

CAP88-PC V4 TRAINING

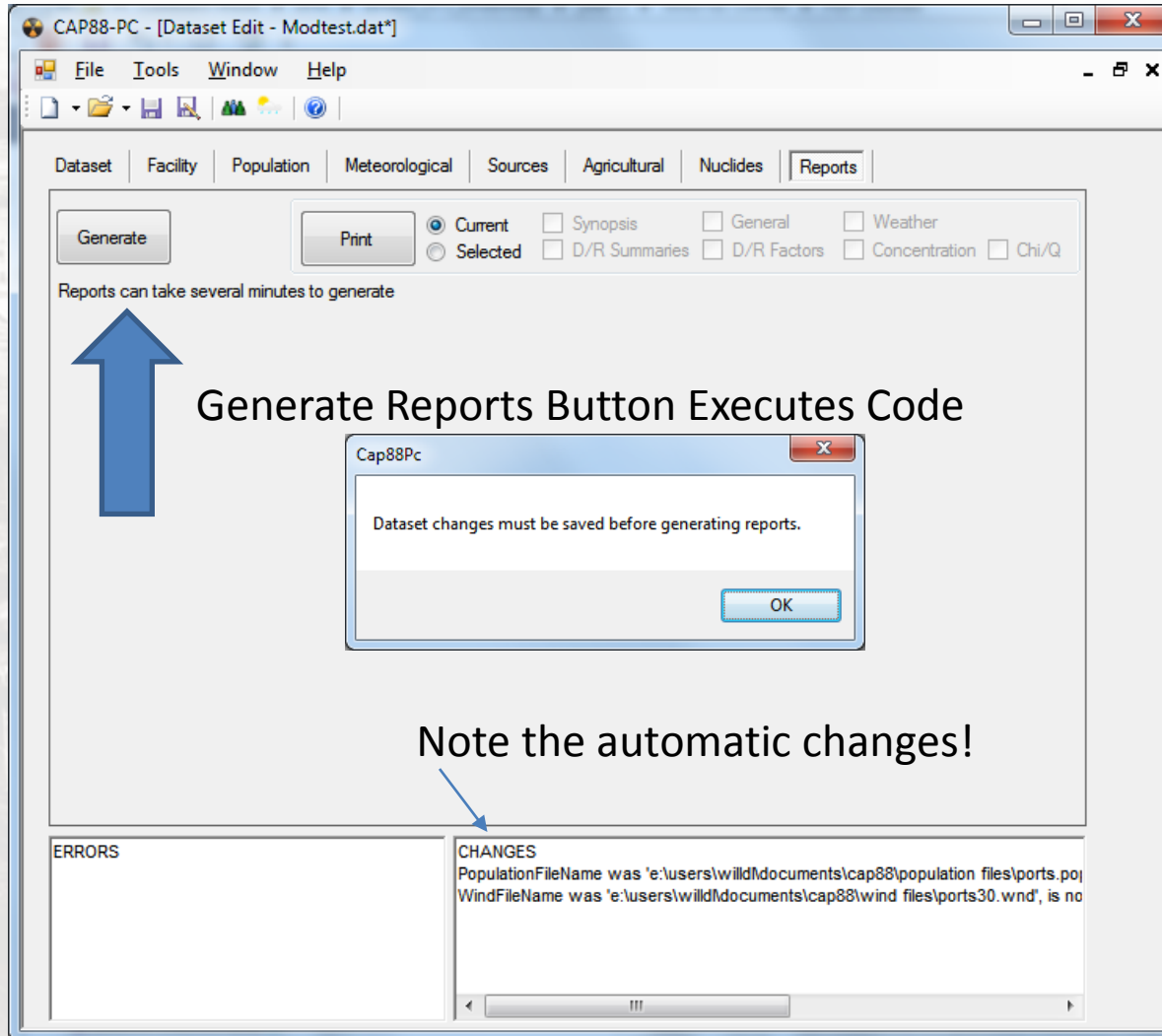
Module 2.4

Reports and Error Logging



GENERATING REPORTS

Flow of Operation: Build Dataset using UI > Save Dataset > Generate Reports

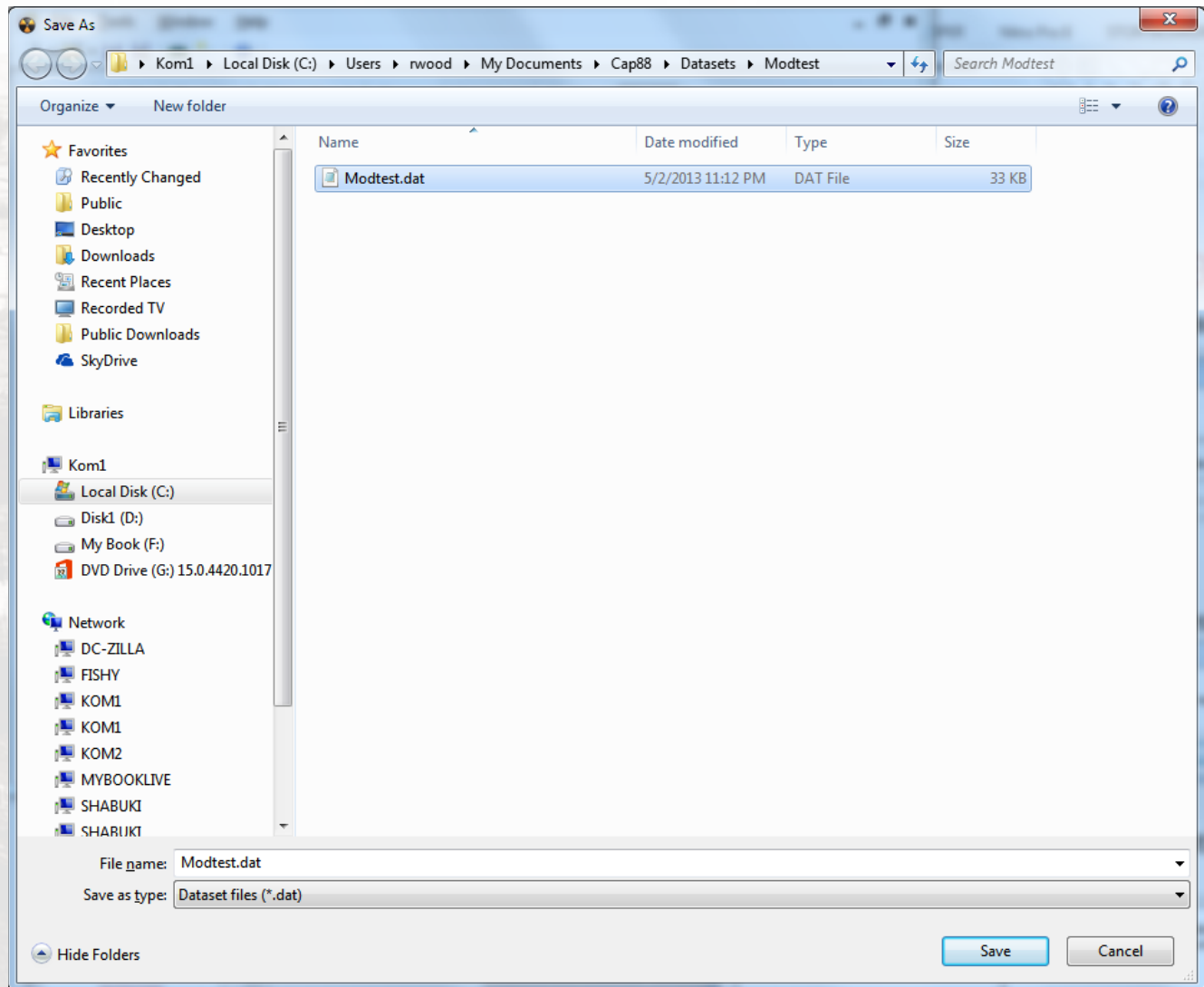


GENERATING REPORTS

Saving the File Before Running the Code

V4 uses standard Windows Save dialog box

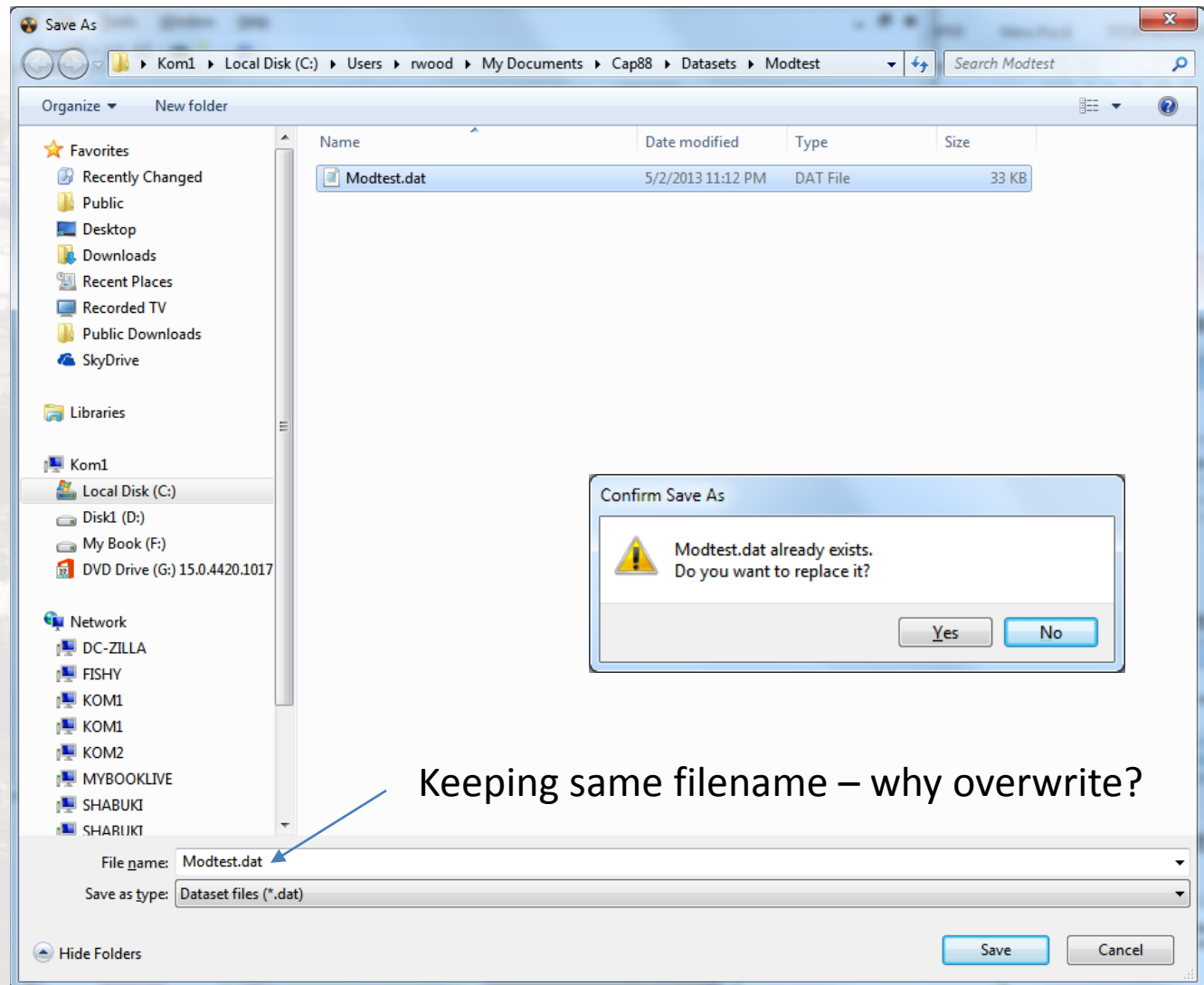
This save location is a result of the default installation path



GENERATING REPORTS

Saving the File Before Running the Code

This was a pre-existing dataset

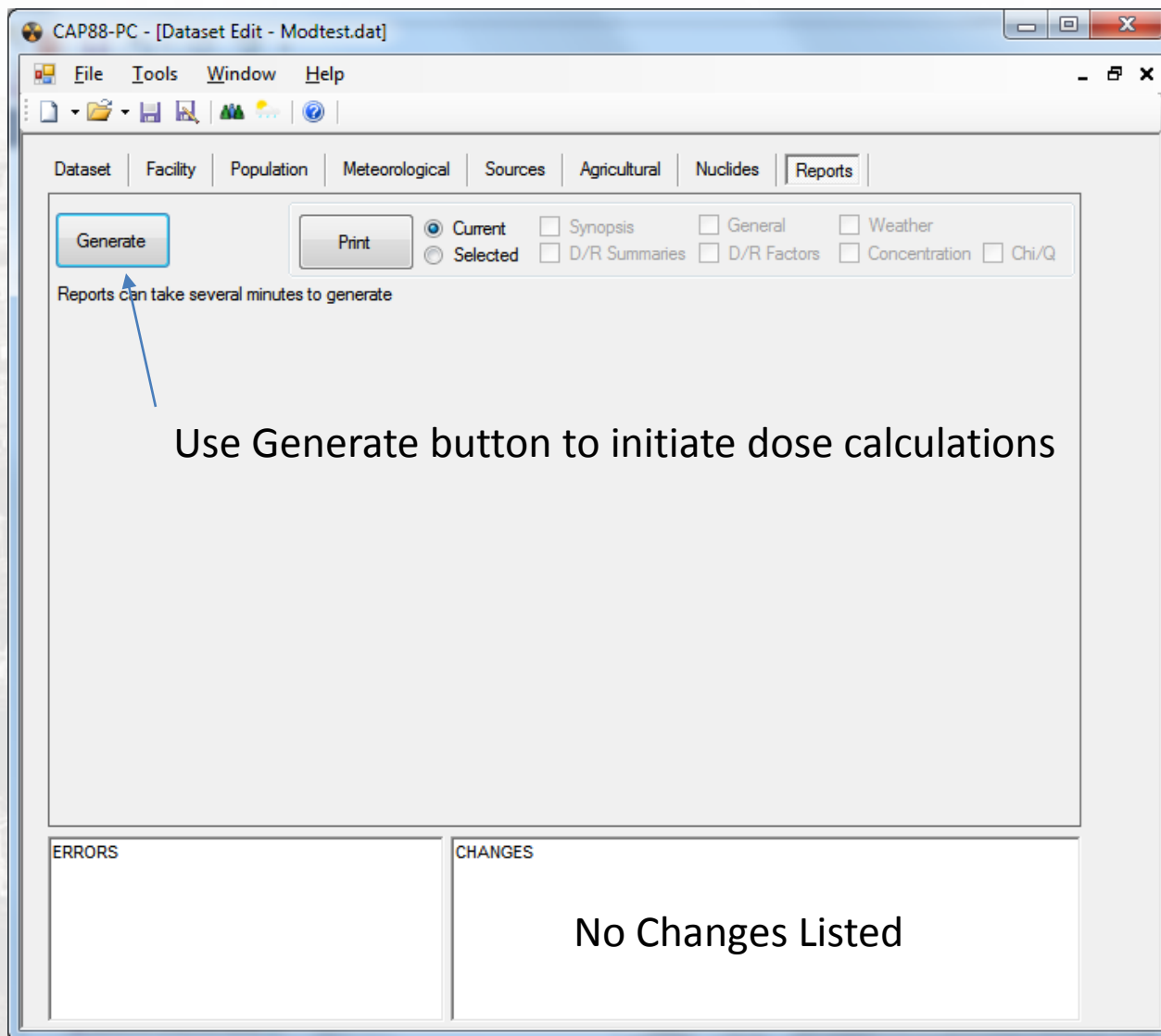


Keeping same filename – why overwrite?



GENERATING REPORTS

Now run the code after saving the dataset



Use Generate button to initiate dose calculations



EXAMINING REPORTS

The screenshot shows the CAP88-PC software interface. The window title is "CAP88-PC - [Dataset Edit - Modtest.dat]". The menu bar includes File, Tools, Window, and Help. The main menu has tabs for Dataset, Facility, Population, Meteorological, Sources, Agricultural, Nuclides, and Reports. The Reports tab is active, showing a "Generate" button, a "Print" button, and radio buttons for "Current" (selected) and "Selected". There are also checkboxes for "Synopsis", "General", "Weather", "D/R Summaries", "D/R Factors", "Concentration", and "Chi/Q". Below this, a message states "Reports can take several minutes to generate". A list of report types is shown: Synopsis, General, Weather, D/R Summaries, D/R Factors, Concentration, and Chi/Q. The "Concentration" tab is selected, displaying a report titled "CAP88-PC Version 4.0 Clean Air Act Assessment Package - 1988 SYNOPSIS REPORT Non-Radon Population Assessment Thu Jun 13 13:14:43 2013". At the bottom, there are sections for "ERRORS" and "CHANGES".

Generate Print Current Synopsis General Weather
 Selected D/R Summaries D/R Factors Concentration Chi/Q

Reports can take several minutes to generate

Synopsis General Weather D/R Summaries D/R Factors **Concentration** Chi/Q

CAP88-PC
Version 4.0
Clean Air Act Assessment Package - 1988
SYNOPSIS REPORT
Non-Radon Population Assessment
Thu Jun 13 13:14:43 2013
Facility: CAP88-PC Version 3
Address: 1111 Simulation Dr
City: Portsmouth

ERRORS CHANGES

List of available reports;
click name to view



WHICH REPORTS GENERATE?

Dataset | Facility | **Population** | Meteorological | Sources | Agricultural | Nuclides | Reports

Run Type: Population | Population Age: Adult | Build up time: 100 years

Files with * are in the same folder as the dataset
Files with ! are in a non-default folder
C:\Users\rwood\Documents\CAP88\Population Files\ports.pop

File: ports | Portsmouth

Midpoints: 10

| | | | | | |
|-------|----------|----------|----------|----------|----------|
| 1 - 5 | 800.00 | 2400.00 | 4000.00 | 5600.00 | 7250.00 |
| 6-10 | 12100.00 | 24150.00 | 40250.00 | 56350.00 | 72200.00 |
| 11-15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16-20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Maximum Exposed Individual
Direction: auto | Midpoint index: 0 | Auto-determine

Create dose and risk summaries
 Create dose and risk factors
 Create concentration table
 Create Chi/Q table

ERRORS | CHANGES

The list of reports that generate is determined by the selections on the Population tab



EXAMINING REPORTS

The screenshot shows the CAP88-PC software interface. The window title is 'CAP88-PC - [Dataset Edit - Modtest.dat]'. The menu bar includes 'File', 'Tools', 'Window', and 'Help'. The main menu has tabs for 'Dataset', 'Facility', 'Population', 'Meteorological', 'Sources', 'Agricultural', 'Nuclides', and 'Reports'. The 'Reports' tab is active, showing a 'Generate' button and a 'Print' button. Below the 'Print' button are radio buttons for 'Current' and 'Selected', and checkboxes for 'Synopsis', 'General', 'Weather', 'D/R Summaries', 'D/R Factors', 'Concentration', and 'Chi/Q'. A blue arrow points from the 'Print' button to the 'Selected' radio button. Below the 'Print' options is a note: 'Reports can take several minutes to generate'. There are more tabs for report types: 'Synopsis', 'General', 'Weather', 'D/R Summaries', 'D/R Factors', 'Concentration', and 'Chi/Q'. The main display area shows the following text:

```
DOSE AND RISK SUMMARIES
Non-Radon Population Assessment
Thu Jun 13 13:14:43 2013

Facility: CAP88-PC Version 3
Address: 1111 Simulation Dr
City: Portsmouth
State: OH Zip: 45111

Source Category: Single Stack
Source Type: Stack
Emission Year: 2012
DOSE Age Group: Adult

Comments: Modtest problem
```

At the bottom of the window, there are two empty panels labeled 'ERRORS' and 'CHANGES'.

Print currently viewed report or a selected set of reports



EXAMINING REPORTS

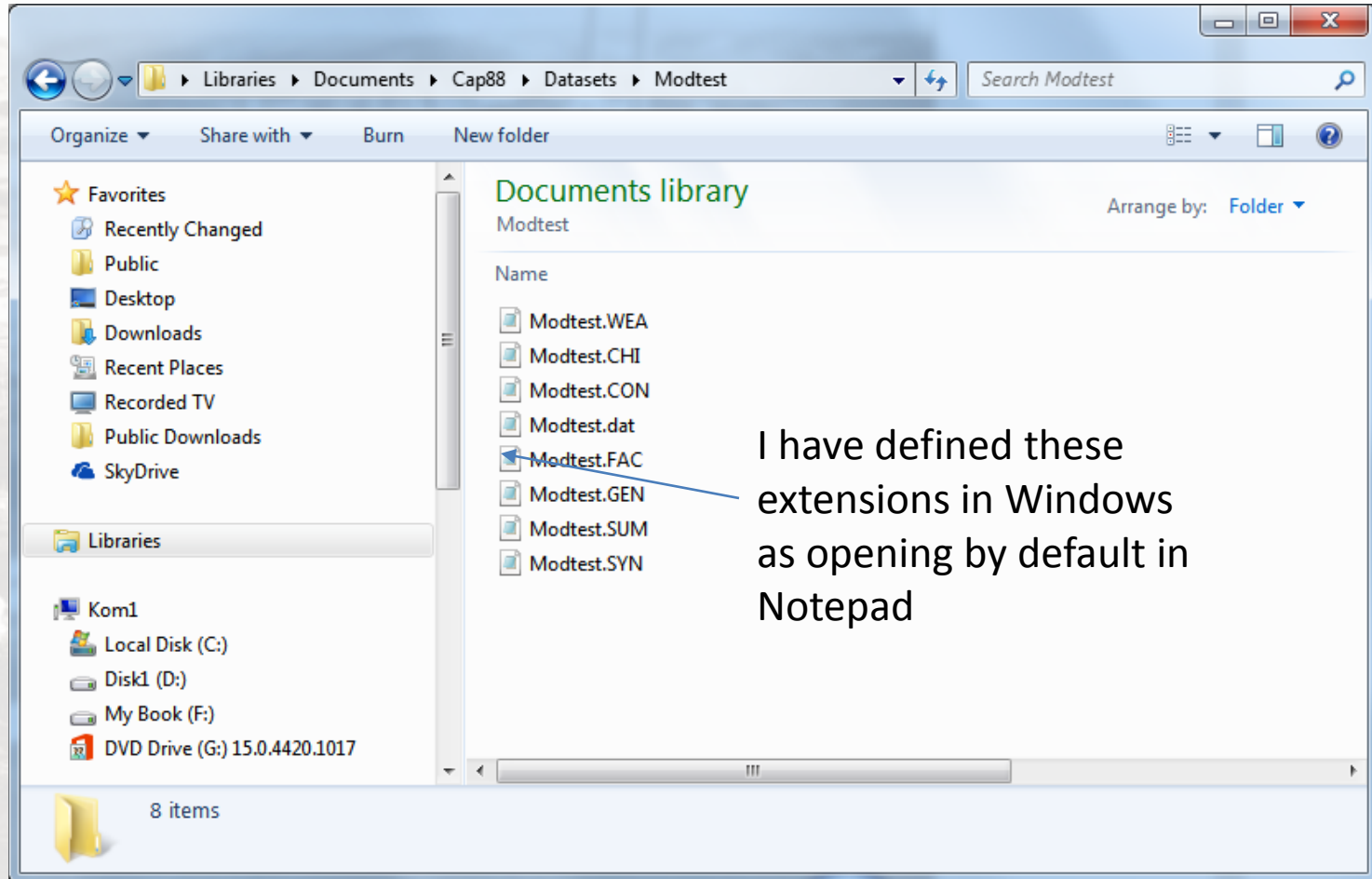
The screenshot shows a software application window titled "CAP88-PC - [Dataset Edit - Modtest.dat]". The application has a menu bar with "File", "Tools", "Window", and "Help". Below the menu bar is a toolbar with various icons. The main window has several tabs: "Dataset", "Facility", "Population", "Meteorological", "Sources", "Agricultural", "Nuclides", and "Reports". The "Reports" tab is active, showing a "Generate" button, a "Print" button, and several radio and checkbox options: "Current" (radio), "Selected" (radio), "Synopsis" (checkbox, checked), "General" (checkbox), "Weather" (checkbox), "D/R Summaries" (checkbox), "D/R Factors" (checkbox, checked), "Concentration" (checkbox), and "Chi/Q" (checkbox, checked). Below these options is a message: "Reports can take several minutes to generate". There are more tabs: "Synopsis", "General", "Weather", "D/R Summaries", "D/R Factors", "Concentration", and "Chi/Q". The "D/R Summaries" tab is active, showing the text "DOSE AND RISK SUMMARIES". A "Print" dialog box is open in the foreground, showing a list of printers: "Phaser 7100N PS", "Send To OneNote 2013", "Xerox ColorQube 8570DN PS", and two instances of "XR0000AAD8B3FB PCL6". The "Print" dialog box has a "General" tab, a "Status" section (Ready), a "Page Range" section (All), and a "Number of copies" section (1). The "Print" button is highlighted.

Standard windows print dialog



USING REPORTS

Reports are written to the dataset file folder as ASCII text files



I have defined these extensions in Windows as opening by default in Notepad



REPORTS – ASCII EDITOR

```
Modtest.SYN - Notepad
File Edit Format View Help
CAP88 - PC
Version 4.0

Clean Air Act Assessment Package - 1988

SYNOPSIS REPORT
Non-Radon Population Assessment
Thu Jun 13 13:14:43 2013

Facility: CAP88-PC Version 3
Address: 1111 Simulation Dr
City: Portsmouth
State: OH Zip: 45111

Source Category: Single Stack
Source Type: Stack
Emission Year: 2012
DOSE Age Group: Adult

Comments: Modtest problem
for Version 4 User Manual

Committed Effective Dose Equivalent
(mrem)
-----
3.59E+02
-----

At This Location: 800 Meters East Northeast

Dataset Name: Modtest.
Dataset Date: Jun 13, 2013 01:14 PM
Wind File: C:\Users\rwood\Documents\CAP88\wind Files\ports30.wnd
p File: C:\Users\rwood\Documents\CAP88\Population Files\ports.pop
Thu Jun 13 13:14:43 2013
SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location of The Individual: 800 Meters East Northeast
Lifetime Fatal Cancer Risk: 1.23E-04

ORGAN DOSE EQUIVALENT SUMMARY
(RN-222 Working Level Calculations Excluded)
```

Notepad opens the report as a continuous text file

Does not recognize page break

ASCII format is useful as input to post-processing routines



REPORTS – WORD PROCESSOR

The screenshot displays the Microsoft Word interface with a report document open. The document content is as follows:

Committed Effective Dose Equivalent (mrem)

3.59E+02

At This Location: 800 Meters East Northeast

Dataset Name: Modtest.
Dataset Date: Jun 13, 2013 01:14 PM
Wind File: C:\Users\rwood\Documents\CAP88\Wind Files\ports30.wnd
p File: C:\Users\rwood\Documents\CAP88\Population Files\ports.pop

Thu Jun 13 13:14:43 2013 SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 800 Meters East Northeast
Lifetime Fatal Cancer Risk: 1.23E-04

ORGAN DOSE EQUIVALENT SUMMARY
(RN-222 Working Level Calculations Excluded)

| Organ | Selected Individual (mrem) | Collective Population (person-rem) |
|-------|----------------------------|------------------------------------|
| _____ | _____ | _____ |

The status bar at the bottom indicates "PAGE 1 OF 6 670 WORDS" and "100%" zoom.

MS Word recognizes formatting features such as page breaks



REPORTS SUMMARY

Reports cannot be generated until the dataset is saved if any changes are made

The list of generated reports is defined in the Population tab

- You must edit the case to change the list

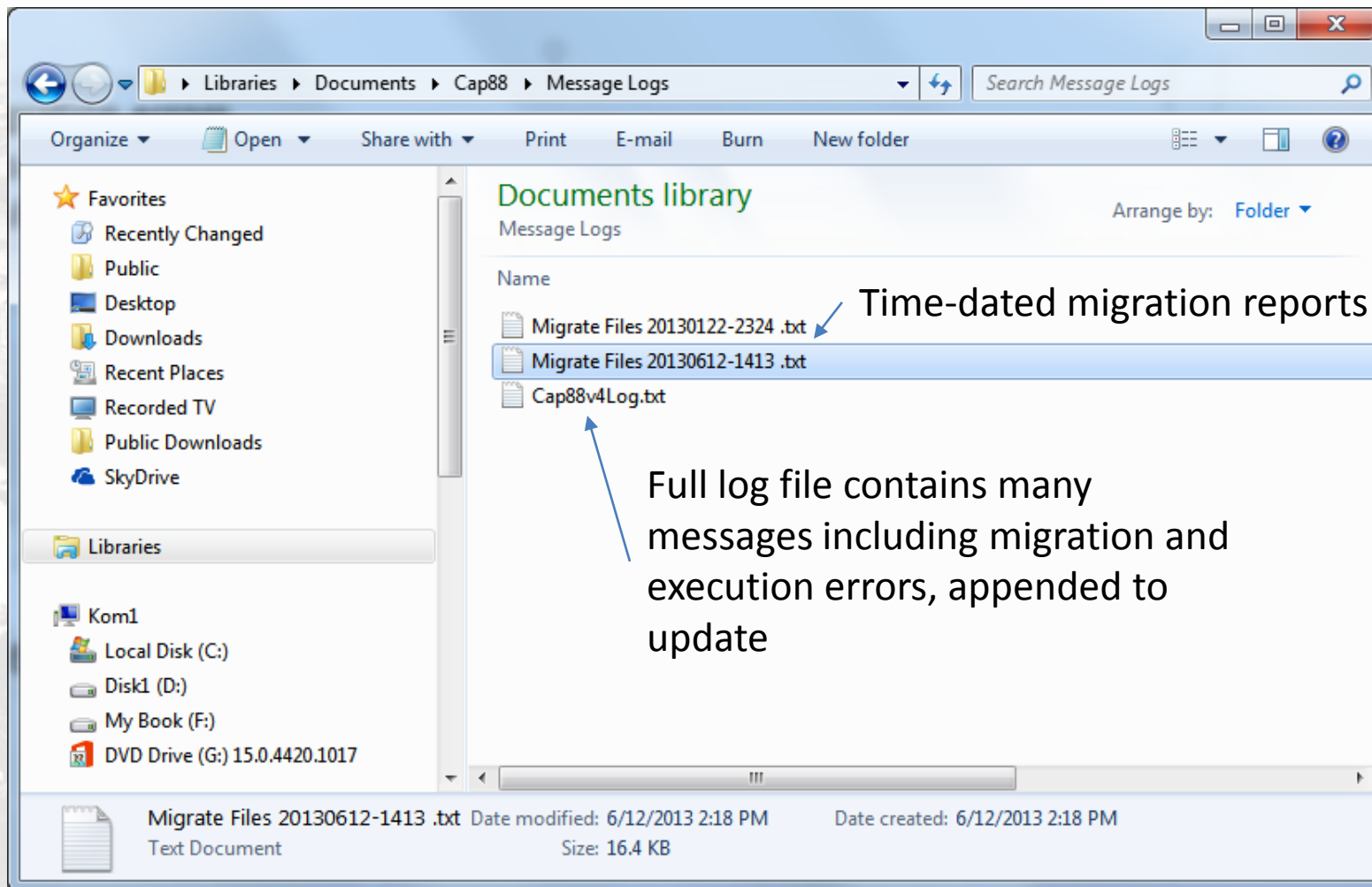
Reports are written to the dataset folder

Reports are written as ASCII text files with some formatting information

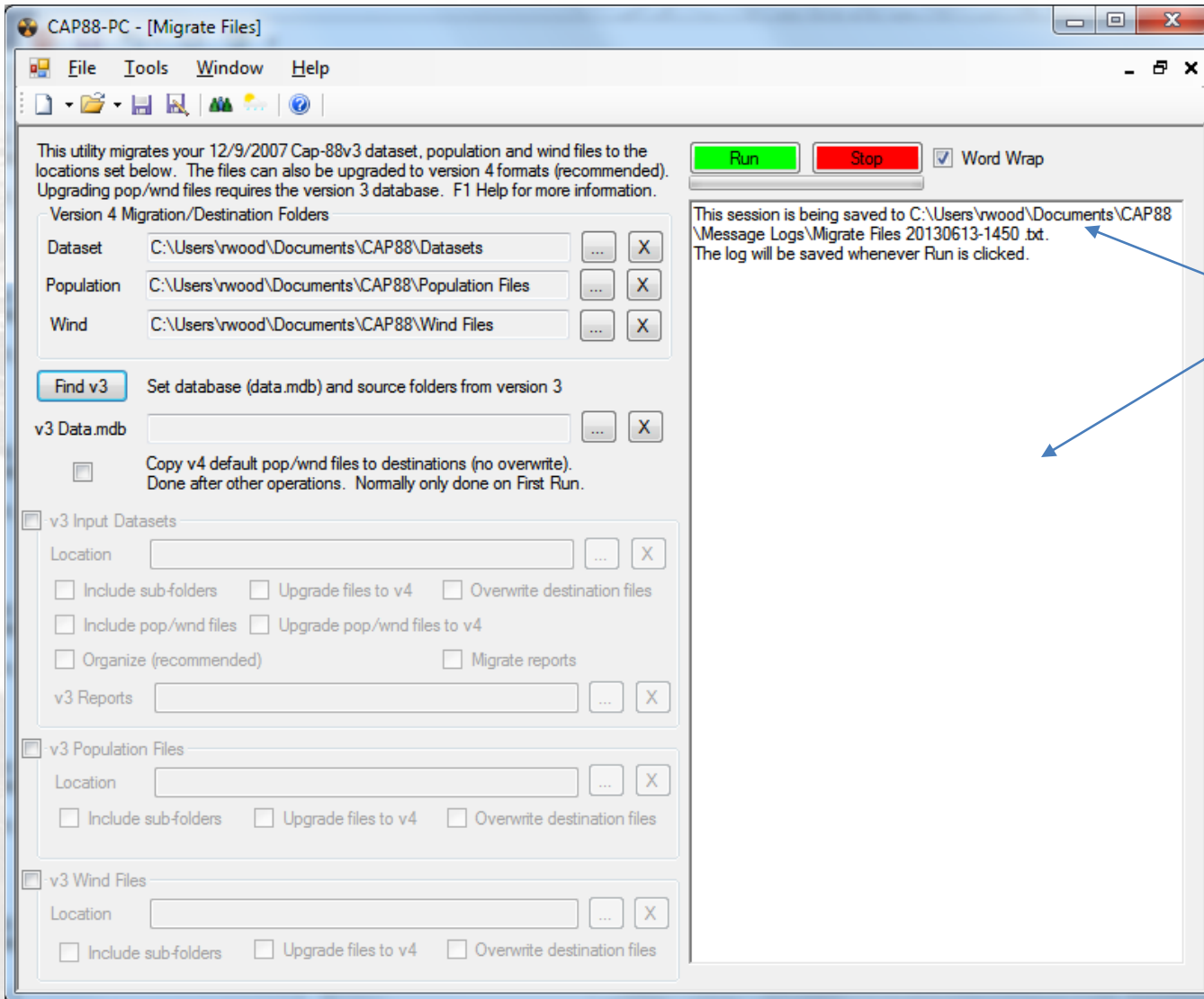


ERROR REPORTING

Error Log Locations



MIGRATION ERRORS



Migration results
Logged in file and
shown in window



DATASET ERRORS

Typically a violation of validation rule or invalid file identified

Invalid value

| Midpoints | 10 | 20 | 30 | 40 | 50 |
|-----------|----------|----------|----------|----------|----------|
| 1 - 5 | 800.00 | 700 | 4000.00 | 5600.00 | 7250.00 |
| 6-10 | 12100.00 | 24150.00 | 40250.00 | 56350.00 | 72200.00 |
| 11-15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16-20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Error description

ERRORS
Midpoints must be ascending. Midpoint 2 is less than Midpoint 1

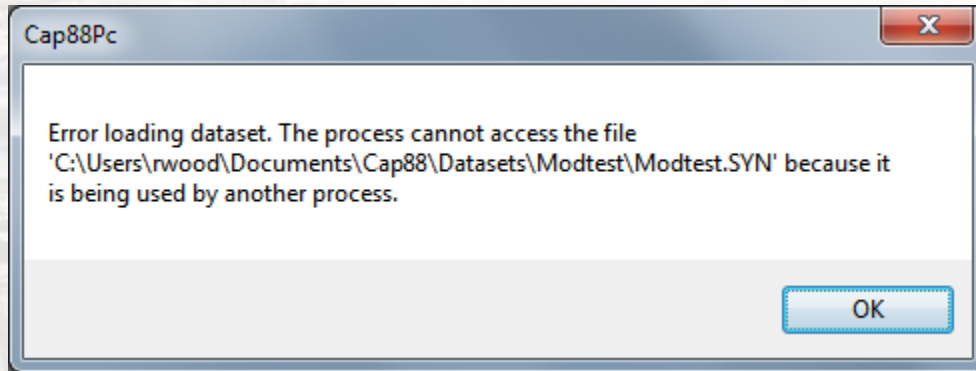
CHANGES
RunType was 'Population', is now 'Individual'
PopulationFileName was 'c:\users\rwood\documents\cap88\population files\ports.p'
Midpoint 2 was '2400', is now '700'

Cannot save dataset with open errors



EXECUTION ERRORS

Open in a message box when the faulting condition is encountered by the code



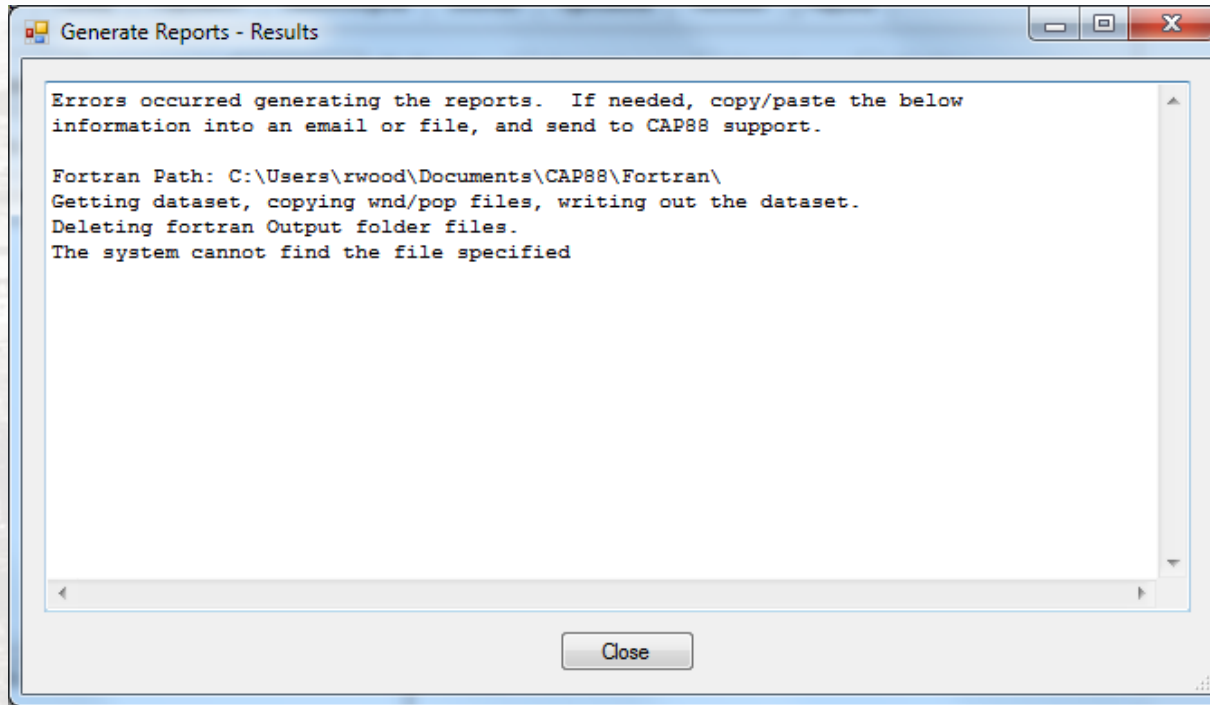
Usually somewhat descriptive

This one was caused by the fact that the report file Modtest.SYN was still open in MS Word when the dataset was opened



EXECUTION ERRORS

Sometimes not so descriptive!



```
Errors occurred generating the reports.  If needed, copy/paste the below
information into an email or file, and send to CAP88 support.

Fortran Path: C:\Users\rwood\Documents\CAP88\Fortran\
Getting dataset, copying wnd/pop files, writing out the dataset.
Deleting fortran Output folder files.
The system cannot find the file specified
```

This was generated by a failure to find the FORTRAN executable (note the path)
- solved by using the Refresh Fortran button under tools>options>advanced

All errors are appended to the end of the CAP88V4Log.txt file mentioned earlier



DEALING WITH ERRORS

Migration Errors:

- Examine the migration log to determine the error source
- Many of these errors are caused by not over-writing files (usually benign)
- Examine the data folder structure to see if everything is there
 - Datasets
 - Pop/Wnd, especially any custom ones (manually insert if needed)
 - Fortran executable and batch file is in Fortran folder (refresh if not)
- Often these can be fixed by manually re-running the migration utility

Dataset Errors:

- If persistent then perhaps your desired value is outside the allowed range
 - Contact EPA to check allowed value

Execution Errors:

- You may be able to solve these by examining the message
- Often require submittal of dataset, pop/wnd, and log file to EPA

