



# ELECTRONIC IMPORTS

## IMPORT FORMATS

### Introduction

There are three ways to import data into GIS\Key Database files:

- **Import Directly Into a Database File** - GIS\Key supports electronic imports into most of the GIS\Key Database files (a.k.a., tables).
- **Importing Sites Into a Basemap** - Import basic Site Id data directly into both the AutoCAD basemap and the database.
- **Importing Chemistry Electronic Data Deliverables ("EDDs")** - The program LabBuild (icon on the Desktop) is used to modify the EDD, perform integrity checks, and convert the modified records into a format compatible with the GIS\Key Database.

### Format of Source File

The format of the source file must match that of the target file. If the source file is a database file (dbf), then the field names (headers) of the source file must match the field names of the target file. If the source file is not a database file, then the sequence of the fields in the source file must match the sequence of the fields in the target file. The source file then cannot contain any field names. Some of the most common allowable file types for the source file are:

- **DBF** - dBASE, FoxBASE+, or FoxPro database file
- **TXT** - text that is either comma (e.g., csv), tab, or space delimited.
- **XLS** - Microsoft Excel Version 2, 3, or 4

## IMPORTING DIRECTLY INTO A DATABASE FILE

To import data directly into an existing database file (e.g., importing water levels into flevel.dbf) use the following procedures:

1. Create a source file in the format defined above (see Format of Source File). Some tips:
  - If the source file is a DBF file, the field names in the source file must be exactly the same as those in the target file.
  - If the source file is not a DBF file, the order of the fields in the source file must be exactly the same as those in the target file, even if a particular field contains no data.
  - You can review the target table structure (Help - Table Information) or the contents of the existing target table (Utility - Browse Files).
  - If you are not sure what each field represents, review the tour.hlp (Help File). This help file is available on the GIS\Solutions website.



# ELECTRONIC IMPORTS

- To ensure that your source file is in the correct structure, you can enter one record in the GIS\Key database and then export that record (Utility - Export Data) into a file that you can use as a template for your source file.
  - If you are using Excel, make sure all dates are in a MM/DD/YYYY format (e.g., 09/05/1999, not 9/5/99) and all times are in a HH:MM format (e.g., 09:05, not 9:05). You can set these settings for your computer in Start - Settings - Control Panel - Regional Settings.
2. Start the database. Select menu item Utility - Import Data;
    - Select the directory containing the file to import;
    - Select the source file name (press F2, type, or right click) and the type of file (press F2 or right click for valid file types);
    - Select the target data file; and
    - Click "OK".
  3. The import routine performs data integrity and validation checks on the source file. If the import routine detected errors in the source file, you can review the reject report by printing to the default "Printer", "Screen", or "File". The reject report displays the failed record number(s) and the associated reason(s) for failure. Some Tips:
    - When viewing a reject report on the screen, hit the "Page Down" button on your keyboard to scroll down. You cannot scroll back up.
    - The associated legend for the reject report is at the bottom of the report.
    - To close the window, hit <Esc> or double click the small box in the upper left hand corner of the report window.

## IMPORTING SITES INTO THE BASEMAP

The general process for importing sites into the basemap and the database is to:

1. Create a space-delimited text file with the following data in this order: "Site identifier", "x coordinate", "y coordinate", "ground surface elevation", "map symbol block name". The text file must have a ".add" extension and must be in the c:\gistemp directory. Do not include the header names.
2. From the basemap (i.e., in AutoCAD), select GIS\Utilities - Site Map Symbols - Database - Add.
3. Click "Get File" and select the .add file.
4. Click "Apply".

## IMPORTING LABORATORY ELECTRONIC DATA (EDDS)

### Step 1: Preparing the EDD(s)

1. The EDD(s) must be in the format specified in Chapter 8 of the Training Manual (these structure notes are also available on the GIS\Solutions website). If the EDD is a database file (dbf), then the field names must match the field names of the structure notes. If the EDD is not a database file, then the sequence of the fields must match the sequence in the structure notes. Also, the EDD should not include field names.
2. Place the EDD(s) in an appropriate directory (we recommend the project\labdata directory).



# ELECTRONIC IMPORTS

## Step 2: Run LabBuild

1. Double click the LabBuild icon.
2. At the first screen, specify the Gis\Key database directory (e.g., c:\giskey31\database), the project\database directory (e.g., c:\training\database), and the Lab/Temp directory (where the EDDs are stored). Click "OK"
3. At the Load/Save Data Window, Click "New Data". To open a previously saved LabBuild session, click "Load".
4. Select your EDD. You can load multiple EDDs, but must load them one at a time in the "New Lab Data" window. Click "OK" after selecting each EDD, then select the next EDD. To exit, click "OK" again when all your EDDs are loaded. After exiting, you will not be able to load additional EDDs.
5. After loading your EDDs, LabBuild tries to match all constituents from the lab with the corresponding CAS number in the GISKey database. If no match is found for a particular CAS Number, you will be prompted to print all the constituents that GISKey could not match with constituents in the database. To correctly match these constituents, click "CAS Reconcile" and select the appropriate constituent. Previous reconciliations are also listed in this screen.
6. Back at the Load/Save Data screen, select "Work".
7. Select "Browse/View" to view and edit the laboratory loaded from your EDDs.
  - Select your view settings, then click "OK".
  - In the Browse window, use the Database - Filter command to view specific records. If you enter a description in the Filter window, your filter statement will be saved for future use. You can enter a FoxPro condition to show certain records (e.g. site\_id = "MW" will show all site ids that start with "MW").
  - Use the Record - Replace command to edit the values in certain fields. If you enter a description in the Replace window, your Replace statement will be saved for future use.  
**Field** - Select the field (column) in which your changes will be applied.  
**With** - Enter the values or a statement that will go into the field.  
**For** - Enter a FoxPro condition to select the records for which the Replace statement applies (e.g. DTOC(samp\_date) = "09/10/2000"; the Replace statement will only apply to records that have a sample date of September 10, 2000).
  - To exit the Browse window, hit <Esc> or double click the small box in the upper left corner of the table.
8. At the "Work Chemistry" window, select "Apply Defaults" to enter default values in fields (e.g. all Iced = "Y"). If the "Only If Empty" box is "Y", the change will only be applied for records where that field is empty (i.e., if the lab supplied a value, the value will not be changed). If it is "N", the default value will be applied to every record.
9. At the "Work Chemistry" window, click "Checks" to check your data against the project database. Checked records are flagged as one of the following:
  - **Deleted** - Will not be imported,
  - **Exceptions** - The record has an error that will prevent it from being imported,
  - **Warnings** - The record may have an error, but it can be imported, or
  - **Checked OK** - The record has no Exceptions or Warnings and can be imported.



# ELECTRONIC IMPORTS

## Step 3: Resolving Exceptions

1. After running a Check, click the "Problems" button to view the exceptions and warnings report.
  - When viewing a report on the screen, use the "Page Down" button on your keyboard to scroll down. You cannot scroll back up.
  - To view the corresponding codes for Exceptions and Warnings, click the "Error Codes" or "Warning Codes" buttons in the "Work Chemistry" window.
  - To close the report windows, hit <Esc> or double click the small box in the upper left hand corner of the report window.
2. To view only Exception records, click the "Browse/View" button in the "Work Chemistry" window. Then in the "Browse/View Options" window, check all boxes under "Hide Options". To view Exception and Warning records, uncheck the "Warnings" box.
3. In the Browse window, edit the records as appropriate. Some tips:
  - Use the Database - Filter command to view records with specific error or warning codes. The Exception and Warning codes are stored in the X\_Error and X\_Warn fields, respectively. For example, if you would like to view only records with a Warning Code of "05" use the following filter: "05"\$X\_Warn (the "\$" in FoxPro can be read as "is included in").
  - Use the Record - Replace command to edit the values in certain fields.
4. After the changes have been made, rerun the "Checks" command in the "Work Chemistry" window.

## Step 4: Sending the Records to the Project Database

1. If there are no more Exceptions and all the Warning records are acceptable, the records are ready to send to the project database. Click the "Send to Import" in the "Work Chemistry" window and click "OK" at the prompt. This will create several temporary import files (with a ".tmp" extension) in the "Lab/Temp" folder (where your EDD is stored). You can view these files by clicking the "Browse Built" button in the "Load/Save Data" or "Work Chemistry" windows.
  - Up until this point, no records have been entered into the database. LabBuild has only copied the EDD records into several tables (TMP files) that can be imported into the database.
  - We strongly recommend you "Save" (in the "Load/Save Data" window) your LabBuild session at this point. This will not only keep a record of your changes in LabBuild, but can be used for reimport later if a mistake was made.
2. To import the records into the database, start the project database from Scout.
3. Select Utility - Load Build Data.
  - Specify the Lab\Temp directory that contains the TMP files, and click "OK".