

Example: Translate Data Into Controller Tools

Translating data into Controller tools is generally a three-step process.

1. Determine the use of the data

Hazardous material data is generally used for field monitoring capabilities; triggering alarms, contamination of the environment, facilities vehicles, injured persons, non-injured persons, and Responders (Players); and protective action decisions (i.e., shelter, shelter-in-place, and evacuation).

The data is collected by Responders (Players) using chemical or radiological monitoring equipment and fixed alarms and monitoring devices and may have a visual aspect (e.g., deposition particulates).

2. Determine presentation form and format

Consider two major elements when determining the form and format for data to be packaged for use by the Control Organization. First, what are the conditions under which the data will be used? Controllers in the field with Monitoring Teams, Reentry Teams, or other Field Elements must carry and manage the data. The less paper the Controllers have to carry, the more efficient they are. Additionally, if the data is in the form where Controllers must extrapolate data, it increases the possibility for error.

Second, what is the level of expertise of the Controllers? As the number of points where data is inserted into the exercise increases, the number of Controllers directly increases. As the number of Controllers increase, tapping an experienced set of Controllers becomes more and more difficult. The “expertise of a Controller” in this context refers to a person who understands the technical aspects of the data and has Controller experience or suitable interpersonal skills as a Controller.

This information must be user-friendly. A rule of thumb is to keep it simple when developing the form and format.

Tip: Once the form and format of the specific Controller tools to provide data to Responders (Players) are determined have a Controller review sample results to ensure the tools meet expectations.

3. Develop and produce the controller tools

There are almost an infinite number of ways that data can be displayed. Much is dependent on the type of modeling and graphic art capabilities (and budget) available to the Scenario Development Group. Following are descriptions of how data are displayed for the Controllers to provide the data to Responders (Players).

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Type of Data	How to Translate Data Into Controller Tools
<p>Field Monitoring Data</p>	<p>Here is where the modeling capability may limit the tools. Some models provide a simple plot or just a centerline where as the National Atmospheric Release Advisory Center (NARAC) can produce a color-coded plume plot on a topographical map of a specific site.</p> <p>For data with predetermined wind direction:</p> <ul style="list-style-type: none"> • Select a map or aerial photograph of the area impacted by the plume • The map/photograph selected should provide current roads, geographical features, and buildings • Draw a grid system over the map from the point of release to the extent of the plume. A grid system in between 50 to 100 feet works well • Label the grid with alphabet designators on the columns and numbers on the rows. The Controller will use the map to identify in <i>what</i> grid square he or she is located • Provide a time-sequenced spreadsheet to list the data (airborne concentrations, dose, and/or deposition) in each square. The Controller will then use the spreadsheet to identify the readings for that grid square <p>For data without predetermined meteorological conditions:</p> <ul style="list-style-type: none"> • Select a map or aerial photograph of the area impacted by the plume • Identify the map scale • Produce time-sequenced plume plots in the same scale as the map • Mark centerline • Print the plot on overlay paper or overhead projector film • The Controller will line up the centerline with the wind direction, starting at the release point • The Controller will then provide the data from the plume plot
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Vehicle, Responder (Player), Employee Contamination	<ul style="list-style-type: none"> • Obtain a drawing of the general types of vehicles used in the response (e.g., fire trucks, ambulances, SUVs, etc.) and body maps (see medical data in this tutorial for people) • From the analysis of the plume plots, determine a range of readings for possible contamination • Select areas that may become contaminated i.e., vehicle tires, the inside of ambulances, or gloves and boots for Responders (Players). Mark these areas on the vehicle drawing or body map • Develop a matrix to indicate the readings per location • Provide for initial readings and subsequent readings during the contamination process
Building Damage and Contamination	<p>Building contamination levels are primarily provided to entry teams during the damage assessment or reentry process</p> <ul style="list-style-type: none"> • Obtain drawings of the building to include the interior configuration • Divide the building into zones • Describe the damage in each zone • Determine the range of possible contamination • Develop a contamination matrix indicating walls, floor, ceiling/roof, and airborne concentrations • Provide digitized photographs of damage, where possible