orange and yellow threat zones represent areas of decreasing hazards. For further information and to download the application, go to [www.epa.gov/cameo/aloha-software](http://www.epa.gov/cameo/aloha-software).

## MARPLOT Software

Mapping Application for Response, Planning, and Local Operational Tasks (MARPLOT) is the mapping program for the CAMEO software suite. MARPLOT is widely used to plan for and respond to chemical/hazardous materials emergencies. MARPLOT's easy-to-use GIS interface allows one to add objects to a map, as well as view and edit data associated with the objects. One can choose between several background basemap images and can customize the map further with annotations and online layers from Web Mapping Services. One can also interact with the map in other ways, such as getting population estimates within an area. MARPLOT can be run by itself as a general mapping program. It can also be used interactively with programs in the CAMEO suite to display ALOHA threat zone estimates on the map or to link map objects to database records in CAMEOfm (database and information management tool). For further information or download information go to [www.epa.gov/cameo/marplot-software](http://www.epa.gov/cameo/marplot-software).

## AskRail™ App

The free AskRail™ mobile app is a safety tool that provides first responders immediate access to accurate, timely data about what type of hazardous materials a railcar is carrying so they can make an informed decision about how to respond to a rail emergency. AskRail is a backup resource if information from the train conductor or train consist is not available. AskRail was designed to give first responders immediate information about railcars carrying hazardous materials and be an invaluable tool for helping prepare those on the front line should a rail incident occur. Couple this with emergency training and response planning, AskRail augments the flow of information and specifics between freight railroads and the emergency first responders in communities along the nation's 140,000-mile freight rail network. For security reasons, only qualified emergency responders who have been vetted by their local railroad can download the app. To see if you qualify for this free technology tool go to [www.aar.org](http://www.aar.org). Developed by the seven North American Class 1 railroads, the Association of American Railroads (AAR), and AAR subsidiaries Railinc Corp<sup>4</sup>. and the Transportation Technology Center, Inc.<sup>5</sup>

## SecureNOW

Developed and owned by CSX Transportation, SecureNOW is a map-based geographical train and rail car monitoring tool allowing homeland security and emergency management centers to track CSX trains in real-time. As of June 2017, SecureNOW is in place in 20 of the 23 states where CSX operates and is operational at the U.S. Department of Transportation, the Transportation Security Administration and CHEMTREC. This is not a program designed to run on small devices. It is free, but your city/town/county/region must qualify for it. To find out if your community/region qualifies, contact CSX at **CSX Transportation, 500 Water Street, Jacksonville, FL 32202**.

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<sup>1</sup> ESRI is an international supplier of geographic information system software, web GIS and geodatabase management applications

<sup>4</sup> Rail Inc Corporation provides rail data and messaging services to the North American freight railway industry.

<sup>5</sup> Transportation Technology Center, Inc., is a railroad testing and training facility located northeast of Pueblo, Colorado.

## CHEMTREC

Available 24/7/365 at **800-424-9300**, the CHEMical TRansportation Emergency Center (CHEMTREC) was developed by the chemical industry in 1971 as a public service hotline for emergency first responders (firefighters and police officers) to obtain information and assistance for emergency incidents involving chemicals and hazardous materials. CHEMTREC is the definitive resource and serves as a round-the-clock solutions provider of immediate critical response information for incidents involving hazmat and dangerous goods. It's linked to the largest network of chemical and hazardous material experts in the world, including chemical and response specialists, public emergency services and private contractors. CHEMTREC is a state-of-the-art telecommunications system that seamlessly links on-scene responders with chemical experts, transportation companies and medical experts, including the U.S. Department of Defense (DOD) for incidents involving DOD munitions or explosives. CHEMTREC includes: An expansive electronic library of over 6 million Safety Data Sheets (SDS). A database of medical experts and chemical toxicologists who provide advice and emergency medical treatment assistance to on-scene medical professionals treating victims of product exposure. Interpretation capabilities for more than 200 languages in the event of an emergency involving non-English speaking people. For those within the CSX Transportation footprint, CHEMTREC houses SecureNOW as a resource. CHEMTREC may be contacted 24/7/365 at **800-424-9300**.

## Rail Crossing Locator Mobile App

The Rail Crossing Locator app was developed by the U.S. Department of Transportation (DOT) – Federal Railroad Administration (FRA). For the first responder community, the Rail Crossing Locator is a planning tool. Users enter a specific location and the app locate highway-grade crossings in their area and important information, such as the physical characteristics of a crossing and the type of traffic control devices used. Besides capturing planning information, the app allows users to report information about grade crossings to the FRA to ensure the most accurate and up-to-date information is available to the public. This app is available through the Apple Store (iPhones, iPads) and the Google Play website (Android phones, tablets). For further information visit [www.fra.dot.gov/eLib](http://www.fra.dot.gov/eLib).

For more resources and training opportunities, visit the [Hazmat Fusion Center](#).