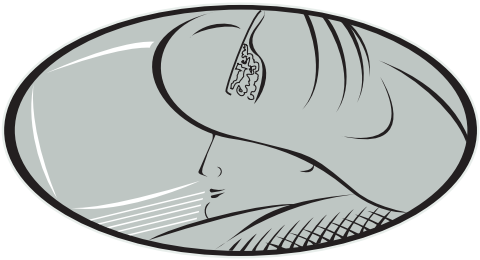
The **CAMEO**® Software Suite



CAMEO®

User Manual

February 2009

U.S. Environmental Protection Agency
Office of Emergency Management
Washington, D.C.

National Oceanic and Atmospheric Administration
Office of Response and Restoration
Emergency Response Division
Seattle, Washington

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1

Introduction to CAMEO

CAMEO® (Computer-Aided Management of Emergency Operations) is a software tool for emergency planning and response. This section explains what CAMEO is, its basic functions, who designed it, and why and for whom it was developed.

CAMEO in Brief

The CAMEO software suite is a collection of software programs designed to assist first responders and emergency planners to:

- Access chemical property and response information.
- Model potential chemical releases.
- Display key locations and release predictions on a map.
- Manage planning data (especially data required by the Emergency Planning and Community Right-to-Know Act, see "CAMEO and EPCRA" on page 12).

The complete CAMEO suite consists of two kinds of components:

- **Modules:** Eight modules (or databases) are included in the CAMEO program, which you can use for response and planning record-keeping. The CAMEO modules are Facilities, Chemicals in Inventory, Contacts, Incidents, Special Locations, Routes, Resources, and Screening & Scenarios. (For more information, see "CAMEO Modules Overview" on page 13.)
- **Programs:** Three programs can be used with the modules: CAMEO Chemicals, ALOHA, and MARPLOT. (For more information, see "Other Programs in the CAMEO Suite" on page 14.)

All of the CAMEO components work interactively to display critical information in an easy-to-understand manner. During a response to a chemical release, the CAMEO software suite of programs can help decision makers quickly get the information they need for a safe, effective response.

To complete various tasks, you're likely to use two or three CAMEO modules or programs in sequence. For example, suppose you want to assess the potential hazard posed to your community by a particular chemical in the inventory of a local chemical processing plant. As part of your investigation, you might:

1. Find the record for that plant in CAMEO's Facilities module.
2. View the location of the plant on a map in MARPLOT.
3. Check the record in CAMEO's Chemicals in Inventory module for the chemical of concern in the plant's inventory.
4. Review the chemical's physical properties and response recommendations in CAMEO Chemicals.
5. Use ALOHA and MARPLOT to predict the extent of the area that could be at risk, if that chemical were to be released.

CAMEO Development

CAMEO was developed by the National Oceanic and Atmospheric Administration's Office of Response and Restoration (NOAA OR&R, http://response.restoration.noaa.gov) and the U.S. Environmental Protection Agency's Office of Emergency Management (EPA OEM, http://www.epa.gov/emergencies).

CAMEO was developed because NOAA recognized the need to assist first responders with easily accessible and accurate response information. Since 1988, NOAA and EPA have collaborated to further the development of CAMEO. The U.S. Census Bureau and the U.S. Coast Guard also have worked with EPA and NOAA to enhance CAMEO.

CAMEO Users

Within the United States, CAMEO's primary users include firefighters, State Emergency Response Commissions, Tribal Emergency Response Commissions, Local Emergency Planning Committees, industry, schools, environmental organizations, and police departments.

Outside of the United States, CAMEO is in use in many countries. CAMEO was selected by the United Nations Environment Programme (UNEP, http://www.unep.org) as a tool for helping developing nations prepare for and respond to chemical accidents, and is part of the UNEP's Awareness and Preparedness for Emergencies at the Local Level (APELL) program. It has been demonstrated or taught in 50 countries as part of the APELL workshops on community preparedness for chemical accidents. Additionally, organizations in other countries have translated CAMEO into several languages over the years.

CAMEO Resources Online

The **CAMEO website** (http://www.epa.gov/emergencies/content/cameo) has many resources for CAMEO users, including:

- News items and updates.
- Software downloads and training materials.
- CAMEO training and events calendars.
- CAMEO News Service.

We encourage you to subscribe to the **CAMEO News Service**, an email announcement list (one-way listserve) used by CAMEO managers and developers to keep the CAMEO community informed. Subscribing to the news service is a way to get access to updated information. Check the CAMEO website to find out how to subscribe to the CAMEO News Service.

Note: You can find additional CAMEO suite resources on the NOAA OR&R website at http://response.restoration.noaa.gov/cameo.

CAMEO and EPCRA

CAMEO was designed to help people meet their responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). EPCRA establishes requirements for industry and federal, state, and local governments for emergency planning and "community right-to-know" reporting on hazardous and toxic chemicals (see "EPCRA" on page 123).

You can use CAMEO for EPCRA-related tasks such as:

- Maintaining and reviewing Tier II information submitted by facilities in your local area (see "Tier II Information and CAMEO" on page 25).
- Assessing the hazards to your community from accidental releases of locally stored hazardous chemicals (see "Using Screening & Scenarios to Assess Hazards" on page 70).

CAMEO and the Clean Air Act

Many CAMEO users, especially facility operators, must also meet certain responsibilities under Section 112(r) of the Clean Air Act (CAA) Amendments of 1990 (see "CAA 112(r)" on page 129). You may be able to use CAMEO for some of your CAA-related projects. For example, you can check a chemical's datasheet in CAMEO Chemicals to find out whether the substance is covered under Section 112(r), and what its designated threshold quantity is. However, note that you can't use CAMEO's Screening & Scenarios module for the offsite consequence analyses required under Section 112(r). For more on this topic, see "Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints" on page 76.

CAMEO Modules Overview

Use the **Facilities** module to store information about facilities where chemicals are maintained, including addresses, emergency contact information, and site plans showing the layout of the facility. You can link records in this module to symbols on a MARPLOT map so that you can quickly see where a facility is located in your community. See Chapter 3, "Facilities," beginning on page 24.

Use the **Chemicals in Inventory** module to maintain inventory records for stored chemicals, including descriptions of each chemical's physical state, storage conditions and locations, and quantities routinely on site. You can also keep track of chemicals that are commonly transported on routes in your community. See Chapter 4, "Chemicals in Inventory," beginning on page 40.

Use the **Contacts** module as a telephone and address directory of important contacts, such as chemical experts, government agencies and organizations, contacts for facilities, response resources, and other people who can help you with emergency planning or response. See Chapter 5, "Contacts," beginning on page 45.

Use the **Incidents** module to track information about hazardous chemical spills, either at fixed facilities or along transport routes. You can link records in this module to symbols on a MARPLOT map, so that you can quickly find the location of an incident on a map. See Chapter 6, "Incidents," beginning on page 49.

Use the **Special Locations** module to keep descriptions of schools, nursing homes, hospitals, and other facilities that require special protection and consideration during emergencies. You can link records in this module to symbols on a MARPLOT map, so that you can quickly find a special location on a map. See Chapter 7, "Special Locations," beginning on page 55.

Use the **Routes** module to compile information about routes (such as railroads or highways) commonly used to transport chemicals. You also can maintain information about the particular chemicals transported along a given route, and you can link records in this module to routes shown on a MARPLOT map, so that you can quickly find a route on a map. See Chapter 8, "Routes," beginning on page 61.

Use the **Resources** module to maintain information about resources (such as supplies, experts, and contractors) that you may need to quickly access during a response, or that are useful to you in your planning activities. You can link records in this module to symbols on an MARPLOT map, so that you can quickly find resources on your map. See Chapter 9, "Resources," beginning on page 65.

Use the **Screening & Scenarios** module to make hazards analyses for your community, using procedures described in *Technical Guidance for Hazards Analysis*, which is also known as the Green Book (see "Technical Guidance" on page 133). In such a hazards analysis, you estimate the extent of the area around a facility, or other potential spill site, that might be affected by the accidental release of a chemical of concern. You then can plot this area (called a *threat zone*) on an MARPLOT map. See Chapter 10, "Screening & Scenarios," beginning on page 69.

Other Programs in the CAMEO Suite

CAMEO Chemicals, ALOHA, and MARPLOT are programs in the CAMEO software suite—not modules in the CAMEO program. This means that you have to download them separately, and that you can use them on their own or in conjunction with the CAMEO program. All of the CAMEO modules and programs are available from the CAMEO Home navigation window (see "Home and Navigation" on page 18). However, you can also access the programs from CAMEO's Sharing menu.

The following sections give a brief overview of CAMEO Chemicals, ALOHA, and MARPLOT. However, to learn how to use these programs, you should refer to the documentation that comes with them; you may also want to go through the guided tour in the Guide to the CAMEO Suite that is available at http://www.epa.gov/emergencies/content/cameo/cameo.htm.

CAMEO Chemicals

Use the **CAMEO Chemicals** program to search through a hazardous materials database with thousands of datasheets, print customized reports, and find out how chemicals would react if they mixed.

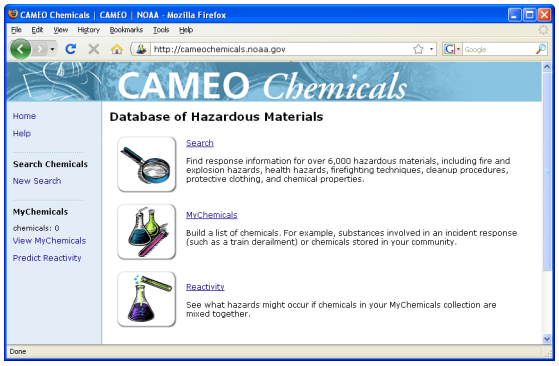
Note: Many features in CAMEO Chemicals were previously included in CAMEO (prior to version 2.0) as the Chemical Library and Reactivity Worksheet.

There are two main types of datasheets:

- **Chemical datasheets** include *hazard information* (such as whether the chemical reacts with air or water), *response recommendations* (such as firefighting, protective clothing, and first aid), *physical properties* (such as the melting point, Lower Explosive Limit, and toxic Levels of Concern) and *regulatory information* (such as threshold planning quantities).

- **UN/NA datasheets** include information from the *Emergency Response Guidebook* (such as response guides, isolation and protective action distances, and toxic-by-inhalation gas warnings) and the *Hazmat Table from 49 CFR 172.101* (such as hazard class, labels, and placards).

Both an online version (http://cameochemicals.noaa.gov) and a downloadable version (http://response.restoration.noaa.gov/cameochemicals) are available. However, only the downloadable version can be used interactively with the other programs in the CAMEO suite.

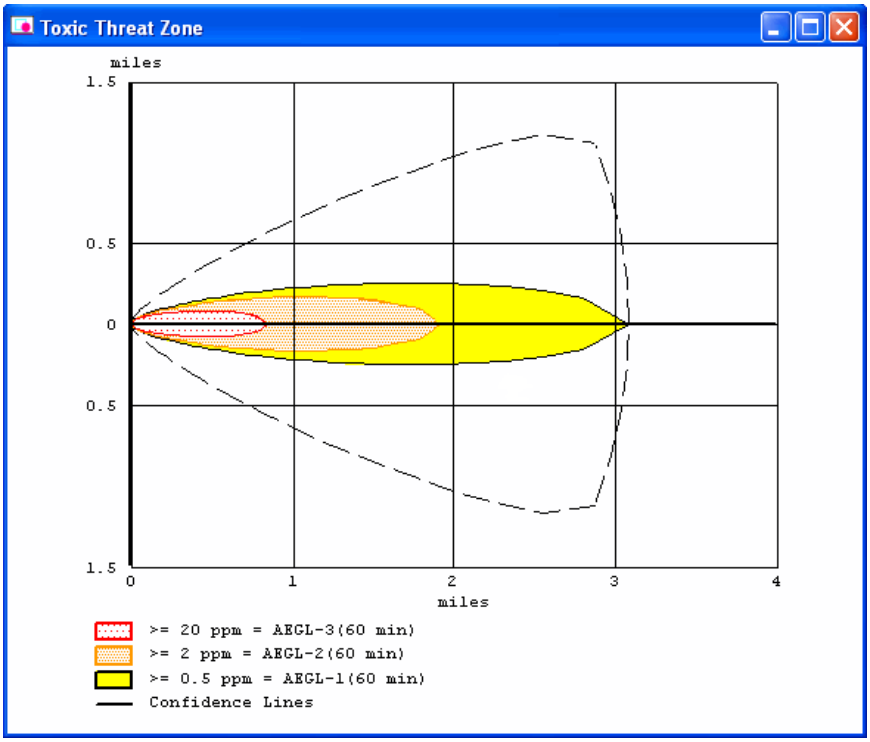


To learn more about CAMEO Chemicals, refer to the on-screen help that comes with both the online and downloadable versions, or download the Guide to the CAMEO Suite (http://www.epa.gov/emergencies/content/cameo/cameo.htm).

ALOHA

Use the ALOHA (Areal Locations of Hazardous Atmospheres) program to estimate threat zones associated with hazardous chemical releases, including toxic gas clouds, fires, and explosions.

Once you enter a description of a chemical release into the model, ALOHA makes a hazard prediction based on the characteristics of the released chemical, atmospheric conditions, and the circumstances of the release. ALOHA displays a threat zone plot (like the one shown at below) showing one or more areas where a hazard—toxicity, flammability, thermal radiation (heat), or damaging overpressure (explosion blast force)—may exceed key Levels of Concern and pose a threat to people and property.



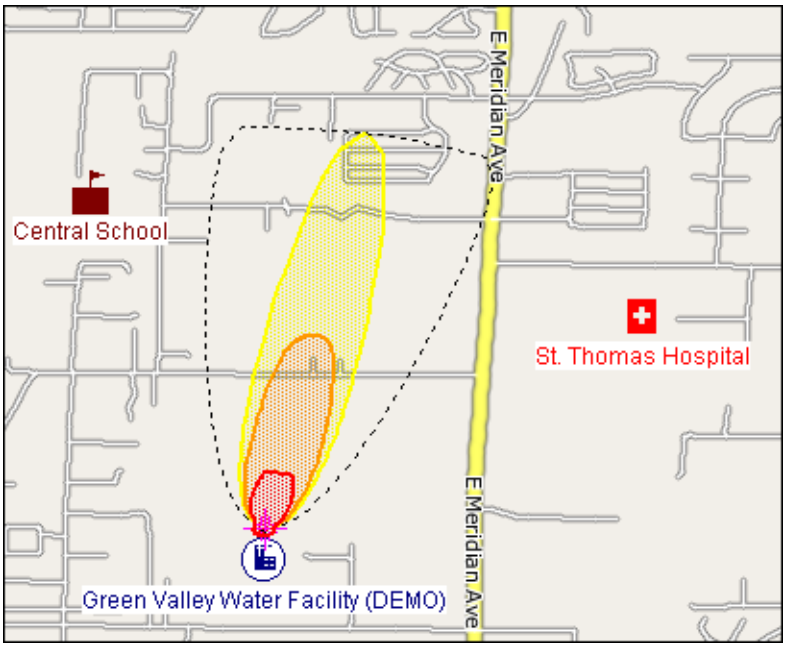
You can also plot ALOHA threat zones on a map in MARPLOT, where you might want to check to see if any vulnerable locations (such as hospitals and schools) fall within the predicted threat zone and might be affected by a chemical release. If you've linked the map objects for those locations to records in CAMEO's Special Locations module, you can then quickly extract information (such as emergency phone numbers) for these locations from CAMEO.

Note: You can use ALOHA for both emergency planning and response, unlike CAMEO's Screening & Scenarios module, which is only a planning tool. (See "Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints" on page 76.)

To learn more about ALOHA, download the ALOHA manual (http://www.epa.gov/emergencies/content/cameo/aloha.htm) or the Guide to the CAMEO Suite (http://www.epa.gov/emergencies/content/cameo/cameo.htm).

MARPLOT

Use the MARPLOT (Mapping Application for Response, Planning, and Operational Tasks) program to create, view, and modify maps of your community that show roads, facilities, schools, response assets, and other information useful for response and planning tasks.



You can link CAMEO records for facilities, special locations, transport routes, and other items of interest to symbols representing those locations on maps in MARPLOT (see "Linking a Record to a Map Object" on page 122). You can also plot threat zones from Screening & Scenarios or ALOHA to consider areas that could be impacted by a chemical release. (An ALOHA toxic threat zone plot is shown above on a MARPLOT map.)

To learn more about MARPLOT, download the MARPLOT manual (http://www.epa.gov/emergencies/content/cameo/marplot.htm) or the Guide to the CAMEO Suite (http://www.epa.gov/emergencies/content/cameo/cameo.htm)

Some CAMEO-Related Programs

There are two other programs produced by the CAMEO development team that may be useful for CAMEO users: Tier2 Submit and RMP*Comp.

Tier2 Submit

Each year, facilities covered by EPCRA must submit an emergency and hazardous chemical inventory form to their Local Emergency Planning Committee, State Emergency Response Commission, and local fire department. Facilities provide either a Tier I or Tier II form. Most states require the Tier II form. Tier II forms require basic facility identification information, employee contact information, and information such as storage amounts, storage conditions, and locations for chemicals stored or used at the facility. (See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.)

Tier2 Submit is a chemical inventory software program for both reporting facilities and for state and local emergency responders:

- Facilities can use Tier2 Submit to manage, print, and send electronic Tier II reports.
- State and local emergency responders can import those facilities' reports directly into their copies of CAMEO. By importing facility reports, responders can have current chemical inventory and contact information available to them if they need to respond to an incident at a reporting facility.

For more information, go to http://response.restoration.noaa.gov/tier2submit.

RMP*Comp

RMP*Comp is a program you can use to complete the offsite consequence analyses (both worst-case scenarios and alternative scenarios) required under the Risk Management Planning Rule, which implements Section 112(r) of the 1990 Clean Air Act (see "CAA 112(r)" on page 129).

For more information, go to http://response.restoration.noaa.gov/rmpcomp.

Note: Offsite consequence analyses are like the hazards analyses required under EPCRA, but they aren't quite the same (see "Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints" on page 76).

2

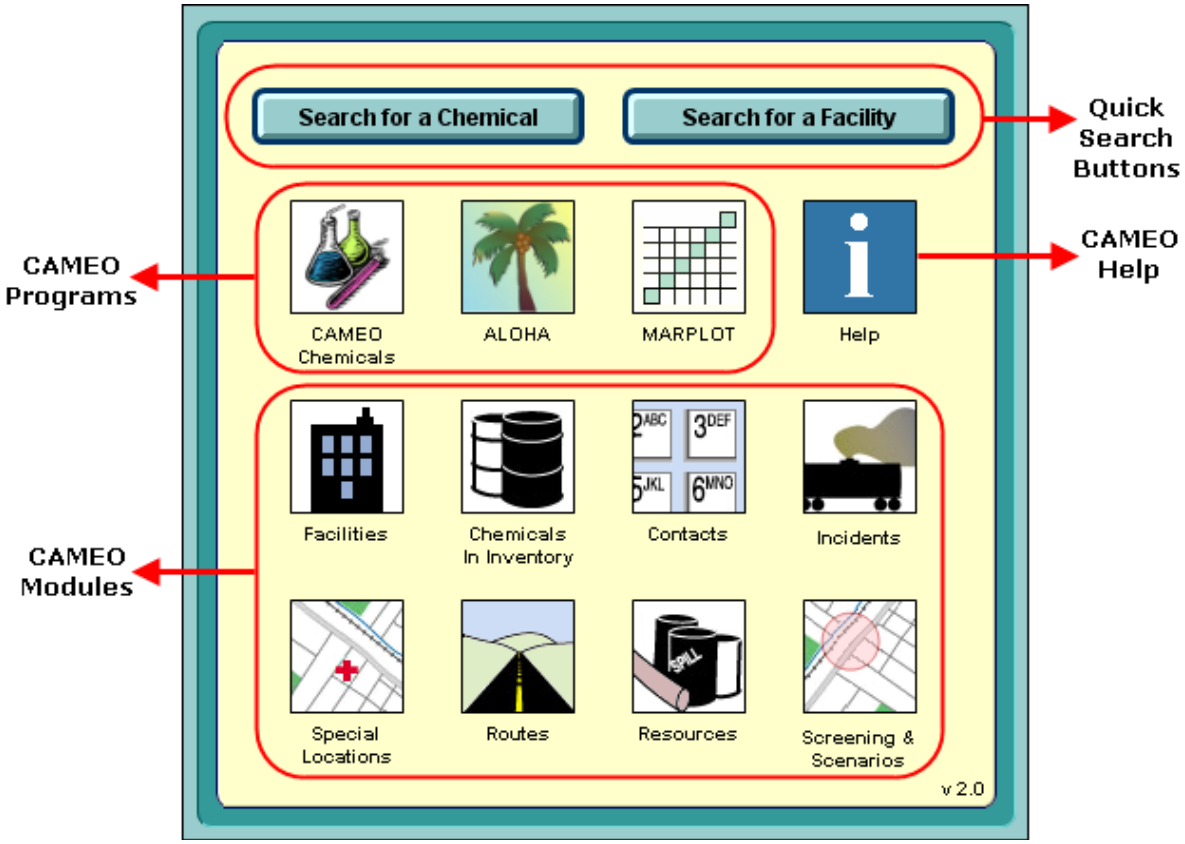
Getting Started

This section contains an overview of the basic features of CAMEO and an explanation of how you use them. These explanations only apply to the CAMEO modules, not the other programs in the CAMEO suite. CAMEO Chemicals, ALOHA, and MARPLOT work differently, and you should refer to their documentation to learn how they work.

Note: For a Guided Tour with examples from all programs in the CAMEO suite, see the Guide to the CAMEO Suite available at http://www.epa.gov/emergencies/content/cameo/cameo.htm.

Home and Navigation

CAMEO's Home is a navigation window containing buttons you can use to quickly navigate among CAMEO's modules and programs, or complete a facility search (in CAMEO) or a chemical search (in the downloadable version of CAMEO Chemicals).



To display the Home window, select Go Home from the File menu or click the Home button in the toolbar.

Anatomy of a CAMEO Module

Each module in CAMEO is a **database**, which is an organized collection of information. Each CAMEO module includes the same standard components as other computer databases:

- **Records**. A database is composed of records. Each record is a compilation of information about a particular entity. For example, in CAMEO's Facilities module, each record describes a particular facility (or division of a large facility).

- **Data fields**. Each record is composed of data fields, and each field contains a particular type of information. In the Facilities module, one field contains a facility's address, another holds its zip code, and so on.

CAMEO's modules are interrelated (see "CAMEO Modules Overview" on page 13). For example, in the Chemicals in Inventory module, you can keep track of the chemical inventories of facilities in your Facilities module. Likewise, in the Contacts module, you can keep information about contact people, such as representatives of:

- Facilities (described on Facilities records).

- Special locations (described on Special Locations records).

- Response organizations (described on Resources records).

You can quickly access information in one module when you're working with a related record in another.

The Toolbar

CAMEO contains a simple toolbar that's visible when any CAMEO module is open (except when you're searching the module or editing a record). It contains:

- **Buttons for common operations:**

  - Click Home to open the Home navigation window.

  - Click View List or View Record to switch between **list view** (where you see a list of the records in the module) and **record view** (where you see the contents of a single record). See "List and Record Views" on page 20.

  - Click New Search to perform a new search within the open CAMEO module.

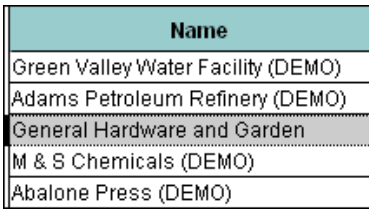
  - Click Edit when you need to edit the record you're currently viewing (see "Editing Records" on page 22).

  - Click Help to go to the list of Help topics.

- **Buttons for navigation:**
  - Click to see the *first* record in the module.
  - Click to see the *previous* record in the module.
  - Click to see the *next* record in the module.
  - Click to see the *last* record in the module.

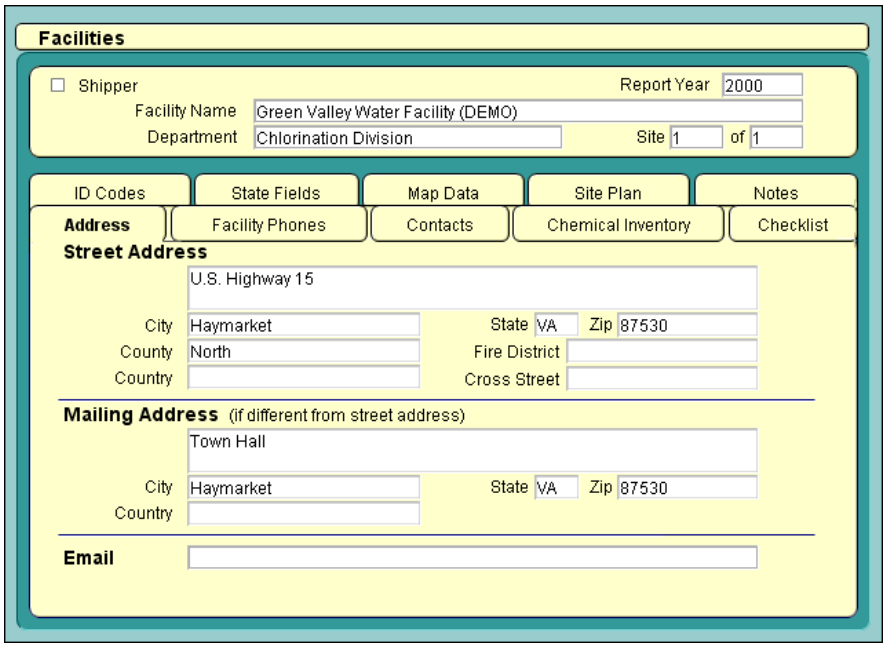
List and Record Views

Whenever you have a CAMEO module open, you're viewing that module in either list or record view. When you first open a module, you're in list view and you see a list of all the records in that module. In list view, click on a record name to select that record. Once a record is selected, a small black rectangle appears to the left of its name and the row becomes shaded. In the example at right, General Hardware and Garden is selected.



Note: Records appear in the list in the order in which you create them, unless you sort them into a different order (see "Sorting Records in CAMEO Modules" on page 117).

In record view, you see a record in that module. When you're in record view, you can view the information contained in all the individual fields on that record. Although you can only see one record at a time in record view, you can still browse through the other records in that module (see "Browsing and Searching" on page 21).



You can go back and forth between the two views by clicking the View List and View Record buttons in the toolbar. If you're in list view, you also can double-click on the name of any record in the list to see that record.

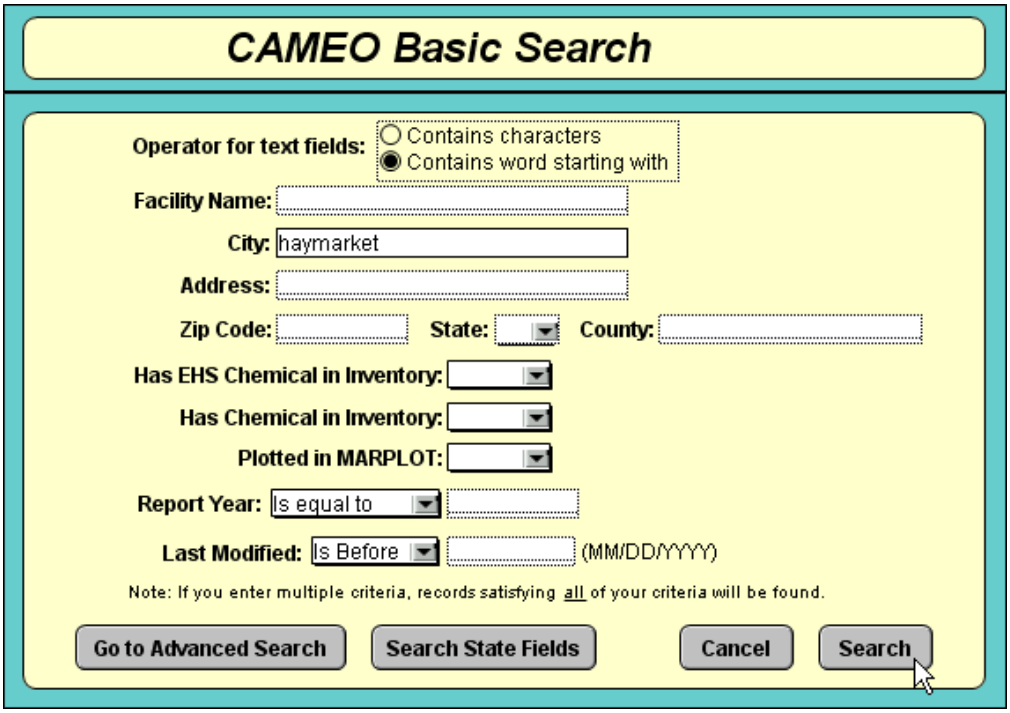
Browsing and Searching

You can **browse** through the records in a CAMEO module in four ways:

- In list view, **scan the list of records visually** until you find the one you want. Use the scroll bar to review the entire list if it's too long to fit in the window.
- In record view, click the **navigation buttons** on the right side of the toolbar to navigate from record to record.
- Click the pages of the **book icon** in the upper left corner of the module window to page through the records in the module.
- From the Record menu, select **Go To**, then select either First, Previous, Next, or Last to navigate through the records in the module.

If you can't find a record you need by browsing, **search** the module to find that record:

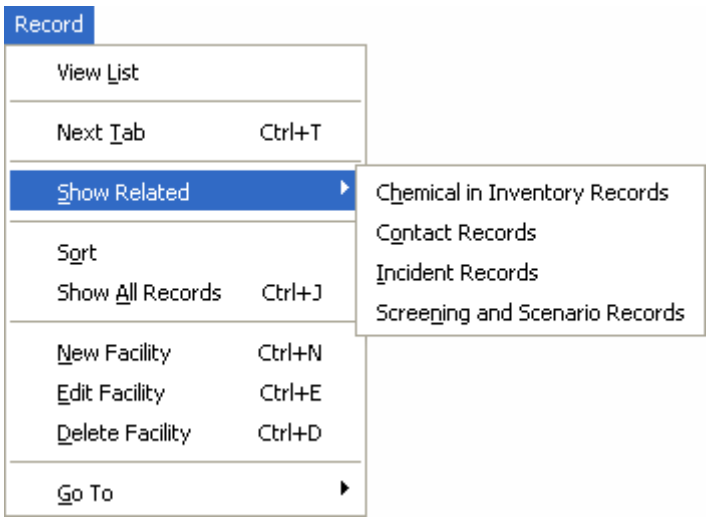
1. Click the New Search button or select Start Search from the Search menu.
2. For a quick, simple search, just type the word(s) or number(s) you're looking for, then click Search.



To learn how to make more complex searches, see "Searching" on page 113.

Using the Show Related Command

You can associate records in your CAMEO modules with other records to which they're logically related. For example, you can create a record for a school in the Special Locations module, then create a Contacts record for that school's principal. That Contacts record for the principal is then automatically associated with the school's record in Special Locations.



When you're working with a record that is associated with one or more other records, select Show Related from the Record menu to quickly access the records associated with that record. You'll also need to indicate the module of interest. For example, from the Facilities record for a local chemical processing plant, select Show Related, and then Contact Records, to view the Contacts records associated with the plant.

Editing Records

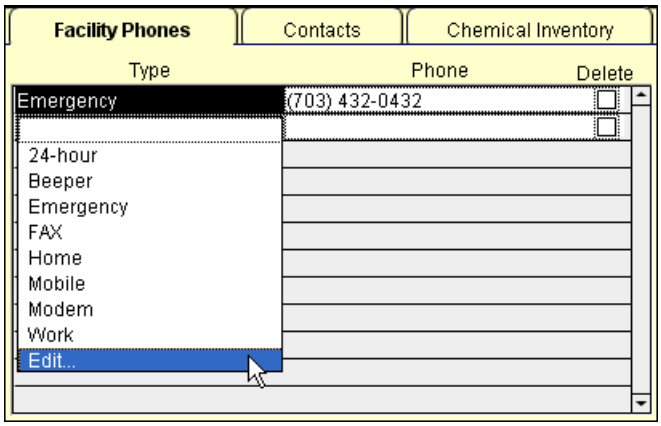
You can edit records in CAMEO's modules in three ways:

- You can manually change records in any CAMEO module.
- You can import Tier II data (see "Importing Data from Tier2 Submit" on page 86).
- You can import data from someone else's copy of CAMEO (see "Importing Data from Another Copy of CAMEO" on page 94).

Whenever you start CAMEO, you're in Browse mode. To make changes to your CAMEO records, you must switch to Edit mode by clicking Edit in the toolbar.

On a CAMEO record in Edit mode, different data fields have different appearances: one may be a text box (in which you'd type, say, the amount of a stored chemical), while another might be a drop-down list (from which you'd choose the units for the amount, such as pounds, tons, or kilograms).

When you're in Edit mode, you can edit some of the drop-down lists that appear in CAMEO records. Only the lists with Edit at the bottom (as shown at right) can be modified.



To delete a record from a CAMEO module, select that record, then select Delete <module name> from the Record menu (for example, in the Special Locations module, select Delete Special Location).

Getting Help

Whenever CAMEO is running on your computer, you can access its help system using your web browser (such as Internet Explorer or Firefox). **Note:** You don't have to be online to access the help content.

To view the help, either:

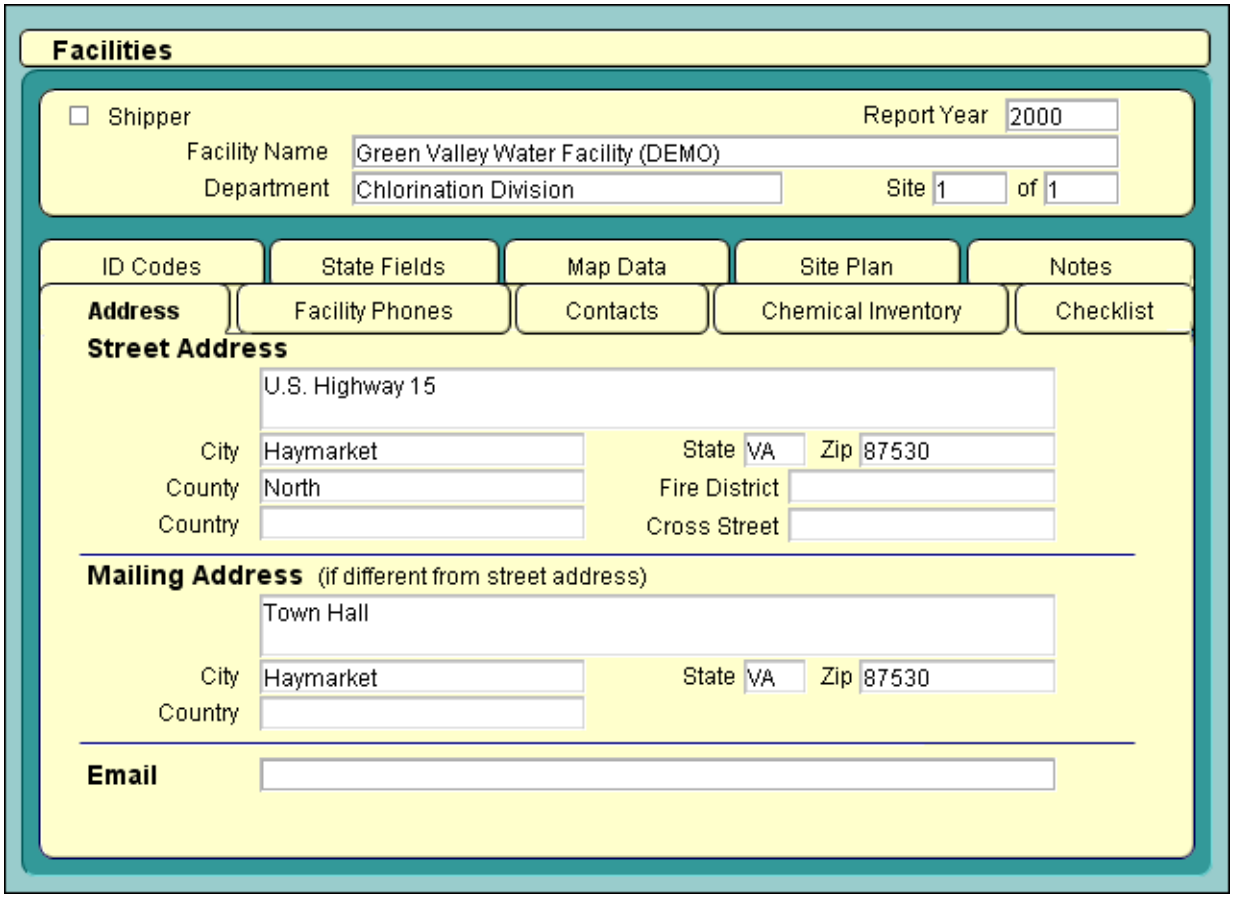
- Click the Help button (shown above) on the Home navigation window.
- Select CAMEO Help from the Help menu.
- Click the Help button on the toolbar when viewing a module.

3

Facilities

Use the Facilities module to keep track of information about facilities with hazardous materials. Facilities records can be associated with records in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules, and you can link Facilities records to symbols on MARPLOT maps.

A sample Facilities record is shown below; see Table 3-1 on page 36 for detailed explanations of the information shown on a Facilities record.



You keep information about facilities in five related CAMEO modules. You can access all the information about a given facility from the facility's record in the Facilities module, which acts as a central hub for information about that facility.

- In the Facilities module, you create a record containing the basic information about a given facility (such as its location, owner, and the type of business it is). If you have a site plan for the facility, you can link that plan to this facility record. You can also keep track of reports relating to each facility that have been submitted under the reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA). And you can link any facility's record to a symbol for that facility that you place on a MARPLOT map, so that you can quickly see the facility's location in your community or use Screening & Scenarios or ALOHA to assess the potential hazard to the community posed by chemicals at the facility (see Chapter 10, "Screening & Scenarios," beginning on page 69 and/or the Guide to the CAMEO Suite available at http://www.epa.gov/emergencies/content/cameo/cameo.htm.

- In the Chemicals in Inventory module, you can create a record for each of the hazardous substances stored at a facility. Each Chemicals in Inventory record contains information such as the quantity of the substance stored at the facility and the storage conditions and location within the facility.

- In the Contacts module, you can create a record for each of the contact people for the facility (such as the emergency manager and the facility owner).

- In the Screening & Scenarios module, you can assess the hazards to the surrounding community from accidental releases from that facility, following the procedures described in *Technical Guidance for Hazards Analysis* (see "Technical Guidance" on page 133 to learn how to obtain a copy).

- In the Incidents module, you can keep records describing past releases of hazardous substances from that facility. This information can be used for risk analysis.

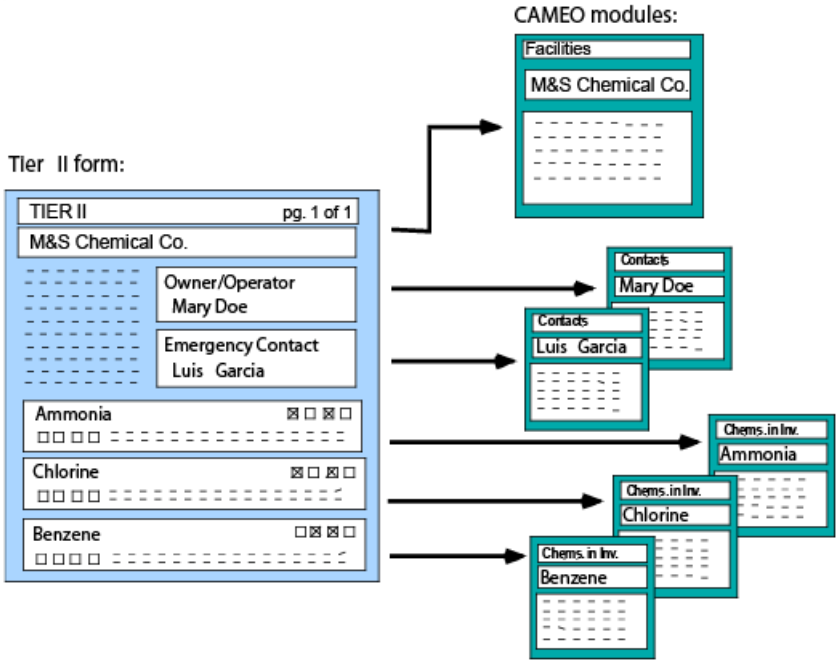
Tier II Information and CAMEO

Under EPCRA, facilities that maintain more than threshold amounts of certain hazardous materials must submit an annual chemical inventory report, called a Tier II form, to their State Emergency Response Commission, Local Emergency Planning Committee, and local fire department. See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.

You can store information submitted on Tier II reports in the Facilities, Chemicals in Inventory, and Contacts modules. If you're familiar with Tier II forms, you'll notice that many of the data fields in the Facilities, Chemicals in Inventory, and Contacts modules are identical to the fields on Tier II forms.

Importing a Tier2 Submit Data File

To import a Tier2 Submit file, follow the procedure described in "Importing Data from Tier2 Submit" on page 86. When you import a Tier2 Submit file, many new records are created based on the information provided on the Tier II forms: Facilities records for each facility, Chemicals in Inventory records for all the chemicals in each facility's inventory, and Contacts records for each contact listed by each facility.



Note: It isn't possible for a facility manager to maintain records for that facility's Tier II chemicals in CAMEO, and then, at reporting time, export that information to Tier2 Submit in order to generate the submittable data file.

State Fields in the Facilities Module. Records in both the Facilities and Chemicals in Inventory modules contain a State Fields tab, which is designed to support the emergency planning work of U.S. states that have developed their own reporting requirements in addition to the Tier II requirements specified in EPCRA (which apply to all 50 states). In these states, Tier II forms contain additional data fields. CAMEO's fields under the State Fields tab represent those state-required fields, providing a place where people working in these states can maintain their reporting information.

Manually Entering Data from Tier II Forms into CAMEO

To enter the data by hand, rather than importing a Tier2 Submit file:

1. Create a new Facilities record for each submitting facility (see "Adding and Editing Facilities Records" on page 33).

2. Create a new Chemicals in Inventory record for each chemical or mixture maintained at each facility (see "Adding and Editing Chemicals in Inventory Records" on page 41).

3. Create new Contacts records for the contacts listed for each facility.

4. For subsequent annual updates, either:

   - Edit the Facilities, Chemicals in Inventory, and Contacts records to update them as needed, or

   - Add new records for the new reporting year, if you would rather keep a set of records for each reporting year.

Accessing Facility Information

To see the information in CAMEO on a particular facility, you first search the Facilities module to find the record describing that facility. Once you've found that record, you can:

- Click tabs on the facility's record to review most of the information about that facility. Check Table 3-1 on page 36 for definitions of the various kinds of information shown on Facilities records.

- Select Show Related from the Record menu to see additional information about the facility on associated Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios records.

You can make either a basic search or a more advanced search to find a facility record.

Making a Basic Search for a Facilities Record

Make a basic search when you just need to look up a facility by its name, address, or other straightforward piece of identifying information. Here's how:

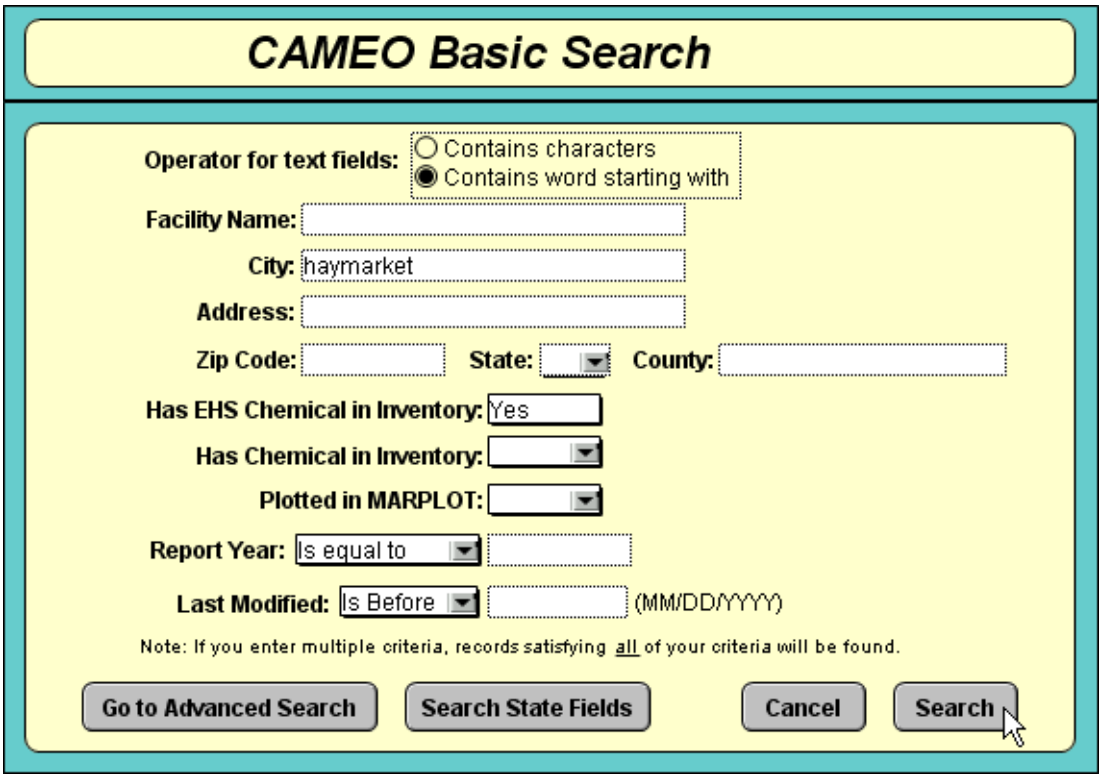
1. Start the search in either of two ways:

   - While you're working in the Facilities module, click the New Search button or select Start Search from the Search menu.

   - In the Home navigation window, click Search for a Facility. (To access the Home navigation window, click the Home toolbar button or, from the File menu, select Go Home.)

2. In the Basic Search dialog, fill out the information you have about the facility you're looking for. Choose **contains characters** to search for part of a word, phrase, code, or number; or **contains word starting with** to search either for the first part (or all) of a word, phrase, code, or number. Check Table 3-1 on page 36 to see explanations of the other choices in the dialog.

Note: If you enter multiple criteria, CAMEO will search for facilities that match all criteria. For example, if you type "haymarket" in the City field and choose Yes from the Has EHS Chemical in Inventory drop-down list (as shown below), CAMEO will find a list of all the facilities in Haymarket that store or use Extremely Hazardous Substances.



3. Click Search. CAMEO will run the search and display a list of the facilities that match your criteria (or a message if no facilities match your criteria).

4. Double-click on the name of any facility in the Found Facilities list to view that facility's record. Whenever you want to return to the Found Facilities list, press the View List button in the toolbar. If you'd like to view the list of all facilities again (as opposed to just the ones that met your search criteria), from the Search menu, select Clear Search.

Some basic search examples:

- To find the most recent records for facilities in a particular zip code: type that zip code in the Zip Code box, then for Report Year, choose "is equal to" from the drop-down list and type the most recent report year in the box.

- To find the facilities in a particular county that store EHS chemicals: choose Yes from the Has EHS Chemical in Inventory drop-down list, and then type all (or part) of the county name in the County box.

Making an Advanced Search for a Facilities Record

You can make an advanced search whenever you need to use criteria other than the ones in a basic search:

1. Start your search just as you would start a basic search, by either:
   - While you're working in the Facilities module, click the New Search button or select Start Search from the Search menu.
   - In the Home navigation window, click Search for a Facility.
2. Click Go to Advanced Search.
3. Click Select field. The Select a Field window appears.
4. Select one of the following options from the list on the left:
   - Facilities—to search for a facility by basic information about it (such as its name or address).
   - Chemicals in Inventory—to search for a facility that stores or uses a particular chemical.
   - Contacts—to search for a facility for which a particular person is a contact (such as an emergency contact or the facility's owner).
   - Facility IDs—to search for a facility with a particular identification number or type.
   - Incidents—to search for a facility where a particular incident occurred.
   - Mixture Components—to search for a facility storing a mixture made up of particular components.
   - Screening and Scenarios—to search for a facility for which you have prepared hazards analysis screenings or scenarios.
   - Storage Locations—to search for a facility where a chemical is stored at a particular location (such as Warehouse 43).
5. Based on your selection, a list of searchable fields appears. Click on a field name, then click Select. The Advanced Search window reappears.
6. Choose an operator from the drop-down list (such as "contains characters" or "is greater than"). Your choices for operator depend on the kind of data you're searching for: whether it's text, a number, a date, or yes/no information.
7. Type the word, phrase, number, or code to search for in the box. Leave the box empty if you don't need to type something in—for example, when you choose an operator like "is empty" or "is not empty."
8. Click Search.

Adding More Choices. You can make an advanced search for records that match multiple criteria.

To add a second criterion to your advanced search:

1. While you're working in the Advanced Search dialog, click Add a Choice to add a second criterion.
2. Follow Steps 3-7 in the previous section to set up the search for the second criterion.
3. Indicate whether to search for records that meet:
   - *Both* your criteria (click "Search for all of the following"), or
   - *Either* criterion (click "Search for any of the following").
4. If you want to add another choice, press Add a Choice again. You can add up to three more choices, for a total of four choices. If you need to search for more than four criteria, first run a search for the first four of your criteria, then choose either Append Search (for a search for *any* of the criteria) or Subset Search (for a search for *all* your criteria) from the Search menu to add additional criteria (see "Making Append Searches and Subset Searches" on page 116).
5. Click Search.

You can save any set of advanced search criteria to reuse later (see "Saving Searches" on page 116).

Some advanced search examples:

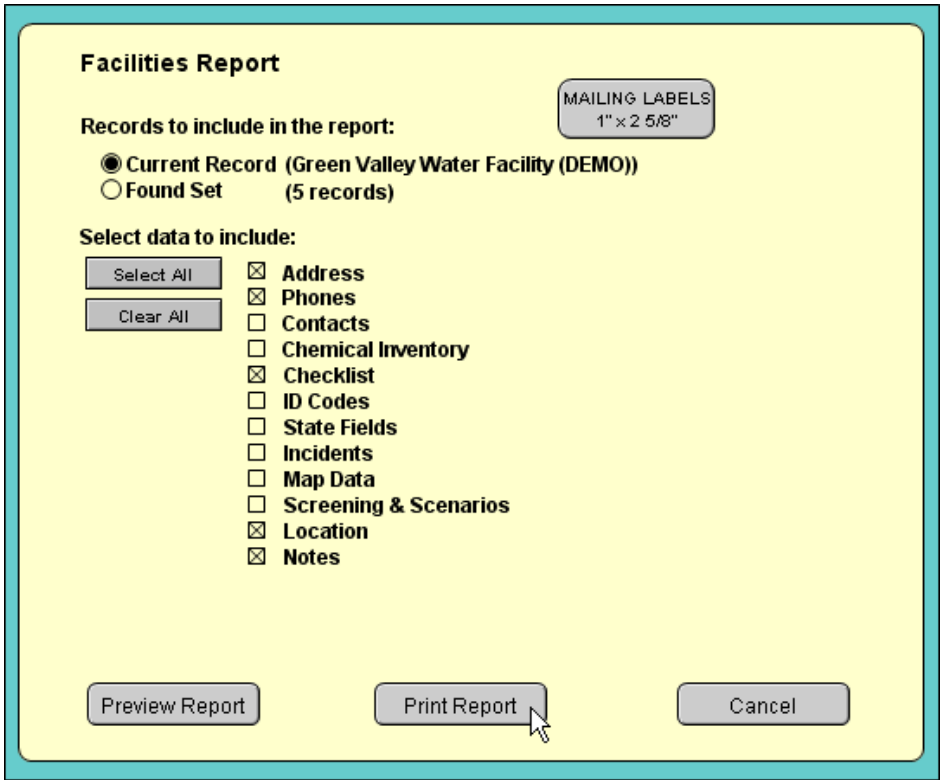
- To find all the facilities that store or use chemicals that pose a fire hazard: search Chemicals in Inventory for Fire Hazard is Yes.
- To find facilities owned by a particular person: search Contacts for Contact Type contains characters "owner" AND Last Name contains characters "<last name of that person>" (and if necessary) AND First Name contains characters "<first name of that person>."
- To find all the facilities in Haymarket that store chlorine in quantities averaging 500 pounds or more: search Facilities for City contains characters "Haymarket" AND search Chemicals in Inventory for Chemical Name contains characters "chlorine" AND search Chemicals in Inventory for Average Amount on Site is greater than or equal to "500."

Making and Printing Reports on Facilities

You can make three kinds of print reports from the Facilities module: report on a single facility, report on multiple facilities, and mailing labels for a given set of facilities.

Making and Printing a Report for a Single Facility

1. Go to the Facility record.
2. From the File menu, select Print Report.
3. Check to be sure that the Current Record option is selected.
4. Check the box for each kind of data to be included in the report. (Some of the information about a facility is in records in related modules. For example, if you check the Contacts box, information from records in the Contacts module for this facility will be included in the report.)
5. Click Print Report. The Print Setup dialog will be displayed. **Note:** If you'd like to see what your report will look like before you print it, click on Preview Report instead. You'll see a view of the printable report and can choose to print or cancel the report from there.



6. Adjust any settings you'd like to change on the Print Setup dialog, then click OK. The Print dialog appears.
7. Adjust any settings you'd like to change on the Print dialog, then click OK to print the report.

Making and Printing a Report for Multiple Facilities

1. Open the Facilities module, and then choose either option below:

   - To include all your Facilities records in the report, choose Show All Records from the Record menu to clear any existing found set.

   - To include just certain records in the report, run a search, choosing your search criteria so that just the records you want in your report will be included in the found set. For more information about searching for facility records, see "Accessing Facility Information" on page 27.

2. From the File menu, select Print Report.

3. Select the Found Set option.

4. Check the box for each kind of data to be included in the report. (Some of the information about a facility is in records in related modules. For example, if you check the Contacts box, information from records in the Contacts module for each facility will be included in the report.)

5. Click Print Report. The Print Setup dialog will be displayed. **Note:** If you'd like to see what your report will look like before you print it, click on Preview Report instead. You'll see a view of the printable report and can choose to print or cancel the report from there.

6. Adjust any settings you'd like to change on the Print Setup dialog, then click OK. The Print dialog appears.

7. Adjust any settings you'd like to change on the Print dialog, then click OK to print the report.

Making and Printing a Set of Mailing Labels

To make a set of 1-inch by 2 5/8-inch mailing labels for some (or all) of your Facilities records:

1. Open the Facilities module, and then choose either option below:

   - To make mailing labels for all your Facilities records, choose Show All Records from the Record menu to clear any existing found set.

   - To make mailing labels for just certain Facilities records, run a search, choosing your search criteria so that just the records you want labels for will be included in the found set. For more information about searching for facility records, see "Accessing Facility Information" on page 27.

2. From the File menu, select Print Report.

3. Select the Found Set option.

4. Click Mailing Labels. You'll see a preview of your mailing labels.

5. From the File menu, select Print Report to print the labels. The Print Setup dialog will be displayed.

6. Adjust any settings you'd like to change on the Print Setup dialog, then click OK. The Print dialog appears.

7. Adjust any settings you'd like to change on the Print dialog, then click OK to print the labels.

Adding and Editing Facilities Records

You add a new Facilities record in three ways:

- Creating the new Facilities record manually, working in the Facilities module and following the instructions below.
- Importing a Tier2 Submit data file. When you import a Tier2 Submit data file, CAMEO automatically creates a new record for each facility in that file, along with new Chemicals in Inventory and Contacts records for that facility. For more details and instructions for importing a file, see "Importing Data from Tier2 Submit" on page 86.
- Transferring data from someone else's copy of CAMEO. See "Transferring Data Between CAMEO Programs" on page 89.

Adding a New Facilities Record

1. Open the Facilities module.
2. Select New Facility from the Record menu. A new, blank record appears.
3. Fill out all applicable tabs in the new Facilities record. For additional information, see:
   - Table 3-1 on page 36 for explanations of all the fields on a record.
   - "Adding Contact Information for Facilities" on page 34 to add an associated Contacts record for the facility.
   - "Adding and Editing Site Plans for Facilities" on page 35 to associate a site plan or other document with the facility.
   - "Adding and Editing Chemicals in Inventory Records" on page 41 to add an associated Chemicals in Inventory record for the facility.
   - "Mapping a Facility" on page 36 to create a link to an object on a MARPLOT map.
   - "Documenting Incidents at Facilities" on page 36 to add an associated Incidents record for the facility.
   - Chapter 10, "Screening & Scenarios," beginning on page 69 to add an associated Screening & Scenarios record for a chemical in the facility's inventory.
4. Click Save Changes.

Editing a Facilities Record

To edit an existing Facilities record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Adding Contact Information for Facilities

You can add contact information for facilities (such as an emergency phone number or the name of a site manager) by:

- Entering phone numbers directly into a Facilities record—without creating separate Contacts records. You might do this if you want to quickly contact facilities during an emergency response by referring to CAMEO to access the phone numbers.
- Creating an association with a new or existing Contacts record, where you can keep addresses and notes (such as notes from meetings or phone conversations) as well as phone numbers. When you add a new contact from a Facilities record, you're actually adding a new record to the Contacts module, but information about that contact will also be displayed under the Contacts tab in the record for that facility.

Adding a Phone Number to a Facilities Record

1. Go to the Facilities record, and then click the Edit button in the toolbar.
2. Select the Facility Phones tab.
3. Click within the first blank table row below the Type heading. Classify the phone number by choosing a type (such as 24-hour or emergency) from the drop-down list. **Note:** If you need to add or modify a type, select Edit from the drop-down list.
4. Type the phone number in the same table row.
5. Click Save Changes.

Adding a Contacts Record for a Facility

1. Go to the Facilities record, and then click the Edit button in the toolbar.
2. Select the Contacts tab.
3. Click Add Contact. A list of all records in the Contacts module appears.

4. Select an existing contact or create a new contact:

   - If the contact is already in the list, click on their name, then click Select. **Note:** You can associate the same Contacts record with more than one facility by repeating these steps for each of the facilities for which this person is a contact.

   - If the contact isn't already in the list, click Add New. You'll see a new, blank Contacts record. Fill in the record (see Table 5-1 on page 47 for explanations of all the items), then click Save Changes. **Note:** When you create a new Contacts record from the Facilities module, the Contacts record will be associated with that Facilities record automatically.

Note: New Contacts records for facility contacts will automatically be added to your copy of CAMEO whenever you import a Tier2 Submit data file that contains contact information. See "Importing Data from Tier2 Submit" on page 86.

Adding and Editing Site Plans for Facilities

You can keep site plans, photos, and other documents for facilities in the SitePlans folder, which is inside of the CAMEO folder on your hard drive.

Adding a Site Plan to a Facilities Record

1. Place the site plan file (or other file of interest) in the SitePlans folder.
2. Go to the Facilities record, and then click the Edit button in the toolbar.
3. Select the Site Plan tab on the Facilities record.
4. Enter the file name into the box to the left of the Add button.
5. Click Add. The file name will appear in the list of site plans and other files.
6. Click Save Changes.

Now you can go to this document from the Facilities record whenever you need to, by double-clicking on its name in the list on the Site Plans tab. **Note:** Only files in a standard graphic file format (for example, JPG, GIF, or PNG) will be displayed within CAMEO. If you've added another type of file (such as PDF or DOC), when you double-click on its name in the list, a dialog appears with a button you need to click in order to open the file in an external program (such as Adobe Reader or Microsoft Word).

Editing a Site Plan for a Facilities Record

If you have an updated site plan or other document, add it to the SitePlans folder with the same name as the old file. The next time you go to the Facilities record and double-click on the file name on the Site Plans tab, you'll see the updated file.

Deleting a Site Plan for a Facilities Record

1. Go to the Facilities record, and click the Edit button in the toolbar.
2. Select the Site Plan tab.
3. Click on the name of the site plan or other document, and click Remove.
4. Click Save Changes.

Mapping a Facility

You can link any Facilities record to a symbol on a MARPLOT map representing the location of that facility. To make a link, follow the procedure described in "Linking a Record to a Map Object" on page 122.

Documenting Incidents at Facilities

Use the Incidents module to record incidents (such as accidental spills and releases) that have occurred at a particular facility. To create an Incidents record that is associated with a Facilities record, follow the steps in "Adding and Editing Incidents Records" on page 50.

Facility Fields

Table 3-1. Items on a Facilities Record

Item	Description
Shipper	When checked, indicates that the facility ships chemicals.
Report Year	The reporting year for which the Tier II information contained in the record was submitted by the facility. See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.
Facility Name	Name of the facility.
Department	Name of a particular department of a facility (if the record is just for that department rather than for the entire facility).
Site	Indicates the number of physical site locations for the facility and allows you to differentiate records with the same facility name and report year. For example, a facility with only one location would be listed as Site 1 of 1, but if the facility had two locations, the first site would be listed as Site 1 of 2 and the second site would be Site 2 of 2.

Table 3-1. Items on a Facilities Record (Continued)

Item	Description
Address Tab	
Street Address	Street address for the facility, as well as the county (or borough or parish), fire district, and country where it's located.
Mailing Address	Mailing address for the facility.
Email	Email address for the facility.
Facility Phones Tab	
Type	Type of phone number (such as 24-hour, emergency, or office); choose the type from the editable drop-down list.
Phone	Phone number for the facility.
Contacts Tab Double-click on any contact to see the associated Contacts record.	
Last/First Name	Name of the contact who is associated with the facility.
Title	Job title or position of the contact who is associated with the facility.
Organization	Organization with which this contact is affiliated.
Chemical Inventory Tab	
CAS	Chemical Abstracts Service (CAS) number for a chemical in the facility's inventory.
Chemical Name	Name of a chemical in the facility's inventory.
Datasheet	On saved records, clicking this button will take you to a chemical datasheet with response recommendations and physical properties based on the CAS number and chemical name you entered. You'll only be taken to a chemical datasheet if (a) you've installed the downloadable version of CAMEO Chemicals, and (b) the CAS number and chemical name match a chemical datasheet in CAMEO Chemicals.
Checklist Tab	
Submitted general site plan...	When checked, indicates that the facility has submitted a general site plan to state and local emergency planners (see "Section 301-303: Emergency Planning" on page 124).
MSDS Received with Tier II Forms	When checked, indicates that a Material Safety Data Sheet (MSDS) has been received from the facility along with a Tier II form.
Is facility subject to the Clean Air Act (112r)?	When checked, indicates that the facility is subject to section 112(r) of the Clean Air Act. See "CAA 112(r)" on page 129.

Table 3-1. Items on a Facilities Record (Continued)

Item	Description
Are dikes or other safeguard measures employed?	When checked, indicates that passive safeguards (such as dikes, berms, enclosures, or drains) are used to mitigate accidental hazardous releases at the facility.
Site Coordinate Abbreviations Submitted	When checked, indicates that a list of site coordinate abbreviations (that correspond to buildings, lots, areas, etc., located throughout the facility) were submitted.
Date Tier II Signed	Date when the Tier II form submitted by the facility was signed. See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.
Date Tier II Received	Date when the Tier II form submitted by the facility was received. See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.
Signature	Name of owner/operator or authorized representative of the facility who signed the Tier II Chemical Inventory Form.
Checked Automatically if Items Present in CAMEO	These boxes are checked automatically if there are associated records for the facility in the Chemicals in Inventory, Screening & Scenarios, or Incidents modules; if the facility uses or stores EHS chemicals; and if the facility record is linked to an object on a MARPLOT map. Not editable.
ID Codes Tab	
Number of Employees on Site	The maximum number of employees on site at the facility at any time.
State Fees Total	Total fees (if any) collected by the state for Tier II reporting.
Type	Type of identification code—for example, Dun and Bradstreet, Standard Industrial Classification (SIC), or North American Industry Classification System (NAICS)—for the facility; choose the type from the editable drop-down list.
ID	Identification code number for the facility. Depending on the type you selected in the preceding field, this field may either be a drop-down list of choices (for example, if you selected SIC for the type, you'll see a list of pre-defined code numbers for the ID) or a text field where you can type in a number.
Description	Description of the kind of facility represented by this identification code. If the ID type is listed as SIC or NAICS, this field will appear as a drop-down list; otherwise, it will be a text field where you can type in your own description.

Table 3-1. Items on a Facilities Record (Continued)

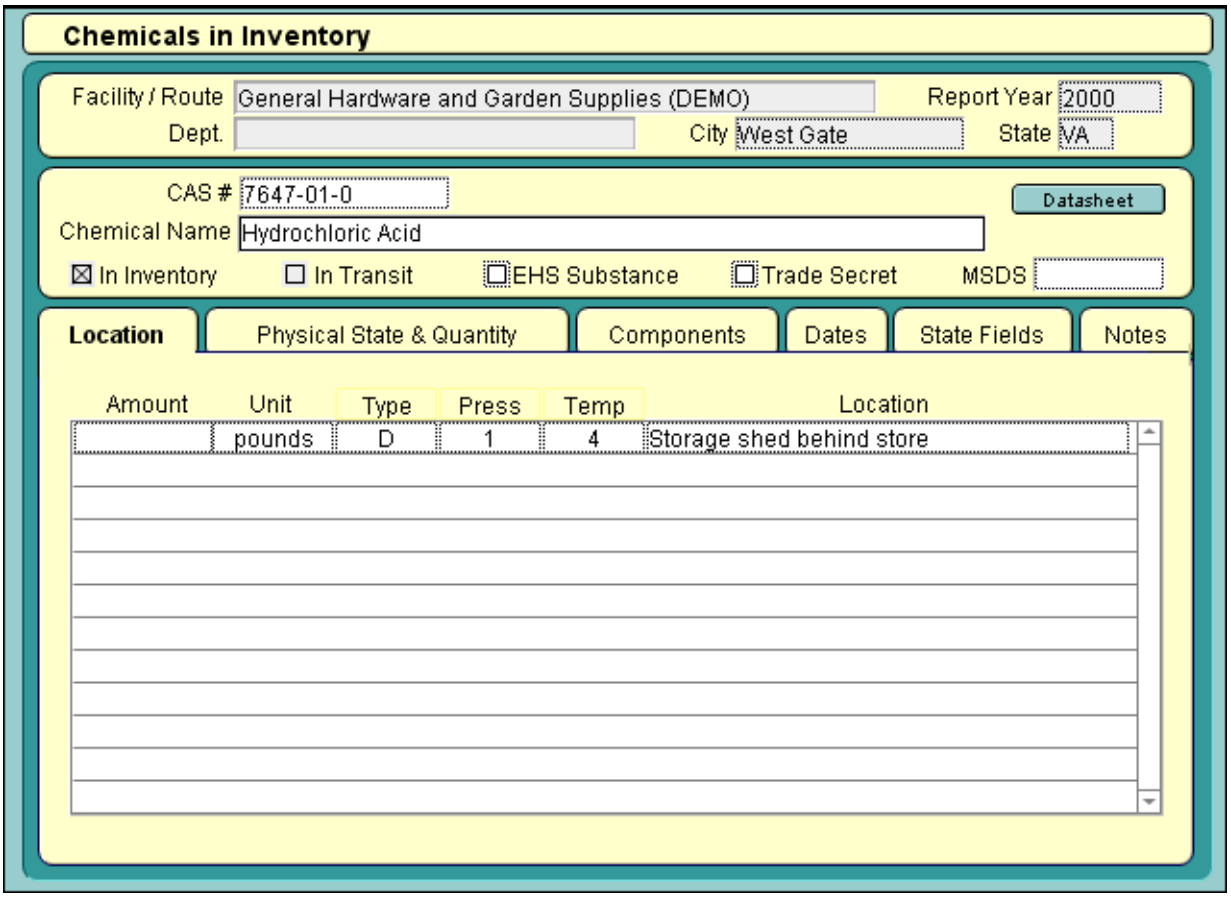
Item	Description
State Fields Tab	
State Fields	On annual Tier II reports submitted by facilities, some states require additional data fields beyond those required on all Tier II forms. Once you've entered the 2-letter abbreviation for a state under the Address tab, CAMEO automatically displays all fields required by that state, as well as any optional fields also used on Tier II reports in that state. See "State Fields in the Facilities Module" on page 26.
Map Data Tab	
Latitude/Longitude	Latitude and longitude of the facility, expressed as decimal values.
Method for Determining Latitude and Longitude	Code and description of the method by which latitude and longitude were measured; choose from the drop-down list.
Description of Location Identified by Latitude and Longitude	Code and description of the location for which latitude and longitude were measured.
Record is Linked to MARPLOT Object	This box is checked automatically if the record is linked to an object on a MARPLOT map (see "Linking a Record to a Map Object" on page 122). Not editable.
Site Plan Tab	
Site Plan Names	A list of the names of site plan files associated with the facility. Double-click on the name of any site plan file to display that site plan in another view. (To add or edit site plans, see "Adding and Editing Site Plans for Facilities" on page 35.)
Notes Tab	
Notes	Additional notes about the facility.

4

Chemicals in Inventory

Use the Chemicals in Inventory module to keep track of hazardous chemicals and mixtures that are stored or transported. Chemicals in Inventory records must be associated with records in the Facilities and Routes modules.

A sample Chemicals in Inventory record is shown below; see Table 4-1 on page 42 for detailed explanations of the information shown on an Chemicals in Inventory record.



Adding and Editing Chemicals in Inventory Records

When you create a new Chemicals in Inventory record, you must associate it with a particular facility or transportation route.

Importing a Chemicals in Inventory Record

If you use Tier2 Submit to import Tier II forms into CAMEO, a new Chemicals in Inventory record will be created for each chemical (or mixture) in a given facility's inventory and automatically associated with that facility. You'll be able to access information about an inventory chemical directly from the Chemicals in Inventory record or from the associated Facilities record. See "Tier II Information and CAMEO" on page 25.

Adding a New Chemicals in Inventory Record

Note: If you're adding a new Chemicals in Inventory record directly from the Chemical Inventory tab on either a Facilities or a Routes record, skip to Step 4.

1. Chemicals in Inventory records must be associated with a particular facility or transportation route, so you need to first create the associated record in either the Facilities or Routes modules.
2. Open the Chemicals in Inventory module.
3. Select New Chemical in Inventory from the Record menu. A new, blank record appears.
4. Fill out all applicable tabs in the new Chemicals in Inventory record. For additional information, see:
   - Table 4-1 on page 42 for explanations of all the fields on a Chemicals in Inventory record.
   - "Looking up a Chemical or Component" on page 41.
5. Click Save Changes.

Now you'll be able to access information about the inventory chemical directly from the Chemicals in Inventory record or from the associated Facilities or Routes record.

Looking up a Chemical or Component. The Look Up Chemical and Look Up Component buttons are provided to assist you in filling in the name of the chemical or component. You may wish to use this feature to facilitate the use of consistent names and to minimize data entry errors.

Clicking these buttons takes you to a new dialog where you can either search for chemical names in CAMEO Chemicals or from the list of names already entered as chemicals (or components) on Chemicals in Inventory records.

Editing a Chemicals in Inventory Record

To edit an existing Chemicals in Inventory record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Chemicals in Inventory Fields

Table 4-1. Items on a Chemicals in Inventory Record

Item	Description
Facility/Route	Name of the facility that maintains the chemical or the name of the transportation route along which the chemical is transported. Not editable.
Report Year	Report year on a related Facilities record; this will be blank if the chemical is associated with a Routes record. Should be the year for which this chemical inventory information applies (typically, the reporting year in which the Tier II form or data file was submitted). Not editable.
Dept. (or Route Type)	Department or division of a facility (or the type of route). Not editable.
City	City where the facility or route is located. Not editable.
State	State where the facility or route is located. Not editable.
CAS #	Chemical Abstracts Service (CAS) number for the chemical.
Datasheet	On saved records, clicking this button will take you to a chemical datasheet with response recommendations and physical properties based on the CAS number and chemical name you entered. You'll only be taken to a chemical datasheet if (a) you've installed the downloadable version of CAMEO Chemicals, and (b) the CAS number and chemical name match a chemical datasheet in CAMEO Chemicals.
Chemical Name	Name of the chemical.
In Inventory	When checked, indicates that the chemical is associated with a facility. Not editable.
In Transit	When checked, indicates that the chemical is associated with a transportation route. Not editable.
EHS Substance	When checked, indicates that the chemical (or one of the components if it's a mixture) is one of the Extremely Hazardous Substances (EHSs) identified by EPA.
Trade Secret	When checked, indicates that the formula for this chemical is a trade secret.
MSDS	Material Safety Data Sheet (MSDS) number for the chemical (provided by manufacturer).
Location Tab	
Amount	Amount of the chemical stored or transported.

Table 4-1. Items on a Chemicals in Inventory Record (Continued)

Item	Description
Unit	Units (mass or volume) for the amount of the chemical listed in the Amount field; choose the unit from the editable drop-down list.
Type	Letter code for the type of chemical storage (such as "D" for Steel Drum); choose the type from the drop-down list.
Press	Number code for the storage pressure of the chemical; choose the pressure code from the drop-down list. Ambient pressure is "1," greater than ambient pressure is "2," and less than ambient pressure is "3."
Temp	Number code for the storage temperature of the chemical; choose the temperature code from the drop-down list. Ambient temperature is "4," greater than ambient temperature is "5," less than ambient temperature, but not cryogenic conditions is "6," and cryogenic conditions is "7."
Location	Short description of the location of the stored (or transported) chemical.
Physical State & Quantity Tab	
Pure/Mixture	When checked, indicates that the chemical is either in pure form or that it's a mixture.
Solid/Liquid/Gas	When checked, indicates the physical state(s) of the stored (or transported) chemical.
Fire	When checked, indicates that the chemical is a fire hazard (for example, flammables, combustible liquids, and oxidizers).
Pressure	When checked, indicates that the chemical is a "sudden release of pressure" hazard (for example, explosives and compressed gases).
Reactive	When checked, indicates that the chemical is a reactive hazard (for example, water reactives, unstable reactives, and organic peroxides).
Acute/Chronic	When checked, indicates that the chemical poses either acute (immediate) or chronic (delayed) health risks. Examples of acute health hazards include toxics, corrosives, irritants, and sensitizers; chronic health hazards include carcinogens.
Max Daily Amount/ Max Code	Maximum amount of the chemical stored or transported; choose the appropriate code for the maximum amount from the drop-down list. (These codes are the same as the reporting range code used on Tier II forms.)
Average Daily Amount/ Ave Code	Average amount of the chemical stored or transported; choose the appropriate code for the average amount from the drop-down list. (These codes are the same as the reporting range code used on Tier II forms.)
Max Amount in Largest Container	Maximum amount (in pounds) of the chemical in a single container or in interconnected vessels.

Table 4-1. Items on a Chemicals in Inventory Record (Continued)

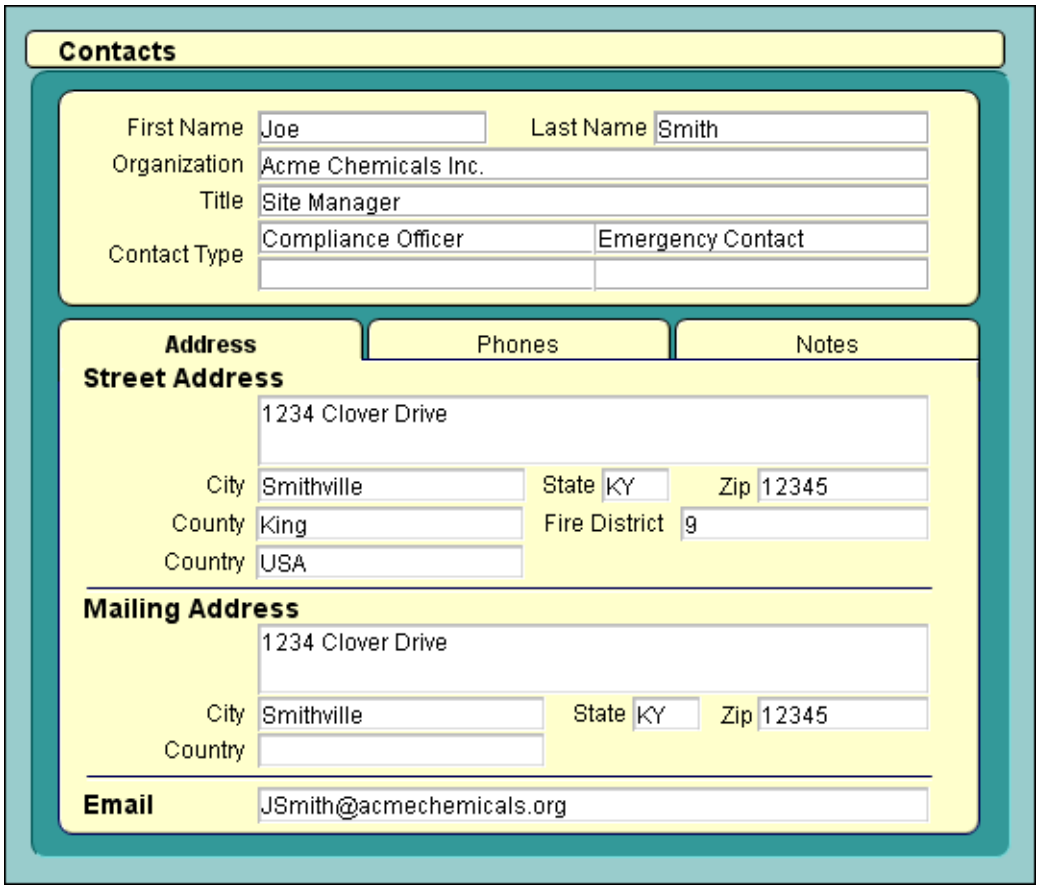
Item	Description
Components Tab Each mixture component is described in a separate table row. All rows should be blank for pure chemicals.	
EHS	When checked, indicates that the component is an Extremely Hazardous Substance (EHS).
CAS	Chemical Abstracts Service (CAS) number for the component.
Component	Name of the component.
%	Percentage by weight or volume of the component within the mixture.
Wt/Vol	Units for the percentage; choose either Weight or Volume from the drop-down list.
Dates Tab	
Report Year from January 1 to December 31	Report year on a related Facilities record; this will be blank if the chemical is associated with a Routes record. Should be the year for which this chemical inventory information applies (typically, the reporting year in which the Tier II form or data file was submitted). Not editable.
Chemical Identical to Previous Year	When checked, indicates that the chemical is identical to the information submitted during the previous year.
Days On Site	Number of days during the reporting year that the chemical was found at this facility (or on the route).
Date Tier II Signed	Date when the Tier II form was signed by the facility owner or operator; this will be blank if the chemical is associated with a Routes record. Not editable.
Date Tier II Received	Date when the Tier II form for a facility was received; this will be blank if the chemical is associated with a Routes record. Not editable.
State Fields Tab	
State Fields	On annual Tier II reports submitted by facilities, some states require additional data fields beyond those required on all Tier II forms. CAMEO automatically displays all state-required fields under this tab, along with any optional fields used on annual facility reports in that state. See "State Fields in the Facilities Module" on page 60. (This tab will be blank if the chemical is associated with a Routes record.) Not editable.
Notes Tab	
Notes	Additional notes about the chemical.

5

Contacts

Use the Contacts module as a directory of people and organizations involved in hazardous materials emergency response and/or planning. You can associate a given Contacts record with the record for a specific facility, special location, incident, or response resource (such as a supplier provider).

A sample Contacts record is shown below; see Table 5-1 on page 47 for detailed explanations of the information shown on a Contacts record.



Adding and Editing Contacts Records

When you create a new Contacts record, you can associate it with a facility, special location, response resource, or incident—you can even associate the contact's information with multiple records. The advantage of associating a Contacts record with a facility, special location, incident, or resource is that you then can use the Show Related command in the Record menu to quickly move between the related records (see "Using the Show Related Command" on page 22).

Importing a Contacts Record

If you use Tier2 Submit to import Tier II forms into CAMEO, a new Contacts record will be created for each contact listed for a given facility and automatically associated with that facility. You'll be able to access information about a contact directly from the Contacts record or from the associated Facilities record. See "Tier II Information and CAMEO" on page 25.

Adding a New Contacts Record

Note: If you're adding a new Contacts record directly from the Contacts tab on a Facilities, Special Locations, or a Resources record (or from the Notification tab on an Incidents record), skip to Step 3.

1. Open the Contacts module.
2. Select New Contact from the Record menu. A new, blank record appears.
3. Fill out all applicable tabs in the new Contacts record. For additional information, see Table 5-1 on page 47 for explanations of all the fields on a Contacts record.
4. Click Save Changes.

Your contact will now appear in the list of Contacts records. Note that:

- If you started this process by coming from either the Contacts or Notification tabs on a related record, your new Contacts record will be automatically associated with that record. Now you'll be able to access contact information directly from the Contacts record or from the associated Facilities, Special Locations, Resources, or Incidents record.
- If you started this process at Step 1, your contact won't be automatically associated with any Facilities, Special Locations, Resources, or Incidents records. You need to follow the steps in "Making an Association with a Contacts Record" on page 46 if you want to associate a record with your new Contacts record.

Making an Association with a Contacts Record

1. Go to the Facilities, Special Locations, Resources, or Incidents record that you want to associate with a Contacts record, and then click the Edit button in the toolbar.
2. Select the Contacts tab (or the Notification tab on an Incident record).

3. Click Add Contact. A list of all records in the Contacts module appears.

4. Select an existing contact or create a new contact:

   - If the contact is already in the list, click on their name, then click Select. **Note:** You can associate the same Contacts record with multiple records by repeating these steps for each of the records for which this person is a contact.

   - If the contact isn't already in the list, click Add New. You'll see a new, blank Contacts record. Fill in the record (see Table 5-1 on page 47 for explanations of all the items), then click Save Changes.

The Contacts record is now associated with that Facilities, Special Locations, Resources, or Incidents record. Now you'll be able to access contact information directly from the Contacts record or from the associated Facilities, Special Locations, Resources, or Incidents record.

Editing a Contacts Record

To edit an existing Contacts record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Contact Fields

Table 5-1. Items on a Contacts Record

Item	Description
First/Last Name	First and last name of the contact.
Organization	Organization with which the contact is affiliated.
Title	Job title or position of the contact.
Contact Type	Description of up to four of the contact's primary functions (such as compliance officer); choose the contact type(s) from the editable drop-down lists.
Address Tab	
Street Address	Street address of the contact, as well as the county (or borough or parish), fire district, and country.
Mailing Address	Mailing address of the contact.
Email	Email address of the contact.
Phones Tab	
Type	Description of the contact's phone number type (such as 24-hour, emergency, or work); choose from the editable drop-down list.

Table 5-1. Items on a Contacts Record

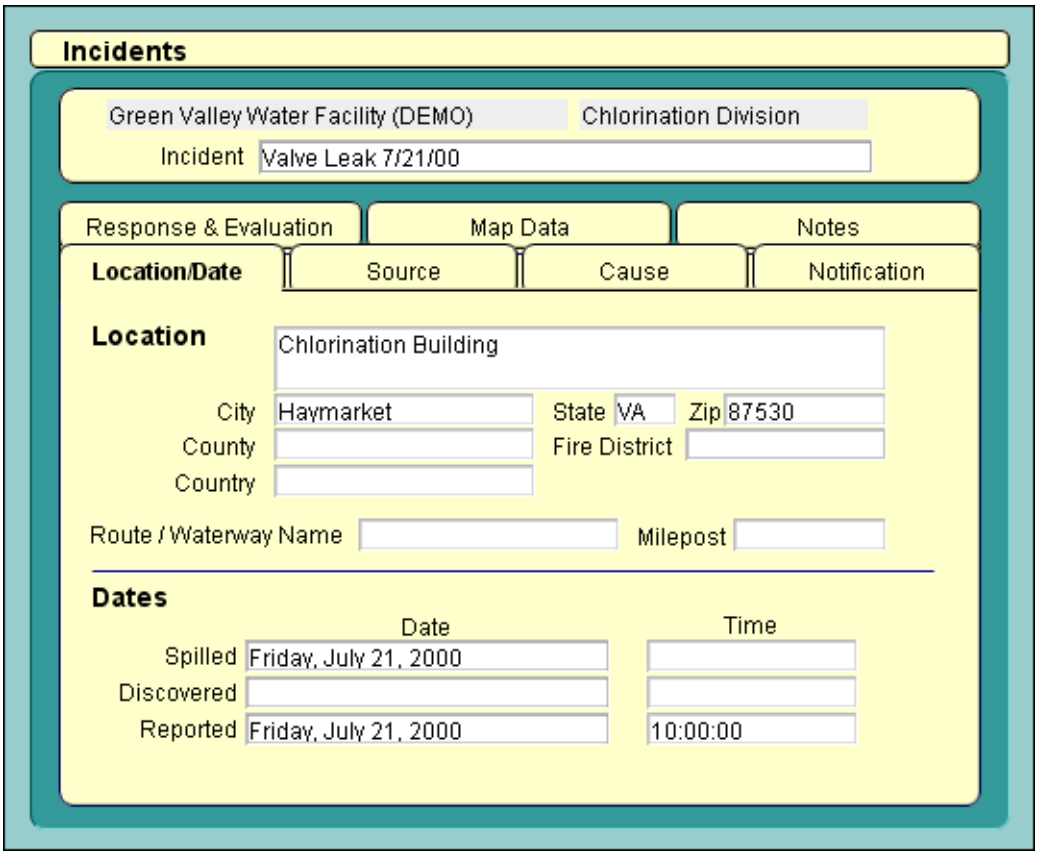
Item	Description
Phone	Phone number of the contact.
Notes Tab	
Notes	Additional notes about the contact.

6

Incidents

Use the Incidents module to keep track of chemical releases at facilities or along transport routes. Incidents records can be associated with records in the Facilities and Routes modules, and you can link Incidents records to symbols marking release locations on maps in MARPLOT.

A sample Incidents record is shown below; see Table 6-1 on page 51 for detailed explanations of the information shown on an Incidents record.



Under EPCRA (see “Section 304: Emergency Notification” on page 126), facility operators must report accidental releases of:

- Extremely Hazardous Substances (also known as EHS chemicals, and defined in EPCRA), and
- Hazardous Substances (also known as CERCLA chemicals, and defined in CERCLA).

You can use the Incidents module to store the required information for these types of releases, as well as information for use in reporting incidents that is recommended by the National Fire Information Council and the Emergency Response Notification System.

Note: You can find information about past incidents at facilities in your area by querying the National Response Center’s incident database at http://www.nrc.uscg.mil/foia.html.

Adding and Editing Incidents Records

When you create a new Incidents record, you can associate it with a particular facility or route where the incident occurred.

Adding a New Incidents Record

1. If you want to associate the new record with a facility or route where the incident occurred, create either a Facilities record or a Routes record—if you haven’t already done so. If you don’t want to create an association, skip to Step 2.
2. Open the Incidents module.
3. Select New Incident from the Record menu.
4. When asked whether you’d like to associate the new record with a route or facility, click either Route, Facility, or Neither. If you choose Neither, skip to Step 5—but note that you won’t be able to associate the incident with a facility or route later.
5. In the list of routes or facilities, click on the name of a route or facility, then click Select. A new, blank Incidents record will be created for this route or facility.
6. Fill out all applicable tabs in the new Incidents record. For additional information, see:
   - Table 6-1 on page 51 for explanations of all the fields on an Incidents Record.
   - “Adding Reporter/Discharger Contact Information” on page 51.
7. Click Save Changes.

Editing an Incidents Record

To edit an existing Incidents record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Adding Reporter/Discharger Contact Information

You can create Contacts records that contain contact information for incident reporters or dischargers who are associated with incidents. When you add a contact for an incident, you're actually adding a new record to the Contacts module, but information about that contact will also be displayed in the Reporter/Discharger section under the Notification tab in the record for that incident.

To add a Contacts record for a reporter or discharger associated with a particular incident:

1. Go to the Incidents record, and then click the Edit button in the toolbar.
2. Select the Notification tab.
3. Click Add Contact. A list of all records in the Contacts module appears.
4. Select an existing contact or create a new contact:
   - If the reporter/discharger is already in the list, click on their name, then click Select. **Note:** You can associate the same Contacts record with more than one incident by repeating these steps for each of the incidents for which this person is a contact.
   - If the reporter/discharger isn't already in the list, click Add New. You'll see a new, blank Contacts record. Fill in the record (see Table 5-1 on page 47 for explanations of all the items), then click Save Changes. **Note:** When you create a new Contacts record from the Incidents module, the Contacts record will be associated with that Incidents record automatically.

Mapping an Incident

You can link any Incidents record to an object on a MARPLOT map representing the location of that incident. To make a link, follow the procedure described in "Linking a Record to a Map Object" on page 122.

Incident Fields

Table 6-1. Items on an Incidents Record

Item	Description
Name of Facility or Route	Name of facility or route where the incident took place. If this record isn't associated with a facility or route, this box is blank. Not editable.

Table 6-1. Items on an Incidents Record (Continued)

Item	Description
Route Type or Facility Department	Type of route or department/division of facility where the incident took place. If this record isn't associated with a facility or route, this box is blank. Not editable.
Incident	Name of the incident.
Location/Date Tab	
Location	Description of the location of an incident, including the county and fire district, route or waterway, and milepost where the incident occurred.
Date/Time Spilled	Date and time when the incident happened.
Date/Time Discovered	Date and time when the incident was discovered.
Date/Time Reported	Date and time when the incident was reported to the authorities.
Source Tab	
Source Checkboxes	11 source categories (such as underground tank); check any applicable category to indicate the source(s) of the spill.
Vehicle ID	Identification or license number, if a vehicle was the source of the spill.
# of Tanks	Number of tanks involved in the release.
Tank Capacity/Units	Weight or volume of each tank; choose the units from the editable drop-down list.
Material Type	Type of material that has been released; check any of the four checkboxes to indicate the type.
Chemical	Name of the spilled chemical. If a mixture spilled, use a separate line to describe each hazardous component of the mixture.
Quantity/Units	Amount of the chemical that was released into the environment; choose the units from the editable drop-down list.
Qty in Water/Units	Amount of the chemical that was released into water; choose the units from the editable drop-down list.
Cause Tab	
Medium	Type of medium or media (such as air or groundwater) into which the chemical was released; check any of the eight checkboxes to indicate the type.
Cause	Cause(s) of the incident; check any of the seven checkboxes to indicate the cause.
Cause Description	Short description of the cause(s) of the incident.
Action Taken	Short description of the initial action taken to respond to the incident.

Table 6-1. Items on an Incidents Record (Continued)

Item	Description
Notification Tab	
Notified	Check any of the six boxes to indicate the agencies notified and the means of notification used. Click Multiple Reports if more than one agency was notified.
Agency Notified	If you clicked the Other checkbox (under the Notified heading), type the name of the agency notified about the incident.
Reporter/Discharger	Names and titles of the people who either reported the incident or are responsible for the discharge. Double-click on a contact name or title to see the associated Contacts record.
Confidentiality	When checked, indicates that the reporter information in the record or in the associated Contacts record is confidential.
Through NRC	When checked, indicates that the incident was reported to the National Response Center (NRC).
Location/Report	When checked, indicates that a known location was reported.
SSI Report	When checked, indicates that a report on a statistically significant increase (SSI) in a continuous release has been filed.
Incident/Discharge	When checked, indicates that this is a single incident or discharge (rather than a continuous release).
Case ID	Case identification numbers assigned to the incident by either the regional Environmental Protection Agency or U.S. Coast Guard office (**Regional Case ID**), the National Response Center (**NRC**), the discharger (**discharger**), and/or the EPA for a continuous release (**CR**).
Response & Evaluation Tab	
Response Agency/Type	List of the agencies involved in the response to the incident; choose the agency type (such as state or local) from the editable drop-down list.
Evacuation Required	When checked, indicates that people were evacuated in response to the incident.
Followup Required	When checked, indicates that a report describing the spill is required to be submitted by the discharger to the U.S. Department of Transportation, Environmental Protection Agency, or the Chemical Safety Board.
Followup Received	When checked, indicates that a followup report describing the incident has been submitted by the discharger to the U.S. Department of Transportation, Environmental Protection Agency, or the Chemical Safety Board.
Response & Evaluation	Brief description of the response to the incident, and the evaluation of the incident.
Injuries	Number of people injured by the incident.

Table 6-1. Items on an Incidents Record (Continued)

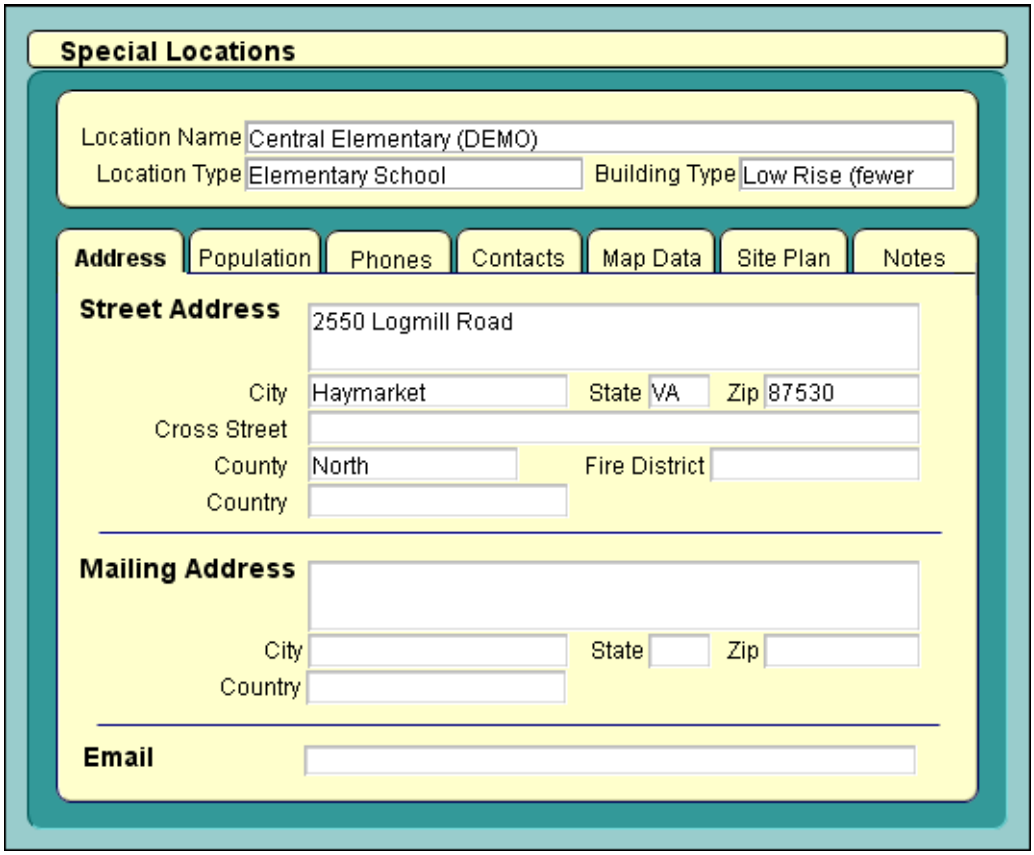
Item	Description
Deaths	Number of people killed by the incident.
Property Damage > $50,000	When checked, indicates that the incident caused more than $50,000 in property damages.
Map Data Tab	
Latitude/Longitude	Latitude and longitude of the incident location, expressed as decimal values.
Method for Determining Latitude and Longitude	Code and description of the method by which latitude and longitude were measured; choose from the drop-down list.
Description of Location Identified by Latitude and Longitude	Code and description of the location for which latitude and longitude were measured.
Record is Linked to MARPLOT Object	This box is checked automatically if the record is linked to an object on a MARPLOT map (see "Linking a Record to a Map Object" on page 122). Not editable.
Notes Tab	
Notes	Additional notes about the incident.

7

Special Locations

Use the Special Locations module to keep track of locations that have high-density, confined, or sensitive populations that might need special attention during an emergency (such as schools, nursing homes, or hospitals). You can link Special Locations records to symbols on a map in MARPLOT.

A sample Special Locations record is shown below; see Table 7-1 on page 58 for detailed explanations of the information shown on a Special Locations record.



Adding and Editing Special Locations Records

Adding a New Special Locations Record

1. Open the Special Locations module.
2. Select New Special Location from the Record menu. A new, blank record appears.
3. Fill out all applicable tabs in the new Special Locations record. For additional information, see:
   - Table 7-1 on page 58 for explanations of all the fields on a Special Locations record.
   - "Adding Contact Information for Special Locations" on page 56.
   - "Adding and Editing Site Plans for Special Locations" on page 57.
   - "Mapping a Special Location" on page 58.
4. Click Save Changes.

Editing a Special Locations Record

To edit an existing Special Locations record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Adding Contact Information for Special Locations

You can add contact information for special locations (such as a school's emergency phone number or the name of a facility manager) by:

- Entering phone numbers directly into a Special Locations record—without creating separate Contacts records. You might do this if you want to quickly contact special locations during an emergency response by referring to CAMEO to access the phone numbers.
- Creating an association with a new or existing Contacts record, where you can keep addresses and notes (such as notes from meetings or phone conversations) as well as phone numbers. When you add a new contact from a Special Locations record, you're actually adding a new record to the Contacts module, but information about that contact will also be displayed under the Contacts tab in the record for that special location.

Adding a Phone Number to a Special Locations Record

1. Go to the Special Locations record, and then click the Edit button in the toolbar.
2. Select the Phones tab.

3. Click within the first blank table row below the Type heading. Classify the phone number by choosing a type (such as 24-hour or emergency) from the drop-down list. **Note:** If you need to add or modify a type, select Edit from the drop-down list.

4. Type the phone number in the same table row.

5. Click Save Changes.

Adding a Contacts Record for a Special Location

1. Go to the Special Locations record, and then click the Edit button in the toolbar.

2. Select the Contacts tab.

3. Click Add Contact. A list of all records in the Contacts module appears.

4. Select an existing contact or create a new contact:

   - If the contact is already in the list, click on their name, then click Select. **Note:** You can associate the same Contacts record with more than one special location by repeating these steps for each of the special locations for which this person is a contact.

   - If the contact isn't already in the list, click Add New. You'll see a new, blank Contacts record. Fill in the record (see Table 5-1 on page 47 for explanations of all the items), then click Save Changes. **Note:** When you create a new Contacts record from the Special Locations module, the Contacts record will be associated with that Special Locations record automatically.

Adding and Editing Site Plans for Special Locations

You can keep site plans, photos, and other documents for special locations in the SitePlans folder, which is inside of the CAMEO folder on your hard drive.

Adding a Site Plan to a Special Locations Record

1. Place the site plan file (or other file of interest) in the SitePlans folder.

2. Go to the Special Locations record, and then click the Edit button in the toolbar.

3. Select the Site Plan tab on the Special Locations record.

4. Enter the file name into the box to the left of the Add button.

5. Click Add. The file name will appear in the list of site plans and other files.

6. Click Save Changes.

Now you can go to this document from the Special Locations record whenever you need to, by double-clicking on its name in the list on the Site Plans tab. **Note:** Only files in a standard graphic file format (for example, JPG, GIF, or PNG) will be displayed within CAMEO. If you've added another type of file (such as PDF or DOC), when you double-click on its name in the list, a dialog appears with a button you need to click in order to open the file in an external program (such as Adobe Reader or Microsoft Word).

Editing a Site Plan for a Special Locations Record

If you have an updated site plan or other document, add it to the SitePlans folder with the same name as the old file. The next time you go to the Special Locations record and double-click on the file name on the Site Plans tab, you'll see the updated file.

Deleting a Site Plan for a Special Locations Record

1. Go to the Special Locations record, and click the Edit button in the toolbar.
2. Select the Site Plan tab.
3. Click on the name of the site plan or other document, and click Remove.
4. Click Save Changes. Only the link to that site plan will be removed; you must go to the SitePlans folder and delete the site plan file there to permanently remove it from your computer.

Mapping a Special Location

You can link any Special Locations record to a symbol on a MARPLOT map. To make a link, follow the procedure described in "Linking a Record to a Map Object" on page 122.

Special Location Fields

Table 7-1. Items on a Special Locations Record

Item	Description
Location Name	Name of the special location.
Location Type	Location type (for example, Elementary School); choose the type from the editable drop-down list.
Building Type	Type of building (such as Single Family or Tower) for the location; choose the type from the editable drop-down list.
Address Tab	
Street Address	Street address for the location, as well as the county (or borough or parish), fire district, and country where it's located.

Table 7-1. Items on a Special Locations Record (Continued)

Item	Description
Mailing Address	Mailing address for the location.
Email	Email address for the location.
Population Tab	
Hours of Operation	Time periods during the day when people are present at the location (for example, 8:00 am - 5:00 pm).
Peak Season	Season of the year when the largest number of people are present at the location (for example, "school year" for a school or "summer" for a resort hotel).
Average Population	Average number of people at the location during its hours of operation on typical days.
Average Age	Average age of the people at the location.
Daily Population, Min/Max	Minimum and maximum number of people at the location during a day.
Seasonal Population, Min/Max	Minimum and maximum number of people at the location during a season. (Minimum is the number present during the slowest season; maximum is the number during the peak season.)
Phones Tab	
Type	Type of phone number (such as 24-hour, emergency, or office); choose the type from the editable drop-down list.
Phone	Phone number for the location.
Contacts Tab Double-click on any contact to see the associated Contacts record.	
Last/First Name	Name of the contact who is associated with the location.
Title	Job title or position of the contact who is associated with the location.
Organization	Organization with which this contact is affiliated.
Map Data Tab	
Latitude/Longitude	Latitude and longitude of the special location, expressed as decimal values.
Method for Determining Latitude and Longitude	Code and description of the method by which latitude and longitude were measured; choose from the drop-down list.
Description of Location Identified by Latitude and Longitude	Code and description of the location for which latitude and longitude were measured.

Table 7-1. Items on a Special Locations Record (Continued)

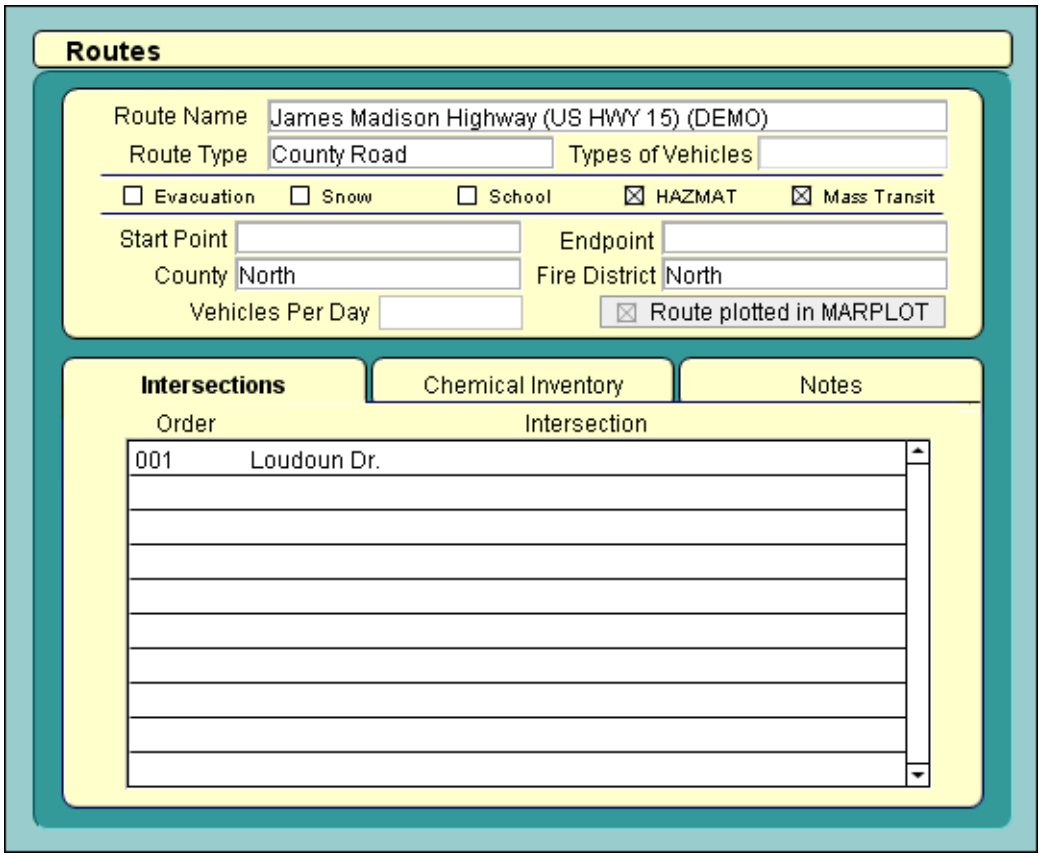
Item	Description
Record is Linked to MARPLOT Object	This box is checked automatically if the record is linked to an object on a MARPLOT map (see "Linking a Record to a Map Object" on page 122). Not editable.
Notes Tab	
Notes	Additional notes about the location.

8

Routes

Use the Routes module to maintain information about routes (such as railroads or highways) used to transport hazardous materials. Route types can include air, water, or land routes. You can link Routes records to routes depicted on a map in MARPLOT.

A sample Routes record is shown below; see Table 8-1 on page 63 for detailed explanations of the information shown on a Routes record.



Adding and Editing Routes Records

Adding a New Routes Record

1. Open the Routes module.
2. Select New Route from the Record menu. A new, blank record appears.
3. Fill out all applicable tabs in the new Routes record. For additional information, see:
   - Table 8-1 on page 63 for explanations of all the fields on a Routes record.
   - "Mapping a Route" on page 62.
   - "Tracking Chemicals Transported along a Route" on page 62.
   - "Tracking Incidents on a Route" on page 63.
4. Click Save Changes.

Editing a Routes Record

To edit an existing Routes record, go to that record, then click the Edit button in the toolbar (see "Editing Records" on page 22).

Mapping a Route

You can link any Routes record to a polyline object on a MARPLOT map representing that route. To make a link, follow the procedure described in "Linking a Record to a Map Object" on page 122.

Tracking Chemicals Transported along a Route

You can associate Chemicals in Inventory records with a Routes record. You would do this if you need to track hazardous materials that are regularly transported along the route (such as regular shipments of a particular hazardous material from a facility located along the route). To create a Chemicals in Inventory record that is associated with a Routes record, follow the steps in "Adding and Editing Chemicals in Inventory Records" on page 41.

Once you've created a Chemicals in Inventory record for a hazardous material shipped along a particular route, you can use the Screening & Scenarios module to investigate potential hazards posed by an accidental release of that substance. Follow the instructions in Chapter 10, "Screening & Scenarios," beginning on page 69.

Tracking Incidents on a Route

Use the Incidents module to record incidents (such as accidental spills and releases) that have occurred along a particular route. To create an Incidents record that is associated with a Routes record, follow the steps in "Adding and Editing Incidents Records" on page 50.

Routes Fields

Table 8-1. Items on a Routes Record

Item	Description
Route Name	Name of the route.
Route Type	Route type (for example, county road, railroad, river, or canal); choose the type from the editable drop-down list.
Types of Vehicles	Types of vehicles common on the route or used to transport hazardous materials along the route.
Evacuation	When checked, indicates that the route is designated as an evacuation route during chemical emergencies.
Snow	When checked, indicates that the route is designated as an snow emergency route.
School	When checked, indicates that the route is designated for school-related transportation.
HAZMAT	When checked, indicates that the route is designated for vehicles carrying hazardous materials (HAZMAT).
Mass Transit	When checked, indicates that the route is designated for mass transit (for example, a bus route).
Start/End Point	Starting and ending points of the route or route segment of concern.
County/District	County or other political unit through which the route passes.
Fire District	Fire district through which the route passes.
Vehicles Per Day	Average number of vehicles traveling the route each day.
Route Plotted in MARPLOT	This box is checked automatically if this record is linked to an object on a MARPLOT map (see "Linking a Record to a Map Object" on page 122). Not editable.
Intersections Tab	
Order	The order of the intersections along the route (for example, you might assign the order number "1" to the first intersection in a sequence, "2" to the second intersection, and so on).
Intersection	An intersection name or milepost number identifying a specific location on a route that is of particular concern—either because of congestion and accident risks, or because of high volumes of hazardous materials moving through the area.

Table 8-1. Items on a Routes Record (Continued)

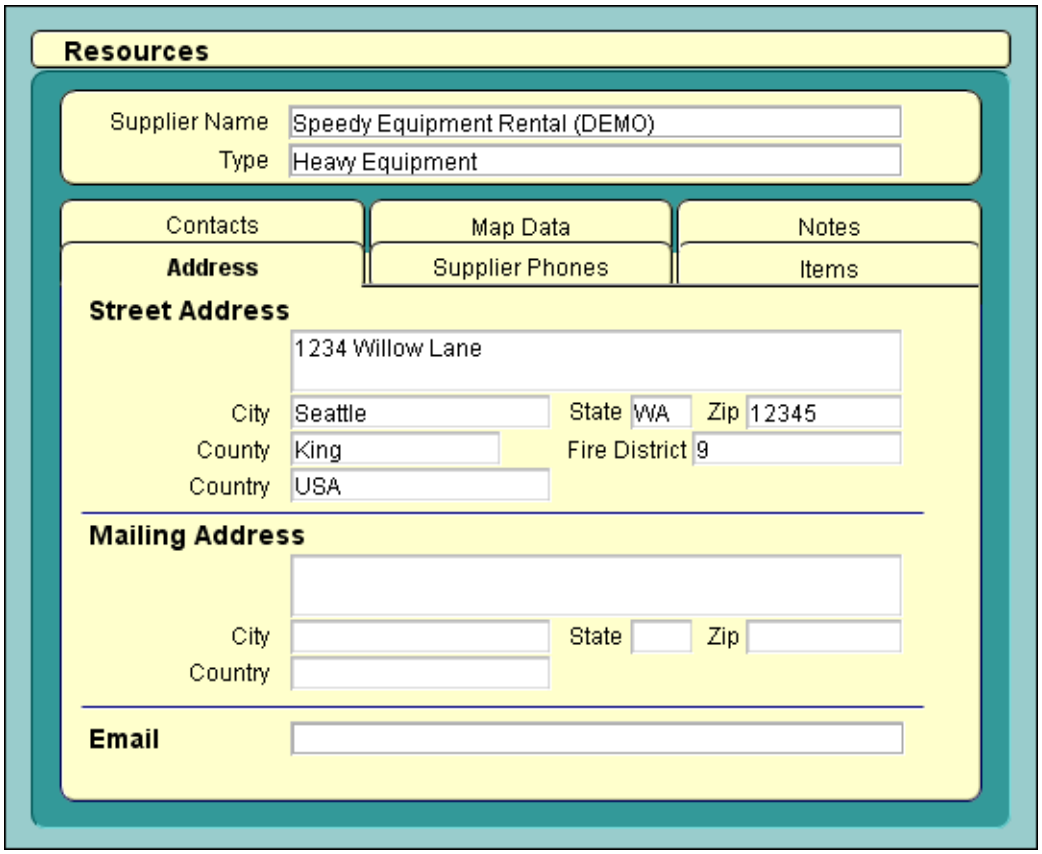
Item	Description
Chemical Inventory Tab	
CAS	Chemical Abstracts Service (CAS) number of the chemical transported along the route.
Chemical Name	Name of the chemical transported along the route.
Datasheet	On saved records, clicking this button will take you to a chemical datasheet with response recommendations and physical properties based on the CAS number and chemical name you entered. You'll only be taken to a chemical datasheet if (a) you've installed the downloadable version of CAMEO Chemicals, and (b) the CAS number and chemical name match a chemical datasheet in CAMEO Chemicals.
Notes Tab	
Notes	Additional notes about the route.

9

Resources

Use the Resources module to keep information about companies, people, or organizations that supply resources for emergency response or planning. For example, you might want to track media outlets, cleanup contractors, hospitals, heavy equipment operators, or equipment rental companies.

A sample Resources record is shown below; see Table 9-1 on page 67 for detailed explanations of the information shown on a Resources record.



Adding and Editing Resources Records

Adding a New Resources Record

1. Open the Resources module.
2. Select New Resource from the Record menu. A new, blank record appears.
3. Fill out all applicable tabs in the new Resources record. For additional information, see:
   - Table 9-1 on page 67 for explanations of all the fields on a Special Locations record.
   - "Adding Contact Information for Resource Suppliers" on page 66.
4. Click Save Changes.

Editing a Resources Record

To edit an existing Resources record, go to that record, and then click the Edit button in the toolbar (see "Editing Records" on page 22).

Adding Contact Information for Resource Suppliers

You can add contact information for resource suppliers by:

- Entering phone numbers directly into a Resources record—without creating separate Contacts records. You might do this if you want to quickly contact resource suppliers during an emergency response by referring to CAMEO to access the phone numbers.
- Creating an association with a new or existing Contacts record, where you can keep addresses and notes (such as notes from meetings or phone conversations) as well as phone numbers. When you add a new contact from a Resources record, you're actually adding a new record to the Contacts module, but information about that contact will also be displayed under the Contacts tab in the record for that resource.

Adding a Phone Number to a Resources Record

1. Go to the Resources record, and then click the Edit button in the toolbar.
2. Select the Supplier Phones tab.
3. Click within the first blank table row below the Type heading. Classify the phone number by choosing a type (such as 24-hour or emergency) from the drop-down list. **Note:** If you need to add or modify a type, select Edit from the drop-down list.

4. Type the phone number in the same table row.
5. Click Save Changes.

Adding a Contacts Record for a Resource Supplier

1. Go to the Resources record, and then click the Edit button in the toolbar.
2. Select the Contacts tab.
3. Click Add Contact. A list of all records in the Contacts module appears.
4. Select an existing contact or create a new contact:
   - If the contact is already in the list, click on their name, then click Select. **Note:** You can associate the same Contacts record with more than one resource by repeating these steps for each of the resources for which this person is a contact.
   - If the contact isn't already in the list, click Add New. You'll see a new, blank Contacts record. Fill in the record (see Table 5-1 on page 47 for explanations of all the items), then click Save Changes. **Note:** When you create a new Contacts record from the Resources module, the Contacts record will be associated with that Resources record automatically.

Mapping a Resource

You can link any Resources record to a symbol on a MARPLOT map representing the location of that resource (or resource supplier). To make a link, follow the procedure described in "Linking a Record to a Map Object" on page 122.

Resource Fields

Table 9-1. Items on a Resources Record

Item	Description
Supplier Name	Name of the company, person, or organization that can supply response resources.
Type	Brief description of the type of supplier (for example, 911 Center, Bomb Disposal); choose the type from the editable drop-down list.
Address Tab	
Street Address	Street address for the supplier, as well as the county (or borough or parish), fire district, and country where it's located.
Mailing Address	Mailing address for the supplier.

Table 9-1. Items on a Resources Record (Continued)

Item	Description
Email	Email address for the supplier.
Supplier Phones Tab	
Type	Type of phone number (such as 24-hour, emergency, or office); choose the type from the editable drop-down list
Phone	Phone number for the supplier.
Items Tab	
ID	Model number or other ID number for an item from the resource supplier.
Item	Name or short description of the item supplied.
Amount	Number or quantity of items available (for example, "4" for number of respirators, or "30" for gallons of a chemical neutralizer).
Contacts Tab Double-click on any contact to see the associated Contacts record.	
Last/First Name	Name of the contact who is associated with the resource.
Title	Job title or position of the contact who is associated with the resource.
Organization	Organization with which this contact is affiliated.
Map Data Tab	
Latitude/Longitude	Latitude and longitude of the location of the resource, expressed as decimal values.
Method for Determining Latitude and Longitude	Code and description of the method by which latitude and longitude were measured; choose from the drop-down list.
Description of Location Identified by Latitude and Longitude	Code and description of the location for which latitude and longitude were measured.
Record is Linked to MARPLOT Object	This box is checked automatically if the record is linked to an object on a MARPLOT map (see "Linking a Record to a Map Object" on page 122). Not editable.
Notes Tab	
Notes	Additional notes about the resource supplier.

10

Screening & Scenarios

You can use the Screening & Scenarios module as a planning tool to assess the hazards from accidental releases of locally stored hazardous chemicals. Such an assessment is called a hazards analysis, and you can use the results of the analysis to prepare emergency response plans for your community.

A sample Screening & Scenarios record is shown below; see Table 10-3 on page 78 for detailed explanations of the information shown on a Screening & Scenarios record.

Screening & Scenarios

Facility / Route Name: Green Valley Water Facility (DEMO)
Chemical: Chlorine CAS: 7782-50-5
Screening Name: Screening [Datasheet]
☒ In Inventory ☐ In Transit ☐ Shipper

Screening Description | Notes

Amount Released: 2000 pounds
Concentration: 100 weight %
Release Duration: 10 minutes
Physical State: ◉ Gas ○ Liquid ○ Solid
If stored in container with a dike, enter surface area within dike: _____ sq ft
Atmospheric Concentration Level of Concern: .0073 gm/m³
LOC Description: Greenbook LOC

Weather Information

Wind Speed: 3.35 mph
Wind From: _____ in degrees measured clockwise from 0 N. (for example: 015, 315, 270)
Ground Roughness: Open Country
Stability Class: F

Risk Assessment

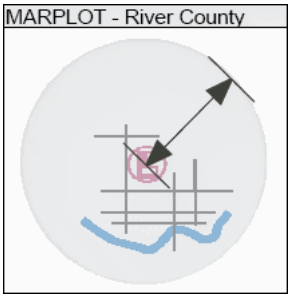
Risk: Low — Probability of described accident occurring
Consequences: Medium — Severity of consequence to people
Overall Risk: High — Combination of probability and severity of consequence

Threat Zone Radius: > 10 miles [Show on Map]

Using Screening & Scenarios to Assess Hazards

The basic procedures for hazards analysis are described in *Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances* (1987). This guidebook, which is commonly referred to as the Green Book, was prepared by the U.S. Environmental Protection Agency (EPA), the Federal Emergency Management Agency, and the U.S. Department of Transportation. The procedures described in the Green Book were developed to help community planners—especially members of Local Emergency Planning Committees—meet the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (see "EPCRA" on page 123).

The Green Book describes calculations you can make to estimate the size of the area around a chemical storage facility or along a transportation route that could be affected by an accidental release of a hazardous chemical. This area is called the **threat zone**. It may also be called the **vulnerable zone** or the **screening zone**, to reflect the particular type of hazards analysis you perform.



Screening & Scenarios is essentially a calculator that you use to estimate the radius of a threat zone (as shown at right). To do this, you enter a set of simple conditions to describe an accidental chemical release at a chemical facility or along a transportation route. Screening & Scenarios then estimates the radius of the threat zone around the facility or along the route, using the Green Book calculations. You can also plot these threat zones on a MARPLOT map.

You can only make Screening & Scenarios calculations for Extremely Hazardous Substances (EHSs)—over 350 chemicals—that have been identified by EPA as acute inhalation toxic threats and listed under EPCRA.

Important: Never use Screening & Scenarios as an emergency response tool or for meeting the requirements of Section 112(r) of the Clean Air Act of 1990. See "Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints" on page 76.

Choosing Between Screening and Scenarios

When you use Screening & Scenarios, you need to choose whether to estimate the threat zone using either:

- A **screening** calculation based on EPA's credible worst-case assumptions (Table 10-1 on page 71).
- A **scenario** calculation based on atmospheric and chemical information that you judge to be more typical of the region and facility.

Use the screening assumptions to compare the relative risks to your community from the worst possible releases of all chemicals of concern, both at fixed facilities and along transportation routes. Once you've completed your initial screening, you can construct scenarios to explore how changing your release assumptions might influence the size of the vulnerable zone. (You also could use ALOHA to further investigate potential release scenarios; for more information, see the ALOHA manual.)

Making Screening Calculations

About Screening Calculations

When you use EPA's worst-case assumptions, you're performing a screening, and the threat zone is typically called a **screening zone**. In a screening, you estimate screening zones for all EHSs that are either:

- Stored above their specified Threshold Planning Quantity (TPQ) at a local chemical facility, or
- Transported along a local route in quantities greater than the TPQ.

Table 10-1. Worst-case Assumptions Used for Screening Zone Estimates

Atmospheric Stability Class = F	Indicates very stable, nighttime atmospheric conditions (see Table 10-2 on page 75).
Wind Speed = 3.35 Miles per Hour	On average, a chemical cloud can travel the farthest downwind at this relatively low wind speed.
Wind Direction = Any Direction	Wind direction can't be predicted in advance. Because an escaping chemical cloud could potentially travel in any direction away from its point of release, the screening zone forms a circle around the potential release point. Therefore, the zone doesn't represent the area that could be affected during a release; the part of the zone that is affected would depend on the wind direction during the release.
Ground Roughness = Open Country	A chemical cloud can travel the farthest when it travels across flat, rural terrain that presents no obstacles to air movement.
Level of Concern = Green Book Value for that EHS	A conservative estimate of the chemical concentration that might cause adverse health effects. A screening zone encompasses the area around the potential release point within which ground-level concentrations of pollutant could reach or exceed your level of concern.
Amount Released = Maximum Quantity in Vessel or Interconnected Vessels	Maximum quantity of a chemical that can be contained in a single storage vessel or in a group of interconnected vessels within the facility under examination. Release is from ground level.
Release Duration = 10 Minutes (Unless it Depends on the Evaporation or Volatilization Rate)	Depends on the chemical's state. Solids in powder or solution form and gases are expected to be released within 10 minutes. The duration of a liquid or molten solid's release depends on its rate of evaporation or volatilization.

Once you've estimated your screening zones, the Green Book describes in detail the remaining steps of a hazards analysis. Briefly, those steps are:

1. Use your estimated screening zones as an aid in identifying the populations and critical facilities that might be placed at risk by a worst-case, accidental release. This gives you a way to estimate the greatest possible severity of the consequences of a release.

2. Estimate the likelihood of a given release.

3. Use your estimates from Steps 1 and 2 to estimate the overall risk associated with a particular chemical for each facility and transportation route.

4. Differentiate between high-priority and low-priority risks to your community. You might choose to focus first on high-priority risks when preparing emergency plans.

Estimating a Screening Zone

Before you begin, you need to make the following preparations:

1. Create a Facilities or Routes record.

2. Create a Chemicals in Inventory record for an EHS chemical that's either maintained at the facility or routinely transported along the route (see "Adding and Editing Chemicals in Inventory Records" on page 41). **Note:** To run a screening calculation, you must enter a value for Max Amount in Largest Container.

Once you've made these preparations, follow the steps below to estimate the radius of a screening zone for a particular EHS at a facility or along a route:

1. Select the Chemicals in Inventory record for the chemical for which you want to estimate a threat zone, then select New Screening/Scenario Record from the Record menu.

2. Click Screening when asked whether you want to create a screening record or alternative scenario. Information about the chemical and the facility or route will be copied onto a new Screening & Scenarios record, which will be displayed in Edit mode. **Note:** For each Chemicals in Inventory record, you can create just one screening record (which you can edit whenever you like). You can create as many alternate scenario records as you like.

3. Type a name for the screening in the Screening Name box.

4. The chemical's physical state—solid, liquid, or gas—at 68°F is automatically filled in. If the chemical is a liquid or a solid at that temperature, a drop-down list will appear to the right of the state. Use the drop-down list to select additional information about the state (such as liquid is near boiling point). Your choice influences how CAMEO makes threat zone calculations (see the Green Book for more details about how the calculations are made).

5. If the chemical's container is surrounded by a dike, type the diked area in square feet.

6. Click Estimate Threat Zone Radius. The radius estimate will be displayed.

7. Fill in the risks and consequences of the release, if desired. Consult the Green Book for assistance.

8. Click Save Changes.

For the directions for plotting the screening zone on a map, see "Plotting a Threat Zone on a Map" on page 75.

Making Scenarios Calculations

About Scenarios Calculations

If you change at least one of the screening assumptions, you're making a scenario calculation instead of a screening calculation. You might choose to make a scenario calculation if you thought that one or more of the worst-case assumptions (Table 10-1 on page 71) for weather, release amount, level of concern, and/or other circumstances of a release didn't represent likely release circumstances for a particular facility or route. For example, you might change wind speed and stability class to fit historical weather data. You can then find the size of a threat zone under more typical weather conditions rather than the worst-case conditions. When you make scenarios instead of screening calculations, the threat zone is typically termed the **vulnerable zone** to distinguish it from a screening zone.

Estimating Vulnerable Zones

Before you begin, you need to make the following preparations:

1. Create a Facilities or Routes record.

2. Create a Chemicals in Inventory record for an EHS chemical that's either maintained at the facility or routinely transported along the route (see "Adding and Editing Chemicals in Inventory Records" on page 41).

Once you've made these preparations, follow the steps below to estimate the radius of a vulnerable zone for a particular EHS at a facility or along a route:

1. Select the Chemicals in Inventory record for the chemical for which you want to estimate a threat zone, then select New Screening/Scenario Record from the Record menu.

2. Click Scenario if you're asked whether you want to create a screening record or alternative scenario. (CAMEO will skip this step if you've already created a screening for this chemical, because there can be only one screening for each Chemicals in Inventory record.) Information about the chemical and the facility or route will be copied onto a new Screening & Scenarios record, which will be displayed in Edit mode.

3. Type a name for the scenario in the Scenario Name box.

4. The chemical's physical state—solid, liquid, or gas—at 68°F is automatically filled in. If the chemical is a liquid or a solid at that temperature, a drop-down list will appear to the right of the state. Use the drop-down list to select additional information about the state (such as liquid is near boiling point). Your choice influences how CAMEO makes threat zone calculations (see the Green Book for more details about how the calculations are made).

5. Adjust any storage and release conditions that need to be changed (see "Choosing a Stability Class" on page 74 and Table 10-3 on page 78).

6. Click Estimate Threat Zone Radius. The radius estimate will be displayed.

7. Fill in the risks and consequences of the release, if desired. Consult the Green Book for assistance.

8. Click Save Changes.

For the directions for plotting the vulnerable zone on a map, see "Plotting a Threat Zone on a Map" on page 75.

Choosing a Stability Class. Atmospheric stability class is one of the conditions you can adjust when making scenario rather than screening calculations. The atmosphere is more or less turbulent at any given time, depending on the amount of incoming solar radiation as well as other factors. Meteorologists have defined six atmospheric stability classes, each representing a different degree of turbulence in the atmosphere.

- When moderate-to-strong incoming solar radiation heats air near the ground so that it rises and generates large eddies, the atmosphere is considered **unstable** or relatively turbulent. Unstable conditions are associated with atmospheric stability classes A and B.

- When solar radiation is relatively weak, air near the surface has less of a tendency to rise and less turbulence develops. In this case, the atmosphere is considered **stable** (stability classes E and F).

- Stability classes D and C represent conditions of more **neutral** stability, or moderate turbulence. Neutral conditions are associated with relatively strong wind speeds and moderate solar radiation.

Use Table 10-2 on page 75 to choose the stability class that best fits a given combination of wind speed and solar radiation strength.

Table 10-2. Stability Class Choices (adapted from Turner 1994)

Surface Wind Speed		DAYTIME Incoming Solar Radiation			NIGHTTIME* Cloud Cover	
Miles per Hour	**Meters per Second**	**Strong**	**Moderate**	**Slight**	**>5/10**	**<5/10**
< 4	< 2	A	A–B	B	E	F
4 to 7	2 to 3	A–B	B	C	E	F
7 to 11	3 to 5	B	B–C	C	D	E
11 to 13	5 to 6	C	C–D	D	D	D
> 13	> 6	C	D	D	D	D
Choose D for completely overcast conditions during day or night. *Nighttime is the period from 1 hour before sunset to 1 hour after sunrise.						

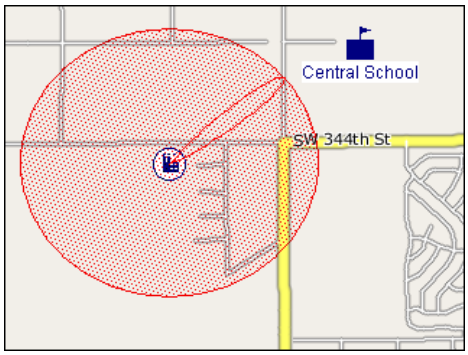
Plotting a Threat Zone on a Map

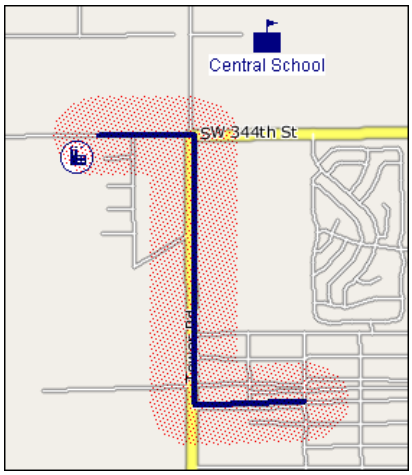
To plot a threat zone on a MARPLOT map from a Screening & Scenarios record, first link the associated Facilities or Routes record to a map object (see "Linking a Record to a Map Object" on page 122). Any Screening & Scenarios records you create for the facility or route will become indirectly linked to the same map object, and you'll then be able to plot a threat zone for that facility or route on the map.

Then, click

on the Screening & Scenarios record (or, from the Sharing menu, select MARPLOT, then Show on Map). MARPLOT will start up and display the map with the threat zone on it.

In the case of a facility, the threat zone will appear as a shaded circle around the facility, with a radius equal to the threat zone radius shown on the Screening & Scenarios record. A threat zone for a scenario also includes a small oval area (as shown on the next page), representing the area that could potentially be affected if the wind blows from the direction you indicated on the scenario record. Threat zones for screenings don't include an oval area because wind direction isn't specified in screenings. In the case of a route, the threat zone will appear as a shaded corridor along the full length of the route, twice as wide at every point along the route as the calculated threat zone radius.





You can find out which special locations (such as schools) could be at risk during a potential incident by using records from the Special Locations and Screening & Scenarios modules along with MARPLOT. For instructions, see the Guide to the CAMEO Suite (available at http://www.epa.gov/emergencies/content/cameo/cameo.htm).

All your threat zones will be removed automatically from the map when you quit MARPLOT. To delete a threat zone from your map without quitting from MARPLOT, return to the Screening & Scenarios record from which you plotted the threat zone, and select MARPLOT from the Sharing menu, then Delete Scenario Object. If you've plotted multiple threat zones on your map and would like to remove them all, select Delete All Scenario Objects instead.

Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints

Three kinds of toxic hazard predictions can seem very similar on first encounter:

- Screening & Scenarios threat zone estimates.
- Toxic threat zone estimates produced by ALOHA, CAMEO's hazard model. ALOHA's toxic threat zone is defined as the area downwind of an accidental release where chemical concentrations in the air near ground level may be high enough to be of concern.
- Endpoint distance estimates from offsite consequence analyses under the Risk Management Planning Rule (or RMP Rule; see "CAA 112(r)" on page 129). An endpoint distance represents the distance to a particular level of hazard, such as a toxic gas concentration or heat radiation intensity. The RMP*Comp program (see "RMP*Comp" on page 17) or similar software can be used to estimate endpoint distances.

First, what's the difference between a threat zone from Screening & Scenarios and ALOHA? CAMEO's Screening & Scenarios module makes the simplified threat zone calculations described in the Green Book. ALOHA makes a toxic threat zone estimate by taking into account many factors—such as additional properties of the chemical, weather conditions, and the specific characteristics of the release source—that

aren't included in Screening & Scenarios calculations. ALOHA's calculations are more complex, and may more accurately predict the effects of a release. For more information, see http://response.restoration.noaa.gov/ADA/GreenBook.

Second, an endpoint distance for an offsite consequence analysis is similar in concept to a Screenings & Scenarios threat zone radius—so how are they different? At first glance, the hazard analysis procedures described in the Green Book and implemented in Screening and Scenarios look similar to the RMP consequence analysis procedures specified by the RMP Rule. For example, both the RMP Rule and the Green Book specify F stability and 3.4 miles per hour wind speed conditions for worst-case scenarios. But there are key differences between the two procedures:

- For many substances, the toxic endpoints specified in the RMP Rule differ from the Levels of Concern specified in the Green Book.
- Screening & Scenarios only uses Gaussian dispersion calculations, but the RMP Rule specifies that you must "appropriately account for gas density." That is, you must use another technique to model heavy gases (Gaussian calculations are designed for neutrally buoyant gases).
- While the Green Book mandates rural terrain for all worst-case scenarios, the RMP Rule specifies that you should choose either urban or rural terrain conditions, depending on which choice best describes the terrain.
- Both the Green Book and the RMP Rule specify that toxic gases should be assumed to be released over a 10-minute period. But the Green Book specifies that the dispersion distance then be estimated by treating the release as a steady-state (infinite-duration) emission, at the rate that would result in the release of the entire quantity of the substance in 10 minutes. In contrast, the RMP Rule specifies that the distance be estimated by treating the release as an emission lasting only 10 minutes. This difference in method may seem obscure, but it can make a big difference. Distances estimated using the Green Book method can be substantially longer.

Here are the key points to remember:

- For emergency response, use ALOHA—not Screening & Scenarios.
- Don't use Screening & Scenarios to estimate endpoint distances for the offsite consequence analyses required under the RMP Rule. You can use ALOHA or RMP*Comp for this task.
- Use Screening & Scenarios only for the hazards analyses described in the Green Book, in order to meet EPCRA requirements.

For more information, see the Ask Dr. ALOHA articles on this subject, which are available at http://response.restoration.noaa.gov/ADA/RMP_EPCRA.

Screening & Scenarios Fields

Note: For all Screening & Scenarios calculations, temperature is assumed to be 68°F (20°C).

Table 10-3. Items on a Screening & Scenarios Records

Item	Description
Facility/Route Name	Name of the facility that maintains the chemical or the name of the transportation route along which the chemical is transported. Not editable.
Chemical	Name of the chemical. Not editable.
CAS	Chemical Abstracts Service (CAS) number for this chemical. Not editable.
Screening Name (Scenario Name)	Name of this screening or scenario.
Datasheet	On saved records, clicking this button will take you to a chemical datasheet with response recommendations and physical properties based on the CAS number and chemical name you entered. You'll only be taken to a chemical datasheet if (a) you've installed the downloadable version of CAMEO Chemicals, and (b) the CAS number and chemical name match a chemical datasheet in CAMEO Chemicals.
In Inventory	When checked, indicates that the Screening & Scenarios record is associated with a facility. Not editable.
In Transit	When checked, indicates that the Screening & Scenarios record is associated with a transportation route. Not editable.
Shipper	When checked, indicates that the Screening & Scenarios record is associated with a facility that ships chemicals (as indicated on the associated Facilities record). Not editable.
Screening (Scenario) Description Tab	
Amount Released	Amount of chemical released, in pounds. For screening calculations, this is the maximum amount stored in one vessel or in connected vessels. For scenario calculations, you can choose other values.
Concentration	Concentration of the chemical, in weight percent. For screening calculations, this is 100 percent. For scenario calculations, you can choose other values.
Release Duration	Duration of the chemical release (in minutes). For screening calculations, this is 10 minutes (unless it depends on the evaporation or volatilization rate). For scenario calculations, you can choose other values.
Physical State	Chemical's physical state (solid, liquid, or gas) at 68°F is filled in automatically. If the chemical is a liquid or a solid at that temperature, use the drop-down list to the right of the state to select additional information about the state (such as liquid is near boiling point).

Table 10-3. Items on a Screening & Scenarios Records (Continued)

Item	Description
If Stored in a Container with a Dike, Enter Surface Area within Dike	Area within the dike (in square feet).
Atmospheric Concentration Level of Concern	Or LOC. Atmospheric concentration of the chemical on which to base threat zone calculations (in grams per cubic meter). The value listed in the Green Book is automatically filled in; you can use a different value for scenarios.
LOC Description	Description about where the chosen level of concern came from, either Greenbook LOC or Other.
Wind Speed	Wind speed in miles per hour. For screening calculations, this is 3.4 miles per hour. For scenario calculations, you can choose other values, but the wind speed must be appropriate for the stability class (see Table 10-2 on page 75).
Wind From	Direction from which the wind is blowing, in degrees true north. For screening calculations, this remains blank.
Ground Roughness	A measure of the size of the obstacles on the ground that a dispersing chemical cloud must pass over. For screening calculations, this is set to Open Country. For scenario calculations, you can choose either Open Country (relatively smaller and fewer obstacles) or Urban or Forest (relatively more and larger obstacles).
Stability Class	Atmospheric stability class depends on wind speed and cloud cover. For screening calculations, stability class is set to F. For scenarios, review Table 10-2 on page 75 to choose a class.
Risk/Consequences/Overall Risk	Using the information you entered for the Screening/Scenarios calculations, you can rank the likelihood, consequences, and overall risk of a release of a chemical; choose either high, medium, or low from each drop-down list. (Refer to the Green Book for more on risk assessment.)
Threat Zone Radius	Distance from the release point beyond which the predicted concentration of the airborne pollutant is expected to be below the LOC. At locations closer to the release point and directly downwind, concentrations are predicted to exceed the LOC. Because wind direction is not taken into account when this distance is calculated, a threat zone around a release point always forms a circle. This value is calculated for you when you click Estimate Threat Zone Radius in Edit mode.
Estimate Threat Zone Radius	Visible only in Edit mode. Click this button to estimate the threat zone radius.
Show on Map	On saved records where the associated Facilities or Routes record has been linked to a map object, clicking this button will display the facility/route and threat zone on a MARPLOT map.

Table 10-3. Items on a Screening & Scenarios Records (Continued)

Item	Description
Notes Tab	
Notes	Additional notes about the screening or scenario.

11

Importing and Exporting Data

In this section, you'll find explanations of the kinds of data transfers that can be made to or from CAMEO, and instructions for completing each kind of transfer. You'll also find background information you'll need to know to avoid problems when you transfer data.

Avoiding Trouble

To avoid trouble when you transfer data to and from CAMEO, we recommend that you:

- Always back up your existing data before importing data into CAMEO. It's easy to do: just export all the data from the affected module(s) into an archive file (see "Exporting Data from All CAMEO Modules" on page 90 and "Exporting Data from All Records in a CAMEO Module" on page 90).
- Follow the CAMEO Data Ownership Rule.

To avoid inadvertently duplicating records, see "Strategies for Avoiding Duplicate Records" on page 95.

Important: Don't delete either the ImportFiles or ExportFiles folder from your CAMEO folder. Without them, CAMEO can't import or export data.

CAMEO Data Ownership Rule

The Ownership Rule says that the CAMEO user with the most detailed knowledge of the data on a CAMEO record should be considered the **owner** of that record. The owner of a record should be the only person who makes changes to it (or directs others to change it). To implement the Ownership Rule, first, establish who owns which data. Then, import data only from its owner, and export data only if you own it.

Here's an example of how the rule works in practice: Suppose that you work for a fire district that has a mutual aid agreement with neighboring districts. Also suppose that each district has agreed to be responsible for collecting information about the facilities in their district and creating CAMEO records describing those facilities.

To prepare for mutual aid calls, you might want to import the other districts' facility records into your copy of CAMEO. The other districts likewise might ask you to export your facility records to them, for use in their copies of CAMEO. You can avoid causing problems by agreeing to the following rules:

- Each district is the owner of the data describing the facilities in its own fire district.
- Each district will export only the records that it owns.
- Each district will import records only from their owner.

To export your facility records to the other districts, you would follow the steps in "Exporting Data from a Subset of the Records in a Module" on page 91 to export just the data for the facilities in your district.

What if your fire district, and the neighboring districts, instead receive your facility data from the State Emergency Response Commission (SERC), which compiled that data from submitted Tier II reports? You would then consider the SERC to be the owner of the facility data for all your districts. Each district would import data only from the SERC. Districts would never export facility records.

The reason why following the Ownership Rule can save you time and trouble has to do with the way CAMEO keeps track of records (see "How CAMEO Assigns and Uses Record IDs" on page 83).

Possible Data Transfers

You can transfer data to and from CAMEO in three ways:

- From Tier2 Submit to CAMEO. Tier2 Submit is a program used by facilities for preparing and submitting Tier II chemical inventory reports. See "Importing Data from Tier2 Submit" on page 86.
- Between two copies of CAMEO. See "Transferring Data Between CAMEO Programs" on page 89.
- From CAMEO to a data file that can be imported into a spreadsheet, database, or other program. See "Exporting Data to Other Programs" on page 97.

Note: If your facility data comes from Tier2 Submit and you've linked the data to MARPLOT maps and site plans, you can copy the links over to the new facility data when you import the next year's data.

Difficult or Impossible Data Transfers

Two kinds of data transfers can't be made, or can be made only with difficulty:

- Data can't be exported from CAMEO to Tier2 Submit. (However, data can be transferred between different copies of Tier2 Submit. See the Tier2 Submit manual for details.)
- It would be difficult, though not impossible, to import data created in non-CAMEO programs into CAMEO. A file using CAMEO's field order and format could be imported into CAMEO, but you would need to carefully consider assignment of record IDs (see "How CAMEO Assigns and Uses Record IDs" on page 83).

Note: If you want to try creating an import file, first export a file from any CAMEO module. Then, inspect the exported file in a database or spreadsheet program, so that you can see the field order and format used by CAMEO. The first record within any file exported from CAMEO provides data field names and field order; import files must be in zipped merge format (see "Zipped Merge Files: CAMEO's Standard File Format" on page 83).

Zipped Merge Files: CAMEO's Standard File Format

To import and export data, CAMEO uses a standard type of data file called a merge file. When you export data from CAMEO, a merge file is created for each module from which data is exported (merge files are also created for behind-the-scenes supporting files). Merge files exported from CAMEO contain the data exported from the corresponding modules and/or supporting files.

A merge file is a text file in which data fields are separated by commas, records are separated by carriage returns, and the contents of each data field are enclosed in quotation marks. A merge file has a .mer file extension.

With each data export, the merge files exported from CAMEO are automatically compressed together into a single zipped file, which has a .zip file extension. Depending on the nature of the data you're exporting from CAMEO, the zipped file created by CAMEO may contain a single merge file or multiple merge files.

Once you've exported merge files from CAMEO and have uncompressed (unzipped) them, you can open and work with them in standard database, spreadsheet, and text editing programs.

Tier2 Submit File Format. You might receive Tier2 Submit data files either directly from facilities reporting their chemical inventory data or from colleagues. Tier2 Submit data files contain the Tier II information submitted by those facilities, and can be imported into CAMEO (see "Importing Data from Tier2 Submit" on page 86). A data file generated from Tier2 Submit is a collection of individual merge files compressed together into a single zipped file. CAMEO can automatically uncompress a Tier2 Submit file and import the data from the merge files.

How CAMEO Assigns and Uses Record IDs

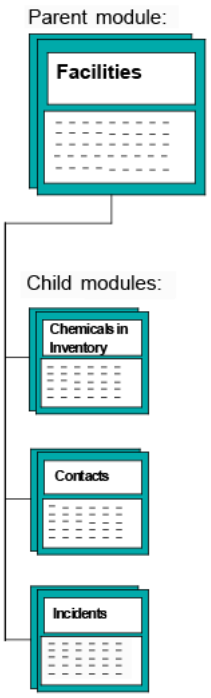
CAMEO uses record ID numbers to keep track of the records in its modules and the relationships between records. Each new record is assigned a unique 20-character record ID at the moment it's created. In the case of CAMEO's facility records, a record ID is assigned to a given facility in either of two ways:

- When you manually create a facility record in CAMEO, a record ID is automatically generated for that record.
- When you import a Tier2 Submit facility record into CAMEO, CAMEO uses the record ID that was created in Tier2 Submit and imported into CAMEO along with the facility record.

Parent and Child Modules and Record IDs

Record IDs are used in CAMEO to track relationships among records stored in different modules, particularly relationships between records in parent and child modules. In CAMEO, as with other kinds of databases, this type of relationship hierarchy is useful to describe which records belong to other records—for example, child modules are subordinate to parent modules.

For the purposes of tracking relationships among records in CAMEO:

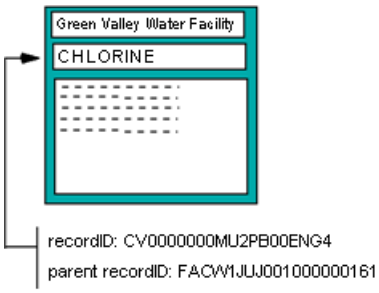


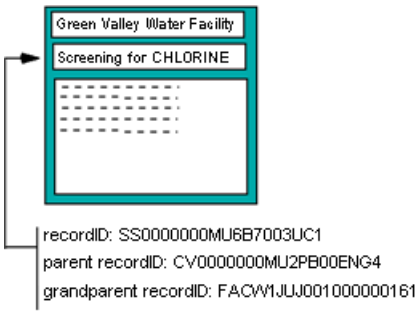
- **Parent Modules:** Facilities, Special Locations, Routes, and Resources.
- **Child Modules:** Chemicals in Inventory, Contacts, and Incidents. The main purpose of these modules is to store information that helps to describe facilities, routes, and special locations.
- **Grandchild Module:** Screening & Scenarios.

For example:

- Chemicals in Inventory records describe either chemicals in a facility's inventory or chemicals routinely transported along a given route.
- Incidents records typically describe incidents that have happened at facilities or along routes.
- Some Contacts records describe contact people for facilities and special locations. Other Contacts records may describe people involved in incidents (such as the discharger or the notified agency) or contact people for companies that provide response resources.

In the Facilities and Routes modules, each new facility or route record is assigned a record ID when it is created. From then on, when a new Chemicals in Inventory record is created to describe a chemical (or mixture) stored at a given facility or transported on a given route, the new record is given its own unique record ID and also a **parent record ID** that matches the facility or route's record ID (as in the example Chemicals in Inventory record at right). CAMEO uses the parent record ID to track the facilities or routes associated with the Chemicals in Inventory record.





Screening & Scenarios can be considered a grandchild module because it's subordinate to the Chemicals in Inventory module, just as the Chemicals in Inventory module is subordinate to the Facilities and Routes modules. For that reason, any Screening & Scenarios record contains three record IDs: its own unique record ID, the parent record ID for the related Chemicals in Inventory record, and the **grandparent record ID** for the facility or route record that's related to the Chemicals in Inventory record (as in the example Screening & Scenarios record at left). CAMEO uses the parent record ID to associate the Screening & Scenarios record with the Chemicals in Inventory record, allowing information about the chemical to be used in hazard zone estimation. It uses the grandparent record ID when you choose to plot a hazard zone on a map (the hazard zone is plotted either around the facility or along the route that has a record ID matching the grandparent record ID).

Data Transfers and Record IDs

For each record in a data file exported from one copy of CAMEO (the **source** copy) into another copy of CAMEO (the **target** copy), one of two things happens:

- A new record is created in the target copy of CAMEO to hold the newly imported data.
- An existing record is updated.

Whether a new record is created or an existing record is updated depends on the record ID for that record, which is included in the file and imported along with the rest of the data in that record. The record ID for each imported record is compared with the record IDs for the existing records in a given target module:

- If no match is found, a new record containing the imported data is added to the target module, and the record ID for the new record is set to match the record ID of the imported record.
- If a match is found, the corresponding record in the target module is updated with the imported data. During the update, *all* the data in the target record is replaced by the matching imported record.

Records in CAMEO—especially records describing facilities—can be duplicated when you might not necessarily expect it, because of how CAMEO uses record IDs. For example:

- A duplicate record for a facility is created if a record for that facility exists in your Facilities module and you import a Tier2 Submit file containing information about that facility. That's because both CAMEO and Tier2 Submit assigned different record IDs to that facility.
- Records can be duplicated when you transfer data between two copies of CAMEO, if the source and target modules each contain a record for the same entity (such as a facility), and if those records came from different sources, and hence have different record IDs.

The best way to avoid unintended record duplication is to follow the "CAMEO Data Ownership Rule" on page 81. For other strategies, see "Strategies for Avoiding Duplicate Records" on page 95.

Viewing Record IDs

Record ID numbers aren't displayed in CAMEO, because you generally don't need to see the record IDs for the records in your copy of CAMEO. However, you can view them if you need to. For example, you might want to view the record IDs in a particular module if you suspect that the module contains unwanted duplicates of some records.

To see the record IDs in any of your CAMEO modules:

1. Export the data from that module, following the steps in "Exporting Data from All Records in a CAMEO Module" on page 90.
2. Open the exported file in a spreadsheet program, following the steps in "Exporting Data to Other Programs" on page 97.

In the exported file, you can recognize record IDs by their distinctive format. Each is 20 characters long (without any spaces), and the record IDs for each CAMEO module can be identified by their unique two-letter prefix. For example, "FA" are the first two characters of any facility record ID.

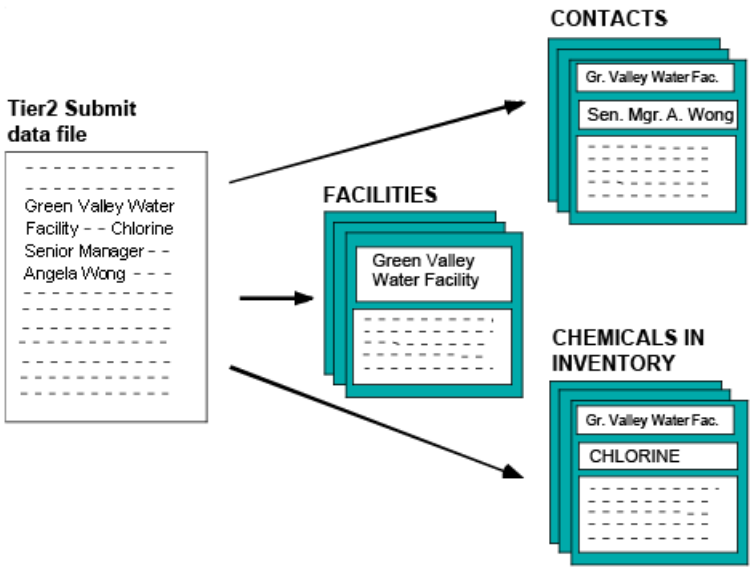
Importing Data from Tier2 Submit

Under the Emergency Planning and Community Right-to-Know Act (EPCRA), facilities that maintain more than threshold amounts of certain hazardous materials must submit an annual chemical inventory report—called a Tier II form—to their state's State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire department. Facility operators can use Tier2 Submit to prepare their annual Tier II report as an electronic file (see "Tier2 Submit" on page 17).

You might receive Tier2 Submit files if you are:

- A member of a SERC, LEPC, or local fire department to whom facilities submit their reports.
- A local responder or planner who receives, from your SERC or LEPC, a Tier2 Submit file of data for facilities in your area.

When you import a Tier2 Submit file into CAMEO, data from that file will be imported into the Facilities, Chemicals in Inventory, and Contacts modules, as follows:



- A new Facilities record will be created for each facility described in the Tier2 Submit file. It will be assigned the record ID generated for that facility by Tier2 Submit.
- A new Chemicals in Inventory record will be created for each chemical (or mixture) in a given facility's inventory that is listed in the Tier2 Submit data file. The parent record ID assigned to this record will match the facility's record ID.
- A new Contacts record will be created for each contact person listed in the Tier2 Submit data file. The parent record ID assigned to this record will match the facility's record ID.

Note: The procedure for importing a Tier2 Submit file is unaffected by how many facilities are represented in the file. A Tier2 Submit file submitted by the operator of a reporting facility would generally contain information for just a single facility. In contrast, a Tier2 Submit file generated by a SERC to share with local planners and responders would contain data on multiple facilities.

Things to Know Before Importing Tier II Data

If your copy of CAMEO already contains records for some of the facilities, chemicals in inventory, or facility contacts included in the Tier2 Submit file (either because you created those records manually or because you imported a Tier2 Submit data file in a previous reporting year), new records for all those facilities, chemicals, and contacts will be created when you import the Tier2 Submit file. The existing records will not be updated, because Tier2 Submit generates its own record IDs when someone enters information in that program. Those record IDs are imported into CAMEO when the Tier2 Submit file is imported, and they won't match the record IDs that CAMEO has assigned to the corresponding Facilities, Chemicals in Inventory, or Contacts records.

Given CAMEO's record-keeping method, there are two ways for you to manage your Tier II data in CAMEO, each with advantages and drawbacks.

Method 1: Records for Each Reporting Year. First, you can simply import new Tier2 Submit data file(s) for the facilities of interest to you each year, following the steps in "Importing a Tier2 Submit Data File" on page 89. Then, for each reporting facility, *for each reporting year*, there will be one record in your Facilities module, one Chemicals in Inventory record for each chemical (or mixture) in the facility's inventory, and a new Contacts record for each facility contact. Note that there will be multiple Contacts records for the same contact person if multiple facilities have reported the same contact person.

Because reporting year is shown on records in the Facilities and Chemicals in Inventory modules, you can differentiate among records that were created in different reporting years in these modules. For example, if you have facility records from multiple reporting years, and want to work with your Facilities records for just the current reporting year:

1. Open the Facilities module and then click the New Search button or select Start Search from the Search menu.

2. Type the current reporting year in the Report Year box, set the drop-down list to "is equal to," then click Search. The found set for this search will contain just the Facilities records for the current reporting year.

If you want to find just the record for a particular facility for the current reporting year, follow the previous steps, but also include the facility's name on the search form.

However, if you want to view the data for a particular facility from all consecutive reporting years:

1. Open the Facilities module and then click the New Search button or select Start Search from the Search menu.

2. Type the name of the facility in the Facility Name box, then click Search. The found set for this search will contain only the records for the given facility, for all reporting years.

3. To sort these records by date, follow the instructions in "Sorting Records by a Single Criterion" on page 119 to sort the found set by Report Year.

Reporting year isn't shown on Contacts records. To access the most recent Contacts record for a facility contact person, begin in the Facilities module rather than the Contacts module:

1. Go to the most recent Facilities record for that facility.

2. Select the Contacts tab.

3. Double-click on the name of the contact person. The most recent Contacts record for that contact will be displayed.

Note: An alternative procedure is to go to the most recent Facilities record for the facility, then select Show Related from the Record menu, and then Contact Records.

Method 2: Records for a Single Reporting Year. Rather than keeping data from multiple reporting years in your copy of CAMEO, you could delete all the records for previous reporting years and then import the current year's Tier2 Submit files. Then, when you import the Tier2 Submit data files, for each reporting facility there would be just one record in your Facilities module, just one Chemicals in Inventory record for each chemical in the facility's inventory, and just one Contacts record for each contact person for that facility (unless multiple facilities have listed the same contact person).

Important: Do *not* choose this approach if you foresee needing facility-related data from previous reporting years in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios. For example, if you want to keep Incidents records for accidents at a particular facility over a period of years, avoid this approach.

If you choose this approach and want to back up your Tier II data from previous year(s) and then delete those records from CAMEO (before you import Tier2 Submit data file(s) for the current reporting year):

1. Open the Facilities module.

2. From the File menu, select Import\Export, then click Export.

3. Click Export Data for Entire Module. When you export data from the Facilities module, data is also exported from related records in the Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios modules. The result of the export is a single zipped file containing a set of merge files.

4. When prompted, choose a location and name for the export file, then click Save. A zipped file containing your exported data will be created at that location. We recommend that you make a second copy of the archive file on another storage device.

5. Click OK on the completion message and click Done on the Import/Export Log.

6. While the Facilities module is still open, select Show All Records from the Record menu.

7. From the Record menu, select Delete All Records. This deletes all records from the Facilities module. Records related to the deleted facilities in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules are also deleted (except for any Contacts records that are also related to other entities that aren't deleted, such as Resources records). **Note:** You need to be in list view to see this menu item.

Importing a Tier2 Submit Data File

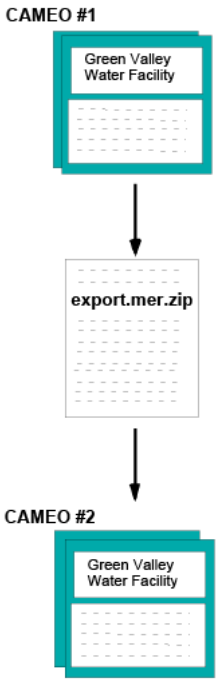
1. Start CAMEO.
2. Back up your facilities-related data, see "Exporting Data from All Records in a CAMEO Module" on page 90.
3. From the File menu, select Import\Export.
4. Click Import, then click Import again when reminded to back up data.
5. Find and open the Tier2 Submit file. The import will start immediately.

Note: If you accidently import the same Tier2 Submit data file more than once, don't worry. Each of the newly imported records will simply be overwritten, rather than duplicated.

Transferring Data Between CAMEO Programs

In some situations, you might need to transfer data between your own copy of CAMEO (the **source** copy) and someone else's (the **target** copy). **Note:** You would follow the same procedure if you wanted to transfer data from the previous version of CAMEO into the latest version.

To transfer data from your copy of CAMEO to someone else's, you export the data from your own records into an export file. Your colleague then imports the data from that file into their copy of CAMEO, as at right. If instead you received data from your colleague, you would import their export file.



You can export data from:

- **All your CAMEO modules at once**.
- **A single CAMEO module**. Data will also be exported from related records in child and grandchild modules. For example, when you export Facilities records, related records in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules are exported as well.
- **A found set of records in a single CAMEO module** (that is, a set of records found during a search). Data will also be exported from related records in child and grandchild modules.
- **A single CAMEO record**. Data will also be exported from related records in child and grandchild modules.

When you transfer data between two copies of CAMEO, it's possible to unintentionally duplicate records. Before transferring data, review "Data Transfers and Record IDs" on page 85.

Exporting Data from All CAMEO Modules

Sometimes, you might want to export all the data from CAMEO into a single export file. This procedure is an easy way to create a backup archive file of all of your CAMEO data.

To export all the data from all of your CAMEO modules:

1. From the File menu, select Import\Export, then click Export.
2. Click Export ALL CAMEO data.
3. When prompted, choose a location and name for the export file, then click Save. A zipped file containing your exported data will be created at that location.
4. Click OK on the completion message and click Done on the Import/Export Log.

If some of the exported records are linked to map objects or site plans that you want to export, see "Transferring Map Links and Map Objects" on page 92 and "Transferring Site Plans" on page 93.

Exporting Data from All Records in a CAMEO Module

Sometimes, you might need to transfer all the data from just one module, along with data from related records in any child or grandchild modules. For example, you might want to do this if you represent a fire district that has just entered into a mutual aid agreement with neighboring districts. If each district only has records for facilities in that district in its copy of CAMEO, then each district could export all its facility data, and share that export file with neighboring districts. Under the "CAMEO Data Ownership Rule" on page 81, each district would "own" the data for facilities in that district. Note, though, that if each district has records for facilities not only in its own district but also in neighboring districts, each district would instead export just the subset of its records containing only the facilities in its own district (see "Exporting Data from a Subset of the Records in a Module" on page 91).

To export all the data from a CAMEO module:

1. Open the module from which you want to export data. **Note:** Whenever you export data from the Facilities or Routes modules, related records in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules are exported as well.
2. From the File menu, select Import/Export, then click Export.
3. Click Export Data for Entire Module.
4. When prompted, choose a location and name for the export file, then click Save. All the data from all the records in the open module, along with all data from related records in child and grandchild modules, will be exported to a single zipped file at that location.
5. Click OK on the completion message and click Done on the Import/Export Log.

If some of the exported records are linked to map objects or site plans that you want to export, see "Transferring Map Links and Map Objects" on page 92 and "Transferring Site Plans" on page 93.

Exporting Data from a Subset of the Records in a Module

Sometimes, you might need to transfer data from only certain records in a CAMEO module, along with data from related records in any child or grandchild modules. Here's an example: Tier II data is particularly useful to emergency responders. So if you're a member of a State Emergency Response Commission that has received Tier II data, you might want to share that data with county- and tribal-level response organizations or with fire departments. You might want to export only certain records to each receiving organization: for example, just the records for King County to that county's emergency management organizations.

Exporting a subset of records can be a way to honor the "CAMEO Data Ownership Rule" on page 81. When you need to export records, you can search a module to create a found set containing just the records you "own" (for example, just your fire district's records, rather than all your facility records). Then, you can export just the found set.

To export only a subset of records from a CAMEO module:

1. In the module, create a found set containing just the records you want to export. To do this, search the module in such a way that only the records you want will be found. For example, to create a found set in the Facilities module that contains just the records for facilities in Johnson County, choose Start Search from the Search menu, type "Johnson" in the County box, then press Search. (For more details about setting up searches, see "Searching" on page 113.) **Note:** Whenever you export data from the Facilities or Routes modules, related records in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules are exported as well.

2. From the File menu, select Import\Export, then click Export.

3. Click Export Data for Found Set.

4. When prompted, choose a location and name for the export file, then click Save. All the data from all the records in the found set, along with all data from related records in child and grandchild modules, will be exported to a single zipped file at that location.

5. Click OK on the completion message and click Done on the Import/Export Log.

If some of the exported records are linked to map objects or site plans that you want to export, see "Transferring Map Links and Map Objects" on page 92 and "Transferring Site Plans" on page 93.

Exporting Data from a Single CAMEO Record

You can export the data from just a single CAMEO record, along with data from related records in child and grandchild modules:

1. Select the record from which you want to export data.

2. From the File menu, select Import/Export, then click Export.

3. Click Export Data for Current Record.

4. When prompted, choose a location and name for the export file, then click Save. The data from the record, along with all data from any related records in child and grandchild modules, will be exported to a single zipped file at that location.

5. Click OK on the completion message and click Done on the Import/Export Log.

If the exported record is linked to a map object or site plan that you want to export, see "Transferring Map Links and Map Objects" on page 92 and "Transferring Site Plans" on page 93.

Transferring Map Links and Map Objects

Sometimes, you might need to export records that are linked to objects on your CAMEO map. In that case, you might need to share with colleagues not only the data from those records, but the map objects as well.

To export all the records, map links, and map objects linked to records in a CAMEO module:

1. Export the records, following the instructions in "Exporting Data from All Records in a CAMEO Module" on page 90. The exported file contains the data from your records, including the map links from linked records, but not the linked map objects themselves.

2. Open the module (if it isn't already).

3. From the Sharing menu, select MARPLOT, then Show All on Map. The map objects linked to records in this module will be selected and displayed in MARPLOT.

4. While the objects remain selected, from MARPLOT's File menu, select Export.

5. Set up the export by selecting the "selected objects" and "MARPLOT Import/Export (MIE)" options, then click Export. An MIE file containing all the selected objects is created. (MIE files are a kind of text file that MARPLOT uses for importing and exporting data.)

6. Give your colleagues both the file that you exported from CAMEO and the MIE file that you exported from MARPLOT.

If you need to export just a subset of the records in a CAMEO module (for example, just the records you own under the "CAMEO Data Ownership Rule" on page 81, not the records you obtained from someone else) along with related map links and map objects, then:

1. Follow the steps in "Exporting Data from a Subset of the Records in a Module" on page 91.

2. While the found set is still in place, from the Sharing menu, select MARPLOT, then Show All on Map. The map objects linked to the found records will be selected and displayed in MARPLOT.

3. While the objects remain selected, from MARPLOT's File menu, select Export.

4. Set up the export by selecting the "selected objects" and "MARPLOT Import/Export (MIE)" options, then click Export. An MIE file containing all the selected objects is created. (MIE files are a kind of text file that MARPLOT uses for importing and exporting data.)

5. Give your colleagues both the file that you exported from CAMEO and the MIE file that you exported from MARPLOT.

To import your data, your colleague should do the following:

1. Back up the data in their copy of CAMEO, following the instructions in either "Exporting Data from All CAMEO Modules" on page 90, "Exporting Data from All Records in a CAMEO Module" on page 90, or "Exporting Data from a Subset of the Records in a Module" on page 91. The exported file serves as an archive file.

2. Save your exported CAMEO and MIE files anywhere on their hard drive.

3. From CAMEO's File menu, select Import\Export, then Import.

4. Click on the name of your exported CAMEO file, then click Open. The data from the file will be imported into their copy of CAMEO.

5. Click OK on the completion message and click Done on the Import/Export Log.

6. Start MARPLOT.

7. In MARPLOT, from the File menu, select Import.

8. Find the MIE file, click on it to select it, then click Open. The map objects are then added to their CAMEO Map (if they don't have the map layer for the objects, a layer will be created). Map links between the imported records and map objects will now be functional in their copies of CAMEO.

Important: Follow the CAMEO Data Ownership Rule when you transfer map objects (see "Avoiding Trouble" on page 81).

Transferring Site Plans

To share Facilities or Special Location records that contain links to site plans with colleagues, along with the site plans themselves:

1. Export the records, following the instructions in either "Exporting Data from All Records in a CAMEO Module" on page 90 or "Exporting Data from a Subset of the Records in a Module" on page 91. The exported file contains the data from your records, including the links to site plans, but not the site plans themselves. The site plans are files stored inside the SitePlans folder.

2. Give your colleague both the exported file of facility and special locations data and your site plan files. **Note:** Site plan files can be contained inside of subfolders of the SitePlans folder. For example, you might see FATR200829PF2C002W43\power_room.jpg in the Site Plan tab for a facility. In that case, give your colleague the folder FATR200829PF2C002W43, with the file power_room.jpg inside it.

To import your data and site plans, your colleague should do the following:

1. Back up their facilities or special locations related data, following the instructions in either "Exporting Data from All Records in a CAMEO Module" on page 90 or "Exporting Data from a Subset of the Records in a Module" on page 91. The exported file serves as an archive file.

2. Back up the SitePlans folder (in case any of the new site plan files have the same names as files already in the folder).

3. Put your exported CAMEO file anywhere on their hard drive.

4. From CAMEO's File menu, select Import\Export, then Import.

5. Click on the name of your exported file, then click Open. The file then will be imported into their copy of CAMEO.

6. Click OK on the completion message and click Done on the Import/Export Log.

7. Place your site plan files (and any subfolders containing them) inside their SitePlans folder. The links from Facilities and Special Location records to site plans will now be functional.

Important: Follow the "CAMEO Data Ownership Rule" on page 81 when you transfer site plan files. One possible way to keep track of the owner of a particular site plan file is to include a code in the file name to indicate the owner. For example, you could use "FD1_" as the prefix in the names of all site plan files owned by Fire District 1.

Importing Data from Another Copy of CAMEO

To import a data file exported from someone else's copy of CAMEO:

1. First check to be sure that the "CAMEO Data Ownership Rule" on page 81 is being followed. That is, be sure that the exporter of the data is its owner.

2. Back up the data in all of the CAMEO modules into which you will import data: if you're importing data into multiple CAMEO modules, follow the instructions in "Exporting Data from All CAMEO Modules" on page 90. To back up a single module, follow the instructions in "Exporting Data from All Records in a CAMEO Module" on page 90. This file serves as an archive file.

3. Place the file you want to import anywhere on your hard drive.

4. From CAMEO's File menu, select Import\Export, then Import.

5. Click on the name of the file you want to import, then click Open. The file will be imported into your copy of CAMEO.

6. Click OK on the completion message and click Done on the Import/Export Log.

If you need to import linked map objects or site plans, see "Transferring Map Links and Map Objects" on page 92 and "Transferring Site Plans" on page 93.

Strategies for Avoiding Duplicate Records

The key to successfully exchanging data between two copies of CAMEO—so that all parties obtain just the data they want and no data they don't want—is to honor the "CAMEO Data Ownership Rule" on page 81. Below are additional troubleshooting suggestions, in case a procedure goes awry despite your best efforts at honoring the rule.

Before Data Import: Strategy 1. Sometimes, you might know or suspect that duplicate records will be generated when you import data from a colleague. For example, you might have obtained facility data from one colleague, but later realized that a different colleague is the actual owner of that data. Your records and the owner's records for the same facilities then are likely to have different record IDs, so if you import the owner's data for those facilities, you're likely to obtain duplicate records (see "How CAMEO Assigns and Uses Record IDs" on page 83).

A solution that you might choose is to delete all the records from your module before you import the owner's data. Do this *only* if it's acceptable to you to replace the entire contents of one of your CAMEO modules (along with related records in child and grandchild modules) with new, imported data. When you import the new file, new records will automatically be created.

Important: Do *not* choose this approach if you foresee needing any of your existing facility-related data in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios. For example, if you have created Incidents records for accidents at a particular facility over a period of years, avoid this approach.

To delete all the records from a CAMEO module in preparation for importing data:

1. Follow the directions in "Exporting Data from All Records in a CAMEO Module" on page 90 to back up the data in that module as an export file. We recommend that you also make a copy of the export file on another storage device.

2. From the Record menu, select Delete All Records to delete all the records in the open module (along with related records in child and grandchild modules). **Note:** You need to be in list view to see this menu item.

Once you've completed these steps, you're ready to import the new data. Follow the procedure in "Importing Data from Another Copy of CAMEO" on page 94.

Before Data Import: Strategy 2. Sometimes, you might need to replace only certain records in a module, rather than all the records in a module. For example, you might have obtained facility records for Fire District 20 from a colleague, but then realized that another colleague is the actual owner of the facility data for Fire District 20. Your records and the owner's records for the facilities in Fire District 20 then are likely to have different record IDs, so if you import the owner's data for those facilities, you're likely to obtain duplicate records.

A solution that you might choose *only* if it's acceptable to you to replace all your records for facilities in Fire District 20 with new, imported data is to delete those records from your module before you import the owner's data. When you import the new file, new records will automatically be created.

Important: Do *not* choose this approach if you foresee needing any of your existing facility-related data in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios.

You could simply browse through your Facilities records, deleting those that are to be replaced (related records in child and grandchild modules also will be deleted). To delete a record, select it or open it in record view, then select Delete Record from the Record menu.

However, whenever you can, run a search that finds just the records that you need to delete, and then delete them, as follows:

1. Open the module in which you want to delete and then replace records. For example, if you need to delete and replace facilities data, open the Facilities module.

2. From the Search menu, select Start Search. Set up and run a search that will find only the records to be replaced. In the case of the example above, you would make an Advanced Search for facility records with "20" in the Fire District field. For help with setting up and running searches, see "Searching" on page 113.

3. Check over the set of found records to be sure that it contains *only* the records to be replaced. When a found set has been created, you can browse through only the records in that found set. So if you see any records that you don't intend to delete, you'll know that you need to refine your search.

4. Before deleting the found records, you'll back up the data from them into an archive file. From the File menu, select Import\Export, then click Export.

5. Click Export Data for Found Set.

6. Choose a name and location for the new archive file. A zipped file of your exported data will be created at that location.

7. From the Record menu, select Delete All Found Records. Selecting this command while a found set exists in the module deletes only the found records, leaving the other records in the module untouched.

Once you've deleted the records to be replaced, you're ready to import your new data. Follow the procedure in "Importing Data from Another Copy of CAMEO" on page 94.

After Data Import Strategies. If you've already imported data into a CAMEO module, and now realize that you've inadvertently duplicated some records, you may be able to remove unwanted duplicates in one

of the following ways. These methods will work *only* if you can tell by visual inspection which duplicates to keep and which to delete.

- Follow the instructions in "Sorting Records in CAMEO Modules" on page 117 to sort the records in the module so that duplicate records appear next to each other in list view. For example, sort the Facilities module alphabetically by the "FacilityName" data field in order for duplicate records for the same facility to appear adjacent to each other in the list. Browse through the list to find duplicates. Inspect the duplicate records for a given facility or other entity to identify the record to keep. To delete an unwanted duplicate record, select it, then select Delete Record from the Record menu.

- If possible, before you look for duplicates, first run a search to create a found set of just the records likely to be duplicates. For example, you may have realized that you've inadvertently duplicated just the records for contact people in Haymarket. In this case, you would search the Contacts module for records in which the City field contains "Haymarket." Once you've completed the search, from the Record menu, sort the found records as above, then select View List. You then can most quickly browse through the names of all the records found in the search to identify duplicates.

Important: Before beginning either procedure, back up the data in the module by following the procedure in "Exporting Data from All Records in a CAMEO Module" on page 90.

Exporting Data to Other Programs

You can open and view a data file exported from CAMEO in any spreadsheet or database program that supports merge files:

1. Uncompress (unzip) the export file. This file contains one or more merge files (one for each CAMEO module from which data was exported, along with a merge file for any supporting files from which data also was exported).

2. Open any of the merge files in your spreadsheet or database program. Merge files are comma delimited files—that is, the data fields are separated by commas, records are separated by carriage returns, and the contents of each data field are enclosed in quotation marks. A merge file has a .mer file extension.

Note: To open a merge file in some database or spreadsheet programs, you may need to rename it so that its file extension is .txt rather than .mer.

For more information about CAMEO's export file format, see "Zipped Merge Files: CAMEO's Standard File Format" on page 83.

12

Managing Your CAMEO System

This section describes how to create a management plan for your CAMEO system, and proposes elements to include in that plan. It also explains how to implement CAMEO on a network, how to protect your CAMEO files, and what to do when multiple people use the same CAMEO system.

CAMEO Management Plan

Before you begin to use CAMEO, consider how you intend to manage and use your new system. This section describes some of the issues to consider and guidelines to follow as you prepare a CAMEO management plan for your workplace.

As you plan how you'll manage your CAMEO system, consider your intended uses of all of the CAMEO components: the CAMEO data management modules, CAMEO Chemicals, MARPLOT, and ALOHA.

Reasons to Make a CAMEO Management Plan

It's important to plan how you intend to manage and use your CAMEO system before you dedicate resources to implementing your CAMEO, CAMEO Chemicals, ALOHA, and MARPLOT programs, because:

- A good management plan can help you to address issues before they become a problem.
- Your plan can prepare you for requesting additional resources as you require them, developing a training program, and handling future software and hardware developments.
- You can use your plan as a guide for implementing the CAMEO suite.

Elements of a Good CAMEO Management Plan

An effective CAMEO implementation goes beyond installing the programs, flipping through the manuals, searching for a few chemical records, and placing a few symbol objects on a MARPLOT map. To effectively implement CAMEO, you'll need to plan in advance your procedures for entering, maintaining, and using information; protecting and backing up both data and programs; training personnel; and customizing your CAMEO system. Your management plan should also address your equipment and personnel needs. An effective management plan can make CAMEO a more useful tool for your organization. Address the topics discussed below as you draft your CAMEO management plan.

Proposed Uses of CAMEO. Describe your planning and response duties, and any other intended uses of your computer system.

Hardware and Software. Describe your hardware inventory, including computer models, operating systems (for example, Windows XP, Macintosh OS X, and so on), hard drive sizes and available memory (RAM), and other hardware (such as modems, storage devices, and printers). Describe your local network if you have one.

Describe your software inventory. List the word-processing, graphics, spreadsheets, database and other programs that you intend to use with your CAMEO system.

Describe your inventory of MARPLOT maps, including areas of coverage.

List the addresses of websites where you can obtain resources and information you plan to use with your CAMEO system.

CAMEO System Manager. Describe the position and responsibilities of the system manager. Include his or her name, telephone number(s), and email address.

CAMEO Information Management. Outline the procedures you'll use to enter information into CAMEO and onto the MARPLOT maps you'll use with CAMEO. Describe procedures for making data linkages both within CAMEO and between CAMEO and MARPLOT, and information-tracking procedures. Propose data element standards, such as acceptable common abbreviations (for example, "St." for Street) or what map symbols represent throughout your area.

Describe your strategies for maintaining, tracking, and updating information. Describe your method for backing up your CAMEO system, and include a schedule (see "Implementing a CAMEO Backup Program" on page 102).

If you plan to import Tier II data into your CAMEO system, see "Importing Data from Tier2 Submit" on page 86.

Training. Describe who will be trained and the purposes and goals of your CAMEO training program. Discuss word processing, graphics, and other skills required of trainees. Outline your proposed training program and list the subjects that you intend to cover. Describe the resources that you need to conduct your program. Include a training schedule.

CAMEO Changes. Describe any modifications that you propose to make to your CAMEO system. For example, you might add items to some of the editable drop-down lists in the CAMEO modules. Plan how you'll keep track of the changes you make to CAMEO, so you'll be able to update future versions of the program.

Program Security. Describe your method of ensuring program security and any procedures that you intend to use to restrict access to the program.

CAMEO System Manager

An important decision affecting your CAMEO system will be selection of the system manager. Designate one person as the system manager. This person should be experienced in using CAMEO as well as computer operating system and office software.

The responsibilities of the system manager include:

- Receiving and installing program updates,
- Troubleshooting,
- Directing the training program,
- Ensuring that backups are made,
- Supervising modifications to CAMEO,
- Directing data entry,
- Ensuring program security, and
- Developing data element standards.

Some components of these tasks may be delegated to others. In essence, the system manager should be responsible for maintaining your CAMEO system and ensuring that it's used as effectively as possible. The importance of this position can't be over-emphasized. If your system manager isn't in tune with the CAMEO system, its needs, and your needs, then CAMEO may never prove to be a useful tool for you.

Preparing a Plan for Entering and Updating Data

The quality of your CAMEO system depends on the quality of the data that you enter into your system. Before you enter data, develop a data entry plan. As you develop your plan, try to answer these questions:

1. What information do you intend to enter into CAMEO? Identify the information that can help you to perform your emergency planning and response duties.
2. How will you keep track of the information that you enter? We recommend that you bear the "CAMEO Data Ownership Rule" on page 81 in mind as you consider this topic.
3. Do you need to develop data standards? You may want to standardize information such as facility identification numbers, abbreviations, the symbols placed in MARPLOT, and other information.

4. Do you need to develop step-by-step procedures for entering information into CAMEO? An advantage of preparing written, step-by-step procedures for entering and maintaining information is that you then can refer to these procedures during training sessions and when entering, maintaining, and verifying CAMEO information. The more you can standardize your data entry system, the better the quality of your CAMEO data, and the lower the risk of errors associated with entering multiple records for the same facility, organization, or other entity.

5. Who will be responsible for entering information? Assign data entry and maintenance responsibilities only to trained and responsible staff members. They should follow the procedures that you develop. If several people will enter and maintain your CAMEO data, be sure to develop and use an effective tracking system to minimize errors.

6. How and how often do you plan to verify or update the information in your CAMEO system? Plan to verify and update your CAMEO information regularly. Establish a schedule for verifying and updating data and stick to it (you might want to schedule data verification and updating tasks around regular fire department inspections or important EPCRA-related dates, such as reporting deadlines).

If you plan to import data into CAMEO (including Tier II data) or transfer data between copies of CAMEO, review Chapter 11, “Importing and Exporting Data,” beginning on page 81.

Finally, consider how you might enhance CAMEO to better meet your data entry and management needs.

Program Security

The success of your CAMEO program will depend on your ability to ensure the security of your system.

Your CAMEO system, and the information that it contains, can easily be modified or damaged. When program security is inadequate, a novice user or failed hard drive can jeopardize your entire CAMEO system. Only well-trained, authorized users should have full access to CAMEO. You may want to limit access by other users. Such access restrictions can help to prevent unacceptable CAMEO system modifications.

There are two kinds of security concerns: program access and program backup. As you address program security in your management plan, ask yourself:

- Who should have access to my CAMEO system?
- What methods for restricting access to CAMEO should I use (if any)?
- How will I back up my system? Who will perform backups, how, and how often? (Backing up your CAMEO data is easy and quick; see “Implementing a CAMEO Backup Program” on page 102.)

Password Protection

One way to restrict access to your CAMEO files is to implement password protection.

All of the CAMEO files are already password-protected. However, users aren't asked for a password when they work with CAMEO, because the passwords for these files are set as defaults. You can change CAMEO's passwording so that people would need to enter a password to work with your CAMEO modules. To do this, you would need to purchase a copy of version 8.5 or later of either FileMaker Pro or FileMaker Pro Advanced (http://www.filemaker.com/products).

Especially before you share your CAMEO files over a network, we recommend that you change the password(s) for your CAMEO files. Change the passwords both for the administrator and for normal users, and delete the default passwords. Once you change the password(s), people would need to enter a password to use the CAMEO files. To learn how to modify passwords and delete default passwords in FileMaker files, including CAMEO, check the FileMaker manual for your product.

Once you make this change, any CAMEO user would need to enter a password before being able to access the data or change CAMEO records.

Other ways to use passwording to restrict access to CAMEO include:

- Requiring a password to log onto the computer where CAMEO is installed.
- Using a password screensaver on that computer.

Implementing a CAMEO Backup Program

You can quickly and easily create backup archive files containing all your CAMEO data, or just data from selected modules. Follow the procedures for creating export files in "Transferring Data Between CAMEO Programs" on page 89; the files that you export serve as your backup files.

We recommend that you:

- Export all your CAMEO data into an archive file on a regular basis.
- Keep at least the two most recent archive files on physically separate storage media. Consider keeping older backups in case problems remain undiscovered until after one or more backup cycles.

Installing and Running CAMEO on a Network

You can install and run the CAMEO modules on a network. You might want to do so if multiple people in your workplace need to use a single copy of CAMEO as a reference. We recommend that ALOHA, CAMEO Chemicals, and MARPLOT be installed and run on individual users' local computers, rather than on the network.

There are two main ways to network CAMEO:

- From a dedicated server computer, to which every user connects over the network. This is your best choice if multiple people need to routinely use the same copy of CAMEO.
- From one user's computer, to which others on the network connect from time to time.

While we've completed some testing of CAMEO on networks, we couldn't emulate all possible network configurations. If you encounter problems installing or running CAMEO on your particular network, please check the CAMEO website (http://www.epa.gov/emergencies/content/cameo/) for troubleshooting help and resources. More user support resources are available on the FileMaker website (http://www.filemaker.com/support/). The comments in this section are provided as guidelines only.

Ensure Security First

Carefully consider file security before you install CAMEO on a network and especially before you share sensitive CAMEO data, such as Tier II data, over a network. Above all, check to be sure that your network is secure, so that unauthorized people can't access your data. Consider password-protecting your CAMEO files to prevent unwanted access (see "Password Protection" on page 102).

Possible Configurations

You can network CAMEO and support multiple users in three ways. The most appropriate choice for you depends mainly on the number of concurrent CAMEO users you need to support. You can:

- Install the runtime version of CAMEO on a network (this is the version of CAMEO that you can download and install). This configuration allows you to support just one CAMEO user at a time.
- Purchase and install either FileMaker Pro or FileMaker Pro Advanced (version 8.5 or later), which you use to host the CAMEO files. This configuration allows you to support a limited number of concurrent users, each of whom also must have a licensed copy of FileMaker Pro. The number of users who can work with CAMEO concurrently depends on how many files each has open at the same time; fewer people can use the program when each has more files open. With this configuration, up to five people can use CAMEO if each has all or nearly all CAMEO files open at the same time.
- Use either FileMaker Server or FileMaker Server Advanced (version 8.5 or later) for the fastest-possible CAMEO networking. This configuration allows you to support up to 250 concurrent CAMEO users, each of whom must have a licensed copy of FileMaker Pro.

Installing the Runtime Version on a Network

You can install the runtime version of CAMEO either on a network server or in a shared directory on a networked workstation without purchasing and installing any additional software. Just one person at a time can work with the runtime version of CAMEO over a network.

Using FileMaker Pro to Host Runtime Files

The CAMEO files can be modified so that multiple people can work with them concurrently.

When FileMaker databases (such as the CAMEO modules) are set to be shared over a network, whoever first opens a particular database file (such as a CAMEO module) becomes the **host** of that file, and their computer becomes the server of the file. Other users can modify the file by connecting to the host computer.

From the CAMEO perspective, the main advantage of hosting files is that you can serve multiple concurrent users. The runtime version of CAMEO can't host files, but you can use either FileMaker Pro or FileMaker Pro Advanced (version 8.5 or later) to host the CAMEO files on your network so that multiple people can work with them. To accomplish this, you would install both FileMaker Pro and the CAMEO modules either in a shared directory on a networked workstation or on your network server computer. Others on the network who also have installed FileMaker Pro then can work concurrently with the shared copy of CAMEO (they don't need to have CAMEO installed on their computers).

In our own tests of FileMaker Pro hosting of CAMEO on local networks, we observed the following:

- Multiple users can view the same record in Browse mode at the same time.
- Multiple people also can open the same record in Edit mode. However, as soon as one person clicks his or her cursor within an editable field, the others are locked out of Edit mode; they see an explanatory message when this happens.
- Multiple people can perform basic searches of the same CAMEO module at the same time. Multiple people also can view the advanced search dialog at the same time. However, as soon as one person selects a field to use as a search criterion, saves a set of search criteria, or opens a saved set of search criteria, the others are locked out (and are shown an explanatory message).

Important: A key to trouble-free networking of CAMEO is to be sure that only one computer hosts all the CAMEO files. We recommend that you use a dedicated computer to host CAMEO, and that you keep the CAMEO files open on that computer all the time, to prevent other users from accidentally hosting any of those files.

Follow all the procedures below to set up CAMEO for hosting on either FileMaker Pro or FileMaker Pro Advanced.

Relocate Plug-in Files and Indicate the Directory Path. Once you have installed CAMEO and FileMaker Pro on the computer that will host CAMEO, you must move some files from the default installer locations. Also, you must create a base directory file that FileMaker Pro will reference, as follows:

In Windows: Copy the following files from the Extensions folder inside the CAMEO folder into the Extensions folder inside the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 8.5\Extensions):**Cameo.fmx**, **Marplot.fmx**, and **Menu.fmx**.

On a Macintosh: Copy the following files from the Extensions folder inside the CAMEO folder into the Extensions folder inside the folder containing FileMaker (e.g., Macintosh HD:Applications:FileMaker Pro 8.5 Folder:Extensions): **Cameo.fmplugin**, **Marplot.fmplugin**, and **Menu.fmplugin**.

Prepare the CAMEO Files to be Shared. Once you've installed the software, then follow the steps below to prepare your CAMEO files to be shared by multiple, networked users. You'll only need to complete these steps once.

1. Start FileMaker Pro. If you see "Open New or Existing File" go directly to Step 2. Otherwise, select Open from FileMaker Pro's File menu.

2. If you're working in Windows, select "All Files" from the "Files of Type" list.

3. Hold down either the Shift key in Windows or the Option key on a Macintosh as you select Home.CAM (inside the CAMEO folder) and click Open.

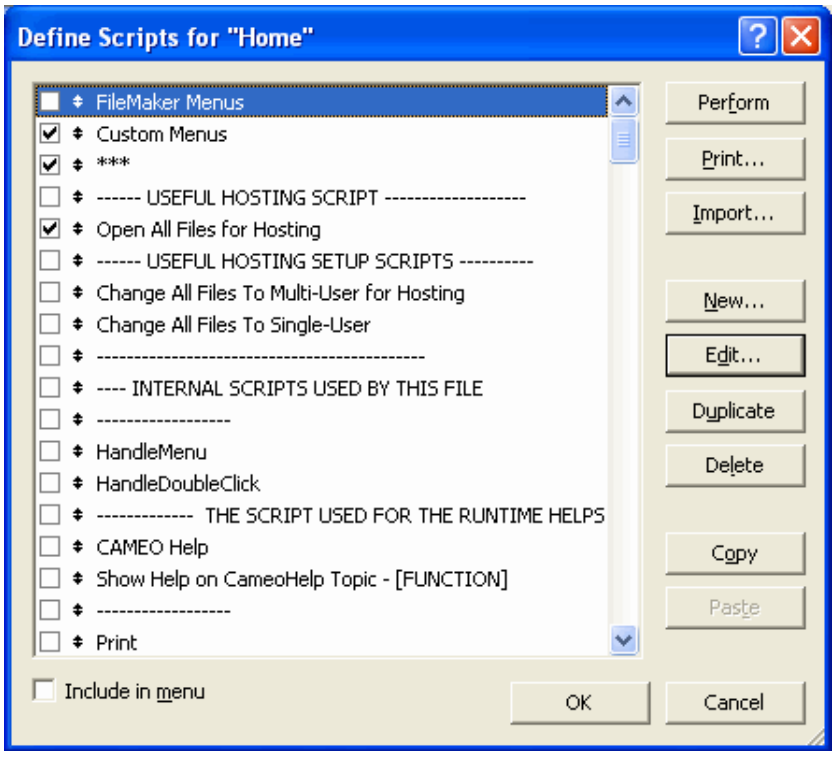
4. When prompted for an account name and password, type **Admin** (case sensitive) in both places and then click OK.

5. From the Scripts menu, select ScriptMaker.

6. In the list of scripts, highlight (but do not check) "Change All Files to Multi-User for Hosting," then click Perform to run the script.

7. From the Scripts menu, select ScriptMaker.

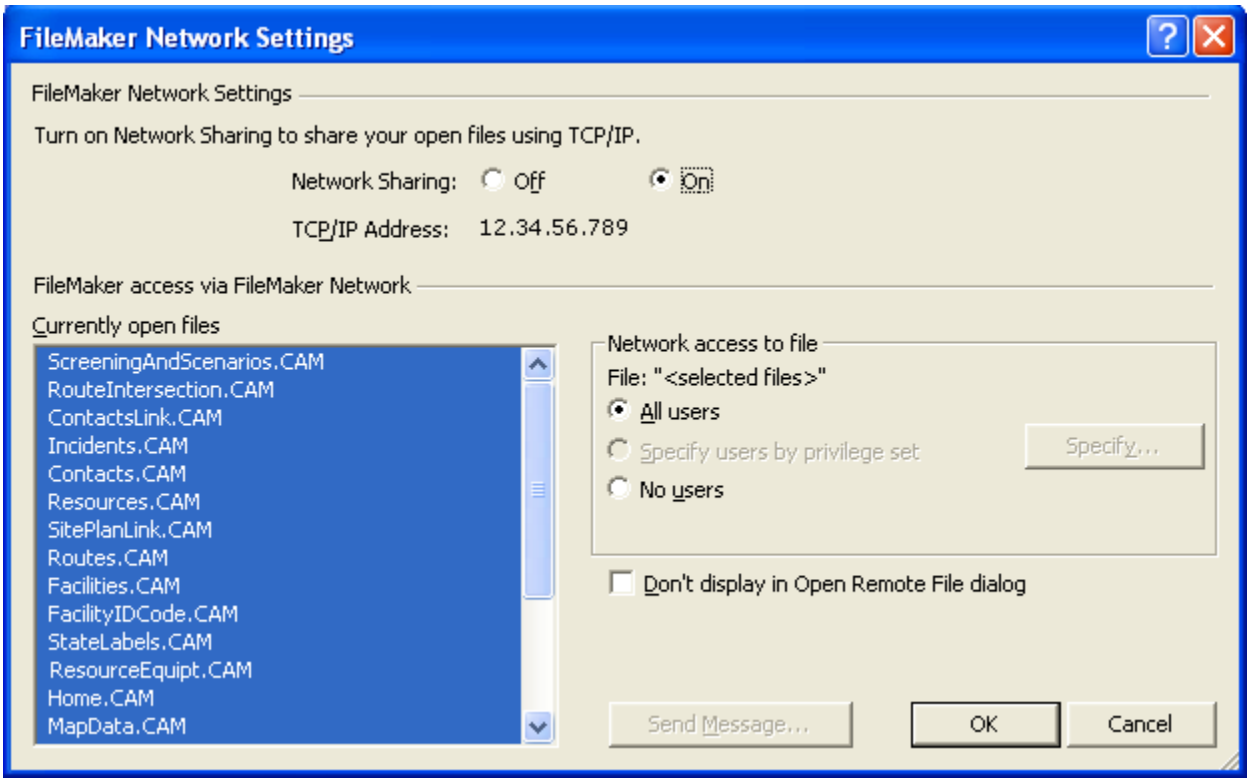
8. Check the box next to "Open All Files for Hosting."



9. Highlight the FileMaker Menus line, then click Perform to run the script.

10. From the Edit menu, select Sharing, then FileMaker Network.

11. In the FileMaker Network Settings dialog box, turn Network Sharing on. Select all of the currently open files in the list (Ctrl+A in Windows) and change the Network access to "All users," then click OK.



12. Quit or Exit from FileMaker.

Prepare Users' Computers. You'll need to copy supporting files to the computer of each colleague who will work with the hosted copy of CAMEO.

In Windows: Copy the following files into the Extensions folder inside the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 8.5\Extensions):**Cameo.fmx**, **Marplot.fmx**, and **Menu.fmx**.

On a Macintosh: Copy the following files into the Extensions folder inside the folder containing FileMaker (e.g., Macintosh HD:Applications: FileMaker Pro 8.5 Folder:Extensions): **Cameo.fmplugin**, **Marplot.fmplugin**, and **Menu.fmplugin**.

Begin Hosting CAMEO. To begin hosting the CAMEO files over your network, follow the steps below. You must complete these steps each time you want to start hosting the CAMEO files from a computer:

1. On the computer that will be used to host the CAMEO files, start FileMaker Pro. If you see "Open New or Existing File," click Remote. Otherwise, select Open Remote from FileMaker Pro's File menu. The Open Remote File dialog box appears.

2. Review the list to be sure that Home does not appear in the list of available files for any of the local hosts. If it appears in the list, another computer is hosting this file. If so, ask that user to quit from FileMaker.

3. Click Cancel on the Open Remote File dialog box.

4. If you're working in Windows, select "All Files" from the "Files of Type" list.

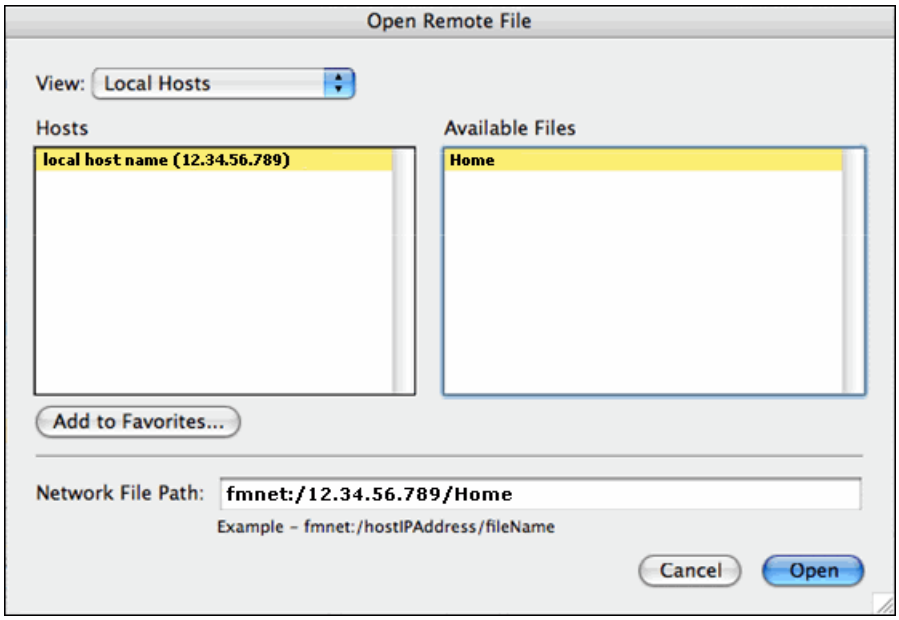
5. Open Home.CAM.

6. From the Scripts menu, select "Open All Files for Hosting."

Accessing the Hosted CAMEO. Once the CAMEO files are being hosted by a computer on your network, those colleagues on the network now can access CAMEO, as follows:

1. Start FileMaker Pro (on their computer). If you see "Open New or Existing File," click Remote. Otherwise, select Open Remote from FileMaker Pro's File menu. The Open Remote File dialog box appears.

2. Set the view to Local Hosts and highlight the host computer in the Hosts box. In the Available Files box, highlight Home.



3. Click Open.

Important: Your colleagues should open *only* the copy of Home on the host computer. If they see that Home is being hosted on any other computer, you or they should ask that user to quit FileMaker Pro.

Using FileMaker Server

Using either FileMaker Server or FileMaker Server Advanced (version 8.5 or later) to host your CAMEO files (rather than FileMaker Pro), allows you to support many more concurrent users—up to 250 at a time—and CAMEO operations will proceed substantially faster.

If you choose this approach, you'll need to install FileMaker Server and the CAMEO files on a networked workstation or on a dedicated server computer. Others on the network who also have installed FileMaker Pro (but not CAMEO) then can work with the shared copy of CAMEO, concurrently. For more details on FileMaker Server, check http://www.filemaker.com.

Note: We didn't specifically test CAMEO hosting via FileMaker Server, but our best understanding is that if you choose this approach, you'll need to prepare your files as explained in "Using FileMaker Pro to Host Runtime Files" on page 104.

Managing Multiple Users

We recommend that you plan your CAMEO projects so that multiple people don't routinely use CAMEO on your network at the same time. We especially recommend that you manage your workflow to avoid having multiple people working concurrently over a network to edit records and/or perform CAMEO operations that require the most computer power, such as adding records. The program needs time to complete scripts and respond to user commands, and CAMEO operations are slower over a network.

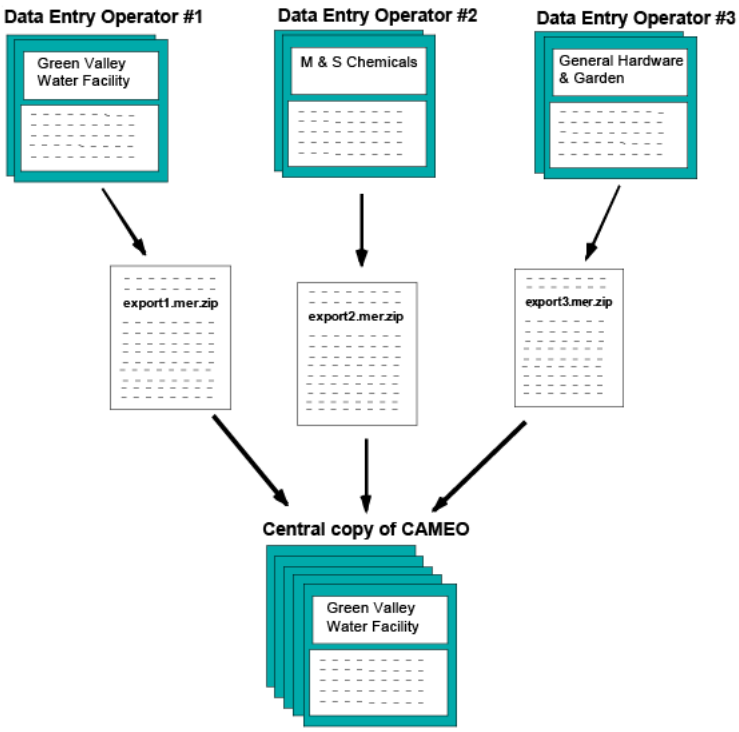
We recommend that you avoid importing and exporting data to or from a hosted copy of CAMEO via client computers over your network. Instead, whenever you or your colleagues need to import or export data, work either on the host computer or on a copy of CAMEO that isn't networked.

Managing Data Entry by Multiple People. Sometimes, you may need to have multiple people entering CAMEO data. For example, if you receive Tier II data from many facilities, you may need to give a stack of Tier II forms to each of several data entry operators who then would create new Facilities records to contain that Tier II data.

When you need to have multiple people entering data concurrently, we suggest that each person be given a copy of the runtime version of CAMEO (that is, a copy of CAMEO that hasn't been modified for multi-user hosting). Each person can add records to their own copy of CAMEO, rather than having everyone making editing changes to a single, networked copy of CAMEO.

When each data entry operator has completed adding records, he or she should export a file containing those records, by following the procedure in either "Exporting Data from All Records in a CAMEO Module" on page 90 if records have been added to just one module, or "Exporting Data from All CAMEO Modules" on page 90 if records have been added to multiple modules.

The data file exported by each data entry operator can then be imported into a central, networked copy of CAMEO (as shown at right), by following the procedure in "Importing Data from Another Copy of CAMEO" on page 94.



Using CAMEO if You Already Have FileMaker

When you follow the standard installation instructions (that is, not the network instructions), you install the runtime version of CAMEO. We recommend that as you work with CAMEO, you use the runtime version of CAMEO even if you already have a copy of either FileMaker Pro or FileMaker Pro Advanced (version 8.5 or later), *unless* you are hosting CAMEO on a network (see "Installing and Running CAMEO on a Network" on page 102). If you aren't hosting the CAMEO files, there is no advantage to running CAMEO in FileMaker Pro rather than as a runtime program, because all of CAMEO's features are available in the runtime version.

13

Reference Information

This section contains basic reference information about CAMEO: explanations of the functions of CAMEO's menu items, explanations of how to search for and sort records in CAMEO modules, how to link records to MARPLOT objects, and an overview of the legislation on which CAMEO is based.

CAMEO's Menus

Below are explanations of the functions of each of CAMEO's menu.

Table 13-1. CAMEO's Menus

File Menu	
Go Home	Opens the Home navigation window (which contains buttons to open CAMEO's modules and perform common tasks). See "Home and Navigation" on page 18.
Open	Select Open, then point to any module name to open that module.
Close	Close the current window.
Import\Export	Displays controls you use to import or export data to or from CAMEO. See "Importing and Exporting Data" on page 81.
Print Report	Displays controls you use to create and print reports.
Exit (or Quit on a Macintosh)	Quits CAMEO.
Edit Menu The Edit menu contains standard FileMaker menu items, most of which work in some places in CAMEO (for example, text-editing menu items work within text boxes in CAMEO, but not within lists of records).	
Undo	Undoes your most recent text-editing action.
Cut	Removes selected text from a text box, and places it in the Clipboard.
Copy	Copies selected text into the Clipboard.
Paste	Pastes the contents of the Clipboard into the currently selected text box.
Clear	Deletes selected text from a text box.
Select All	Selects all the text with in a text box in which you have clicked.

Table 13-1. CAMEO's Menus

Spelling	Checks the spelling of text in text boxes: select the text, select Spelling from the Edit menu, then Check Selection. You can check spelling in either Browse or Edit mode, but you can replace misspelled words only in Edit mode.
Preferences	In Windows, you can use a checkbox on the General tab to set a larger window size for increased readability. You shouldn't adjust any other preferences settings.
Record Menu	
View List	Displays a list of the records in the current module (that is, the list view of the records). See "List and Record Views" on page 20. Available only when you're in record view.
View Record	Displays the selected record in record view (in list view, click on a record to select it; you'll then see a small black rectangle next to its name). See "List and Record Views" on page 20. Available only when you're in list view.
Next Tab	Brings the next tab forward. Available only when you're in record view.
Show Related	Displays a submenu listing all modules that could be related to the current record. Choose a module name to view a list of all the records in that module that are related to the current record. See "Using the Show Related Command" on page 22.
Sort	Choose to sort the records in the current module (or found set) alphabetically, numerically, or chronologically by one or more data fields. See "Sorting Records in CAMEO Modules" on page 117.
Show All Records	Choose to view all the records in the current module, rather than just the found set of records collected during your most recent search or other activity. You would choose this menu item after you had finished working with a search.
New <module>	Creates a new record in the current module (for example, in the Facilities module, choosing New Facility creates a new Facility record).
Edit <module>	Allows you to edit the current record (for example, while you're viewing a record in the Incidents module, choose Edit Incident in order to edit that record).
Delete <module>	Deletes the current record, along with subordinate ("child") records in other modules. (For example, when a Facility record is the current record, choosing Delete Facility deletes not only that record but also all Chemicals in Inventory, Screening & Scenarios, and Incidents records for that facility, as well as all Contacts records for that facility that aren't also associated with another facility or organization.)
Delete All Records	Deletes all the records from the current module. Available only when you're in list view.
Delete All Found Records	Deletes all the records from the current found set. Available only when you're in list view.

Table 13-1. CAMEO's Menus

Go To	Displays a submenu of navigation menu items: choose **First** to view the first record in the current module (or set of found records), **Previous** to view the record preceding the current one, **Next** to view the record immediately after the current record, and **Last** to view the last record in the module.
Search Menu	
Start Search	Initiates a search of the current module (for example, in the Contacts module, choose Start Search to find the record for a particular contact). See "Searching" on page 113.
Append Search	Choose when you want to broaden a search; that is, to search for more records than you found in a previous search. Any records found in an append search that aren't in the existing set of records found in your previous search will be added to that set of found records. See "Making Append Searches and Subset Searches" on page 116.
Subset Search	Choose when you want to narrow your search; that is, to search through a set of records you found in a previous search in order to find those that meet more restrictive criteria. See "Making Append Searches and Subset Searches" on page 116.
Clear Search	Allows you to view all the records in the current module, rather than just the found set of records collected during your most recent search.
Sharing Menu	
ALOHA/Help on ALOHA	Displays an explanation of ALOHA and how it works with CAMEO. For more on ALOHA, see the ALOHA manual.
ALOHA/Go to ALOHA	Starts ALOHA if it isn't already running, and brings it forward.
CAMEO Chemicals/ Help on CAMEO Chemicals	Displays an explanation of CAMEO Chemicals and how it works with CAMEO. For more on CAMEO Chemicals, see the on-screen help in the downloadable version of CAMEO Chemicals (or on the CAMEO Chemicals website at http://www.cameochemicals.noaa.gov).
CAMEO Chemicals/ Go to CAMEO Chemicals	Starts CAMEO Chemicals if it isn't already running, and brings it forward.
MARPLOT/Help on MARPLOT	Displays an explanation of MARPLOT and how it works with CAMEO. For more on MARPLOT, see the MARPLOT manual.
MARPLOT/Show on Map	If the current record is linked to a map object, brings MARPLOT forward with that object visible and selected. In Screening & Scenarios, displays the threat zone (if the associated facility or route is linked to a map object; see "Plotting a Threat Zone on a Map" on page 75).
MARPLOT/Show All on Map	If multiple records in the current module or found set are linked to map objects, brings MARPLOT forward with those objects visible and selected.

Table 13-1. CAMEO's Menus

MARPLOT/Unlink	If the current record is linked to a map object, unlinks that record and object. See "Deleting a Map Link" on page 123.
MARPLOT/Delete Scenario Object	Deletes the threat zone map object linked to the current Screening and Scenarios record. See "Plotting a Threat Zone on a Map" on page 75. Available only when you're in the Screening & Scenarios module.
MARPLOT/Delete All Scenario Objects	Deletes all Scenario objects in MARPLOT. See "Plotting a Threat Zone on a Map" on page 75. Available only when you're in the Screening & Scenarios module.
MARPLOT/Go to MARPLOT	Starts MARPLOT if it isn't already running, and brings it forward.
Scripts Menu	
Custom Menus	Restores CAMEO's normal menus if they fail to display properly.
***	This menu item must appear in the menu for CAMEO to function normally, but choosing it doesn't initiate any actions.
Help Menu	
CAMEO Help	Opens and displays the CAMEO help table of contents in your web browser. (However, you don't have to be connected to the internet.)
About CAMEO	Displays version information.
Link Menu This is a temporary menu that is only visible when you have begun linking a MARPLOT map object to a CAMEO record (see "Linking a Record to a Map Object" on page 122).	
Link this Record	Links the selected map object to the current CAMEO record.
Cancel	Cancels the link in progress.

Searching

You can make either a basic search or a more advanced search for the records you want to see in any CAMEO module, as explained in this section. You also can save the criteria you used for particularly complex searches so that you can rerun them again later.

Note: You can find additional instructions about searching for records on particular facilities in "Accessing Facility Information" on page 27.

Making a Basic Search

Use a basic search when you just need to look up records by name, address, or other straightforward piece of identifying information. Here's how to do a basic search:

1. To start your search, first open the module you want to search, then click the New Search toolbar button or select Start Search from the Search menu.

2. In the Basic Search dialog, fill out the information you have about the record you're looking for. Choose either **contains characters** (to search for part of a word, phrase, or code) or **contains word starting with** (to search either for the first part of a word, phrase, or code—or for an entire word, phrase, or code). **Note:** If you fill in multiple criteria, CAMEO will search for records that match all your criteria.

3. Click Search. CAMEO will run the search and then display either a list of the records that match your criteria (or a message if no records match your criteria).

4. Double-click the name of any record in the list to view that record. Whenever you want to return to the list, click the View List button in the toolbar. If you'd like to view the list of all records in the module again, from the Search menu, select Clear Search.

Searching State Fields

Both Facilities and Chemicals in Inventory records contain a State Fields tab to support the emergency planning work of U.S. states that have developed their own reporting requirements in addition to the Tier II requirements specified in EPCRA (which apply to all 50 states). Tier II forms submitted in those states contain additional data fields, which are called State Fields in CAMEO. CAMEO's State Fields provide a place where people working in these states can maintain their reporting information.

You can search for records for facilities or inventory chemicals that contain particular information in one or more State Fields. For example, the State of Arizona requires facilities to report whether they are located on Tribal Land.

To search State Fields:

1. Open the module you want to search, then click the New Search toolbar button or select Start Search from the Search menu.

2. Click Search State Fields. You'll see the window for basic state field searches.

3. If the report year and state shown aren't what you want to search for, click Choose State and Report Year, change the report year and/or the state, then click Select. **Note:** You can only search for records with a particular report year and state at one time. If you need to search for records for more than one report year (for example, for facilities on Tribal Lands for which records were created in report years 2005, 2006, and 2007), run a search for one of those years, then run successive Append searches, one for each of the other years. (See "Making Append Searches and Subset Searches" on page 116.)

4. Fill out the information you have about the records you're looking for. For example, if you're searching for Arizona facilities located on Tribal Lands, search for records for which "Is the facility on Tribal Land?" is "Yes." **Note:** If you fill in multiple criteria, CAMEO will search for records that match all your criteria.

5. Click Search.

Making an Advanced Search

You can make an advanced search whenever you need to use other criteria than the ones available for a basic search. Here's how:

1. Start your search just as you would start a basic search: in the module you want to search, either select Start Search from the Search menu or click the New Search toolbar button.

2. Click Go to Advanced Search.

3. Click Select field to indicate which data field to search.

4. In the list of searchable fields, click the name of a field, then click Select.

5. Choose an operator from the drop-down list (for example, "contains characters," "is equal to," or "is greater than"). The operator to choose depends on the search you're making.

6. Type the word, phrase, number, or code to search for in the box. **Note:** Leave the box empty if you don't need to type something in—for example, when you choose an operator like "is empty" or "is not empty."

7. Click Search to start your search.

Adding More Choices. You can make an advanced search for records that match more than one criterion.

To add a second criterion to your search:

1. While you're working in the Advanced Search dialog, click Add a Choice.

2. Follow steps 3 through 6 in the previous section to set up the search for that criterion.

3. Indicate whether to search for either

   - Records that meet *both* your criteria—click "Search for all of the following (AND search)."

   - Records that meet *either* criterion—click "Search for any of the following (OR search)."

Saving Searches

You can save any advanced search to reuse later. To save a search, first fill out the Advanced Search dialog with the criteria choices you'd like to save, and then click Save This Search. Type a name for the saved search, then click Save This Search.

If you've just run an advanced search, your criteria will remain in the Advanced Search dialog until you do a new search (or quit CAMEO). So, if you later decide that you want to save that search, just return to the Advanced Search dialog and click Save This Search. (To return to the Advanced Search dialog at any time, select Start Search from the Search menu, then click Go to Advanced Search.)

To open and reuse a saved search, in the Advanced Search dialog, click Open Saved Search. From the drop-down list of search names, choose a search name, then click Select This Search. The Advanced Search dialog will be filled in with the criteria for this search. You then can click Search to run this reopened search.

Making Append Searches and Subset Searches

Once you've run a search and collected a set of found records, there are two ways to continue your search.

In the Search menu, run a second search by selecting either:

- **Append Search**. This *widens* your search. Records found during an append search will be added to the existing set of found records. You might choose to append a search if your first search didn't turn up all the records you needed to work with. For example, you might have run a search for facilities with a particular report year, then realized that you also wanted to work with the records for the previous year. You would run an append search for the second report year in order to obtain a set of records for facilities who reported information in either year.

- **Subset Search**. This *narrows* your search. Only records that were found in the first search and that also are found during your second search will be included in the set of found records. You might choose a subset search if your first search turned up too many records, and you needed to narrow down the number of found records. For example, if you search the Chemicals in Inventory module for chemicals that are Extremely Hazardous Substances, you might end up with a lot of results (depending on the facilities in your area). You might need to refine the search by doing a subset search—for example, by also specifying that the amount (or quantity) of the chemical onsite must exceed some value. The results of this found set will include only the inventory chemicals that are stored in large quantities and classified as Extremely Hazardous Substances.

Sorting Records in CAMEO Modules

You can change the order of the records in any module by sorting them into a new order. When you do this, the new sort order is retained until you resort the module or unsort it. (Unsorted records are listed in the order in which they were added to the module.)

You can sort either all the records in a module or just a found set of records (those records that you found by running a search of a module). When you sort just a found set, the sort order of those records is lost when you quit CAMEO.

Choosing Sort Criteria

To sort records, you must choose one or more sort criteria. For example, to sort your Facilities records alphabetically by facility name, you would use facility name as your sort criterion.

You set up a sort and choose your criteria using the Sort Records dialog. In the Sort Records dialog, you see a list of the field names that you can use as sort criteria. These names generally are similar to the field names shown on your CAMEO records, although they don't correspond exactly (because the names you see in the Sort Records dialog are internal names used by CAMEO). Many names begin with a one- or two-letter prefix indicating the module they are in (for example, "FCounty" is the County field in Facilities records).

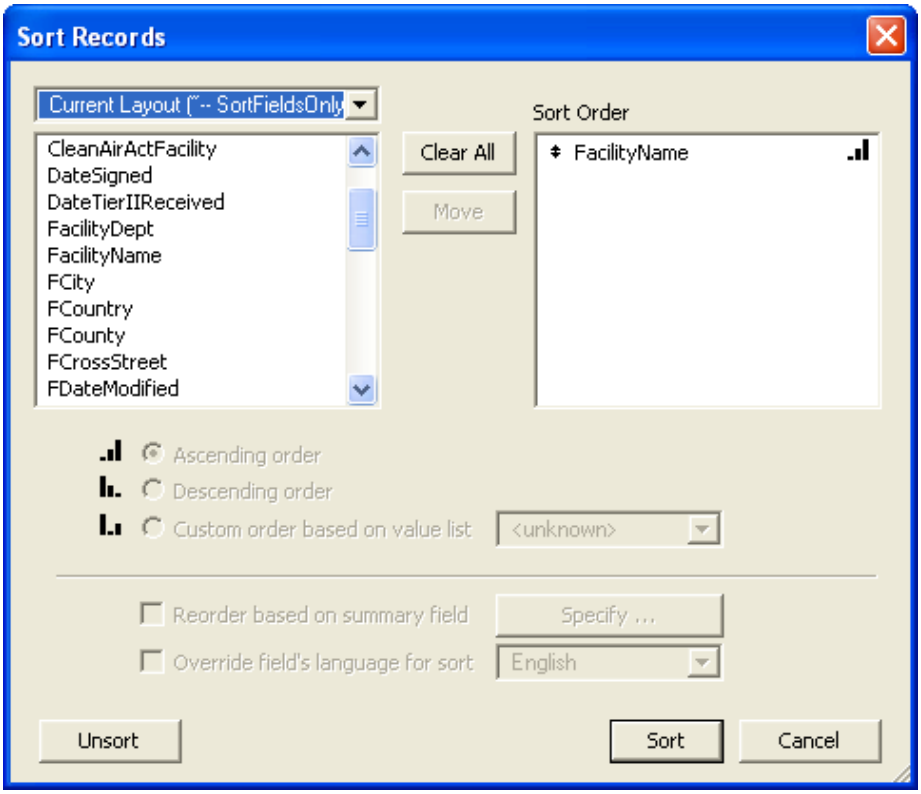


Table 13-2 shows some sort criteria names that you may find useful for sorting each CAMEO module.

Table 13-2. Some CAMEO Sort Criteria

Item to Sort	Name of the Corresponding Sort Criterion
Chemicals in Inventory Items	
Facility/Route Name	_CFacilityRouteName
Chemical Name	EnteredChemName
Facility Department	_CFacilityDepartment
Contacts Items	
Last Name	LastName
First Name	FirstName
Organization	Organization
Facilities Items	
Facility Name	FacilityName
Report Year	ReportYear
Department	FacilityDept
Incidents Items	
Facility/Route Name	_FacRouteName
Incident Name	IncidentName
Spilled Date	SpillDate
Resources Items	
Supplier Name	ResourceName
Resource Type	ResourceType
Routes Items	
Route Name	RouteName
Route Type	RouteType
Screening & Scenarios Items	
Facility/Route Name	_scFacilityName
Chemical	EnteredChemName

Table 13-2. Some CAMEO Sort Criteria (Continued)

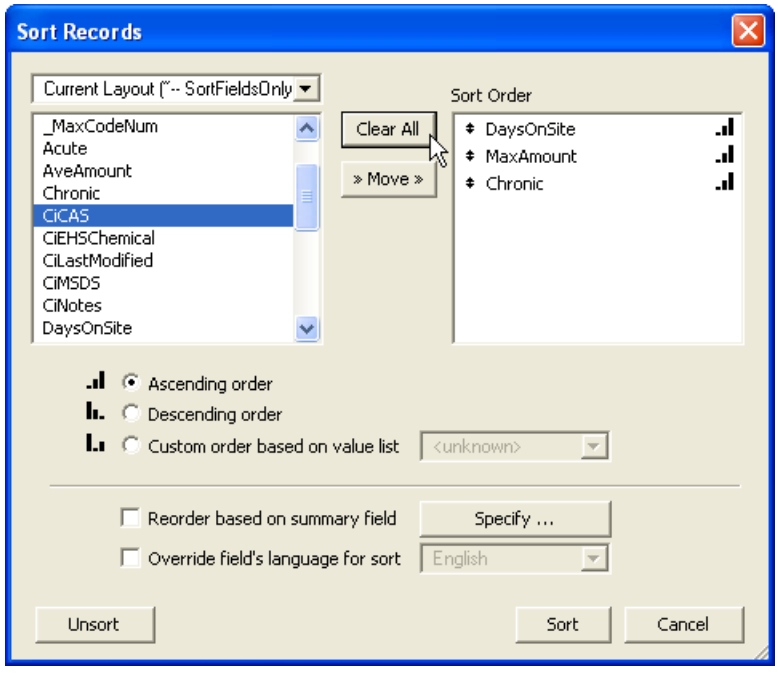
Item to Sort	Name of the Corresponding Sort Criterion
Threat Zone Radius	_RadiusValue
Screening	Screening
Special Locations Items	
Location Name	LocationName
Location Type	LocationType

Sorting Records by a Single Criterion

To sort all the records in a module using a single data field—such as chemical name or reporting year—as your sort criterion:

1. Open the module to be sorted.
2. From the Record menu, select Show All Records to clear any existing found set (there will be a found set if you ran a search in the module, unless you cleared your search results).
3. From the Record menu, select Sort. The Sort Records dialog will be displayed.
4. Choose the field to use as your sort criterion, as follows:

   - To add a sort criterion to the Sort Order box, click on its name in the list of fields on the left, then click Move.
   - To remove all sort criteria from the Sort Order box, click Clear All (as shown at right). The criteria will still be available in the list of fields on the left side if you want to sort by them again.
   - To remove one sort criterion, click on that field name in the Sort Order box to highlight it, then click Clear. (When you highlight items in the Sort Order box, the Move button becomes the Clear button.)



5. Once the Sort Order box contains just the criterion of your choice, click on the name of your criterion in the Sort Order box to select it, and then select either:

   - Ascending order (to sort the records alphabetically from A to Z, in numerical order from smallest to largest number, or in chronological order from earliest to latest date/time), or

   - Descending order (to sort the records alphabetically from Z to A, in numerical order from largest to smallest number, or in chronological order from latest to earliest date/time).

6. Click Sort (or Cancel if you decide not to sort the records).

Unsorting Records

To unsort the records in any CAMEO module (that is, return them to the order in which the records were created):

1. Open the module to be unsorted.

2. From the Record menu, select Sort. The Sort Records dialog will be displayed.

3. Click Unsort (or Cancel if you decide not to unsort the records).

Sorting a Subset of Records in a Module

Sometimes, you might want to sort just some of the records in a module. For example, in the Facilities module, you might need to sort just the records for facilities in the town of Haymarket without sorting the records for facilities elsewhere.

To sort just some records, first search the module to find just the records you want to sort, then sort those records, as follows:

1. From the Search menu, select Start Search.

2. Choose the criteria for your search, making an Advanced Search if necessary, then click Search. (For help setting up searches, see "Searching" on page 113.) When you run a search, a found set of records that meet your criteria is established within the module you've searched. You can access and sort only those records until you clear your search.

3. From the Record menu, select Sort.

4. Choose the criteria for your sort, then click Sort (see "Sorting Records by a Single Criterion" on page 119). Only the records in the found set will be sorted. In list view, you'll see just the names of those records, sorted in the order you chose.

5. When you've finished working with your sorted records, if you want to clear your search so you can work with all the records in the module, select Clear Search from the Search menu (or Show All Records from the Record menu). The found set will be cleared, and the found records will revert to their default order among the other records in the module.

Sorting by Multiple Criteria

Sometimes, you might find it useful to use more than one criterion to sort a module. For example, you might want to sort the records in the Contacts module alphabetically by last name. If some of your contacts have the same last names, you also might want to sort the records alphabetically by first name. If you sort this way, Abe Johnson would appear in your sorted list ahead of Sarah Johnson.

When you use multiple criteria in a sort, arrange your criteria so that the most important criterion appears first in the Sort Order box. In the example above, last name would appear before first name. In that case, your Contacts records will be sorted first by last name and then, within each last name, by first name.

To sort the records in a module using multiple criteria:

1. Open the module to be sorted.

2. From the Record menu, select Show All Records to clear any existing found set (unless you want to sort the found set; a found set exists if you ran a search in the module, and haven't cleared your search results).

3. From the Record menu, select Sort. The Sort Records dialog will be displayed.

4. Choose the fields to use as your sort criteria, as follows:

   - To add a sort criterion to the Sort Order box, click on its name in the list of fields on the left, then click Move.

   - To remove all sort criteria from the Sort Order box, click Clear All. The criteria will still be available in the list of fields on the left side if you want to sort by them again.

   - To remove one sort criterion, click on that field name in the Sort Order box to highlight it, then click Clear. (When you highlight items in the Sort Order box, the Move button becomes the Clear button.)

5. Order your sort criteria by their importance: move the most important criterion to the top of the Sort Order list (in the example above, last name is the most important criterion), the next most important to the position just below it, and so on. To move a criterion, click and drag the double-headed arrow button ⇕ (to the left of the criterion's name in the list) to move the criterion up or down in the list. For example, you might sort your Contacts records first by Organization (the most important criterion) and then by last name (the less-important criterion). Your contacts then will be sorted by organization, with contacts for the same organization listed alphabetically.

6. Once the Sort Order box contains just the criteria of your choice, click on the name of *each* criterion in the Sort Order box to select it, and then select either:

   - Ascending order (to sort the records by that criterion alphabetically from A to Z, in numerical order from smallest to largest number, or in chronological order from earliest to latest date/time).

   - Descending order (to sort the records by that criterion alphabetically from Z to A, in numerical order from largest to smallest number, or in chronological order from latest to earliest date/time).

For example, you might sort your Facilities records (a) alphabetically by city (ascending order), (b) then alphabetically by facility name (ascending order), which orders records within cities, and then (c) chronologically by most recent report year (descending order), which orders the records for any given facility with the most recent records listed before less recent records.

7. Click Sort (or Cancel if you decide not to sort the records).

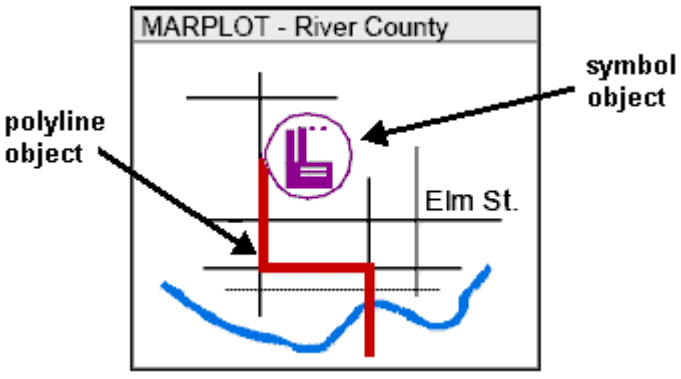
Linking a Record to a Map Object

You can link CAMEO records to MARPLOT map objects. From CAMEO, this will allow you to show the location on a map and perform advanced planning and response analysis (for example, viewing special locations within a threat zone). From MARPLOT, this will allow you to quickly return to linked CAMEO records to get in-depth information about the map objects (for example, getting phone numbers and contact information for special locations within a threat zone).

Three types of map objects are commonly linked to CAMEO records:

- **Symbol and polygon objects** that mark the locations of facilities (such as chemical processing plants), special locations (such as schools or hospitals), response/planning resources (such as equipment stockpiles), and past incidents.

- **Polyline objects** that represent routes (along roads, rivers, railroads, or combinations of these) used to transport hazardous substances.

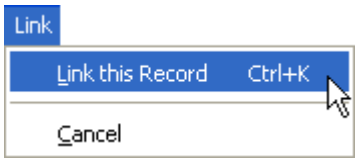


Note: For more information about linking records, see the MARPLOT manual or the Guide to the CAMEO Suite (available at http://www.epa.gov/emergencies/content/cameo/cameo.htm).

Creating a Map Link

You can link any record in the Facilities, Special Locations, Routes, Incidents, and Resources modules to an object on a MARPLOT map. Screening & Scenarios threat zones can be displayed on a map once you've linked the related Facilities or Routes record to a map object.

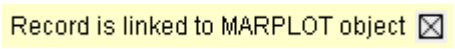
1. Open MARPLOT and select the map object that you want to link to.
2. In MARPLOT's Sharing menu, select CAMEOfm, then Link Object. CAMEO will come forward and the Link menu appears.
3. In CAMEO, go to the record that you want to link the map object to.
4. From CAMEO's Link menu, select Link this Record. (The Link menu will disappear when the link has been made.)



Viewing a Record's Location on a Map

1. Go to the linked CAMEO record.
2. From the Sharing menu, select MARPLOT, then Show on Map. MARPLOT will come forward and display a map that is centered on the map object.

Note: To see if a record is linked, select the Map Data tab on a record. CAMEO automatically checks the box shown at right if the record is linked.



Deleting a Map Link

1. Open MARPLOT and select the map object that you wish to unlink.
2. From MARPLOT's Sharing menu, select CAMEOfm, then Unlink Objects. This will delete (or break) the link information, but the map object and the CAMEO record will still exist. You'll need to delete those separately if you no longer want them.

Overview of Legislation

CAMEO is designed not only to be an emergency response tool, but to be useful for people who must meet the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA).

EPCRA

EPCRA, also known as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), establishes requirements for federal, state, and local governments and for industry for emergency planning and community right-to-know reporting on hazardous chemicals. The community right-to-know provisions of EPCRA are intended to increase public knowledge of—and access to—information about the presence of hazardous chemicals in their communities and releases into the environment.

Under EPCRA, manufacturers and other facilities are required to report accidental releases of hazardous chemicals to state and local officials and local fire departments. State and local officials are required to prepare contingency plans for communities where hazardous materials are manufactured, stored, or processed. Records of chemical inventories at facilities, and of accidental and routine chemical spills must be readily available to interested citizens, local and state governments, and local fire departments.

Table 13-3. Brief Summary of EPCRA's Major Sections.

Sections	Summary
Sections 301 to 303: Emergency Planning	Local governments are required to prepare chemical emergency response plans, and to review them annually. State governments are required to oversee and coordinate local planning efforts. Facilities that maintain any Extremely Hazardous Substance on site in a quantity that is greater than the listed Threshold Planning Quantity must cooperate in emergency plan preparation.
Section 304: Emergency Notification	Facilities must immediately report accidental releases of Extremely Hazardous Substances and "hazardous substances" in quantities greater than the Reportable Quantities (defined under the Comprehensive Environmental Response, Compensation, and Liability Act) to state and local officials. Information about accidental chemical releases must be available to the public.
Sections 311 and 312: Community Right-to-Know Requirements	Facilities manufacturing, processing, or storing designated hazardous chemicals must report inventories of onsite chemicals for which Material Safety Data Sheets (MSDSs) exist to state and local officials and local fire departments—and make the MSDSs available to them. (MSDSs describe the properties and health effects of the chemicals.) This information must also be available to the public.
Section 313: Toxic Chemical Release Reporting	In the Toxic Release Inventory, EPA must maintain records of toxic chemical emissions from certain facilities, and use this information in research and in preparation of guidelines and regulations. Facilities subject to these reporting requirements must submit annual reports of total amounts of chemicals released into the environment (both routinely and accidentally) to EPA and state officials.

You can learn more about the reporting and planning requirements of EPCRA by (a) reading the following pages, (b) going to EPA's EPCRA website (http://www.epa.gov/emergencies/content/epcra/), or (c) contacting the nearest EPA regional office. You can also review parts of the Code of Federal Regulations (CFR) describing these requirements. The relevant parts are 40 CFR § 300 and 355 (describing Sections 301 to 303 and Section 304 of EPCRA); 40 CFR § 370 (describing Sections 311 to 312); and 40 CFR § 372 (describing Section 313).

Section 301-303: Emergency Planning. The emergency planning sections of EPCRA are designed to develop state and federal emergency response and preparedness capabilities through improved coordination and planning, especially within local communities. When enacted, EPCRA required the governor of each state to designate a State Emergency Response Commission (SERC). Each SERC then designated local emergency planning districts and appointed a Local Emergency Planning Committee (LEPC) for each district. Each SERC is responsible for supervising and coordinating the activities of LEPCs, establishing procedures for receiving and processing public requests for information collected in order to meet other provisions of EPCRA, and reviewing local emergency plans.

At a minimum, each LEPC includes elected state and local officials; police; fire; civil defense and public health professionals; environment, hospital, and transportation officials; as well as representatives of facilities subject to the reporting requirements, community groups, and the media. As soon as facilities become subject to the emergency planning requirements, they must designate representatives to participate in the EPCRA planning process.

The LEPC's primary responsibility is to develop a chemical emergency response plan, and to review it annually thereafter. In developing a response plan, each LEPC evaluates available resources for preparing for and responding to a potential chemical accident.

Each plan:

- Identifies facilities and transportation routes of extremely hazardous substances.
- Describes onsite and offsite emergency response procedures.
- Designates a community emergency response coordinator and facility coordinator(s) to implement the plan.
- Outlines emergency procedures.
- Describes methods for determining the occurrence of a release and the possible affected area and population.
- Describes community and industry emergency equipment and facilities, and identifies the people responsible for them.
- Outlines evacuation plans.
- Describes a training program (including schedules) for emergency response personnel.
- Presents methods and schedules for exercising emergency response plans.

Note: To assist LEPCs in preparing and reviewing plans, the National Response Team (which is composed of 16 federal agencies with emergency response responsibilities) published the *Hazardous Materials Emergency Planning Guide* in March 1987.

Each emergency response plan must initially be reviewed by the SERC and then must be reviewed at least annually by the LEPC. Regional Response Teams (composed of federal regional officials and state government representatives) may also review the plans and provide assistance to LEPCs upon request. Planning activities of LEPCs and facilities should initially focus on any Extremely Hazardous Substances (EHSs) in their areas, and then expand to address all hazardous materials of concern within their community and cover transportation routes as well as fixed facilities.

Any facility that has EHSs in quantities equal to or greater than the listed Threshold Planning Quantities (TPQs) is subject to the emergency planning requirements. Additionally, state governors and SERCs can designate other facilities to be subject to these requirements (after a period of public comment). A facility must notify the appropriate SERC and LEPC that it has become subject to EPCRA planning requirements within 60 days after beginning to keep any EHS chemical onsite in quantities equal to or greater than its

TPQ. In addition, the SERC must notify the nearest EPA regional office of all facilities subject to these emergency planning requirements, including any facilities designated by the SERC or governor.

Section 304: Emergency Notification. Facilities must immediately notify any LEPCs and SERCs likely to be affected by a release into the environment of a listed hazardous substance in an amount exceeding the reportable quantity (RQ) of that substance. Substances subject to this requirement include both Extremely Hazardous Substances (listed in 40 CFR § 355) and hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (listed in 40 CFR § 302.4). Initial notification can be made by telephone, radio, or in person. Emergency notification requirements for transportation incidents can be met by dialing the 911 emergency number, if possible, or otherwise by calling the operator. Releases of CERCLA hazardous substances must also be reported to the National Response Center (800-424-8802).

Sections 311 and 312: Community Right-to-Know Requirements. Two community right-to-know requirements are included in EPCRA.

Section 311: Under the Occupational Safety and Health Administration's regulations, certain facilities must prepare Material Safety Data Sheets (MSDSs). Under Section 311 of EPCRA, those facilities must also submit required MSDSs (or a list of all onsite MSDS chemicals) to the LEPC, SERC, and local fire department with jurisdiction over the facility. If a list is submitted, the facility must provide an MSDS for any chemical on the list, if requested by the LEPC or SERC. (Whenever a facility becomes subject to Section 311, they have three months to prepare their MSDS data.)

Hazard Categories under Section 311: If the facility chooses to submit a list of MSDS chemicals, that list must include the common or chemical name of each substance and must identify the applicable hazard categories into which each substance falls: immediate (acute) health hazard; delayed (chronic) health hazard; fire hazard; sudden release of pressure hazard; or reactive hazard.

Threshold Exceptions under Section 311: Facilities aren't required to report onsite hazardous chemicals in quantities below the appropriate threshold established by EPA. The current Section 311 thresholds are:

- **For extremely hazardous substances:** either 500 pounds, or the Threshold Planning Quantity, whichever is lower.
- **For all other hazardous chemicals:** 10,000 pounds.

Updates under Section 311: Facilities must submit either an MSDS or a revised list once they store new, previously unreported hazardous chemicals on site in quantities at or above the established threshold levels. Also, if MSDSs were submitted rather than a list, an updated MSDS must be submitted whenever significant new information about a hazardous chemical becomes available.

Section 312: Under Section 312, each subject facility must submit an annual emergency and hazardous chemical inventory form to the LEPC, SERC, and local fire department with jurisdiction over the facility. Hazardous chemicals covered by Section 312 are those chemicals (a) for which facilities are required to prepare or have available an MSDS under the Occupational Safety and Health Administration's Hazard Communication Standard, and (b) that were present at the facility in quantities equaling or exceeding threshold quantities at any time during the previous year. (These are the same chemicals covered under Section 311.)

Threshold Exceptions under Section 312: A facility isn't required to report onsite hazardous chemicals in quantities below the appropriate threshold established by EPA. The current Section 312 thresholds, which are identical to the Section 311 threshold quantities, are:

- **For extremely hazardous substances:** either 500 pounds or the Threshold Planning Quantity, whichever is lower.
- **For all other hazardous chemicals:** 10,000 pounds.

Tier I and Tier II Reporting under Section 312: The required inventory form incorporates a two-tier approach. Under Tier I, facilities must submit the following information about chemicals within each applicable hazard category:

- An estimate (in ranges) of the maximum amount of chemicals in each category present at the facility at any time during the preceding calendar year.
- An estimate (in ranges) of the average daily amount of hazardous chemicals in each category on site during the preceding calendar year.
- The approximate location of hazardous chemicals in each category.

If requested by an LEPC, SERC, or local fire department, a facility must also provide the following Tier II information for each requested substance:

- The common or chemical name of the substance, as indicated on the MSDS.
- An estimate (in ranges) of the maximum amount of the chemical present at the facility at any time during the preceding calendar year.
- A brief description of the manner in which the chemical is stored.
- The location of the chemical at the facility.
- An indication of whether the owner/operator elects to withhold location information from public disclosure.

Note: Because many states impose additional requirements or have incorporated the federal reporting provisions on their own forms, Tier I/II forms should be obtained from the SERCs.

Facilities may choose to submit Tier II rather than Tier I forms, and some states require that Tier II forms be submitted. Individual citizens may also request copies of completed Tier II forms from either a SERC or LEPC. In such a case, if a Tier II form isn't available, it must be requested from the facility. Information submitted by facilities under Sections 311 and 312 generally must be available for public inspection during normal working hours. Facilities must provide Section 311 and 312 information whenever requested, regardless of whether onsite quantities of hazardous chemicals equal or exceed threshold quantities.

Section 313: Toxic Chemical Release Reporting. Section 313 of EPCRA requires EPA to establish and maintain an inventory of toxic chemical emissions from certain facilities. Facilities subject to this reporting requirement must complete a Toxic Chemical Release Inventory Form (commonly known as Form R) for specified chemicals and submit it to EPA and designated state officials.

These reports should include descriptions of both routine and accidental releases of hazardous chemicals from subject facilities during the preceding calendar year. The purpose of this reporting requirement is to inform the public about routine releases of toxic chemicals to the environment. The information is also intended for use in research and in the development of regulations, guidelines, and standards.

The Section 313 reporting requirement applies to facilities that (a) have at least 10 full-time employees, (b) are in Standard Industrial Classification codes 20 through 39, and (c) manufacture, import, process, or otherwise use at least one listed toxic chemical in excess of specified threshold quantities. More than 700 chemicals in more than 20 categories are now included on the list. EPA, through its rule-making authority, can add or remove chemicals from this list.

EPA maintains a national toxic chemical inventory, called the Toxic Release Inventory (TRI) database, containing the submitted inventory information. Individuals may access this national module directly or obtain included information by several other means. For more information, see http://www.epa.gov/tri/.

Other EPCRA Provisions. Section 322 of EPCRA addresses the effect of trade secrets on emergency planning, community right-to-know, and toxic chemical release reporting.

Section 325 of EPCRA describes the penalties for failure to comply with the requirements of this law. Civil and administrative penalties ranging from up to $10,000 to $75,000 per violation or per day per violation can be assessed on facilities that fail to comply with the emergency planning (Section 302), emergency notification (Section 304), community right-to-know (Sections 311 and 312), toxic chemical release (Section 313), and trade secret (Sections 322 and 323) reporting requirements. Criminal penalties of up to $50,000 or five years in prison may also be assessed on any individual who knowingly and willingly fails to provide emergency notification of a hazardous chemical release. Penalties of up to $20,000 and/or up to one year in prison may be assessed on any person who knowingly and willfully discloses any information entitled to protection as a trade secret.

In addition, Section 326 includes provisions allowing citizens to initiate civil actions against EPA, SERCs, or the owner or operator of a facility for failure to meet the requirements of the emergency planning and community right-to-know provisions of EPCRA. A SERC, LEPC, or state or local government may initiate actions against facility owners or operators for failure to comply with EPCRA requirements. Finally, states may file suit against EPA for failure to provide trade secret information.

CAA 112(r)

Section 112(r) of the Clean Air Act (CAA) Amendments of 1990 requires EPA to publish regulations focusing on preventing chemical accidents. The regulations build on the chemical safety work begun under EPCRA, as well as the Occupational Safety and Health Administration's Process Safety Management regulations. While EPCRA requires communities to develop emergency response plans using information on hazardous chemicals provided by local industries, under CAA 112(r), facilities must identify and assess their chemical hazards and carry out certain activities designed to reduce the likelihood and severity of accidental chemical releases. Once the chemical information is shared among industry, government, and the community, those entities can work to reduce the risks to public health and the environment.

In 1996, EPA published the final rule for CAA 112(r), called the Risk Management Plan (RMP) Rule (40 CFR Part 68). A facility is subject to the RMP Rule if, in any process at the facility, there is more than a threshold quantity of any hazardous substance that is regulated under the rule. Facilities subject to the RMP Rule must perform an offsite consequence analysis to check whether its process puts nearby populations at risk. If it does, the facility must take steps to manage that risk (as described in the rule).

You can view the text of CAA 112(r) and the RMP Rule, see the list of regulated substances and their threshold quantities, and obtain factsheets and other information related to CAA 112(r), at http://www.epa.gov/emergencies/content/rmp.

The similarity between the offsite consequence analyses required by the RMP Rule and the hazards analysis procedures required under EPCRA has confused some CAMEO users. The main point to understand is that CAMEO's Screening & Scenarios module is designed to implement the hazards analysis procedures described in an EPCRA guidance document (*Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances*), and *not* for offsite consequence analyses (see "Differences Between Screening & Scenarios, ALOHA, and RMP Endpoints" on page 76). For offsite consequence analyses, you can use the RMP*Comp software program, which can be downloaded at no cost from http://www.epa.gov/emergencies/content/rmp/rmp_comp.htm.

Glossary

A

Acute. Acute health effects usually develop rapidly after a short-term exposure to hazardous chemicals. Acute effects have a short duration. *Contrast with* ***Chronic***.

ALOHA. Computer model that predicts the area potentially affected by a toxic gas release, fire, or explosion; ALOHA is a component of the CAMEO software suite. Find out more about ALOHA on the NOAA OR&R site (http://response.restoration.noaa.gov/aloha).

C

CAMEO. A suite of software programs developed by NOAA and EPA. The suite supports a number of information management functions, such as retrieval of chemical-specific information to support emergency response activities, threat zone calculation and plotting for risk assessment, organization and management of EPCRA information, and mapping. Find out more about CAMEO on the NOAA OR&R site (http://response.restoration.noaa.gov/cameo). *See also* ***ALOHA***. *See also* ***MARPLOT***.

CAMEO Chemicals. A hazardous materials database where you can search thousands of datasheets, print customized reports with physical properties and response recommendations, and find out how chemicals would react if they mixed. Both an online version (http://cameochemicals.noaa.gov) and a downloadable version (http://response.restoration.noaa.gov/cameochemicals) are available.

CAMEO Map. A MARPLOT map designed to hold all CAMEO-related objects, such as symbol objects representing facilities or special locations, and polyline objects representing hazardous materials transportation routes. *See also* ***MARPLOT***.

CAS number. Or CAS #. Chemical Abstracts Service Registry number. This chemical identification number, in the format XXX-XX-X, is assigned by the American Chemical Society (http://www.cas.org/expertise/cascontent/registry/regsys.html).

CERCLA. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also known as Superfund). Creates a framework for federal involvement in response and cleanup activities following hazardous substance releases. For more information, see http://www.epa.gov/superfund/policy/cercla.htm.

CFR. Code of Federal Regulations (http://gpoaccess.gov/cfr).

Child module. A module that is below another, related module in CAMEO's file hierarchy. Chemicals in Inventory is a child module relative to the Facilities and Routes modules.

Chronic. Of long duration, or frequently recurring. Chronic health effects become apparent and/or continue for some time after exposure to hazardous chemicals. *Contrast with* ***Acute***.

Commission. The State Emergency Response Commission, or the governor if there is no commission, for the state in which a facility is located. *See* ***State Emergency Response Commission (SERC)***.

Committee. The Local Emergency Planning Committee (LEPC) for the emergency planning district in which a facility is located. *See* ***Local Emergency Planning Committee (LEPC)***.

D

Database. An organized collection of information. Each of CAMEO's modules is a database. Each record in a database describes an important element of information (for example, each record in the Facilities module describes a particular facility). Each record is composed of data fields that store a particular kind of information (for example, Street Address is a field on a Facilities record). *See also* ***Module***.

E

EHS. Extremely Hazardous Substance. EHS chemicals have been identified by the U.S. Environmental Protection Agency as particular toxic threats. They are listed under EPCRA in the appendices to 40 CFR 355, Emergency Planning and Notification.

EPA. U.S. Environmental Protection Agency. NOAA's Office of Response and Restoration (http://response.restoration.noaa.gov) co-developed the CAMEO suite with the EPA's Office of Emergency Management (http://www.epa.gov/emergencies).

EPCRA. Emergency Planning and Community Right-to-Know Act (also known as SARA Title III). Defines list of chemicals that are classified as Extremely Hazardous Substances (EHSs) and requires planning for and reporting of EHS releases from facilities. See "EPCRA" on page 123.

Extremely Hazardous Substances (EHS). EHS chemicals have been identified by the U.S. Environmental Protection Agency as particular toxic threats. They are listed under EPCRA in the appendices to 40 CFR § 355, Emergency Planning and Notification.

F

Facility. Defined in Section 302 of EPCRA as all buildings, equipment, structures, and other stationary items located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person who controls, is controlled by, or under common control with, such person). For purposes of emergency release notification, the term also includes motor vehicles, rolling stock, and aircraft.

Field. Or data field. An area within a record in a CAMEO module where a specific kind of information is stored (such as the name of a facility or a phone number). *See also* ***Database***.

Found set. A found set is created in a CAMEO module in three ways: (1) when you search the module, records that meet your search criteria are placed in a type of found set also called a search collection; (2) when you choose a command from the Show Related submenu of the Record menu, the records related to the current record are placed in a found set in the related module; and (3) when you select map objects, then select Get Info, records linked to those objects are placed in a found set. Whenever a found set exists in a CAMEO module, only the records in the found set are shown in list view. To clear a found set, select Show All Records from the Record menu. *See also* ***Search collection***.

G

Green Book. Formally known as *Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances*. A guidebook for use by members of Local Emergency Planning Committees in assessing the potential risks to a community from accidental airborne releases of extremely hazardous substances. It was published in 1987 by the U.S. Environmental Protection Agency, Federal Emergency Management Agency, and U.S. Department of Transportation. It's available online at http://www.epa.gov/emergencies/docs/chem/tech.pdf.

H

Hazards analysis. A systematic method for evaluating the potential hazard to a community from accidental airborne releases of hazardous chemicals stored, transported, manufactured, or used within that community. *See also* ***Technical Guidance***.

I

Inventory form. The Tier I and Tier II emergency and hazardous chemical inventory forms described in 40 CFR § 370.4. (See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.) Record fields in the Chemicals in Inventory module resemble the fields on Tier II forms. *See also* ***Tier II***.

L

LEPC. Local Emergency Planning Committee. A committee appointed by the State Emergency Response Commission, as required by EPCRA, first to design, then to regularly review and update a comprehensive emergency plan for an emergency planning district. See "Section 301-303: Emergency Planning" on page 124.

Level of Concern (LOC). Threshold concentration of an airborne pollutant, usually the concentration above which a hazard to people is believed to exist. Find out more about LOCs on the NOAA OR&R site (http://response.restoration.noaa.gov/locs).

Link. A connection between a CAMEO record and a related object on a MARPLOT map.

List view. View of a CAMEO module in which records in the module are displayed as a list. Double-clicking any record in the list displays that record in record view. *Contrast with* ***Record view***.

LOC. Level of Concern. Threshold concentration of an airborne pollutant, usually the concentration above which a hazard to people is believed to exist. Find out more about LOCs on the NOAA OR&R site (http://response.restoration.noaa.gov/locs).

Local Emergency Planning Committee (LEPC). A committee appointed by the State Emergency Response Commission, as required by EPCRA, first to design, then to regularly review and update a comprehensive emergency plan for an emergency planning district. See "Section 301-303: Emergency Planning" on page 124.

M

MARPLOT. CAMEO's mapping program. Find out more about MARPLOT on the NOAA OR&R site (http://response.restoration.noaa.gov/marplot).

Module. Any of the databases included in CAMEO (such as Facilities or Routes). *See also* ***Database***.

MSDS. Material Safety Data Sheet. Product data sheet prepared under 29 CFR § 1910.1200 by the manufacturer or marketer of a hazardous material; describes product, its hazards, and safe handling and response procedures.

N

NOAA. National Oceanic and Atmospheric Administration (http://www.noaa.gov).

O

OR&R. NOAA's Office of Response and Restoration (http://response.restoration.noaa.gov). OR&R co-developed the CAMEO suite with the Environmental Protection Agency's Office of Emergency Management (http://www.epa.gov/emergencies).

P

Parent module. A CAMEO module located above another, related module in CAMEO's file hierarchy. Facilities and Routes are parent modules relative to the Chemicals in Inventory module.

R

Record. In any CAMEO module, each record describes an important entity or element of information. For example, each Facilities record describes a single facility (or department within a large facility). Each record contains fields that each store a particular kind of information (such as the Street Address field on a Facilities record). *See also* ***Database***.

Record view. View of a single record within a CAMEO module, in which you can access all the information contained in that record (typically, you clicks tabs to see different kinds of information in a record). *Contrast with* ***List view***.

Risk analysis. A systematic method of assessing the damage that could be caused to a community by a hazardous substance release.

S

SARA. Superfund Amendments and Reauthorization Act of 1986. Title III of SARA is also known as the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). *See also* ***EPCRA***.

Screening zone. Threat zone for screening calculations.

Search collection. A type of found set. When you perform a search or request information on linked MARPLOT objects, CAMEO collects together the records in the given module that meet your criteria. You then can browse through the collected records. While a search collection exists, you can move among only the collected records. Before you can work with other records in the module, you must clear the search collection (choose Clear Search from the Search menu). *See also* ***Found set***.

Search criteria. The criteria, or conditions, that you set when you search a CAMEO module for a specific piece of information, such as the record for a particular facility in the Facilities module.

SERC. State Emergency Response Commission. A commission appointed by each state governor under EPCRA. A SERC designates emergency planning districts, appoints Local Emergency Planning Committees, supervises and coordinates the activities of planning committees, reviews emergency plans, receives chemical release notifications, and establishes procedures for receiving and processing requests from the public for information. *See also* ***Local Emergency Planning Committee (LEPC)***.

Sharing. The process by which CAMEO, CAMEO Chemicals, ALOHA, and MARPLOT share information in order to establish and use links between module records, chemical datasheets, map objects, and ALOHA threat zones.

Special locations. Locations of people who may be more susceptible to the toxic effects of an accidental release than the general population, because of pre-existing health conditions, age, or other factors. Schools, day-care centers, and nursing homes are examples of special locations.

State Emergency Response Commission (SERC). A commission appointed by each state governor under EPCRA. A SERC designates emergency planning districts, appoints Local Emergency Planning Committees, supervises and coordinates the activities of planning committees, reviews emergency plans, receives chemical release notifications, and establishes procedures for receiving and processing requests from the public for information. *See also* ***Local Emergency Planning Committee (LEPC)***.

State Fields. Records in the Facilities and Chemicals in Inventory modules contain a State Fields section, designed to support the emergency planning work of U.S. states that have developed their own reporting requirements, in addition to the Tier II requirements specified in EPCRA (which apply to all 50 states). In these states, Tier II forms contain additional fields, which are entered into CAMEO in the State Fields.

Superfund. The trust fund established under CERCLA to provide funding for cleanup of hazardous substances.

Superfund Amendments and Reauthorization Act of 1986 (SARA). Title III of SARA is also known as the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). *See also* ***EPCRA***.

T

Technical Guidance. *Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.* A guidebook for use by members of Local Emergency Planning Committees in assessing the potential risks to a community from accidental airborne releases of extremely hazardous substances. This guidance is commonly known as the Green Book, and it was published in 1987 by the U.S. Environmental Protection Agency, Federal Emergency Management Agency, and U.S. Department of Transportation. It's available online at http://www.epa.gov/emergencies/docs/chem/tech.pdf.

Threat zone. Area within which a hazard level is predicted to exceed a specified Level of Concern (LOC) at some time after a release begins. *See also* ***LOC***.

Tier II. Facilities covered by EPCRA must annually submit a hazardous chemical inventory form to the Local Emergency Planning Committee, the State Emergency Response Commission, and the local fire department. Facilities provide either a Tier I or Tier II form. Most states require the Tier II form. See "Sections 311 and 312: Community Right-to-Know Requirements" on page 126.

U

Unlink. A command which breaks a link previously established between a CAMEO record and an object on a MARPLOT map. *Contrast with* ***Link***.

V

Vulnerable zone. Threat zone for scenarios calculations.

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