



USER GUIDE TO THE ESRI WORKPLACE UPDATE EXTENSION

Table of Contents

Chapter 1 Welcome to the Workplace Update Extension	5
Reviewing Employer Data with the Workplace Update Extension	5
Procedure for Updating Employer Files with the Workplace Update Extension	5
Recommended Hardware and Settings.....	6
Loading the TIGER/Line Shapefiles and Employer Data Sets.....	7
Files on the Distribution CD-ROM	7
Copying the County-Specific Files to Your Hard Disk.....	8
Source of the Employer Data Sets	8
Technical Support	9
Chapter 2 Basics of ArcView GIS and the Work-UP Extension	10
Workplace Update Interface	10
The Graphical User Interface	10
The Status Bar	11
Workplace Update View.....	11
Themes	12
Table of Contents	12
Map Display	12
Common Theme Operations	12
Turning Themes On and Off.....	12
Making a Theme Active.....	12
Changing the Display Order	13
Adjusting the Map Display	13
Zooming In.....	13
Zooming Out	14
Pan	14
Previous Extent	15
Display Entire County In Map Display	15
Importing Other ArcView Shapefiles for Reference.....	15
Importing Shapefiles.....	15
Changing Theme Symbology.....	16
Remove Themes	16

Showing Theme Feature Attributes.....	16
Labeling Theme Features in the Map Display	17
Labeling Streets.....	17
Labeling Individual Features.....	18
Deleting Labels.....	18
Moving Labels.....	18
Resize a Label	18
Printing the Workplace Update View.....	19
Chapter 3 Starting the Workplace Update Extension	20
Option 1: Loading the Workplace Update Extension	20
Option 2: Opening a Saved Workplace Update Review	21
Entering the Workplace Update Extension.....	22
Selecting a County for Review	23
Data Input Options	23
Adding Street Data (if not already loaded in Workplace Update View).....	25
Importing Employer Data Sets (if not already loaded in the Workplace Update View)	26
Chapter 4 Selecting Records to Review	28
Workplace Update Extension Interface.....	29
Selecting Employer Data Set Records to Review	30
Pre-Select Operations	31
Spatial Select.....	31
Query Builder.....	31
Define Selection Criteria	33
List Selected Records	36
Chapter 5 Reviewing Employer Data Sets.....	38
Examining the Employer Data Sets	38
Begin the Review of Employer Data Sets	40
Review Geocoded Employer Data.....	41
Review Ungeocoded Employer Data	48
Adding Employers.....	48
Reviewing Data for Another County.....	59

Chapter 6 Exporting Employer Data Sets.....	61
Sending Completing Files to the Census Bureau.....	62
Returning Licensed Employer Files to the Census Bureau	62
Appendix A Graphical User Interface (GUI)	64
Appendix B Employer Data Set Record Description	67

Chapter 1

Welcome to the Workplace Update Extension

The Workplace Update (Work-UP) extension has been developed by Environmental Systems Research Institute, Inc. (ESRI), for the U.S. Census Bureau in support of Census 2000 place-of-work coding. The Workplace Update extension is being distributed to Metropolitan Planning Organizations (MPOs) so they can use local knowledge to verify, correct, and add entries for employers in their area to ensure more accurate and complete workplace data in the Census Transportation Planning Package (CTPP) 2000.

Reviewing Employer Data with the Workplace Update Extension

The Workplace Update extension is a tool for MPOs to use in reviewing the commercial business database that has been licensed by the Census Bureau. The extension was built using, and runs in, ArcView® GIS 3.1, but will also work with version 3.2. An ArcView extension is one file that, when loaded, extracts all programs, tools, and dialog forms for additional functionality not native to core ArcView GIS.

The Workplace Update extension enables users to do the following:

- Validate employers successfully geocoded by the Census Bureau by visually verifying each location.
- Geocode any employers the Census Bureau could not, by either typing in a more complete (or different) address or by clicking on the correct location on the map.
- Add any missing employers by typing in their name and address.
- Delete any employers that are no longer valid.
- Change employer information and/or location on an as-needed basis.

Procedure for Updating Employer Files with the Workplace Update Extension

The process by which MPOs will check over and correct the employer lists is

- MPOs will receive a CD-ROM containing the appropriate TIGER/Line 98 ArcView shapefiles, the Workplace Update extension, and Employer Data files for each county. There will be two employer files, one for records geocoded by the Census Bureau and another for records that were not able to be geocoded.

- MPOs will spend a few months going through the Employer Data files, validating the correct employer addresses, correcting problematic employers, and adding the missing employers and their addresses.
- Once the MPOs are finished checking the Employer Data files using the Workplace Update extension, the exported output files will be sent back to the Census Bureau, Journey-to-Work and Migration Branch. The output will consist of ASCII versions of the revised employer files, with "flags" on validated, changed, or deleted records.
- In accordance with the provisions of the license agreement with the vendor who owns the business database, at the conclusion of the project the original CDs must be returned to the Census Bureau and the employer files must be deleted from the MPOs computers. Agencies interested in licensing the employer files for their own use should call the Journey-to-Work and Migration Branch of the Census Bureau for information on how to contact the vendor. See **Technical Support** at the end of this chapter for the telephone number and names of whom to contact.
- After basic completeness and edit checks have been performed, the Census Bureau Geography Division will integrate the files from the MPOs into the master Workplace File for use in Census 2000 place-of-work coding.

Recommended Hardware and Settings

The following is recommended hardware for the Workplace Update extension and ArcView GIS.

Hardware

- Pentium PC (200 MHz or better).
- Microsoft Windows 95, Windows 98, or Windows NT 4.0 operating system.
- 64 MB physical memory (RAM).
- The amount of hard disk space required will depend on the size of the TIGER/Line 98 ArcView shapefiles and the employer files for your area. The Work-UP installation utility will tell you how much space is needed for the extension, user guide, and associated files but cannot estimate the size of the TIGER files and employer files because they vary from county to county.
- 15" VGA color monitor (256 colors or more) and 8 MB video memory.

Settings

In order to display the dialog boxes properly follow the settings below.

- Font Size should be set to **Small Font**.
- Desktop Area should be set to **1024x768** pixels.

To check settings, go to the Windows **Start** menu → **Settings** → **Control Panel** → **Display** icon → **Settings** tab.

Loading the TIGER/Line Shapefiles and Employer Data Sets

The installation program on the distribution CD only installs the Workplace Update extension, the user guide, and other program-related files. It does not install any of the county-specific TIGER/Line 98 ArcView shapefiles or Employer Data sets. You must choose the counties you are going to work on and copy the county folders from the CD to a specific directory on your computer's hard disk drive as noted below.

Files on the Distribution CD-ROM

The CD-ROM distributed for the Workplace Update program contains the installation program for the Work-UP extension in the root directory of the disc. There is also a subdirectory or folder on the disc for each state contained on the CD. For example, the CD containing Ohio and West Virginia has both a 39 folder (FIPS code for Ohio) and a 54 folder (WV FIPS). Under each state folder is a folder for each county in the state. Continuing the Ohio (39) example, there are folders for 39001, 39003, 39005, and so on.

Each county folder contains up to eleven files. The file named "geoSSCCC.txt" (where SS is the FIPS state code and CCC is the FIPS county code) contains the employer records for the county that were successfully geocoded by the Census Bureau, the **Geocoded Employer Data**. The file named "ungSSCCC.txt" contains the employer records the Census Bureau could not geocode, the **Ungeocoded Employer Data**.

The other nine files are the **TIGER/Line 98 ArcView shapefiles**. There are three street line files (tgrSSCCClkA, with dbf, shp, and shx extensions), three railroad line files (tgrSSCCClkB, with the extensions), and three water line files (tgrSSCCClkH, with the extensions). Only the street line files are automatically loaded by the Work-UP extension. To load the railroad and waterlines as themes, see the section in **Chapter 2** entitled **Importing Other ArcView Shapefiles for Reference**.

Note: TIGER/Line 98 is the same version that was distributed at the beginning of the Traffic Analysis Zone Update (TAZ-UP) program. Therefore, none of the corrections or updates that were made during that work is reflected in these files. Unfortunately, the shapefiles from the TAZ-UP program are not usable in Work-UP because they lack the

address information needed for geocoding. That is why we are distributing TIGER/Line shapefiles with Work-UP. **It is important that you do NOT delete any TIGER/Line shapefiles used in the TAZ-UP program from your computer.** You will need them for the TAZ verification work.

Copying the County-Specific Files to Your Hard Disk

You should first make sure you have enough room on your hard disk to copy the TIGER files and employer files. We suggest you have free disk space equal to at least two times the total of the files in the county directory on the CD to allow for the creation of other files and to ensure sufficient workspace. Check the size of the county folder on the CD. If you do not know the FIPS codes for the counties in your area, open the file named **stcoufips.txt** in the **c:\workup\bin** directory in a text editor or word processor. Then search for the name of your state. It will be followed by a list of the county FIPS codes and county names. The codes are the folder names used on the CDs.

To copy the files from the CD to your hard disk, drag the county folder (e.g., 39001) and all its contents to the directory **c:\workup\data**. In this example, you would create the directory **c:\workup\data\39001** that would contain the eleven files from the distribution CD. The TIGER/Line ArcView shapefiles and Employer Data sets **MUST** be placed in this location for the Work-UP extension to find them. Note that if your computer is short of disk space, the files for only one county at a time have to be present on the disk.

Source of the Employer Data Sets

The records distributed in the Workplace Update program come from three main sources.

The Census Bureau has licensed the majority of the records from infoUSA. This company was formerly known as American Business Information or ABI. The sources of these records are the yellow pages phone directories, the business white pages, and the government blue pages. (We think you may still need to augment the file with records for large government office buildings including local, state, and federal offices.) The employer records were current as of October 1998. Of the approximately 11 million records in the national file from infoUSA, about 60 percent are for employers with fewer than 5 employees. We have included all these records in the Workplace Update program, but you can choose to review employers of whatever size you think appropriate and have time to review.

We have supplemented the infoUSA records with a national shopping center directory that was purchased from the National Research Bureau (NRB). In most cases, this file includes records for both the shopping centers and the stores located within them. The shopping center addresses are oftentimes intersections, which do not geocode successfully, and the stores usually have only the name of the center as their address. For this reason, you will find that **some locations or points displayed in Work-UP have many employers associated with them.** There may also be duplication of records between the infoUSA and NRB files.

The third source of records is a military installation list that was developed by the Census Bureau from a variety of published materials. These records do not usually contain street addresses at all and have probably been coded to the centroid of a ZIP Code, county, or place, along with a large number of other employers that could not be geocoded to a precise location. This also results in some points containing a large number of employers. (**Note:** The names of military bases that are now closed have been retained in the Work-UP files. This is because we think people may still use the base names when they report their place of work location in Census 2000. Do not mark these records for deletion.)

The Geography Division of the Census Bureau has attempted to geocode all the Workplace Update records against TIGER/Line 98. About 80 percent of the 12 million records were successfully coded. Based on the coding, these records have been associated with a TIGER feature, on which side of the feature they are located, and given latitude and longitude coordinates. If you correct any of these records, the Work-UP extension will recalculate these attributes based on the updated address or location you provide.

Many of the records that did not geocode to a precise location in TIGER still contain what appears to be accurate geographic information. Most of the records from infoUSA contain complete addresses and latitude/longitude coordinates. **For records that did not geocode against TIGER, Work-UP uses the coordinates from infoUSA. That is how Work-UP is able to display precise locations for "uncoded" records.** Although we do not know the details concerning how infoUSA determined their coordinates, they frequently appear to be legitimate locations for the employers.

Technical Support

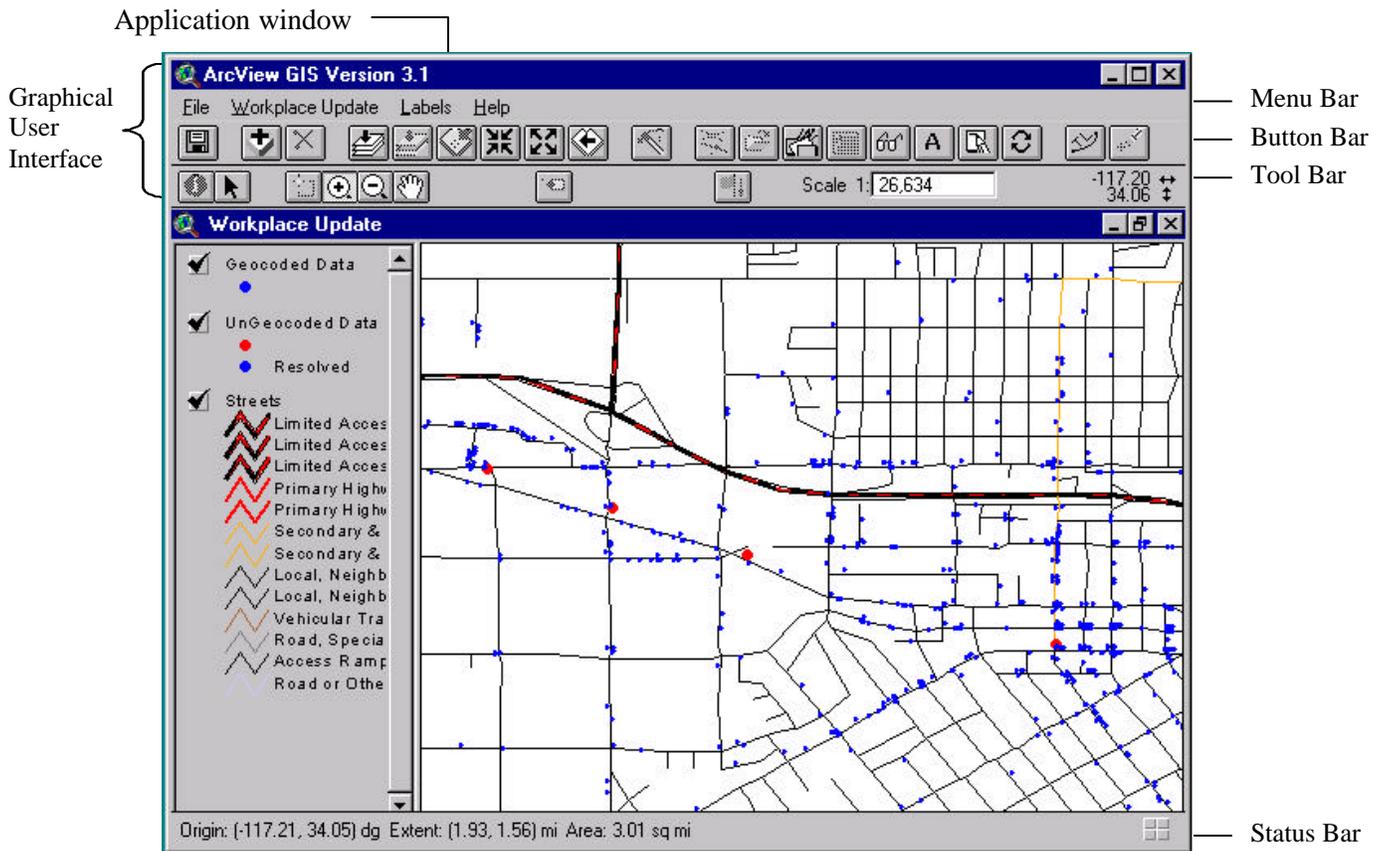
Technical support for the Work-UP software will be handled through the Journey-to-Work and Migration Branch at the Census Bureau. The telephone number is 301-457-2454. Ask for Clara Reschovsky, Gloria Swieczkowski, or Bonny Berkner. If they are unable to answer your question directly, they will contact ESRI for assistance and either call you back with an answer or have someone from ESRI contact you.

Chapter 2

Basics of ArcView GIS and the Work-UP Extension

This chapter is intended for novice users and describes the basic features of ArcView GIS 3.1, the Workplace Update extension interface, and the Workplace Update View. If you are an experienced user of ArcView GIS, you may want to look only at the sections of the chapter indicated by an asterisk (*). They refer to features unique to the Workplace Update extension. The use of some buttons and tools is demonstrated in this chapter. See **Appendix A** for a complete listing of the functions of the menus, buttons, and tools.

Workplace Update Interface



The Graphical User Interface

The Workplace Update extension consists of controls called *menus*, *buttons*, and *tools* arranged in three bars at the top of the *application window*. The *menu bar* provides access to operations through pulldown menus. The *button bar* provides quick access to

operations. The *tool bar* contains tools that perform operations requiring input from the mouse. When the user clicks on a *tool*, the cursor changes to reflect the *tool* chosen. A *tool* remains active until another *tool* is clicked, allowing performance of an operation several times without returning to the *tool bar*.

*Certain *tools* from the *tool bar* are also available on the *toolbar shortcut* menu. Click the right mouse button while the cursor is positioned over the map display to access this menu. When the *toolbar shortcut* menu appears, move the cursor to highlight the operation you wish to perform, then click the left mouse button to activate the *tool*.



Toolbar Shortcut Menu

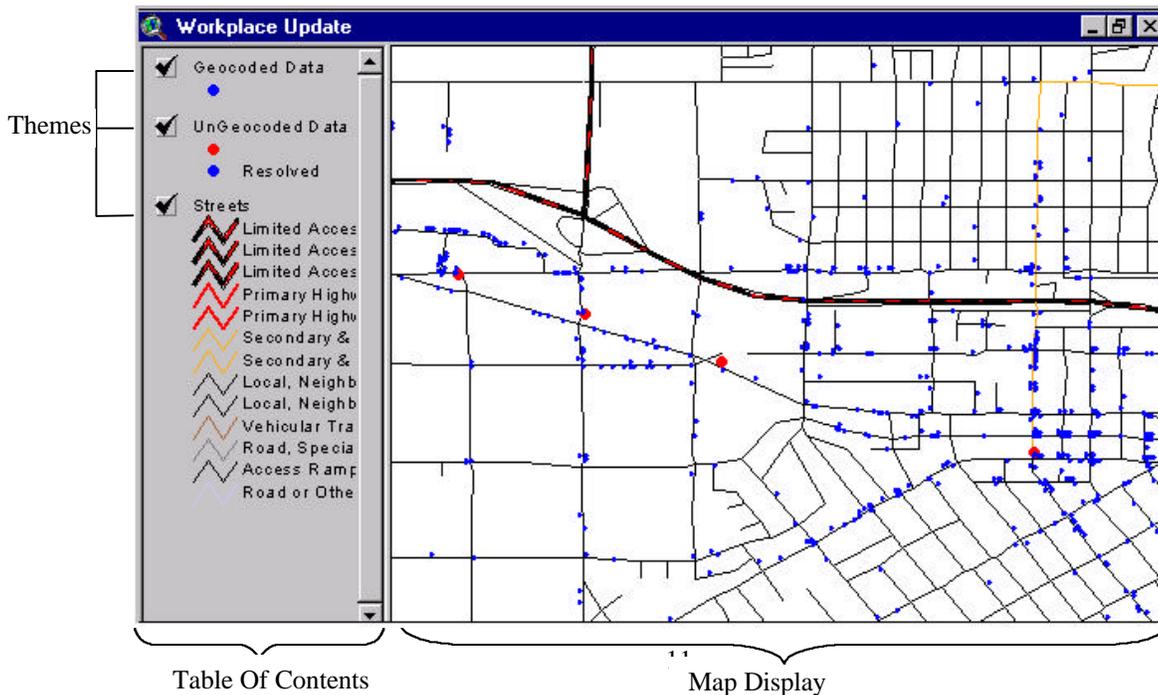
The Status Bar

When you place the cursor over a *menu choice*, *button*, or *tool*, the *status bar* displays a one-line description of the operation it performs. The *status bar* also displays a process bar for lengthy operations.

Tool Tips

Placing the cursor over a *button* or *tool* displays a help string (called a tool tip) inside a yellow box just below the location of the *button* or *tool*.

Workplace Update View



View

A view has two components: a *map display* and *table of contents*. The Workplace Update extension displays features in *themes* and manages them in a view called Workplace Update View. You can display many themes for the same geographic area in the same view.

Themes

A *theme* represents a set of real-world objects as map features along with attributes. A *theme* is a collection of similar geographic objects represented as lines, point, or polygons. Each *theme* has a name and one or more symbols used to display its features.

*By default, the Workplace Update View contains three themes: Streets, Geocoded Data, and Ungeocoded Data. Each of the themes covers the entire geographic area of a specific county. For further information, see the section below entitled **Importing Other ArcView Shapefiles for Reference**.

Table of Contents

The *table of contents* lists all *themes*, along with their legends, that can be displayed in a view.

Map Display

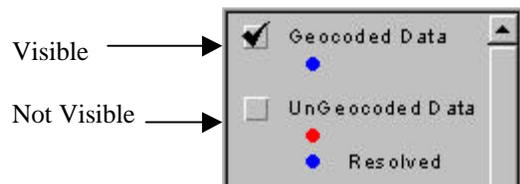
A *map display* shows the features for each theme.

Common Theme Operations

Once you have themes in a view, you can turn them on or off, make them active for operations, and change their display order.

Turning themes on and off

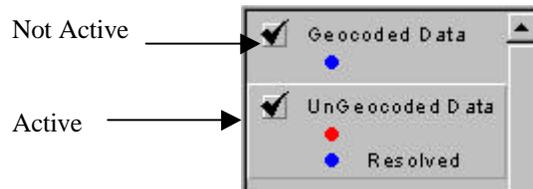
To display a *theme* in the map display you must turn it on by clicking on its check box in the *table of contents*. Clicking again will turn the theme off. When a *theme* is turned on, the Workplace Update extension draws it in the *map display* area; when a *theme* is turned off, the Workplace Update extension does not draw the theme. Turning a *theme* off affects the display only; it does not delete features from the theme. A *theme* does not have to be turned on to perform operations on it.



Making a Theme Active

Many operations work only on active themes. By making a *theme* active, you are telling the Workplace Update extension on which theme you want the operation to be performed. When a *theme* is active, it appears raised in the *table of contents*. This means

that it is available to perform operations on it. You make a *theme* active by clicking on its name in the *table of contents*.



Changing the Display Order

The Workplace Update extension draws themes sequentially starting with the *theme* at the bottom of the *table of contents* and ending with the *theme* at the top of the *table of contents*. Because themes are drawn one on top of the other, a *theme* positioned lower in the *table of contents* may be obscured by a *theme* positioned near the top.

To change the order in which a *theme* draws

1. Place the cursor over the *theme* in the *table of contents*.
2. Hold down the mouse button, then drag the *theme* to a new position (up or down) in the *table of contents*.

Adjusting the Map Display

You can use zoom and pan tools to adjust the extent of the map display.

Zooming In

You can view an area of the *map display* in more detail with either the **Zoom In** button or the **Zoom In** tool. Use the **Zoom In** button to enlarge the map by a preset amount on the center of the *map display*. Use the **Zoom In** tool to enlarge the map by an amount on a point you define or set the map extents with a rectangle you draw.

To use the **Zoom In** button

1. Click the **Zoom In** button on the *button bar*.



The *map display* redraws, enlarging the map based on the center of the *map display* window.

To use the **Zoom In** tool

To zoom in on a point other than the center of the *map display*

1. Click the **Zoom In** tool on the *tool bar* or from the *Toolbar Shortcut Menu*.



2. In the *map display*, click on the point you want to center the *map display* on. The *map display* redraws, enlarging the map based on the point you clicked.

OR

To define your own map extent box

1. Click the **Zoom In** tool on the *tool bar* or from the *Toolbar Shortcut Menu*.



2. In the *map display*, press and hold the mouse button starting where you want to locate one corner of the extent.
3. After dragging the box across the *map display*, release the mouse button when the extent box is surrounding the area you wish to zoom in on.

The *map display* will redraw based on your specifications.

Zooming Out

You can widen the map with either the **Zoom Out** button or the **Zoom Out** tool. Use the **Zoom Out** button to widen the map by a preset amount on the center of the *map display*. Use the **Zoom Out** tool to widen the map by an amount on a point you define.

To use the **Zoom Out** button

1. Click the **Zoom Out** button on the *button bar*.



The *map display* redraws, widening the map based on the center of the *map display* window.

To use the **Zoom Out** tool

1. Click the **Zoom Out** tool on the *tool bar* or from the *Toolbar Shortcut Menu*.



2. In the *map display*, click on the point you want to center the *map display* on. The *map display* redraws, widening the map based on the point you clicked.

Pan

If you want to keep the same map scale in the map display, you can move the map up, down, or sideways by using the **Pan** tool.

To use the **Pan** tool

1. Click on the **Pan** tool on the *tool bar* or from the *Toolbar Shortcut Menu*.



2. In the *map display*, point to a location near the edge of the map then press and hold the mouse button down.
3. With the mouse button pressed, drag the map toward the opposite edge of the map.
4. Release the mouse button to redraw the *map display*.
5. You can continue to press, hold, drag, and release the mouse button until you get to the exact position on the *map display* where you want to be.

Previous Extent

You can go back to a previous *map display* extent by clicking the **Zoom To Previous** *button* on the *button bar* or from the *Toolbar Shortcut Menu*.



Display Entire County in Map Display

You can set the extent of the *map display* to the entire county by clicking the **Zoom To Full Extent** *button* on the *button bar*.



Importing Other ArcView Shapefiles for Reference

*If you want to add other spatial data while reviewing employer locations, you can import the data into the Workplace Update extension. The imported data will be displayed as *themes* in the Workplace Update View and can only be used for reference.

*Some useful spatial data may include TAZ shapefiles, TIGER/Line 98 Railroads, and TIGER/Line 98 Water Features. The TAZ shapefiles should be under your TAZ-UP directory (*C:\Tazup\Shape*). Both the Railroads and Water Features are included on the CDs you received and are named tgrSSCCClkb for Railroads and tgrSSCCClkh for Water Features. (**Note:** The file names and directories used in the Workplace Update program contain specific FIPS state and county codes. However, in the generic form as used above, SS indicates that a FIPS state code will occupy these two positions in the name, while CCC shows where the FIPS county code will appear.) The Railroads and Water Features shapefiles are located in the same directory as the Streets and Employer Data Files (*C:\Workup\Data\SSCCC*), but they will not be automatically loaded as *themes* in Work-UP. See **Importing Shapefiles** below to add them as a theme.

TIGER/Line 98 shapefiles file names

Streets = tgrSSCCClka.*

Railroads = tgrSSCCClkb.*

Water = tgrSSCCClkh.*

Importing Shapefiles

To import an ArcView shapefile

1. Click the **Add Theme** *button* on the *button bar*.



2. In the Add Theme dialog that opens, navigate to the folder that contains the ArcView shapefile you wish to import.
3. Click on the shapefile name you wish to import.
4. Click **OK**.

The Workplace Update extension will load the shapefile as a *theme* into the Workplace Update View and place it at the top of the *table of contents*.

Changing Theme Symbology

To change *theme* symbology

To change the symbology of a *theme* you add to the Workplace Update View, double-click on the *theme* name in the *table of contents*.

*This displays the ArcView Legend Editor. You can only change *theme* symbology for *themes* you import into the Workplace Update View. The Streets, Geocoded Data, and Ungeocoded Data theme symbology are locked.

For more help on using the ArcView Legend Editor, see *Using ArcView GIS*, **Chapter 6**, or from the **Help** menu → **Help Topics** → **Legends**.

Remove Themes

To remove an imported theme from the Workplace Update View

1. In the *table of contents*, click the name of the *theme* you wish to remove in order to make it the active *theme*.
2. Click the **Remove Non-Essential Themes** *button* on the *button bar*.



3. If the *theme* name in the Delete Theme dialog is correct, click **Yes** to remove the *theme* from the Workplace Update View.

*You can only delete *themes* you import into the Workplace Update View. The Streets, Geocoded Data, and Ungeocoded Data themes cannot be deleted from the view.

Showing Theme Feature Attributes

Each *theme* in the Workplace Update View has a table storing attributes about the geographic features it contains. A theme's attribute table contains one record for each feature in the *theme*. For instance, each employer point is a feature, as is each street segment.

Displaying the attributes of a particular feature on a map display:

1. In the *table of contents*, click on the *theme* name containing the feature you wish to identify to make it the active *theme*.
2. Click the **Identify** *tool* on the *tool bar* or from the *Toolbar Shortcut Menu*.

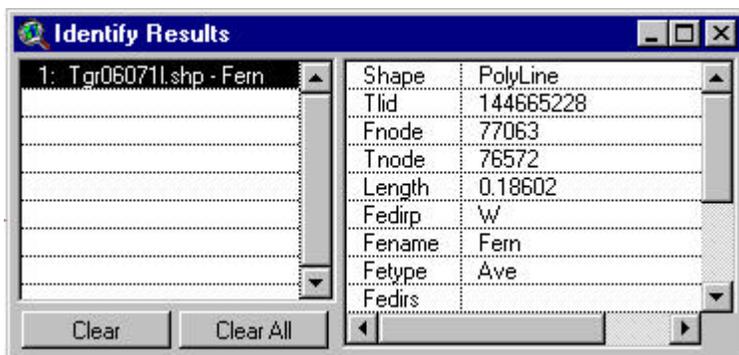


3. Press the mouse button on any feature in the active *theme* on the *map display* to see its attributes. Attributes of all the features located at the same point are displayed.

***Note:** In the Workplace Update View, there may be a very large number of uncoded employer records all assigned to the same point. Oftentimes these records will not be

visible in the map display when the default zoom is in effect, only when the display is zoomed to the full extent. This is because the uncoded records may have zeros in the latitude and longitude coordinates, which puts them very far from the county being displayed. In fact, when in the full extent the streets and employer points of the county being reviewed may be so small that they only appear to be a single dot on the map display. Similarly, if you are reviewing records and come upon one of these uncoded records with no coordinates, when the map display zooms to its location it will appear as though the map has gone blank. No streets will be visible, nor will any amount of panning bring you back to the street network of the county you are working on. Again, this is because the zero coordinates place the record so far away.

The **Identify Results** dialog has two columns: the left side shows the theme and feature you chose, and the right side shows the feature's attributes.



To close the **Identify Results** dialog, click the X on the title bar.

Labeling Theme Features in the Map Display

Sometimes labeling theme features can help you orient yourself within a map display.

Labeling Streets

Labeling all the streets in the map display

The Workplace Update extension provides you with a quick way to label streets in a batch mode.

To label streets, you can

Select the **Labels menu** and choose the **Label Streets** option.

OR

Click the **Label Streets button** on the *button bar*.



OR

Select **Label Streets** from the *Toolbar Shortcut Menu*.

This will auto label the street *theme* features that fall within the *map display* extent with their name.

Labeling Individual Features

To label individual *theme* features

1. In the *table of contents*, click on the *theme* name containing the features you wish to label in order to make it the active *theme*.
2. Click on the **Label** tool on the *tool bar* or from the *Toolbar Shortcut Menu*.



3. Then in the *map display*, click the mouse button on the feature you wish to label. This should label only that feature you choose in the *map display*.

Deleting Labels

To remove all labels in a *map display*

Select the **Labels** menu and choose **Remove All Labels**.

OR

Click the **Remove Labels** button on the *button bar*.



OR

Select **Remove Labels** from the *Toolbar Shortcut Menu*.

To remove a single label from the *map display*

1. Select the label by clicking the **Pointer** tool in the *tool bar*.



2. Click the mouse button on the label you wish to remove in the *map display*. Black boxes called handles will appear around the label you selected.
3. You can either select the **Labels** menu and choose **Delete Graphics** or hit the **Delete** key on your keyboard.

The label should disappear from the *map display*.

Moving Labels

To move a label to a new position

1. Click on the **Pointer** tool on the *tool bar*.



2. In the *map display*, click the mouse button on the label you wish to move. Black boxes called handles will appear around the label you selected.
3. Position the cursor inside the box formed by the handles; the cursor should change into a four-headed arrow.
4. Once you have the four-headed arrow, press and hold the mouse button down to drag the label to a new position.
5. Release the mouse button to place the label at that position.

Resize a Label

To enlarge or shrink a label

1. Click the **Pointer** tool on the *tool bar*.



2. In the *map display*, click the mouse button on the label you wish to resize. Black boxes called handles will appear around the label you selected.
3. Position the cursor over one of the handles; the cursor should change into a two-headed arrow.
4. Once you have the two-headed arrow, press and hold the mouse button down to drag the handle outward or inward depending on whether you want to enlarge or shrink the label.
5. Release the mouse button to stop resizing the label.

Printing the Workplace Update View

You can print the Workplace Update View to get a hard copy of what you see on the map display. Select the **File menu** and choose **Print**.

Chapter 3

Starting the Workplace Update Extension

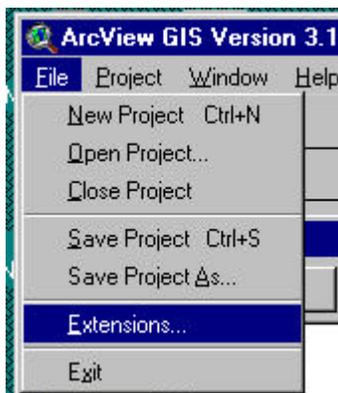
You can start the Workplace Update extension two different ways.

Option 1: If you are starting a review for the first time, or do not have a saved ArcView project (apr) from a previous review, you will need to start ArcView GIS and load the Workplace Update extension into your ArcView session, as described below.

Option 2: If you are continuing a review that was saved, you can start ArcView GIS and open the saved ArcView project (apr); the Workplace Update extension will be loaded automatically.

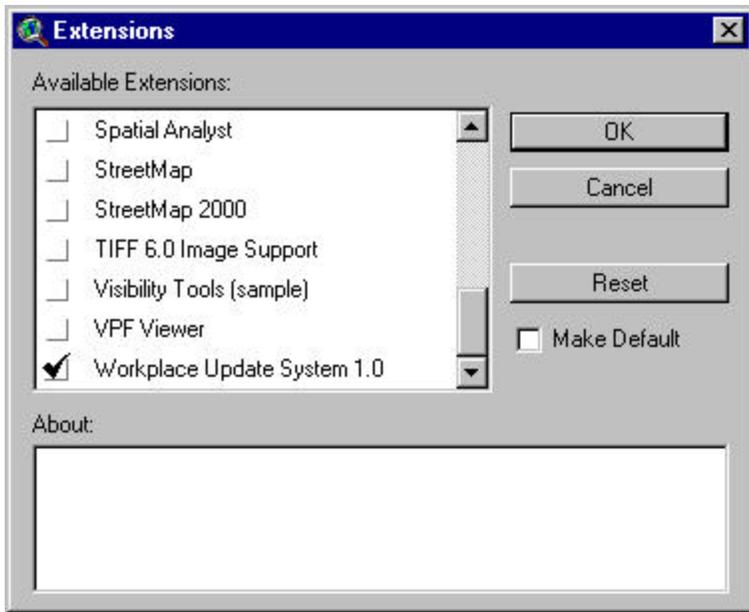
Option 1: Loading the Workplace Update Extension

1. Start a new ArcView GIS session by either going to the Windows **Start** Menu → **Programs** → **Esri** → **ArcView GIS Version 3.1** → **ArcView GIS Version 3.1** OR double-click the ArcView icon on the desktop.
2. Select the **File** menu and choose **Extensions**.



This will open the **Extensions** dialog.

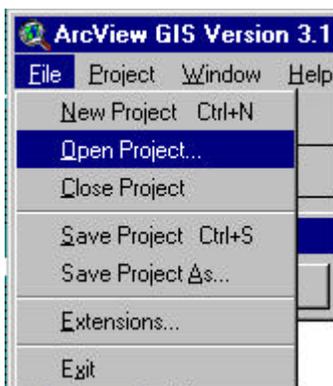
3. In the **Extensions** dialog, scroll down and check **Workplace Update System 1.0** and click on the **OK** button.



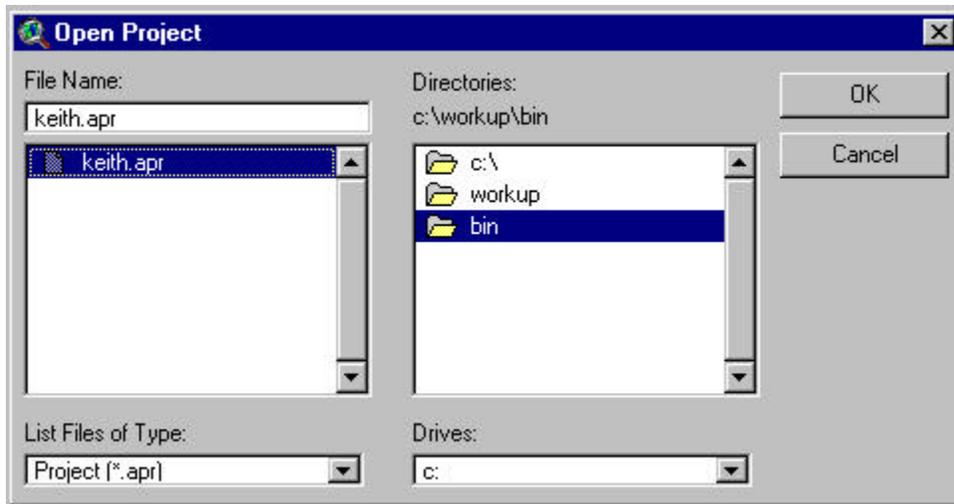
This will load the extension into the ArcView session. You can now skip down to the section entitled **Entering the Workplace Update Extension**.

Option 2: Opening a Saved Workplace Update Review

1. Start a new ArcView GIS session by either going to the Windows **Start** Menu → **Programs** → **Esri** → **ArcView GIS Version 3.1** → **ArcView GIS Version 3.1** OR double-click the ArcView icon on the desktop.
2. Select the **File** menu and choose **Open Project...**



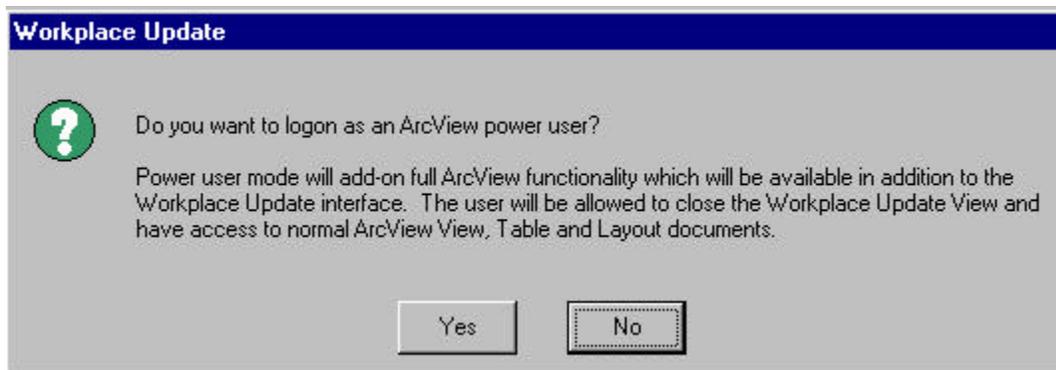
3. In the **Open Project** browser, move to either the default directory `c:\workup\bin` or the directory where you saved the project file and double-click the project name (it will have a apr extension). By default, the Workplace Update extension saves projects in the `c:\workup\bin` directory.



This will open the ArcView project (apr) with all themes, views, record selections, exactly as they were when the project was saved.

Entering the Workplace Update Extension

The extension will prompt you with the question "Do you want to logon as an ArcView power user?"



- If you are well versed in ArcView GIS, choose **Yes** to allow all the ArcView GIS functionality to be available behind the Workplace Update GUI. You will be asked for an ArcView power user password, which can be obtained from Clara Reschovsky of the Journey-to-Work staff at the Census Bureau 301-457-2451. If you incorrectly type the password twice, the extension will automatically default to the non-power user mode.
- Otherwise choose **No**; you will still have the full Workplace Update functionality available to you for your review of the employer files.

Selecting a County for Review

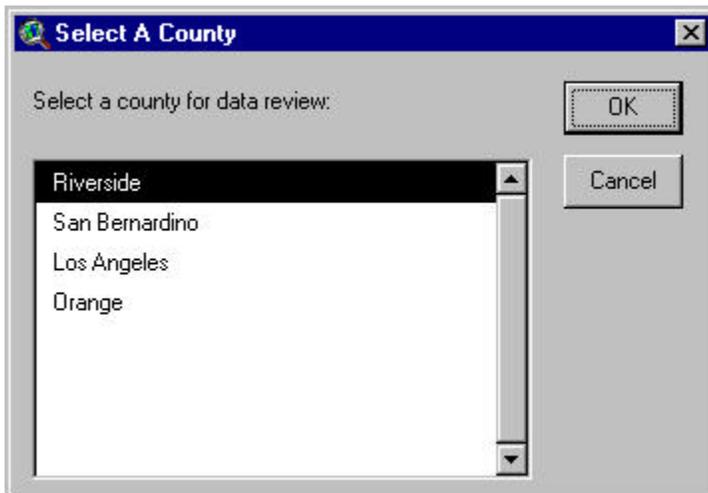
If you started the Workplace Update extension using Option 1

- If only one county data set is contained under *C:\Workup\Data*, the extension will automatically load that county and not display the **Select A County** dialog (skip to **Data Input Options**).
- If you do not have any county data under *C:\Workup\Data*, the Workplace Update extension will not be able to get a county listing, and the extension will unload itself.



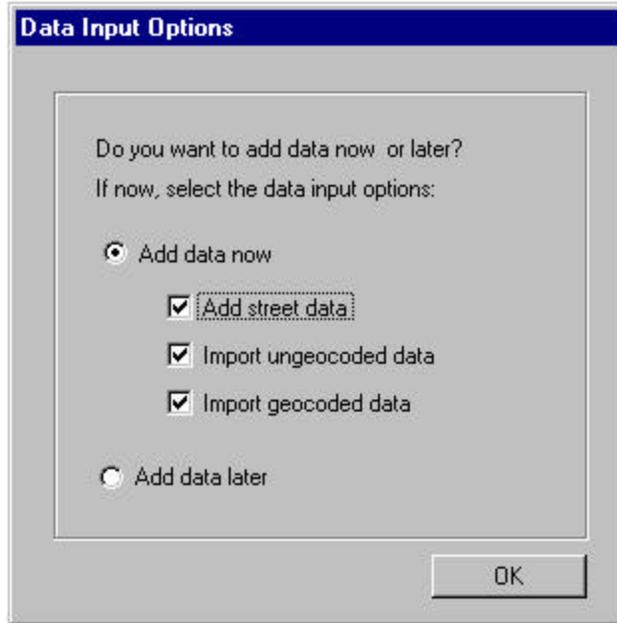
- If you have more than one county folder under *C:\Workup\Data*, the extension will prompt you to select a county for review.

The choices in the **Select A County** dialog will be displayed based on the county data sets contained in the *C:\Workup\Data* directory.



Data Input Options

After choosing a county to review, a **Data Input Options** dialog will appear.



You can choose to input data at this time or wait until later during the same ArcView session to import data.

- By default, the **Add data now** radio button is selected and the **Add street data***, **Import ungeocoded data****, and **Import geocoded data**** check boxes are checked. If you click **OK**, all the data sets will be loaded into the Workplace Update View (skip to **Chapter 4** after reading notes on street and Employer Data).

Anytime you select the radio button **Add data now**, you will need to choose which data sets to load. If you choose the check box to **Add street data***, you can also choose to import either Employer Data set, **Import ungeocoded data**** and/or **Import geocoded data****. However, if you do not choose to **Add street data**, neither **Import ungeocoded data** nor **Import geocoded data** check boxes can be selected.

- If you select the radio button to **Add data later**, you will need to use the Workplace Update GUI to import data (see **Adding Street Data** and **Importing Employer Data Sets**).

***Notes on Street Data**

TIGER/Line 98 is the street data that the Workplace Update extension uses for address matching the Employer Data sets. The street data will be loaded into the Workplace Update View in a *theme* called **Streets**.

If you choose to **Add street data**, and the street data are not set up for geocoding (address matching), the extension will build the files necessary for geocoding when you click **OK** in the **Data Input Options** dialog. Depending on the size and density of streets

in the county to be reviewed, this process could take a few minutes. A banner will be displayed stating "Please wait while the system creates geocode indices."

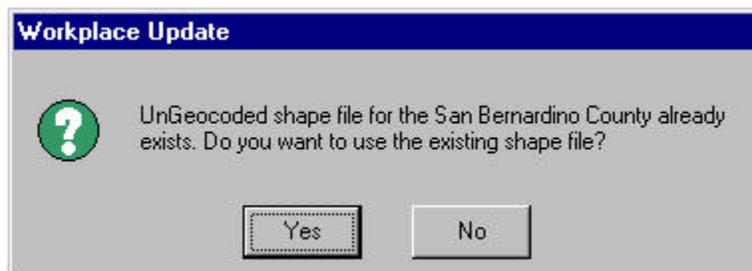
****Notes on Employer Data sets**

Employer Data sets begin as ASCII files processed by the Census Bureau. These ASCII files are the result of a geocoding process performed by the Census Geography Division. Two ASCII files, one for employer records that geocoded and one for those that did not geocode, are provided. The ASCII files containing the employer records are in the directory *C:\Workup\Data\SSCCC*. The file name for the geocoded data contains a prefix of *geo* followed by the state and county FIPS and an extension of *txt*. The file name for the ungecoded data consists of a prefix of *ung* followed by the state and county FIPS and a *txt* extension.

Example: *geo06071.txt* = Geocoded Data Set for San Bernardino, CA
ung06071.txt = Ungecoded Data Set for San Bernardino, CA

Employer Data sets are represented as *themes* in the Workplace Update View and are called **Geocoded Data** and **Ungecoded Data**. When the extension imports this data, it converts the Employer Data sets into ArcView shapefiles placing them in the directory (folder) *C:\Workup\Shapes*. These shapefiles are being displayed as *themes* in the Workplace Update View.

WARNING: If the data you are importing has been imported before, in other words shapefiles already exist for it under *C:\Workup\Shapes*, you will be asked whether to use the existing shapefiles. Your answer to this question should be yes. You should only import each county's geocoded and ungecoded files once. **If you do not use the existing shapefile and the Employer Data file(s) are re-imported, YOU WILL LOSE ALL YOUR PREVIOUS WORK ON THAT EMPLOYER DATA SET!**



Adding Street Data (if not already loaded in Workplace Update View)

Once you are in the Workplace Update View, you can add street data to the view. TIGER/Line 98 is the street data that the Workplace Update extension uses for address matching employer locations. The street data will be loaded into the Workplace Update View in a *theme* called **Streets**.

If the street data is not already loaded, you can load it by either

- Selecting the **Workplace Update** menu and choosing **Add Street Data**.

OR

- Clicking on the **Add Street Data** button on the button bar.



If you choose to **Add Street Data**, and street data is not set up for geocoding (address matching), the extension will build the necessary files to allow for geocoding.

Depending on the size and density of streets in the county to be reviewed, this process could take a few minutes. A banner will be displayed stating, "Please wait while the system creates geocode indices".

Importing Employer Data Sets (if not already loaded in the Workplace Update View)

Employer Data sets are represented as *themes* in the Workplace Update View and are called **Geocoded Data** and **Ungeocoded Data**.

If either one (or both) of the Employer Data sets are not already imported in the project, you can import them by either

- Selecting the **Workplace Update** menu and choosing **Import Employer Data**.

OR



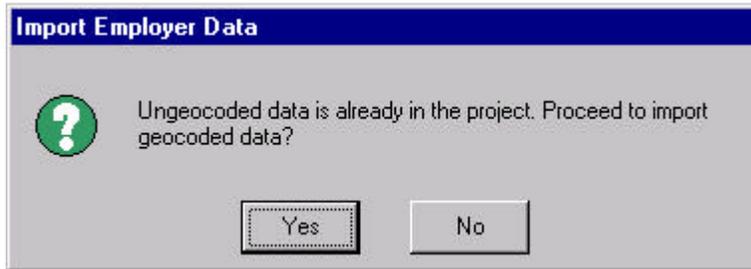
- Clicking the **Import Employer Data** button on the button bar.

Depending on what Employer Data *themes* already exist in the Workplace Update View, you may be prompted about which Employer Data set to import.

- If none of the Employer Data sets are imported in the project, a dialog titled **Import Employer Data** will be displayed in which you can select which data sets to import.



- If only one of the Employer Data sets is imported in the project, a message box will appear indicating that one of the data sets is already imported in the project and ask whether you wish to import the other Employer Data set.

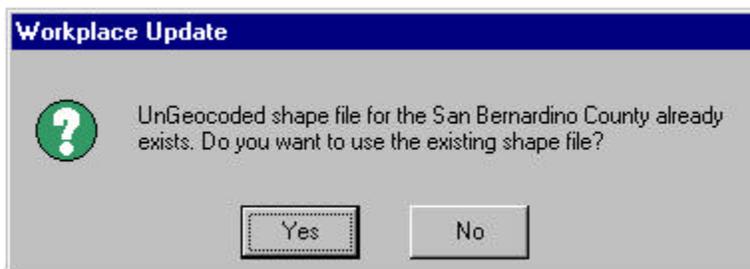


When an Employer Data set is imported, the extension looks for the ASCII file containing the employer records in *C:\Workup\Data\SSCCC*. The file name for the geocoded data contains a prefix of *geo* followed by the state and county FIPS and an extension of *.txt*. The file name for the ungeocoded data consists of a prefix of *ung* followed by the state and county FIPS and a *.txt* extension.

Example: *geo06071.txt* = Geocoded Data Set for San Bernardino, CA
ung06071.txt = Ungeocoded Data Set for San Bernardino, CA

Employer Data sets are loaded into the Workplace Update View as *themes*. When the extension imports this data, it converts the Employer Data sets into ArcView shapefiles placing them in the directory (folder) *C:\Workup\Shapes*. These shapefiles are being displayed as *themes* in the Workplace Update View.

WARNING: If the data you are importing has been imported before, in other words shapefiles already exist for it under *C:\Workup\Shapes*, you will be asked whether to use these shapefiles. Your answer to this question should be yes. You should only import each county's geocoded and ungeocoded files once. **If you do not use the existing shapefile and the Employer Data file(s) are re-imported, YOU WILL LOSE ALL YOUR PREVIOUS WORK ON THAT EMPLOYER DATA SET!**

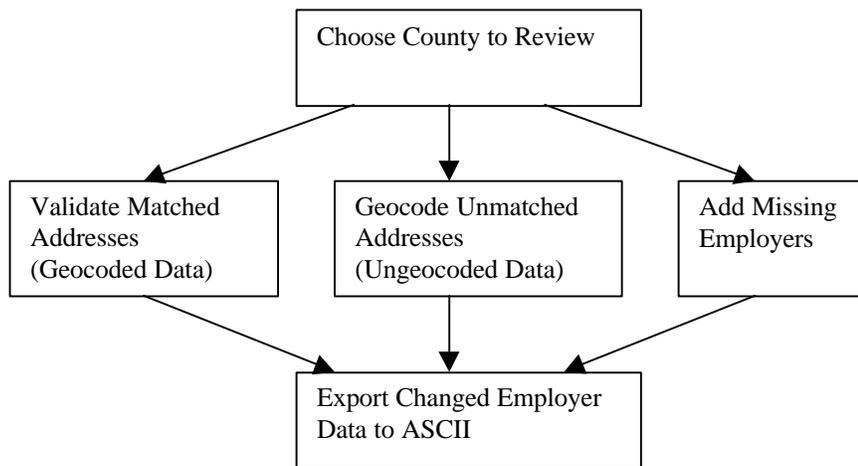


Chapter 4

Selecting Records to Review

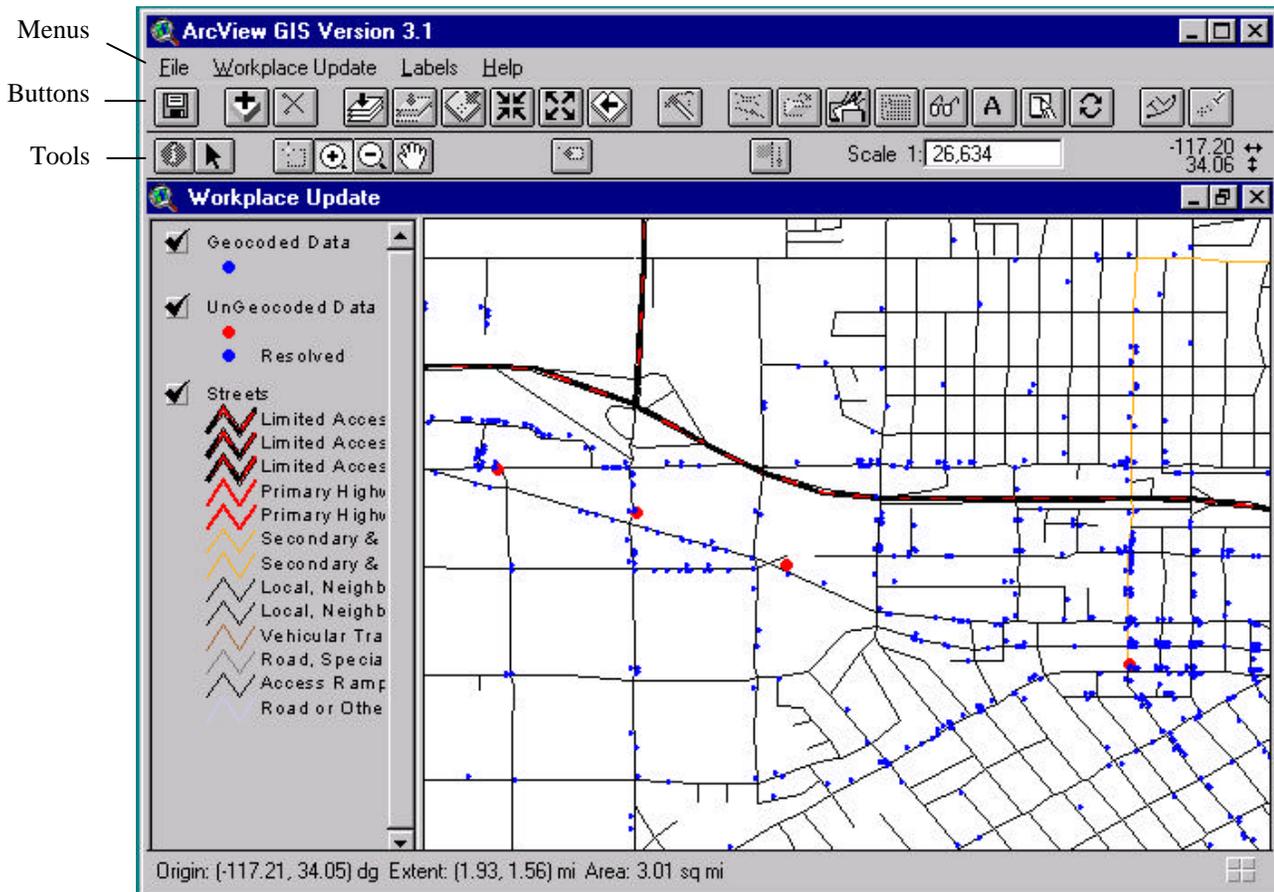
Because the number of employer records for your area may be quite large, the Work-UP extension has been designed to provide several ways for you to prioritize your review and edit of the records. For example, you may want to review large employers first and then in stages review smaller employers. You might consider working on the uncoded records before reviewing the coded file, and perhaps use different size criteria in working on the two files. You could also choose to work on employers in one industry, say manufacturing, and then move on to other types of businesses, for example wholesale trade. You may also choose to work on the employers in one neighborhood at a time or use the query builder to select records that meet some other criteria. By selecting only certain employers to review, you can prioritize your work to ensure that the most important employers are resolved and reviewed. The functional process figure below shows the general flow of reviewing Employer Data.

Functional Process for Reviewing Employer Data



Chapter 3 explained how to enter the Work-UP extension by starting ArcView GIS, loading the extension, choosing a county to review, and adding the street data and Employer Data. After completing these steps, you will be presented with a display similar to the one shown below.

Workplace Update Extension Interface



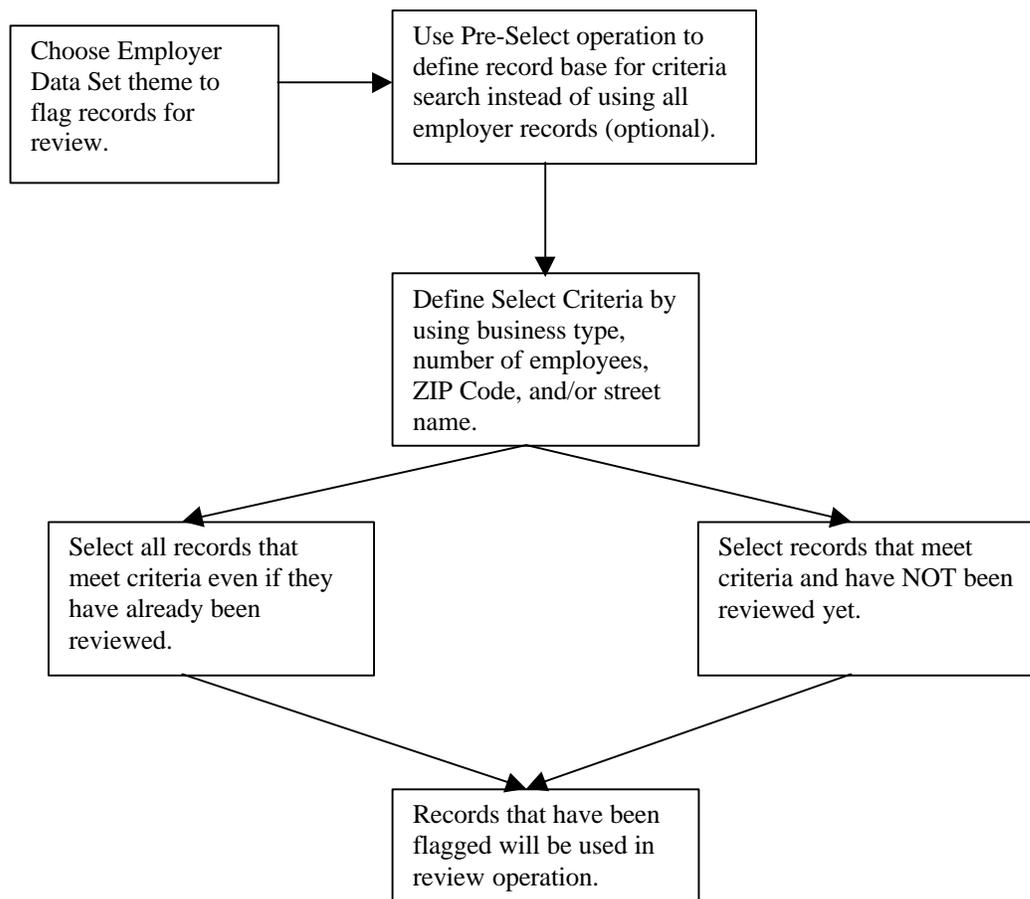
Note that in the table of contents, three themes have been automatically loaded and displayed: Geocoded Data, UnGeocoded Data, and Streets. As mentioned in **Chapter 1**, the railroad and water themes have not been loaded. **Chapter 2** explains how to add themes if you would like to see the railroad and waterlines or other lines (e.g., TAZ boundaries).

You can see that the geocoded employers are represented by blue dots in the map display. Uncoded employer records are represented by red dots *and* blue dots. The way this works is that they start out red (uncoded) and as you resolve or geocode them, the dots are turned to blue. Your first look at the map display will probably show mostly red dots. In fact, you may not be able to see any blue dots at all, only what appear to be blue lines. This is because the blue dots have been made much smaller in this view than the red dots. The reason for this is that there are so many more blue dots (nationally, 80 percent of the records geocoded) that they would completely dominate the display if they were left a bigger size.

Selecting Employer Data Set Records to Review

Before you begin your review, you should think about how you want to organize your work. Some of the possibilities are by size, geographic location, or industry type. To assist you in this, the Workplace Update extension contains a **Select Employer Data** operation. This operation (accessed either through the Workplace Update menu or the Select Employer Data button) allows the user to select (flag) the employers to be reviewed by business type (SIC code), number of employees, ZIP Code, and/or street name. Alternately, you can select employers for review geographically by enclosing them in a polygon using the **Select Feature** tool, or you can use the **Query Builder** button to construct logical expressions based on any of the employer attributes contained in the data sets. These latter two methods are called pre-select operations, since records selected using them may be further refined using the **Select Employer Data** operation. For example, you could highlight (select) the employers in one section of the county using the **Select Feature** tool and then use the **Select Employer Data** button to choose only employers with more than 50 employees to be reviewed. The functional process figure below shows how you can use the Select Employer Data operation.

Functional Process for Selecting Employer Data



- If you wish to apply the **Select Employer Data** operation to the entire county of Employer Data, no pre-select operations should be applied (skip to **Define Select Criteria**).
- If you do not wish to have the **Select Employer Data** operation work on all of the employers in one county, you can pre-select records. You can either use Spatial Select or Query Builder to pre-select employer records for a smaller data set to apply a standard criteria selection.

Pre-Select Operations

Spatial Select

1. Make the Employer Data set theme you wish to perform the pre-selection on the active *theme* by clicking on its name in the *table of contents*.
2. Make sure that the Employer Data set *theme* is visible (a check mark appears in the check box next to the *theme* name in the *table of contents*).
3. Click the **Select Feature tool**.

4. In the *map display*, click the left mouse button where you want the polygon to start, click each vertex around the polygon's boundary, and then double-click the final vertex.
5. A message window will appear telling you the number of employer records you have selected within the polygon. Click OK to close the window. If this number is not acceptable, you may draw another polygon with the Select Feature tool to select a different set of points.

All the employer points that fall within that polygon will turn to a bright green color. These selected employer points, rather than the entire county Employer Data set, will serve as the record base for the **Select Employer Data** operation described in **Define Select Criteria**.

Query Builder

1. Make the Employer Data set theme you wish to perform the pre-selection on the active *theme* by clicking on its name in the *table of contents*.
2. Make sure that the Employer Data set *theme* is visible (a check mark appears in the check box next to the *theme* name in the *table of contents*).
3. Click the **Query button**.



A **Query Builder** dialog box will open, allowing you to select employer records by one or more logical expressions, each expression containing a field, an operator, and a value.

Note: In the Query Builder dialog box, abbreviated field names are used to describe the attributes contained in the Employer Data sets. Some of these abbreviated names are difficult to interpret. Consult **Appendix B, Employer Data Set Record**

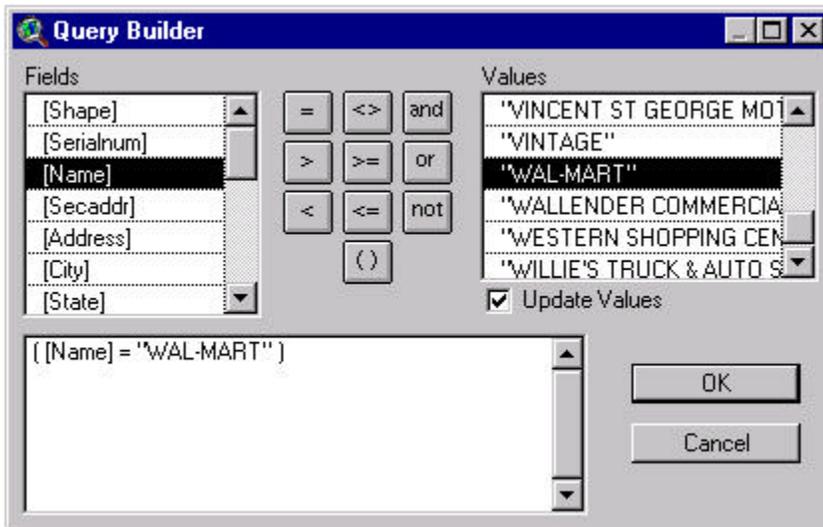
Description, for a fuller description of each field. The abbreviated names used in the Query Builder dialog box are shown in parentheses in the second column of the record layout.

To build a query expression

- a) Make sure that the **Update Values** box is checked.
- b) **DOUBLE-CLICK** on the field name under the *Fields* list.
- c) **SINGLE-CLICK** on the *operator* (=, <, >).
- d) **DOUBLE-CLICK** on the value under the *values* list.
- e) Click **OK**.
- f) A message window will appear telling you the number of employer records you have selected with the logical expression. Click OK to close the window. If this number is not acceptable, you may build another logical expression with the Query Builder to select a different set of points.
- g) Close the **Query Builder** dialog.

All the employer points that meet the logical expression will turn to a bright green color. These selected employer points, rather than the entire county Employer Data set, will serve as the record base for the **Select Employer Data** operation described in **Define Select Criteria**.

The example below will select all the employer points whose name is Wal-Mart.



In order to use a wild card character (*) in the query expression, you must type in the box that contains the query expression. For example, if you wish to select all employers whose business name starts with the letter W, the expression should look like this: ([Name] = "W*"). Note that the quotation marks are required in the expression and must be typed in by the user if the attribute is not a numeric field. Most fields in the Employer Data sets are alpha or character fields and will require the use of quotation marks. This includes some fields that may look numeric but are not, such as the SIC code (srcpsic).

For more help on the Query Builder, choose the **Help** menu → **Help Topics** → **Query Builder** or see page 189 of your ArcView GIS manual.

Define Selection Criteria

Whether you are working with the entire county Employer Data set or a pre-selected set of employers, you can define the selection even further by using employer-specific attributes such as business type, number of employees, ZIP Code, and/or street name. The purpose of the **Select Employer Data** operation is to flag Employer Data points for review.

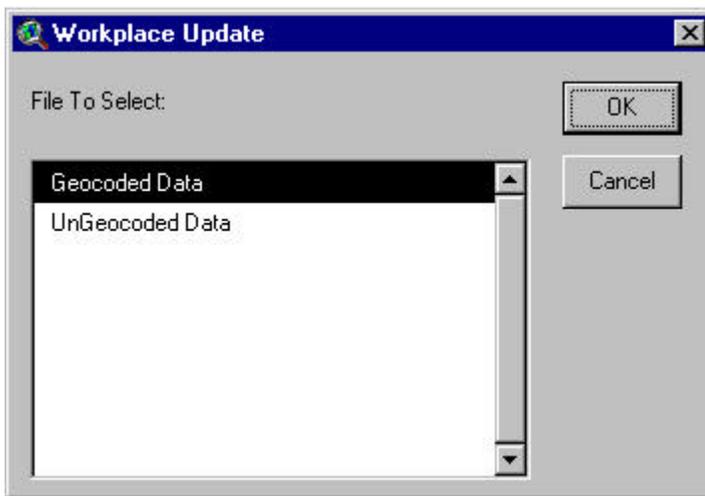
To define a selection either

- Select the **Workplace Update** *menu* and choose **Select Employer Data**.
- OR
- Click on the **Select Employer Data** *button* on the *button bar*.



Depending on what Employer Data *themes* already exist in the Workplace Update View, you may be prompted to indicate from which Employer Data set you want to select records.

- If only one of the Employer Data sets is loaded in the project, the **Select** Dialog will appear automatically.
- If both geocoded and ungeocoded Employer Data sets are loaded in the project, a message box will appear asking you from which Employer Data set you wish to select records.



The title of the **Select** Dialog indicates from which Employer Data set records will be selected.

Select Dialog Default

Select Database By:

By Business Type
Select from the drop down list or type in your own SIC code:
None

By # of Employees
more than None
and less than None

By Zip Code
None

By Street Name
None

Select All Select Unchecked Select Clear Close

Inputs

By Business Type—A list of predefined industries, using ranges of 2-digit SIC codes, will appear when you click on the down arrow. You can also type in your own SIC code up to 4 numbers in length.

Note: The SIC codes in the Work-UP files come from infoUSA. They use an extended SIC system that is comprised of six digits, not the standard four. However, the first four digits of their system do equate with the standard classification. Although we are using SIC codes in the Workplace Update program, as in previous censuses SIC codes will not be used in Census 2000 products.

By # of Employees—A standard list of values will appear when you click on the down arrow. You can choose to fill in none, one, or both inputs. When you choose both inputs, the **more than** value must NOT be greater than the **and less than** value; the extension will not let you select until the **more than** value is less than the **and less than** value.

By ZIP Code—The default value in the input is **None**. When you click on the down arrow, the other choice is **Get Zips**. If you click **Get Zips**, the extension will return a list of all unique ZIP Code values from the TIGER Street Theme. One ZIP Code can be chosen to apply to the select.

By Street Name—This input allows you to type in a street name to be applied in the select. Only one street name is allowed, and the input cannot be blank. If you do not wish to use the **By Street Name** criteria, the input box value should read **None**.

Note: You may choose to fill more than one input field in **Select** Dialog, that is, you can combine the selection criteria. For example, you could choose to review retail trade employers with more than 50 employees in a particular ZIP Code.

Buttons

Select All—Will select everything that meets the select criteria regardless of what value is in the action field. The action field is a single-character flag that provides the status of each record. There is a space in the lower left area of the review dialog box where the action field is displayed. Possible values of the action field are

A = This record was added by the user; it was not in the original file.

C = This record was changed by the user. This flag is assigned when the user clicks the update button in the review dialog box.

D = This record was marked for deletion by the user.

U = This record in the ungeocoded employer file could not be geocoded or map spotted by the user, and they clicked the unresolved button.

V = This record in the geocoded employer file was accepted by the user by clicking the **Accept** button.

Blank = This record has not been reviewed by the user, or no action was taken by the user.

So, **Select All** will select employer records even if they have been previously reviewed and verified, changed, or marked for deletion.

If no select criteria have been chosen (all values in the Select Dialog are set to **None**), the **Select All** will

- Flag all the records in the Employer Data set for the entire county
OR
- Flag the pre-selected records, if a pre-selected set is present, and you answered **Yes** to Apply Select to Currently Selected Points Only.

Select Unchecked – Will select everything that meets the select criteria where the action field has a value of blank (has not been reviewed yet). In other words, **Select Unchecked** will only select employer records that have not been reviewed.

If no select criteria have been chosen (all values in the Select Dialog are set to **None**), the **Select Unchecked** will

- Flag either all unchecked records (action field is blank) in the Employer Data set for the entire county

OR

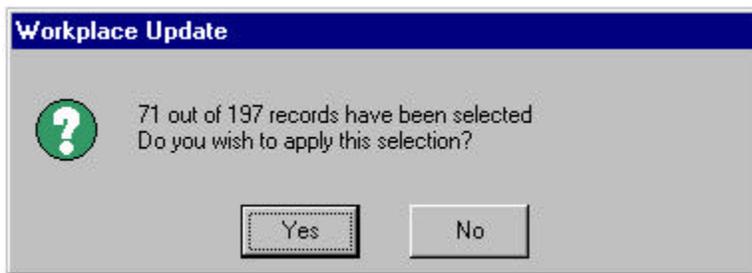
- Flag the pre-selected records that have an action field equal to blank, if a pre-selected set is present and you answered **Yes** to Apply Select to Currently Selected Points Only.

Select Clear—Will clear the select list of previously selected employers.

Close—Closes the Select Dialog window.

Results

A Yes/No box will appear when a select is attempted.



If you apply the select, the Employer Data records that meet the select criteria will be flagged and remain flagged until another select is applied. The *map display* will also update itself and show only the records in the Employer Data set that meet the selection criteria.

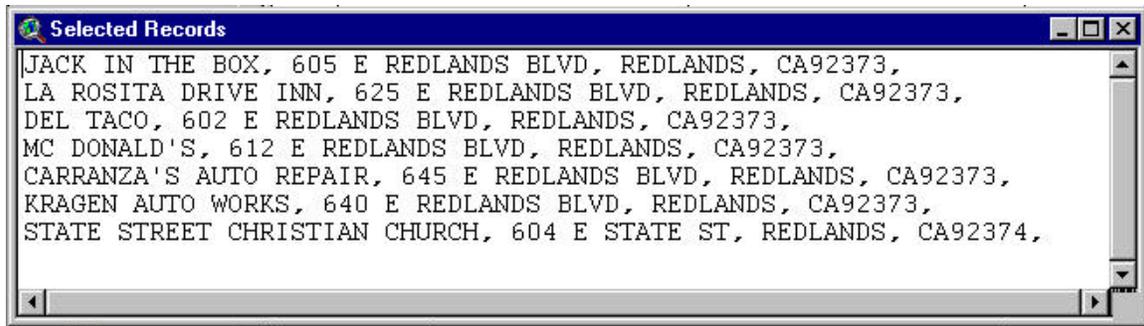
List Selected Records

After you have selected an Employer Data set using the **Select Employer Data** operation, you can view the records that have been flagged. This is NOT a review of the selected records; the **Selected Records** box only shows which records have been chosen for review. **List Selected Records does not work with or get updated by the pre-selection operations Spatial Select or Query Builder.**

To view records that are flagged for review

1. Make the Employer Data set (Geocoded Data or Ungeocoded Data) *theme* active.
2. Click the **List Selected Records** *button*.





This window shows the records that have been flagged for review. The records being displayed in the **Selected Records** box are stored in the file *C:\Workup\bin\xx000sel.txt*. Every time you run the **List Selected Records** operation, this file gets replaced. If for some reason you want to retain a particular list of selected records, you should go out to Windows Explorer and rename the file before you perform another selection.

Some useful ways to use select records file

1. Print selected records using Microsoft Excel or Notepad to import the xx000sel.txt file.
2. Print unreviewed records by using **Select Employer Data** → **Select Unchecked** → **List Selected Records** then printing xx000sel.txt using Microsoft Excel or Notepad.
3. Print unresolved records by using **Query Builder** to see ([Action] = "U") → **Select Employer Data** → **Select All** → **List Selected Records** then printing xx000sel.txt using Microsoft Excel or Notepad.

Chapter 5

Reviewing Employer Data Sets

Chapter 3 covered loading the Work-UP extension, choosing a county to review, and adding street data and Employer Data sets. **Chapter 4** described various capabilities within the software to select subsets of records to review. This chapter explains how to go about reviewing the Employer Data sets.

Examining the Employer Data Sets

One way to familiarize yourself with the software and to gather information useful in developing strategies for reviewing the records is to get record counts for various subsets of records. For example, use the **Select Employer Data** button on one of the Employer Data sets to select employers with more than 100 employees. Then click the **Select All** button. A message window will appear telling you how many records meet this criterion out of the total number of records in the Employer Data set you selected (Geocoded or Ungeocoded). Write these numbers down for your reference and planning. Click **No** in response to the question about applying the selection, since you are really only exploring the data sets at this point. If you happen to apply the selection by mistake, you can easily remove it by clicking on the **Select Clear** button.

Repeat this operation to define other categories of employers by which you might want to organize your work, say by various business types (SIC codes). Remember that you can combine the selection criteria, so it is possible to obtain record counts by industry and size, for example. You can also create a listing of selected records using the **List Selected Records** button. You will need to apply the selection in this case by clicking **Yes** in response to the question in the message box. Note that when you apply a selection, the map display is updated to show only the selected points. Make sure you view the list before printing it, to ensure it is a reasonable size and what you really want. Continue to use this method to acquaint yourself with one or both of the uncoded and geocoded Employer Data sets.

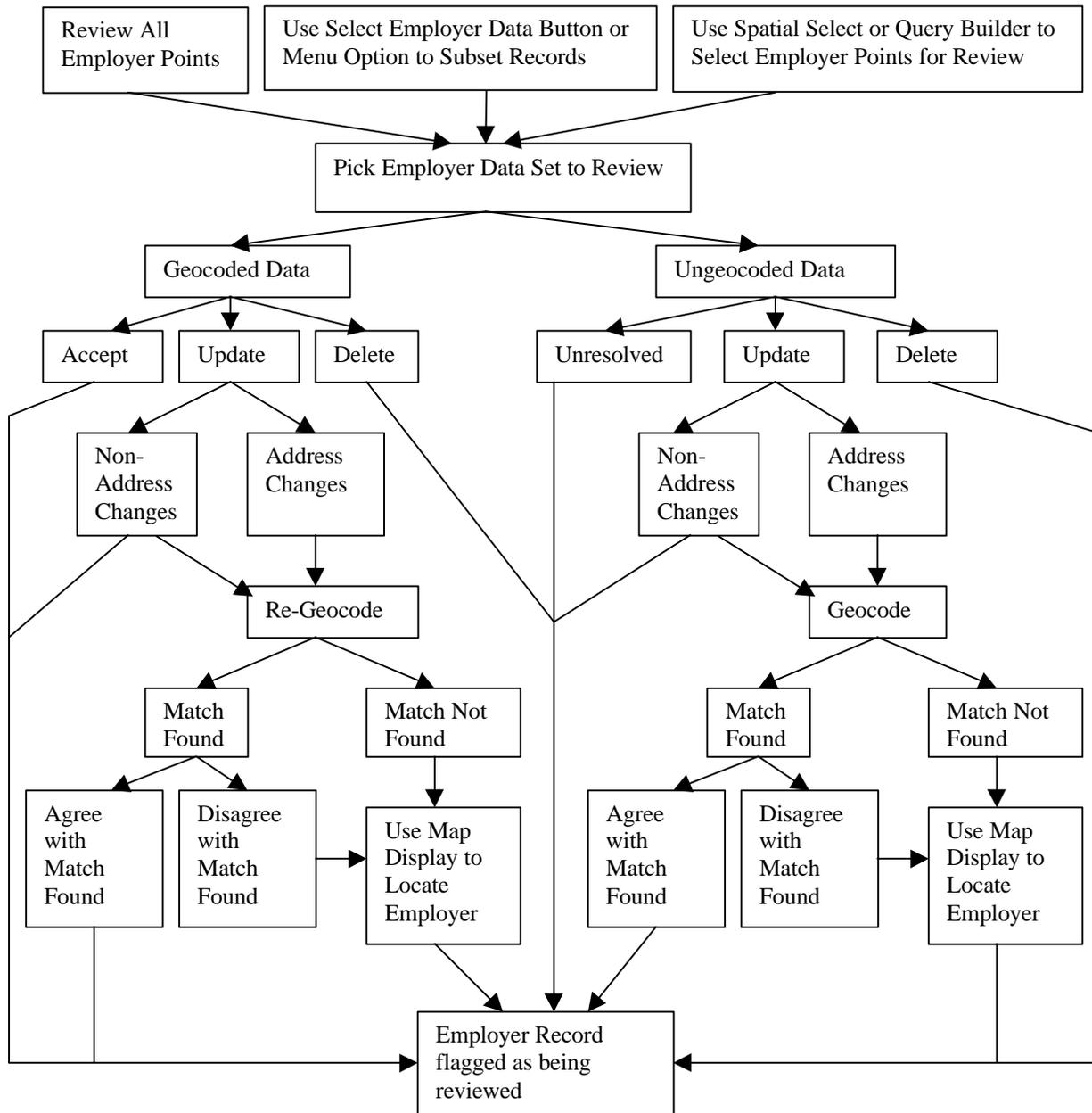
Another thing you might want to do is make a visual inspection of the employer points across the county. When you open the extension, the default map display is zoomed to show the complete street network (theme) for the county. As mentioned in **Chapter 4**, you will see some red dots in the display but no blue dots, only hints of blue along some of the streets. This is because of the relative sizes of the different colored dots. Some of the red dots may fall outside the county street network. In fact, if you zoom to the full extent, you may find red dots located quite far away from the county. For an explanation, see the note in the section **Showing Theme Feature Attributes** in **Chapter 2**.

The ungeocoded records may be clustered in certain areas across the county. If so, you may want to consider working on employers in particular areas, one area at a time, rather than bouncing around throughout the county as you review records. You will have to

zoom in more to see the geocoded employers (blue dots). You may want to pay attention to areas where few blue dots are shown to see if they correspond to primarily residential areas of the county.

The choice of how to organize the review work is, of course, up to you. Do whatever makes sense to you for your area based on the characteristics of the Employer Data sets and the amount of time you have to devote to the project. The overall flow of the Workplace Update review process is displayed for your reference in the functional process figure below.

Functional Process for Reviewing Employer Data



Begin the Review of Employer Data Sets

To review an Employer Data set either

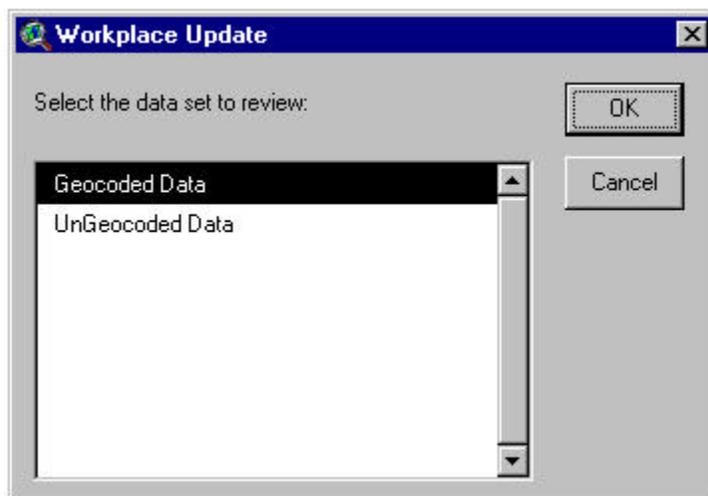
- Select the **Workplace Update** *menu* and choose **Review Employer Data**.

OR

- Click on the **Review Employer Data** *button* on the *button bar*.



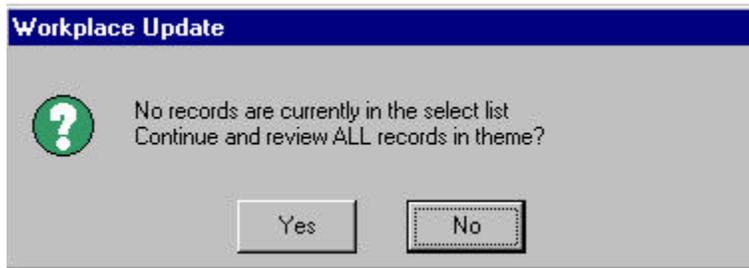
If you have more than one Employer Data set *theme* in the Workplace Update View, the extension will ask you to choose which Employer Data *theme* you wish to review.



Based on which Employer Data set you want to review, click the appropriate text within this section

- Geocoded Data—**Review Geocoded Employer Data**
- Ungeocoded Data—**Review Ungeocoded Employer Data**

To review all employer points in a data set, do not apply any select criteria to the data set as described in **Chapter 4**. If you currently have a selection criteria applied to your data set, you can clear it (refer to **Chapter 4**). If you do not have any selection criteria applied to your data set, the following dialog will appear when you attempt to start a review.



If you have applied selection criteria as described in **Chapter 4**, the Review Dialog opens automatically when you attempt to start a review.

Review Geocoded Employer Data

The purpose of the review of **Geocoded Employer Data** is for you to verify that the Census Bureau has coded the records to the correct location. If the location shown for an employer is correct, you signify this by clicking the **Accept** button. If it is not correct, you enter a new or different address and click the **Update** button to have the record re-geocoded. You can also mark records of employers no longer in existence for deletion by clicking the **Delete** button.

Note that none of the records distributed by the Census Bureau contain alias names. As you are reviewing the geocoded records, any common **aliases** or abbreviations you are aware of should be added. This will help significantly in matching responses during the Census Bureau's place-of-work coding operation. Since there is only one alias field per record, you will have to use the **Add Employer** function to create additional employer records if you want to assign multiple aliases. You must close the **Geocoded Review Dialog** in order to **Add Employers**.

Additional materials to have on hand that you may find helpful in your review include the following. A local street map, in particular one with a street name index, will be useful in locating streets you are not familiar with. A map showing ZIP Code boundaries or a ZIP Code directory will help you determine the appropriate ZIP Code for a local area. The Work-UP extension attempts geocoding within a specified ZIP Code. If the given ZIP Code is incorrect, the address cannot be geocoded. Of course, any local files of employer names and addresses that are available will also be extremely useful in your review.

Using either all the records for the county or the records you have chosen using one of the selection operations, the extension will display information for geocoded employer records in a **Review Dialog** as shown below. The extension will center the *map display* on the employer point being shown in the dialog, zoom to a pre-set factor, and label the streets in the *map display*. The dot representing this active employer point will usually change from blue to a bright green color.

Note: The blue dots representing the coded employers do not change in size as the scale (zoom factor) being used in the *map display* changes. This is why they appear small in

the default *map display*. Conversely, when zoomed in very close the blue (or green) dots appear very large in size. This creates problems at scales of around 1:1,500 or below when trying to use the **Identify** or **Label** tools. You must click in the exact center of the large dot in order to label or identify the point. If you do not hit the precise center, nothing happens. You must either continue trying to click the center or zoom out to a different scale.

In instances where the dot does not turn green, it is because multiple employers are located at the same point. A blue dot representing a different employer at that location is covering up the green dot of the active record. To highlight the location of the active record, click the **Flash** button in the **Review Dialog**. The point representing the active employer record will enlarge and blink several times so you can see where it is located.

If you wish to identify all the employers located at that location, click the **Geocoded Data** theme in the *table of contents* to make it active, and using the **Identify** tool click the point at the active employer's location. The **Identify Results** window will pop up listing the records located at that point and the attributes of each employer. The records in both the **Review Dialog** and the **Identify Results** window are listed alphabetically by employer name.

The Geocoded Employer Review Dialog, its input fields, buttons, and read-only fields, is described below.

Geocoded Employer Data Set Review Dialog

The screenshot shows a dialog box titled "Geocoded Data" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Name:
- Alias:
- Address:
- City: State: Zip:
- Type: Number of Employees:
- Buttons: Accept, Update, Delete, Previous Record, Next Record
- Bottom row: Action: Record of Flash Close

Inputs

Name—Name of the employer

Alias—Secondary name of employer

Address—Physical street address of employer or closest intersection*

City—City or Post Office name where employer is located

State—State in which employer is located

Zip—5 Digit ZIP Code in which employer is located

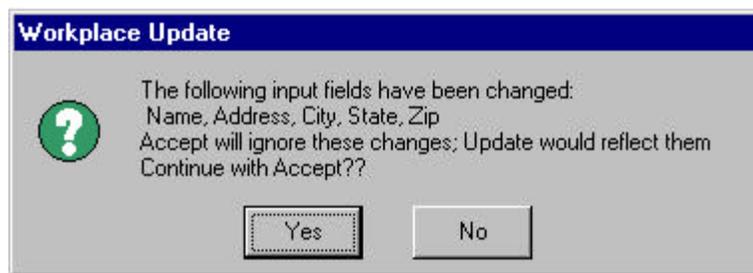
Number of Employees—Current number of employees

* **Note:** If you use closest intersection in the address input, you must separate the street names with a & (Main St & Common Ave).

Buttons

Accept—Allows you to approve or verify that the location and other information about the employer that came from the Census Bureau are correct.

- If you have not changed any of the inputs, when you click **Accept** the action field will be set to "V" for verified and you can go to the next record.
- If any changes have been made in the input fields and you choose **Accept**, the extension will alert you to what has changed and warn that these changes will be ignored if you continue the accept process. (In order to have the changes you made go into effect, you should click the **Update** button.)

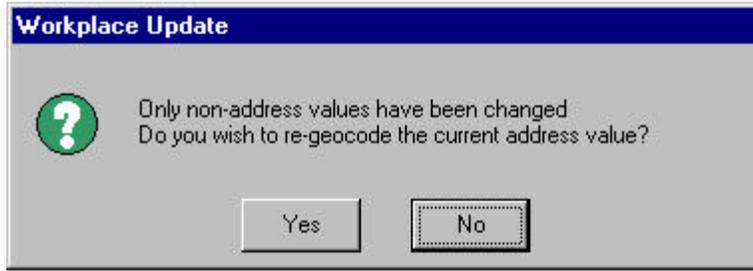


If you click **Yes** here, indicating you want to continue with the Accept process, any changes you have made to the record are ignored and the action field for the employer is set to "V" for verified. You can then move on to the next record.

If you choose **No** in response to this question, you will be returned to the review dialog.

Update—Click this button after you have made changes to the employer information being displayed in the dialog.

- If you have only made changes to non-address input fields (**Name, Alias, or Number of Employees**), **Update** will ask if you want to re-geocode the employer point.

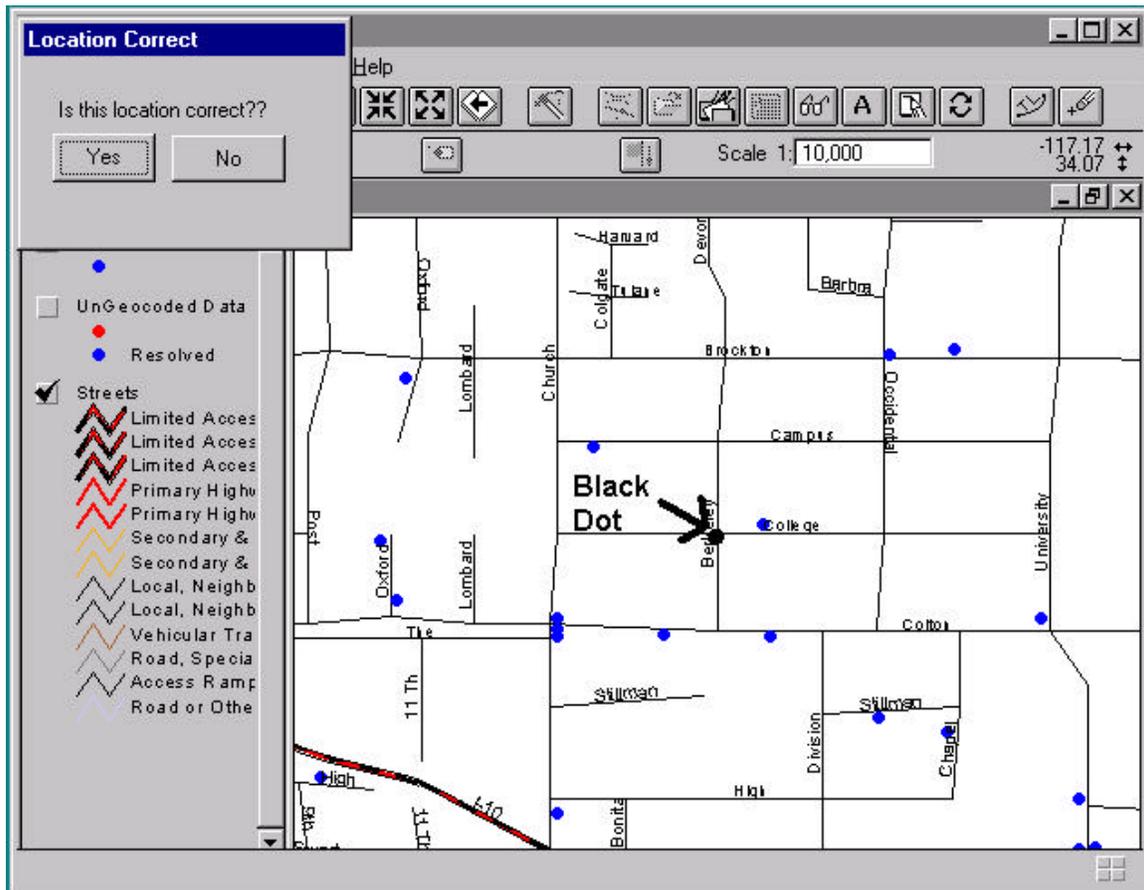


A **No** answer will automatically write any values that have been changed to the Employer Data set and make the action field "C" for changed. A **Yes** answer will attempt to re-geocode the address values (see below for geocoding process).

- If you have changed any address inputs (**Address** and/or **Zip**), **Update** will attempt to geocode (address match) the employer using the new information you provided.

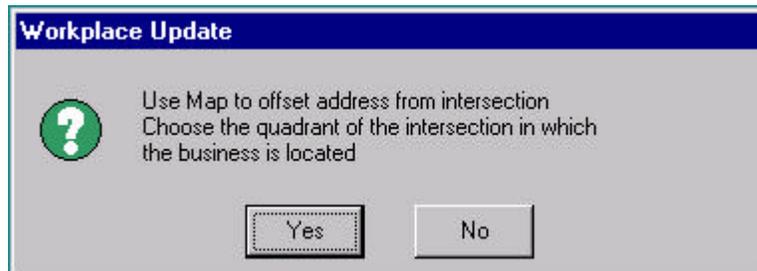
Geocoding Process

1. If an address match is found, a black dot is placed at the address location in the center of the *map display*, and the extension will ask you if the address location it found is correct.

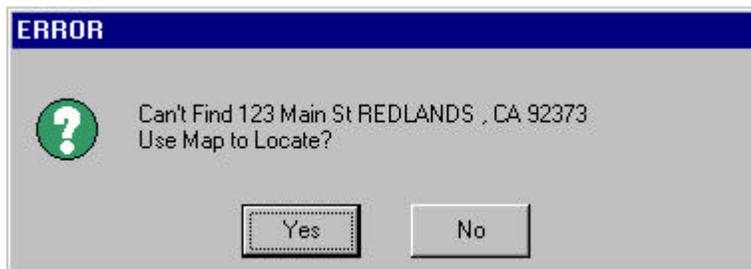


If you agree with the address location in the *map display*, click **Yes** and the extension will update the data set for the employer and make the action field "C" for changed. You may now move on to the next record.

Note: In the case of an intersection, you will be asked which quadrant of the intersection the employer is in because the employer cannot be located in the intersection. If you choose No, the record will not be updated.

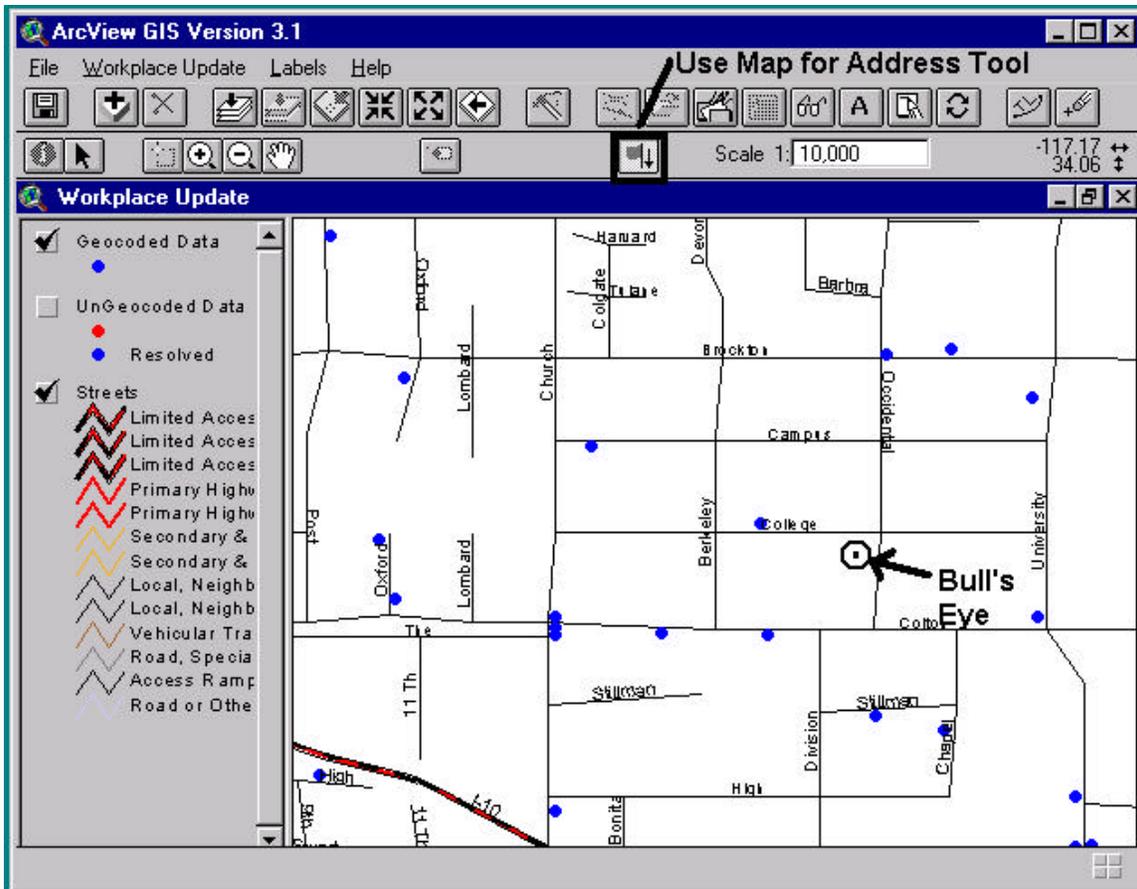


2. If either an address match is not found or you do not agree with the address location in the *map display* (click **No**), you will be asked to locate the employer by using the *map display*.



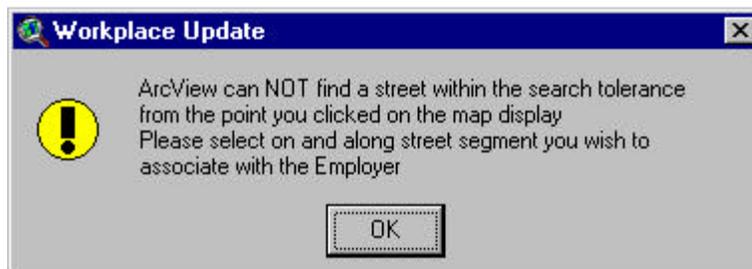
If you choose **Yes** to use the map to locate the address, you must click on the *map display* to indicate the employer location. The **Use Map for Address** tool will be enabled and selected in the *tool bar*. The cursor will change to a bull's eye indicating that you should click on the *map display* to indicate where the employer is located. You may zoom in, zoom out, pan, and label streets as long as you click the **Use Map for Address** tool when you are ready to click the employer location on the *map display*.

If you choose **No** to use the map to locate the address, the employer record will not be changed. Even though the review dialog will still be displaying the new information you typed in, the extension will not alter the Employer Data set because the geocoding was not successful. If you go to the next or previous record, the information on the current employer will default back to the original values.



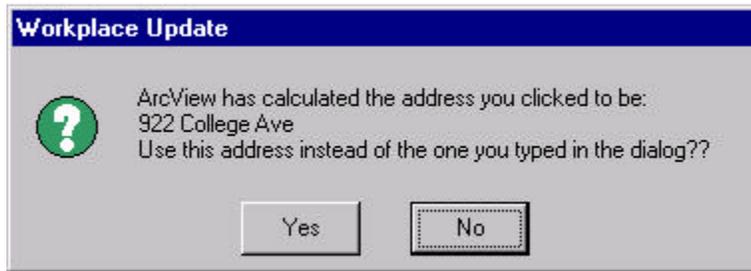
Using a search tolerance, the extension will attempt to return an interpolated address based on the street segment closest to where you clicked in the *map display*.

- If no street segment falls within the extension's search tolerance, it will ask you to manually select the street to associate with the employer point.



Once a street segment is associated with an employer point, the interpolated address will be displayed for you, if possible. If this interpolated address is different than the address typed into the Address input, the extension will ask you which address value you wish to write to the data set. Choose the address that is most likely to be reported by the employees of that business. If an address could

not be interpolated, the point you clicked on in the *map display* will be accepted as the location of the employer.



Your answer to this question does not alter the location or point associated with the employer. If you click **Yes**, the interpolated address will be written to the Employer Data set. A **No** response writes the address in the review dialog to the Employer Data set. The location of the employer is not changed in either case. The action field is set to "C" for changed, and you may now move on to the next record.

Delete—Sets the action field to "D" for delete for that particular record. This option does not actually delete the Employer Data set point.

Previous Record—Moves to the previous record in the select list.

Next Record—Moves to the next record in the select list.

Flash—Flashes, in the map display, the record currently being shown in the review dialog. Flash is useful for locating points that are in a cluster or hidden beneath other points.

Close—Closes the review dialog box only.

Read Only Inputs

Action—Shows the current value of the action field in the data set for that employer, if a value is present (A = Add, C = Change, D = Delete, V = Verified, blank = Unchecked). All records have a default value of blank and will remain blank until you take an action on the record. Just looking at the record will not cause the action field to change.

Record __of__ —Shows the current position, in reference to the count of selected records, for which the dialog is displaying employer information.

Review Ungeocoded Employer Data

The purpose of the review of **Ungeocoded Employer Data** is for you to provide address and/or location information for employers the Census Bureau was not able to geocode. You enter a new or different address and click the **Update** *button* to have the record re-geocoded. If the address cannot be geocoded against TIGER/Line 98, but you know where it is located, you can click on the *map display* to indicate the point to be associated with the employer. If you are unable to find a geocodable address for the employer and do not know the location of the business, you click the **Unresolved** *button* to indicate that the location of the record could not be determined. You can also mark records of employers no longer in existence for deletion by clicking the **Delete** *button*.

Note that none of the records distributed by the Census Bureau contain alias names. As you are reviewing the un-coded records, any common **aliases** you are aware of should be added. This will help significantly in matching responses during the Census Bureau's place-of-work coding operation. Since there is only one alias field per record, you will have to use the **Add Employer** function to create additional employer records if you want to assign multiple aliases. You have to close the **Ungeocoded Review Dialog** in order to **Add Employers**.

Additional materials to have on hand that you may find helpful in your review include the following. A local street map, in particular one with a street name index, will be useful in locating streets you are not familiar with. A map showing ZIP Code boundaries or a ZIP Code directory will help you determine the appropriate ZIP Code for a local area. The Work-UP extension attempts geocoding within a specified ZIP Code. If the given ZIP Code is incorrect, the address cannot be geocoded. In particular, the shopping center and store names from the Shopping Center directory may have incorrect ZIP Codes on the records. The ZIP Codes have to be corrected in order for the records to be successfully geocoded. Of course, any local files of employer names and addresses that are available will also be extremely useful in your review.

Even though the records in the **Ungeocoded Employer Data** set have not been successfully geocoded to a precise location by the Census Bureau, they are still represented by points on the *map display*. Some of these points quite likely represent the correct locations of the employers. For example, most of the records from infoUSA have complete street addresses and latitude/longitude coordinates. When these records could not be geocoded by the Census Bureau, the infoUSA coordinates were retained on the records and are used to show the location of the business on the *map display*. The infoUSA coordinates often seem to place the employer point very close to what appears to be the correct location.

Points representing other employer locations in the **Ungeocoded Data** set are clearly not correct. These may be based on coordinates representing the centroid of a city, ZIP Code, or county. There are also some records that have zero in one or both coordinate values. See the note in the **Showing Theme Feature Attributes** section of **Chapter 2**

for a discussion of the strange occurrences in the *map display* resulting from these records.

Using either all the records for the county or the records you have chosen using one of the selection operations, the extension will display information for uncoded employer records in a **Review Dialog** as shown below. The extension will center the *map display* on the employer point being shown in the dialog, zoom to a pre-set factor, and label the streets in the *map display*. To highlight the location of the active record, click the **Flash button** in the **Review Dialog**. The point representing the active employer record will enlarge and blink several times so you can see where it is located.

In reviewing the uncoded records, look for deficiencies or errors in the address information that could have prevented it from geocoding. Common errors include an incorrect ZIP Code, a misspelled street name, the addition of a suite number, a nonstandard abbreviation of a street type, or lack of a necessary street directional. However, it is also possible that the record did not code because of a deficiency in the TIGER/Line file. Note that you do not have to change the address information in the Review Dialog. If you click the **Update button** ArcView will attempt to re-geocode the address even if nothing has changed. It is possible that the record could code successfully, since the ArcView GIS coding algorithms are different than the Census Bureau's.

As noted in **Chapter 1**, there will be instances where you will find a very large number of employers associated with the same point. To identify all the employers located at the same location as the active record in the **Review Dialog**, click the **Ungeocoded Data theme** in the *table of contents* to make it active, and using the **Identify tool** click the point at the active employer's location. The **Identify Results** window will pop up, listing the records located at that point and the attributes of each employer. The records in both the **Review Dialog** and the **Identify Results** window are listed alphabetically by employer name.

The Ungeocoded Employer Review Dialog, its input fields, buttons, and read-only fields, is described below.

Ungeocoded Employer Data Set Review Dialog

The dialog box is titled "UnGeocoded Data" and contains the following fields and controls:

- Name: Keith's Sports
- Alias: (empty)
- Address: 123 Common Ave
- City: Anywhere
- State: CA
- Zip: 99999
- Type: 753801
- Number of Employees: 4

Buttons: Unresolved, Update, Delete, Previous Record, Next Record

Action: [dropdown menu] Record 16 of 184 Flash Close

Inputs

Name—Name of the employer

Alias—Secondary name of employer

Address—Physical street address of employer or closest intersection*

City—City or Post Office name where employer is located

State—State in which employer is located

Zip—5 Digit ZIP Code in which employer is located

Number of Employees—Current number of employees

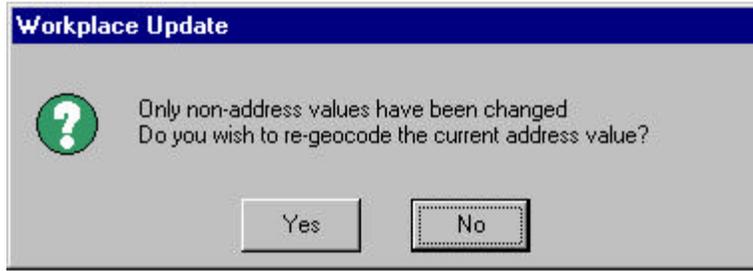
* **Note:** If you use closest intersection in the address input, you must separate the street names with a & (Main St & Common Ave).

Buttons

Unresolved—Allows you to tag records in the data set for which no location can be found. The action field for the employer record is set to "U" for unresolved. You may now move on to the next record.

Update—Click this button after you have made changes to the employer information being displayed in the dialog.

- If you have only made changes to non-address input fields (**Name, Alias, or Number of Employees**), **Update** will ask if you want to re-geocode the employer point.

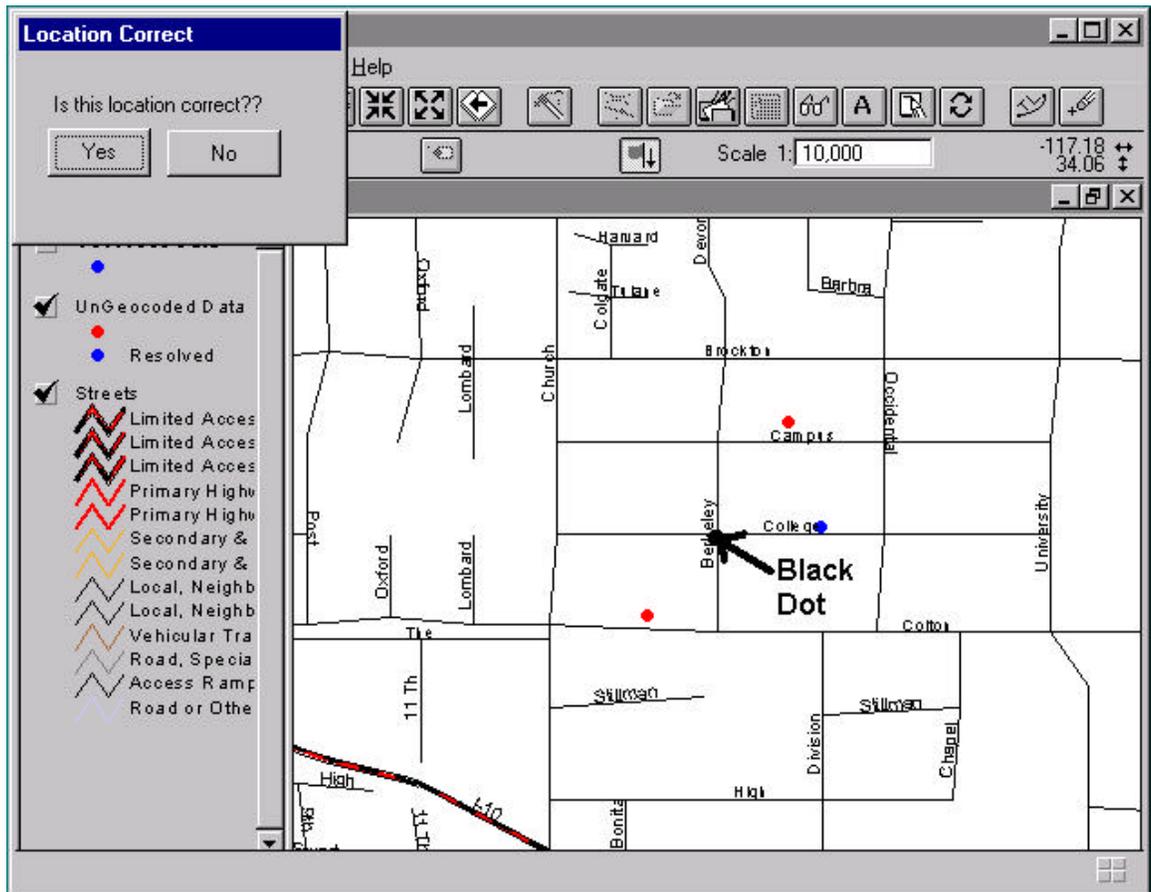


A **No** answer will automatically write any values that have been changed to the Employer Data set and make the action field to "C" for changed. A **Yes** answer will attempt to re-geocode the address values (see below for geocoding process).

- If you have changed any address inputs (**Address** and/or **Zip**), **Update** will attempt to geocode (address match) the employer using the new information you provided.

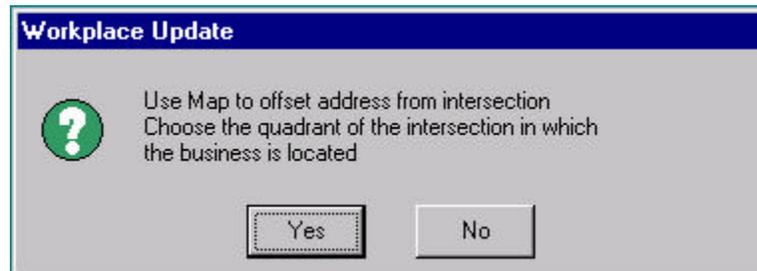
Geocoding Process

1. If an address match is found, a black dot is placed at the address location in the center of the *map display*, and the extension will ask you if the address location it found is correct.

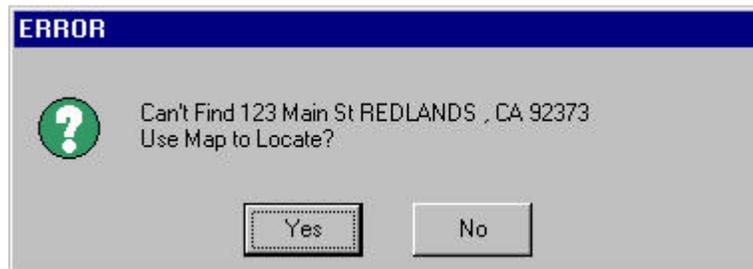


If you agree with the address location in the *map display*, click **Yes** and the extension will update the data set for the employer and make the action field "C" for changed. You may now move on to the next record.

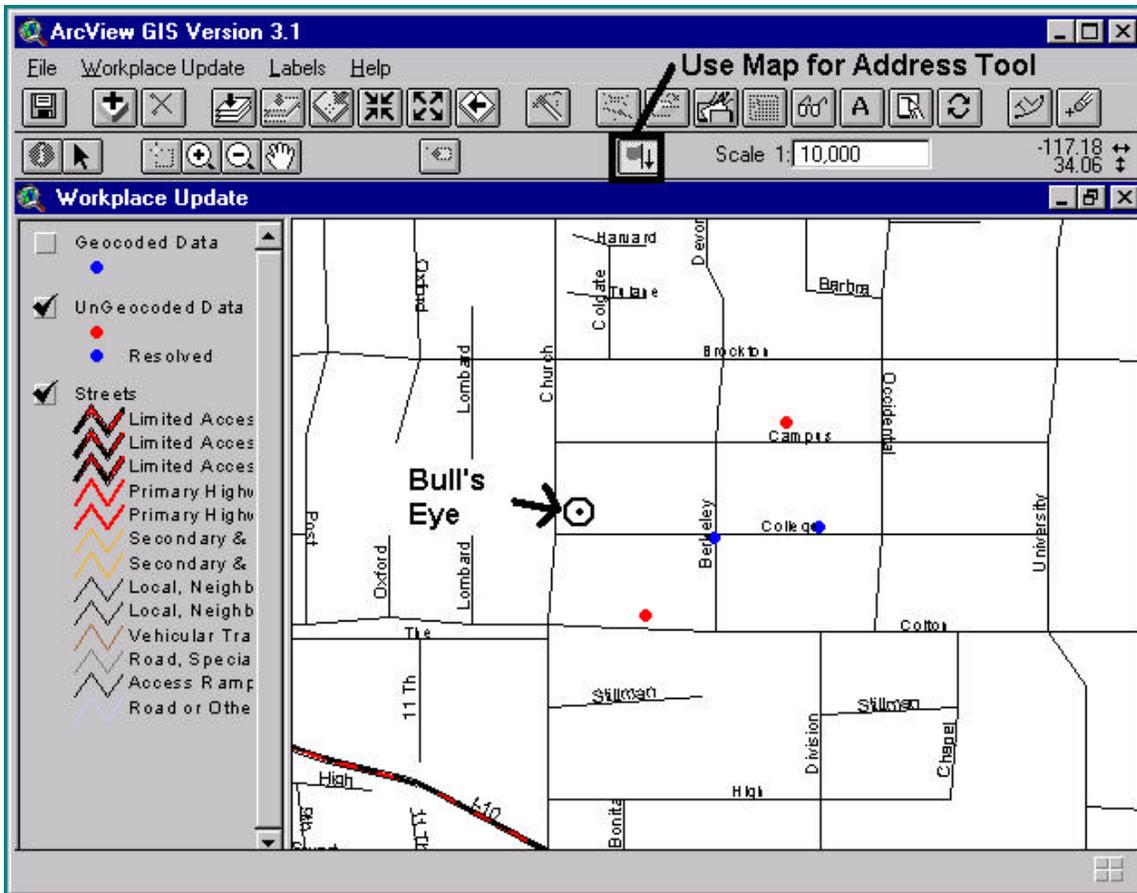
Note: In the case of an intersection, you will be asked which quadrant of the intersection the employer is in because the employer cannot be located in the intersection. If you choose No, the record will not be updated.



2. If either an address match is not found or you do not agree with the address location in the *map display* (click **No**), you will be asked to locate the employer by using the *map display*.

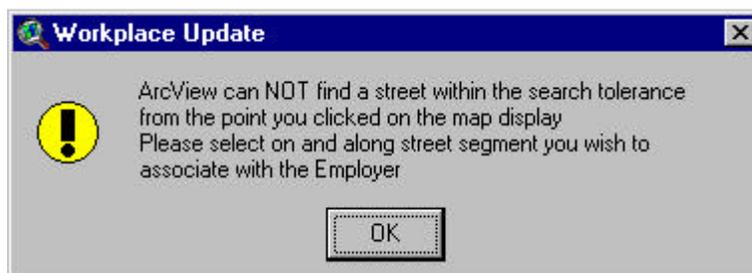


If you choose **Yes** to use the map to locate the address, you must click on the *map display* to indicate the employer location. The **Use Map for Address tool** will be enabled and selected in the *tool bar*. The cursor will change to a bull's eye indicating that you should click on the *map display* to indicate where the employer is located. You may zoom in, zoom out, pan, or label streets as long as you click the **Use Map for Address tool** when you are ready to click the employer location on the *map display*.



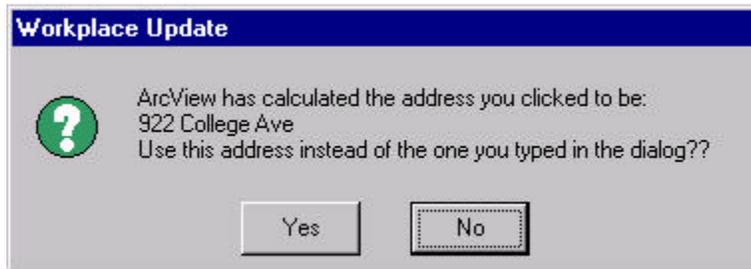
Using a search tolerance, the extension will attempt to return an interpolated address based on the street segment closest to where you clicked in the *map display*.

- If no street segment falls within the extension's search tolerance, it will ask you to manually select the street to associate with the employer point.



Once a street segment is associated with an employer point, the interpolated address will be displayed for you, if possible. If this interpolated address is different than the address typed in the Address input, the extension will ask you which address value you wish to write to the data set. Choose the address that is most likely to be reported by the employees of that business. If an address could

not be interpolated, the point you clicked on in the *map display* will be accepted as the location of the employer.



Your answer to this question does not alter the location or point associated with the employer. If you click **Yes**, the interpolated address will be written to the Employer Data set. A **No** response writes the address in the review dialog to the Employer Data set. The location of the employer is not changed in either case. The action field is set to "C" for changed, and you may now move on to the next record.

Delete—Sets the action field to "D" for delete for that particular record. This option does not actually delete the Employer Data set point.

Previous Record—Moves to the previous record in the select list.

Next Record—Moves to the next record in the select list.

Flash—Flashes, in the map display, the record currently being shown in the review dialog. Flash is useful for locating points that are in a cluster or hidden beneath other points.

Close—Closes the review dialog box only.

Read Only Inputs

Action—Shows the current value of the action field in the data set for that employer, if a value is present (C = Change, D = Delete, U = Unresolved, blank = Unchecked). All records have a default value of blank and will remain blank until you take an action on the record. Just looking at the record will not cause the action field to change.

Record __ of __—Shows the current position, in reference to the count of selected records, for which the dialog is displaying employer information.

Adding Employers

You can add employers to the Geocoded Employer Data set only if the Geocoded Employer Data is loaded as a *theme* in the Workplace Update View.

To Add employer records either

- Select the **Workplace Update** menu and choose **Add Employer**.

OR

- Click the **Add Employer** button on the button bar.



Add Employer Dialog

The screenshot shows a standard Windows-style dialog box titled "Add Employer". It features a title bar with a globe icon on the left and a close button (X) on the right. The main area contains several text input fields: "Name:", "Alias:", "Address", "City:", "State:", "Zip:", "Type:", and "Number of Employees". The "State:" field is a dropdown menu. At the bottom of the dialog, there are two buttons: "Geocode" on the left and "Close" on the right.

Inputs

Name—Name of the employer*

Alias—Secondary or alternative name of employer

Address—Physical street address of employer or closest intersection*#

City—City or Post Office name where employer is located*

State—State in which employer is located*

Zip—5 Digit ZIP Code in which employer is located*

Number of Employees—Current number of employees

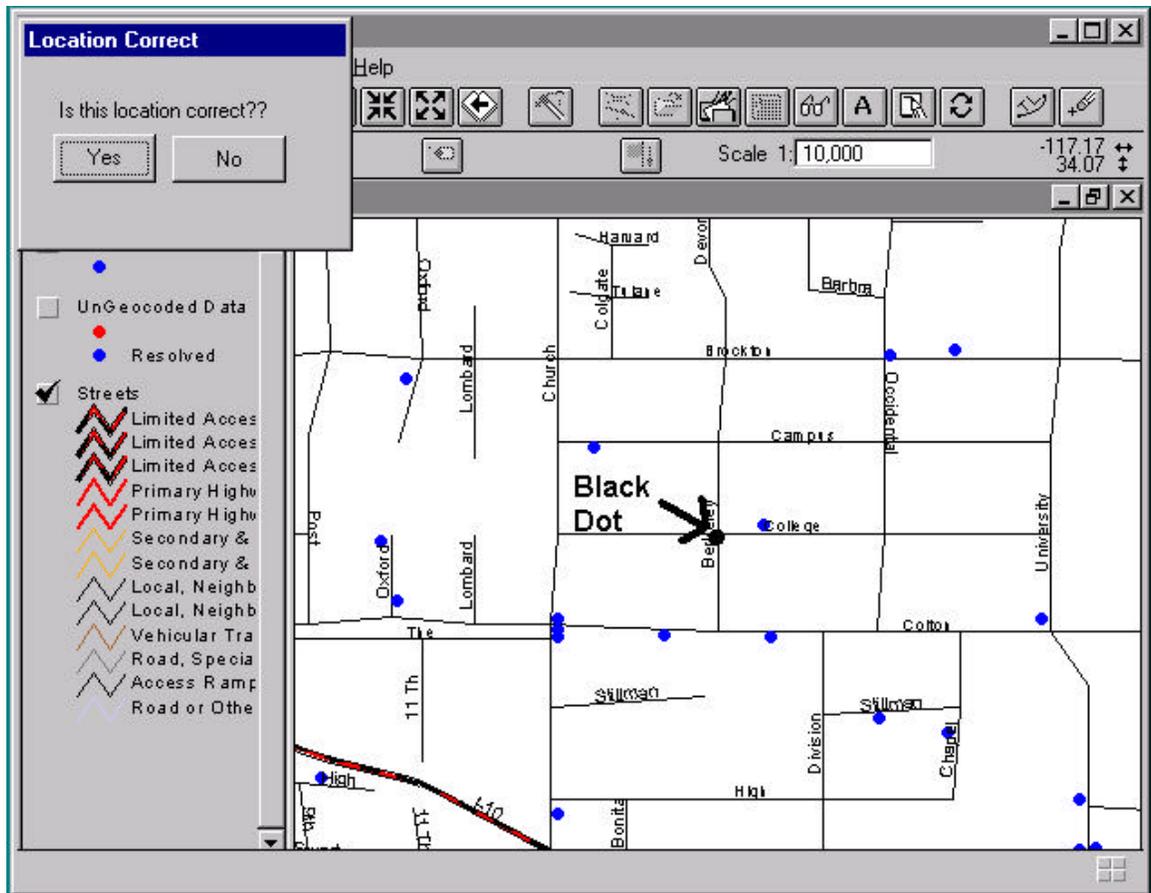
*Required fields in order to geocode

Note: If you use closest intersection in the address input, you must separate the street names with a & (Main St & Common Ave).

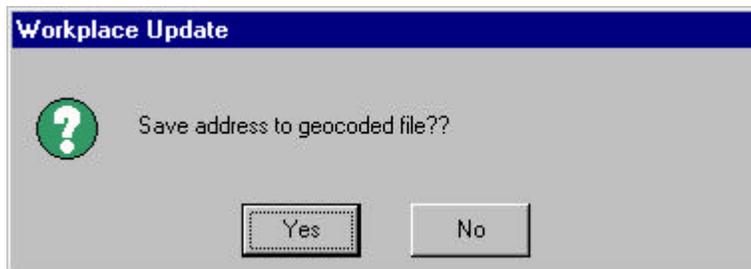
Buttons

Geocode - **Geocode** will attempt to address match the location typed in by you.

1. If an address match is found, a black dot is placed at the address location in the center of the *map display*, and the extension will ask you if the location it found is correct. If you agree with the address location in the *map display*, click **Yes**.

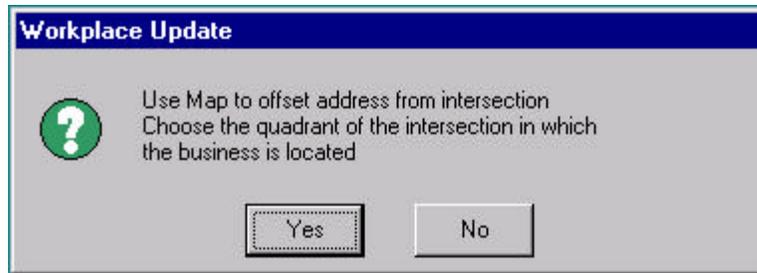


The extension will ask you if you wish to save the point to the Geocoded Employer Data set file.

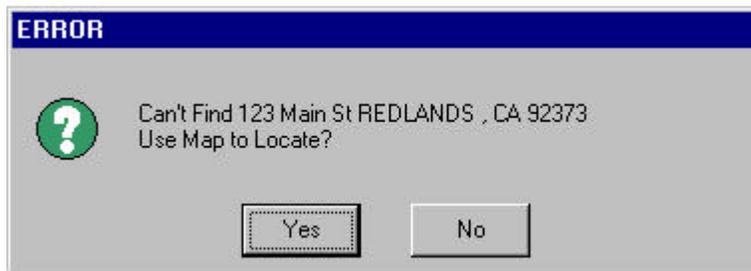


If you agree, the extension will add a record to the Geocoded Employer Data set with the location and information you provided for the employer. The action field will be set to "A" for added. After the record is added and saved to the Geocoded Data set, it becomes available for query and review with the regular geocoded data. You may now add another employer or **Close** the dialog.

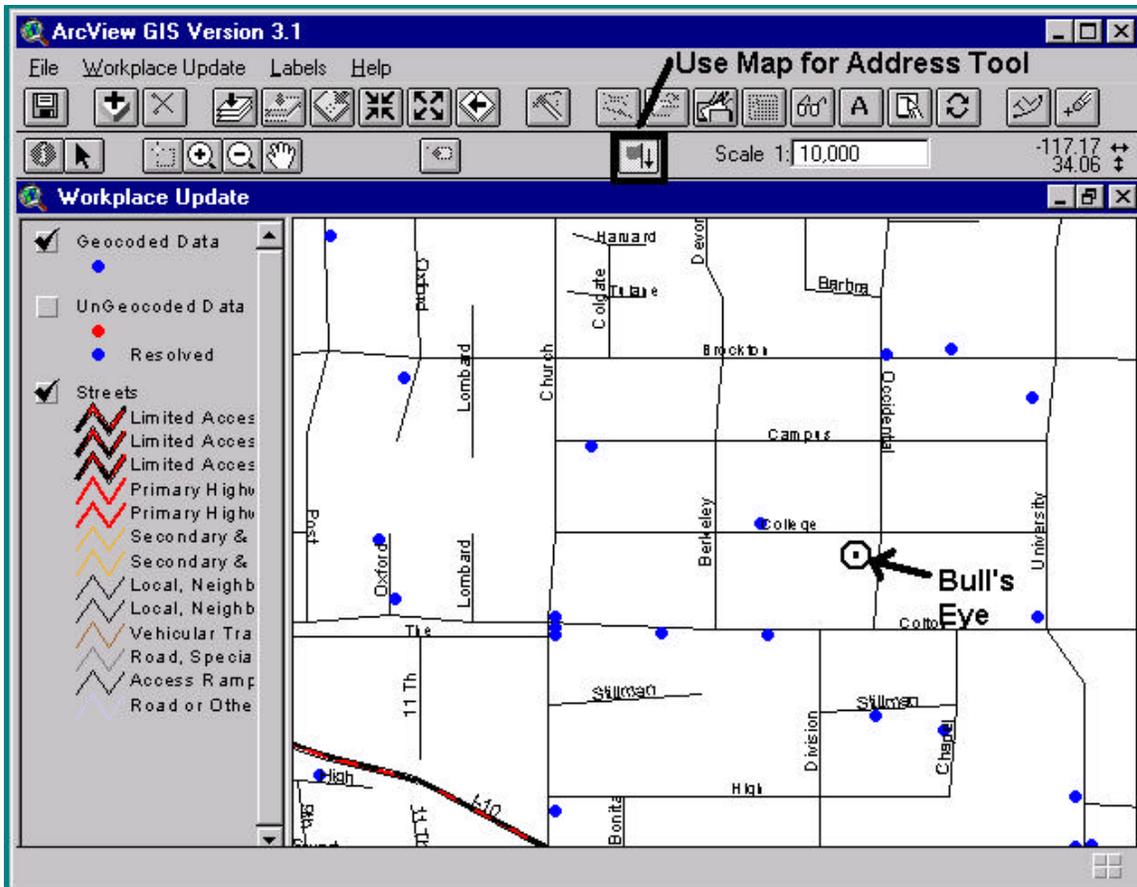
Note: In the case of an intersection, you will be asked which quadrant of the intersection the employer is in because the employer cannot be located in the intersection. If you choose No, the record will not be updated.



2. If either an address match is not found or you do not agree with the address match location the extension found, you will be asked to locate the employer by using the *map display*.

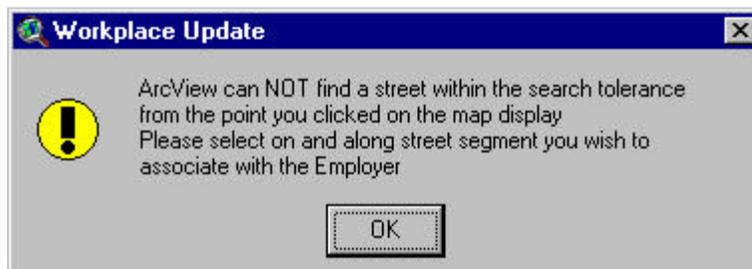


If you choose **Yes** to use the map to locate the employer point, you must click on the *map display* to indicate the employer's location. The **Use Map for Address tool** will be enabled and selected in the *tool bar*. The cursor will change to a bull's eye indicating that you should click on the *map display* to indicate where the employer should be located. You may zoom in, zoom out, pan, and label as long as you click the **Use Map for Address tool** when you are ready to click the employer location in the *map display*.

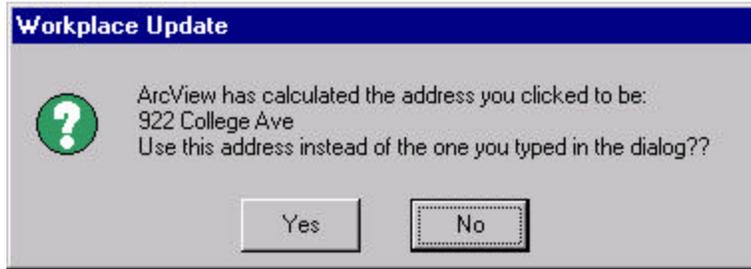


Using a search tolerance, the extension will attempt to return an interpolated address based on the street segment closest to where you clicked in the map display.

- If no street segment falls within the extension's search tolerance, it will ask you to manually select the street to associate with the employer point.



Once a street segment is associated with an employer point, the interpolated address will be displayed to you. If this interpolated address value is different than the address typed in the Address input, the extension will ask you which address value you wish to write to the Employer Data set. Choose the address that is most likely to be reported by the employees of that business.



The address location along with all the other employer information you entered will then be written to the Geocoded Employer Data set. The action field is set to "A" for added. You may now add another employer or **Close** the dialog.

If you choose **No** to the location correct Yes/No box or **No** to the Use Map to locate box or **No** to the Save File to Geocoded Records Yes/No box, nothing will be added to the Geocoded Employer Data set.

Close—Closes the Add Employer dialog box only.

Reviewing Data for Another County

If you wish to begin the review of Employer Data for another county without leaving ArcView, you can do so by either

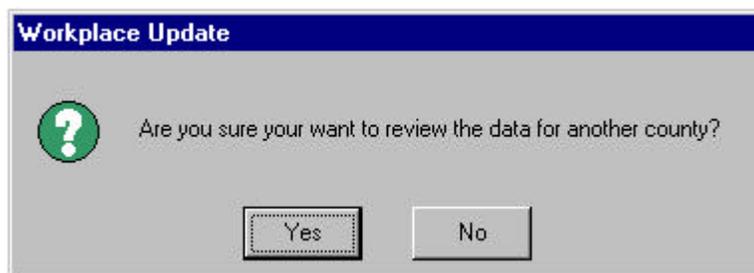
- Selecting the **Workplace Update** *menu* and choose **Review Employer Data for Another County**.

OR

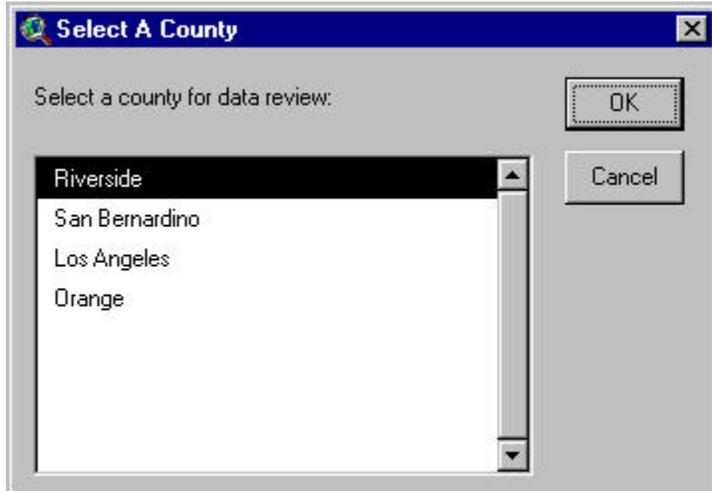
- Clicking on the **Review Employer Data for Another County** *button* on the *button bar*.



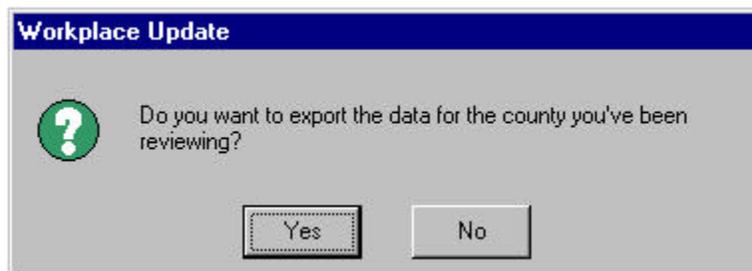
The extension will ask you if you really want to move to another county. **Note:** this procedure should only be used for your initial work session on a county. You should **NOT** use it to switch back and forth between counties. You should save your work as a project file and open and close projects if you want to switch from one county to another in your review.



If you choose **Yes**, the extension will ask you to select the county to switch to.



Then the extension will ask if you want to export the current Employer Data set before switching to another county. Only export the data for the county if you are absolutely sure you are done reviewing it.



If you click **Yes**, the *themes* for the previous county will be unloaded from the Workplace Update View. Then you will be asked which Employer Data sets you want to load for the county you switched to.



Chapter 6

Exporting Employer Data Sets

After reviewing the Employer Data sets, you must use the Workplace Update extension to export the results to ASCII files. These files will be sent back to the Census Bureau. A Web page is being set up at the Census Bureau that will allow you to upload the ASCII files from your Web browser.

You can invoke the export process by either

- Selecting the **Workplace Update** *menu* and choose **Export Reviewed Employer Data**.

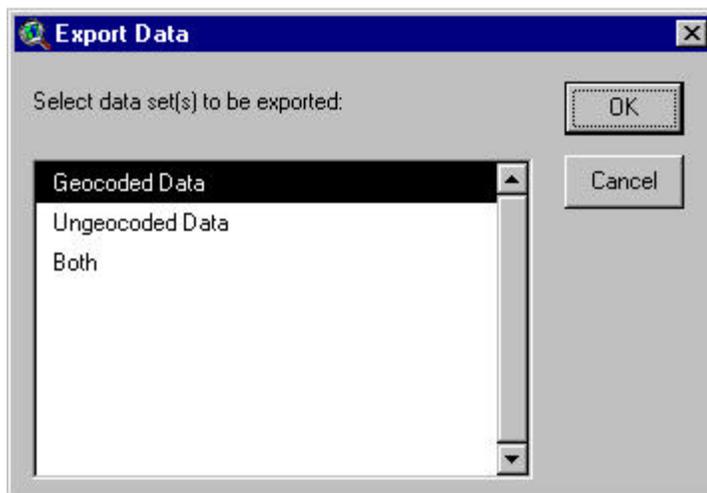
OR

- Clicking on the **Export Reviewed Employer Data** *button* on the *button bar*.



Depending on what Employer Data themes are loaded in the Workplace Update View, you may be prompted to choose which Employer Data to export.

- If only one of the Employer Data sets is loaded, the extension will export that data set directly.
- If both Employer Data sets are loaded in the project, a message box will appear asking whether you want to export one or both of the Employer Data sets.



The export files will be placed in the *C:\Workup\Export* directory. The names will be the same as the import files described in the import section of this document.

Sending Completed Files to the Census Bureau

To send the files you have finished updating and reviewing back to the Census Bureau, point your Web browser at **www.census.gov/cgi-bin/workup/sendfile**. This will bring you to a Web page that contains a form for you to fill out. At the top of the page are fields for you to enter a user name and password. For the user name, type in the word workup. For the password, type in ctp2000. Note that these fields are case sensitive.

Continue filling out the form on the page, providing the name of your agency, your name, your phone number, and your e-mail address. The first three of these items are required information and must be provided. If you have an e-mail address and enter it, you will receive an e-mail confirmation notice that your files were received. If you do not have an e-mail address and want confirmation that your files were received, call one of the people providing **Technical Support** (see **Chapter 1**) on the next business day after submitting the files.

Once you have filled out the necessary contact information, you will need to identify the files you want to upload. There are four fields available for you to enter file names in, so you can send the geocoded and ungeocoded files for two counties at once. Click on the **Browse** button to navigate on your computer to the directory where the files are located: **c:\workup\export**. After you have reached the proper directory, you may click on or type in the file name to upload. If you have a large number of files to upload, call one of the **Technical Support** personnel for instructions on accessing the FTP site directly.

After you have entered the file names in the appropriate areas of the page, click the **Upload** button and your files will be uploaded. If you have a problem with the upload or do not receive notification of your submission, call one of the contact people listed in the **Technical Support** section of **Chapter 1**.

Returning Licensed Employer Files to the Census Bureau

Because of the stipulations of the licensing agreement with infoUSA, the materials used in the Workplace Update program cannot be retained by the MPO and state agencies that conducted the review. The license only allows for the use of the records in Census 2000 place-of-work coding. It does not cover the use of the records for other purposes within the participating agencies. Therefore, you must return the original distribution CDs to the Census Bureau and delete any copies of the employer records from your agency computers. Please send the CDs to

Clara Reschovsky
Population Division
U.S. Bureau of the Census
Washington, DC 20233-8800

We appreciate your willingness to participate in this program and to devote your agency resources to helping us improve the quality of place-of-work coding in Census 2000. Please direct your comments about the Workplace Update program, both favorable and critical, to Phillip Salopek at the address given above, or e-mail him your comments at psalopek@census.gov. Thank you.

Appendix A

Graphical User Interface (GUI)

Menus

- **File** menu
 - **Save Project:** Saves the current ArcView project.
 - **Save Project As:** Saves the current ArcView project to a new name.
 - **Print:** Prints the Workplace Update View extent.
 - **Print Setup:** Edits the printer and printing options.
 - **Exit:** Exits ArcView and the Workplace Update extension.

- **Workplace Update** menu
 - **Add Street Data:** Adds TIGER/Line 98 street data as a theme into the Workplace Update View.
 - **Import Employer Data:** Adds the Employer Data as a theme into the Workplace Update View (requires street data to be added already).
 - **Select Employer Data:** Allows you to select Employer Data by a variety of different attributes in order to systematically approach the review process.
 - **Review Employer Data:** Starts the review process on the Employer Data.
 - **Add Employer:** Allows you to add a missing employer to the Geocoded Data.
 - **Export Reviewed Employer Data:** Exports the reviewed data set to a file that can be sent back to the Census Bureau.
 - **Review Data For Another County:** Allows you to switch to another county to begin a review of that county.

- **Labels** menu
 - **Label Streets:** Labels the streets theme, by street name, for streets that are within the Workplace Update View extent.
 - **Remove All Labels:** Removes all the labels from the Workplace Update View.
 - **Delete Graphics:** Deletes the selected graphic from the Workplace Update View. A graphic is a text string that is placed in the map display using a labeling operation.

- **Help** menu
 - **Help Topics:** Displays the dialog for browsing and searching the ArcView GIS help system.
 - **How to Get Help:** Provides instructions for how to obtain help from ArcView.
 - **About ArcView:** Provides information about ArcView GIS.

Buttons (in order from left to right)

- **Save Project:** Saves current ArcView project.
- **Add Theme:** Inserts theme in the Workplace Update View.

- **Remove non-essential themes:** Removes the active, non-essential theme from the Workplace Update View. Essential themes are Streets, Geocoded Data, and Ungeocoded Data.
- **Zoom to full extent:** Zooms to the extents of all themes in the Workplace Update View.
- **Zoom to Active Theme(s):** Zooms to the extents of the active themes.
- **Zoom to Selected:** Zooms to the extents of selected features.
- **Zoom in:** Zooms in on the center of the map display.
- **Zoom out:** Zooms out on the center of the map display.
- **Zoom to Previous Extent:** Goes back to the previous extent you were viewing.
- **Query Builder:** Displays the query builder to select features with a logical expression.
- **Add Street Data:** Adds TIGER/Line 98 street data as a theme into the Workplace Update View.
- **Import Employer Data:** Adds the Employer Data as a theme into the Workplace Update View.
- **Select Employer Data:** Allows you to select Employer Data by a variety of different attributes in order to systematically approach the review process.
- **List Selected Records:** Allows you to view a list of records that were selected using the Select Employer Data operation.
- **Review Employer Data:** Starts the review process on the Employer Data.
- **Add Employer:** Allows you to add a missing employer to the Geocoded Data.
- **Export Reviewed Employer Data:** Exports the reviewed data set to a file that can be sent back to the Census Bureau.
- **Review Employer Data For Another County:** Allows you to switch to another county to begin a review of that county.
- **Label Streets:** Labels the streets theme, by street name, for streets that are within the Workplace Update View extent.
- **Remove Labels:** Removes all the labels from the Workplace Update View.

Tools (in order from left to right)

- **Identify:** Provides information about a feature in the active theme.
- **Pointer:** Selects, moves, and resizes graphics (labels).
- **Select Feature:** Selects features in the active theme.
- **Zoom In:** Zooms in at a point you click or zooms in on a rectangle you drag.
- **Zoom Out:** Zooms out from a point you click or zooms out to include a rectangle you drag.
- **Pan:** Drags the display in the direction you move the cursor.
- **Label:** Labels a feature in the active theme.
- **Use Map for Address:** Allows you to choose a point on the map display to locate an employer.

Tool Shortcut menu

- **Pan:** Drags the display in the direction you move the cursor.
- **Zoom In:** Zooms in at a point you click or zooms in on a rectangle you drag.
- **Zoom Out:** Zooms out from a point you click or zooms out to include a rectangle you drag.
- **Previous Zoom:** Goes back to the previous extent you were viewing.
- **Identify:** Provides information about a feature in the active theme.

- **Label:** Labels a feature in the active theme.
- **Label Streets:** Labels the streets theme, by street name, for streets that are within the Workplace Update View extent.
- **Remove Labels:** Removes all the labels from the Workplace Update View.

Appendix B

Employer Data Set Record Description

Field Seq.	Oracle DB Field Name	Field Size	Field Location	Field Description	Foot-note	MPO Must Fill *
Workplace File Record Length =		287		Primary Employer Name File		
1	Serial number (Serialnum)	10	1	10	Unique identifier for each record in the WF.	
2	Unstand employer name (Name)	40	11	50	Unstandardized employer, shopping center, or military base name.	*
3	Secondary Address (Secaddr)	50	51	100	Street intersection, location description, etc. Not standardized.	
4	Unstand street address (Address)	50	101	150	Unstandardized employer street address from the source file	*
5	Post office name (City)	20	151	170	Post office name from source file	*
6	State Abbreviation (State)	2	171	172	State abbreviation from the source file	*
7	Five digit Zip Code (Zip)	5	173	177	Five digit ZIP Code from the source file	*
8	Src Flag-phone book (Src_fphone)	1	178	178	Source flag-telephone directory file of commercial listings, InfoUSA file (old name American Business Information File)--y/n	
9	Src Flag-shopping centers (Srcfshop)	1	179	179	Source flag-Shopping Center Directory File--y/n	
10	Src Flag-military (Srcfmil)	1	180	180	Source flag-Military Installation File--y/n	
11	Src Phone (Srcphone)	10	181	190	Company phone number from source file (PHONE from InfoUSA)	
12	Src Primary SIC (Srcpsic)	6	191	196	Standard Industrial Classification (SIC) code for the business's primary activity from source file (PRMSIC from InfoUSA)	
13	Src Employee size code (Srcemcode)	1	197	197	Represents a size range for the number of employees from source file (EMPSIZ from InfoUSA): A=1-4; B=5-9; C=10-19; D=20-49; E=50-99; F=100-249; G=250-499; H=500-999; I=1,000-4,999; J=5,000-9,999; K=10,000+	
14	Src Num of employees (Numofemps)	7	198	204	Number of employees working at this location from source file (LOCEMP from InfoUSA). For military records, this field is filled with 8s. For shopping center records, this field is filled with 9s.	1
15	Src GLA (Srcgla)	7	205	211	Number of square feet of gross leased area (GLA) from the shopping center file.	1
16	Src Bus status flag (Srcbusstat)	1	212	212	For phone book records, identifies the business location as a headquarters, branch, etc. (HDBRCH from InfoUSA): 1=headquarters, 2=branch, 3=subsidiary headquarters. For shopping center records: A=center record, C=individual store record.	
17	Latitude (Lat)	10	213	222	Latitude	* 3
18	Longitude (Long)	11	223	233	Longitude	* 3
19	Hdr-State code (Hdrstate)	2	234	235	State code from the CRF match	2
20	Hdr-County code (Hdrcnty)	3	236	238	County code from the CRF match	2
21	Hdr-MCD code (Hdrcmd)	3	239	241	MCD code from the CRF match	2
22	Hdr-Place code (Hdrplace)	4	242	245	Census place code from the CRF match	2
23	Cur-State code (Curstate)	2	246	247	Current Tab state code (ST from GTUBCU)	2
24	Cur-County code (Curcnty)	3	248	250	Current Tab county code (CO from GTUBCU)	2
25	Cur-MCD code (Curcmd)	3	251	253	Current Tab MCD code (from GTUBCU)	2
26	Cur-Place code (Curplace)	4	254	257	Current Tab census place code (from GTUBCU)	2
27	Cur-Tract code (Curtract)	4	258	261	Current Tab tract base (TRACTBAS from GTUBCU)	2
28	Cur-Tract suffix (Curtracts)	2	262	263	Current Tab tract suffix (TRACTSUF from GTUBCU)	2
29	Cur-Block (Curblk)	3	264	266	Current Tab block base number(BLOCKBAS from BKARA)	2
30	Cur-Block suffix1 (Curblksuf1)	1	267	267	Current Tab block suffix1 field (Tab90SUF from BKARA)	2
31	Cur-Block suffix2 (Curblksuf2)	1	268	268	Current Tab block suffix2 field (CURRSUF from BKARA)	2
32	TIGER partition (Tgrprt)	6	269	274	TIGER partition number associated with the TIGER Line ID	* 3
33	TIGER line ID (Tgrlnid)	10	275	284	TIGER line number	* 3
34	TIGER line side (Tgrlnside)	1	285	285	TIGER line side indicator associated the TIGER line ID	* 3
35	TIGER line source (Tgrlnsrc)	1	286	286	TIGER line source flag. G=from automated geocoding; M=from MPO; Others to be defined	* 3
36	MPO Action Flag (Action)	1	287	287	Audit flag reflecting the action resulting from the MPO review process. A=added; C=changed; D=delete; V=verified; U=reviewed/unresolved, no action taken; blank=not reviewed. This field is blank in the output to the MPO.	4

MPO File Footnotes:

* All changed or added records returned to GEO from the MPOs **must** have data in these fields. Blank is acceptable in all other fields on the input record. If a field is blank, GEO will blank that field in the WF. The update process will perform a field by field replacement of data on changed records.

- 1 When source is Shopping Center file (SRC-Flag-shopping centers=Y), the "Src Num of Employees or GLA" is written to field #15 on the MPO output record. Otherwise the "Src Num of employees or GLA" is written to field #14 on the MPO output.
- 2 Current Tab geography is written to the MPO output record for "block coded" WF records. Current header geography is written to the MPO output record for "ungeo-coded" WF records.
- 3 Both lat/long coordinates and the TIGER Line numbers are required.