

# CAP88-PC V4 TRAINING

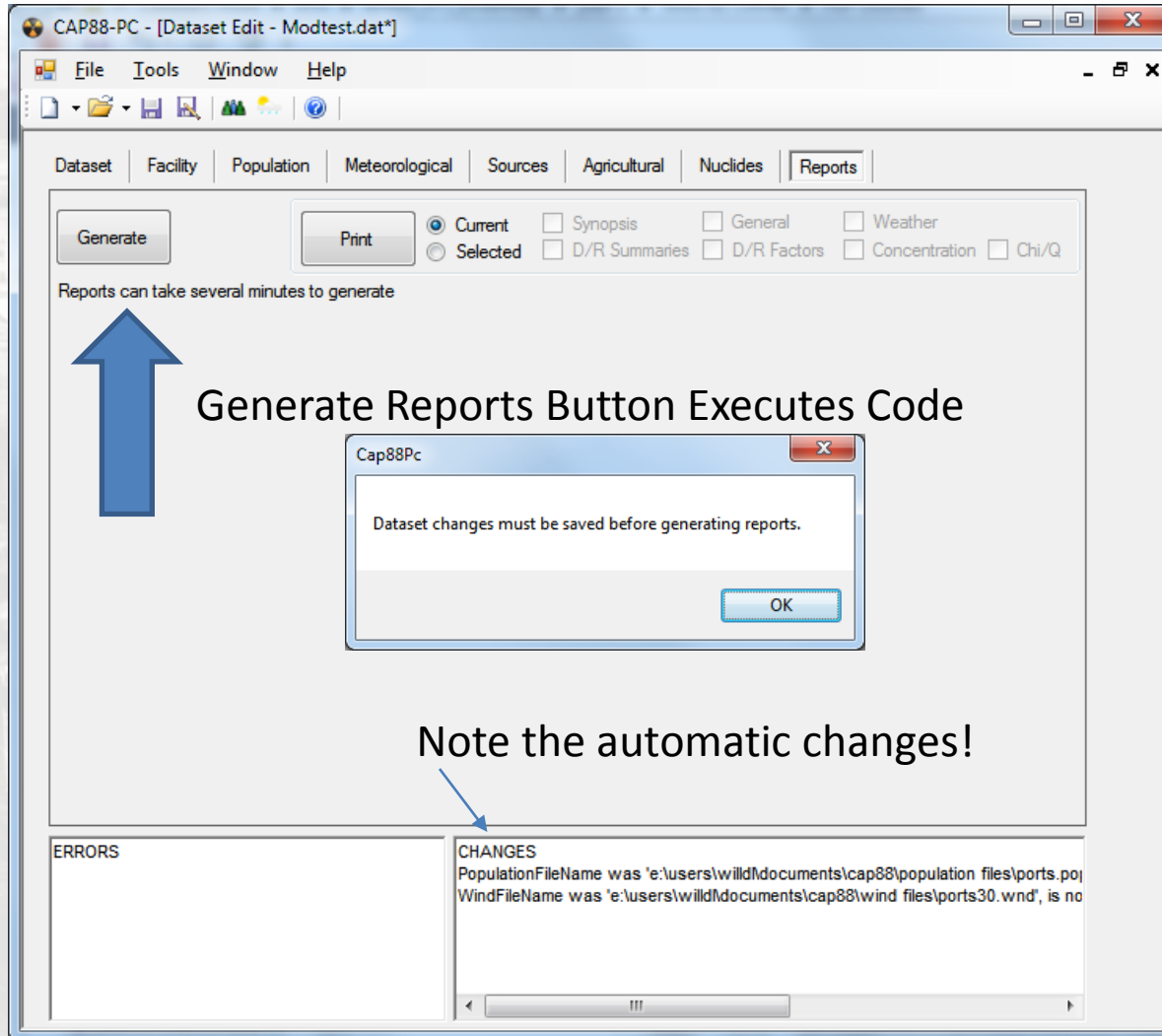
## Module 2.4

### Reports and Error Logging



# GENERATING REPORTS

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

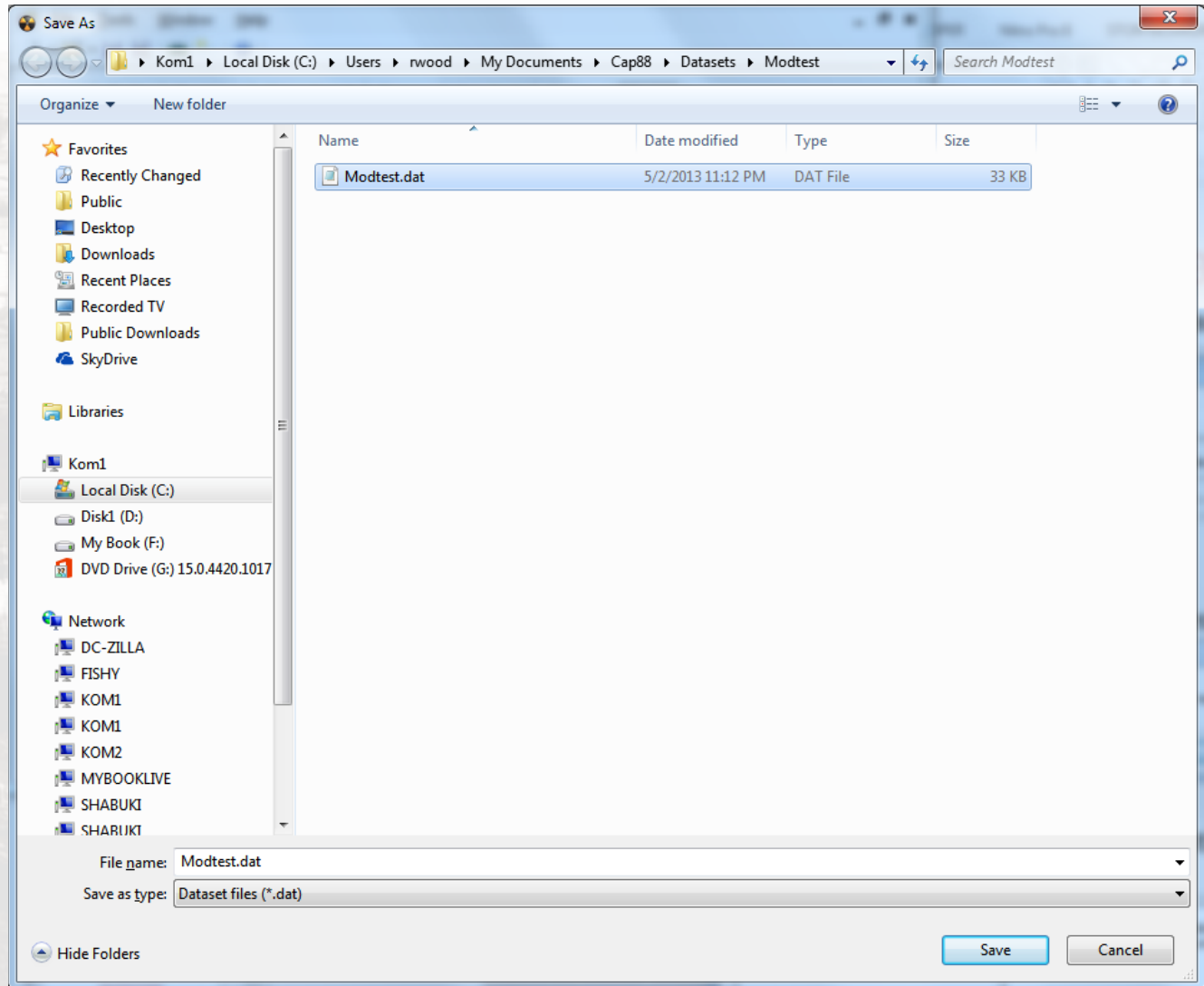


# GENERATING REPORTS

## Saving the File Before Running the Code

V4 uses standard Windows Save dialog box

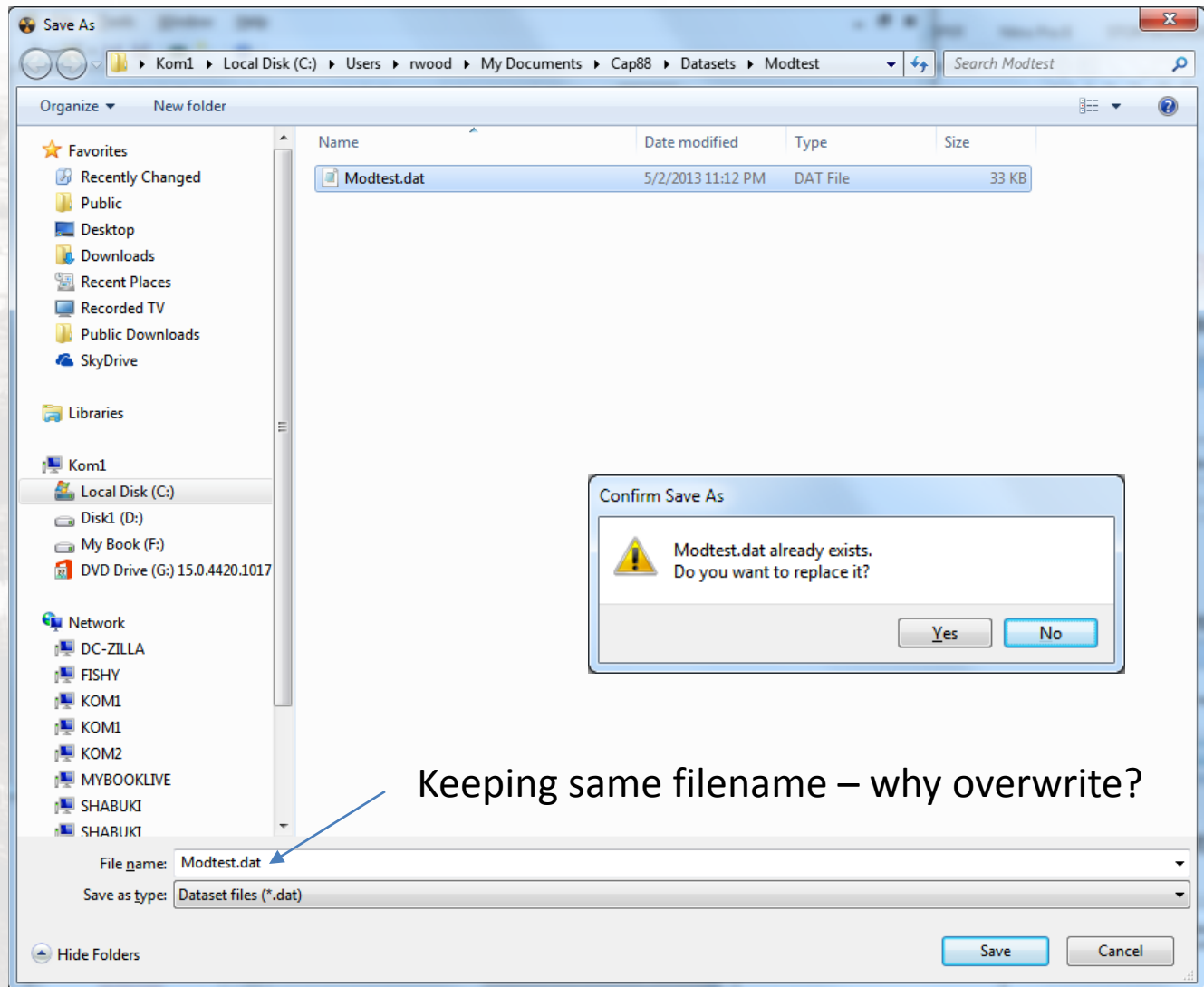
This save location is a result of the default installation path



# GENERATING REPORTS

## Saving the File Before Running the Code

This was a pre-existing dataset

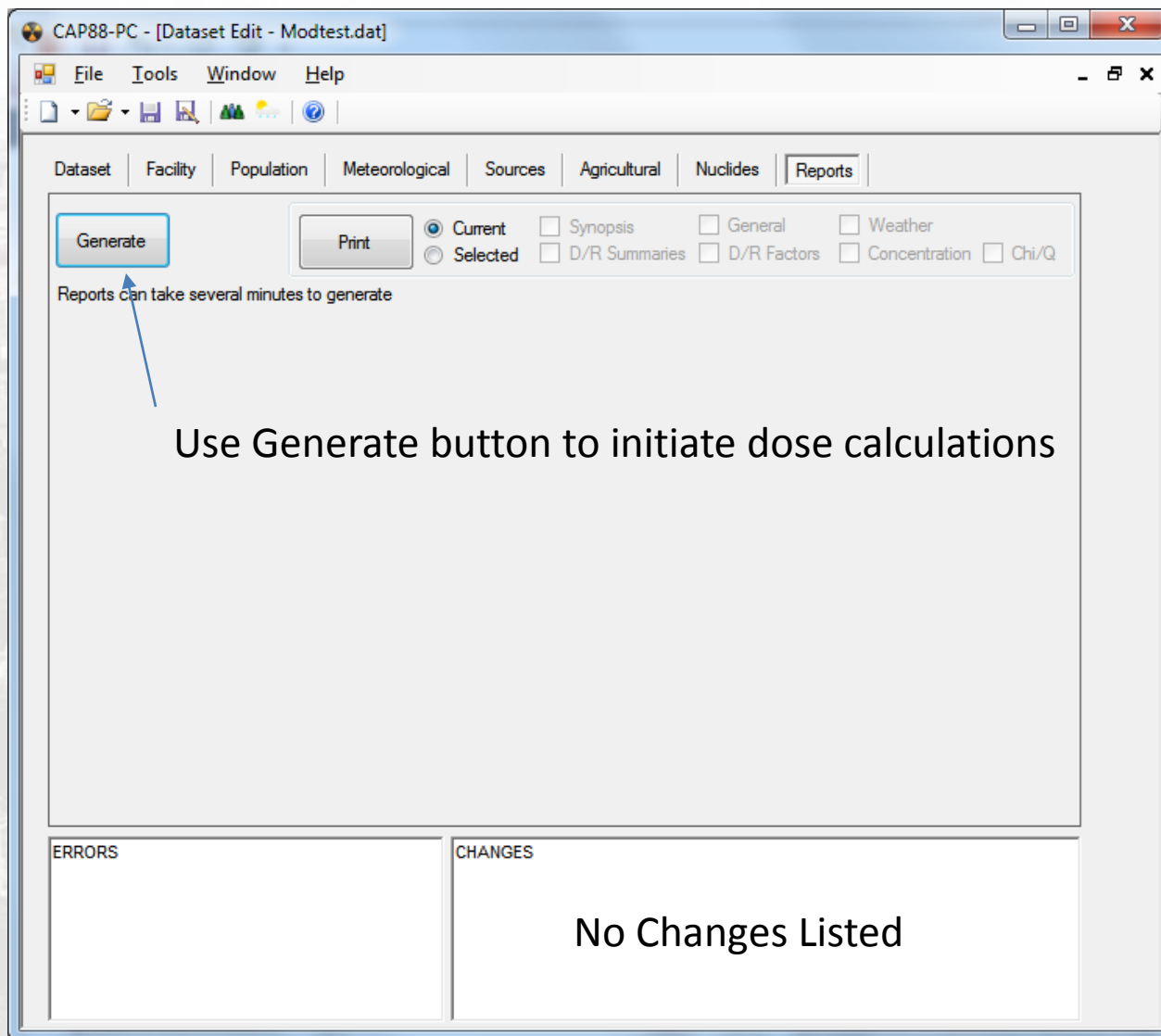


Keeping same filename – why overwrite?



# 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 a list of report types: Current (selected), Selected, Synopsis, D/R Summaries, General, D/R Factors, Weather, Concentration, and Chi/Q. Below this, a text box says "Reports can take several minutes to generate". A list of available reports is shown, with "Concentration" selected. The report content is displayed in a text box, showing the title "CAP88-PC Version 4.0", the subtitle "Clean Air Act Assessment Package - 1988", and the main title "SYNOPSIS REPORT Non-Radon Population Assessment Thu Jun 13 13:14:43 2013". At the bottom, there are two empty boxes labeled "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

C A P 8 8 - P C  
Version 4.0

Clean Air Act Assessment Package - 1988

S Y N O P S I S R E P O R T  
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 text box that says 'Reports can take several minutes to generate'. Below this is another set of tabs for '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 are two empty boxes labeled 'ERRORS' and 'CHANGES'.

Print currently viewed report or a selected set of reports





# EXAMINING REPORTS

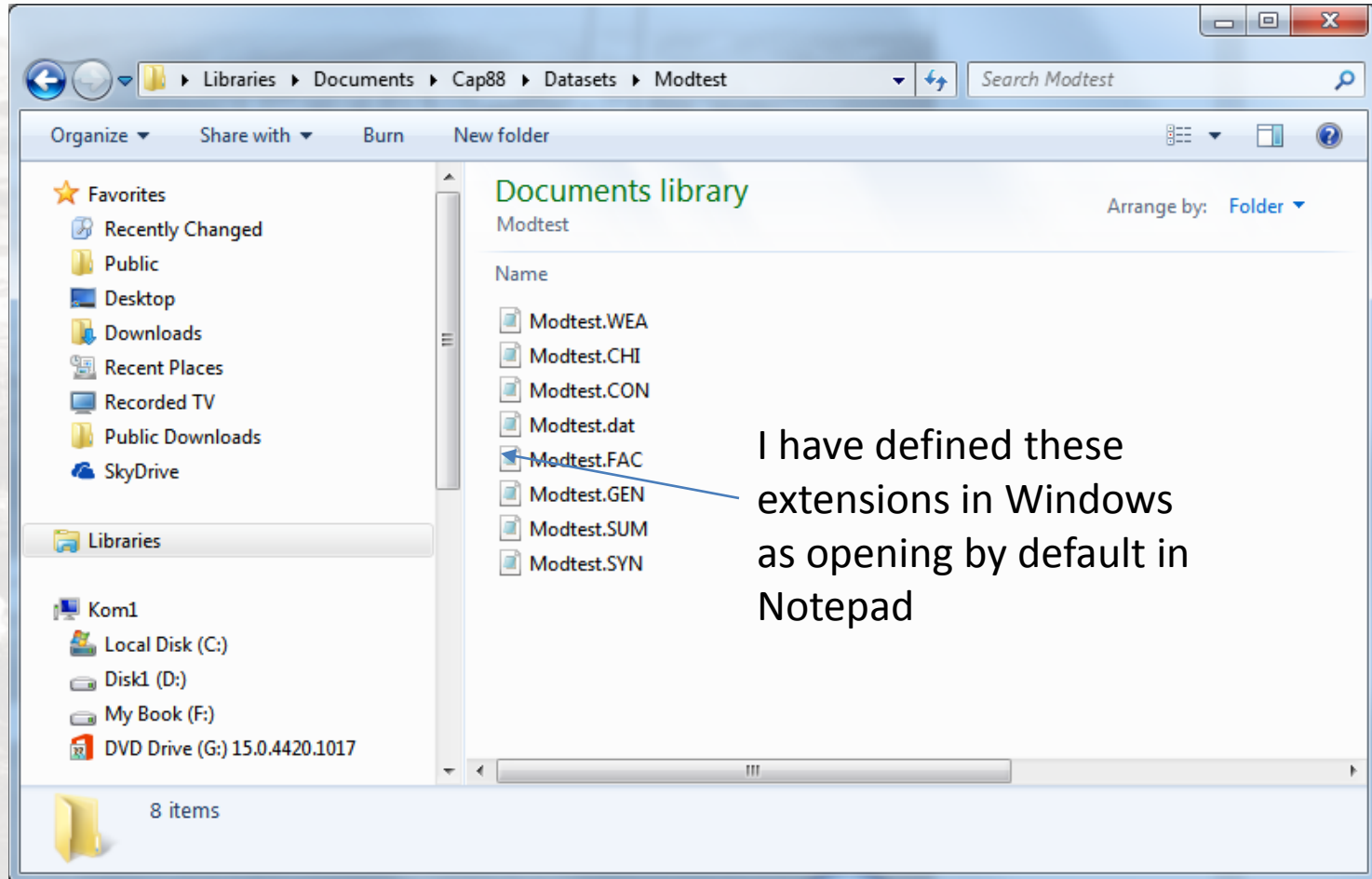
The screenshot shows a software application window titled "CAP88-PC - [Dataset Edit - Modtest.dat]". The window has a menu bar with "File", "Tools", "Window", and "Help". Below the menu bar is a toolbar with various icons. The main area of the window is divided into several tabs: "Dataset", "Facility", "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 "XRX0000AAD8B3FB 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

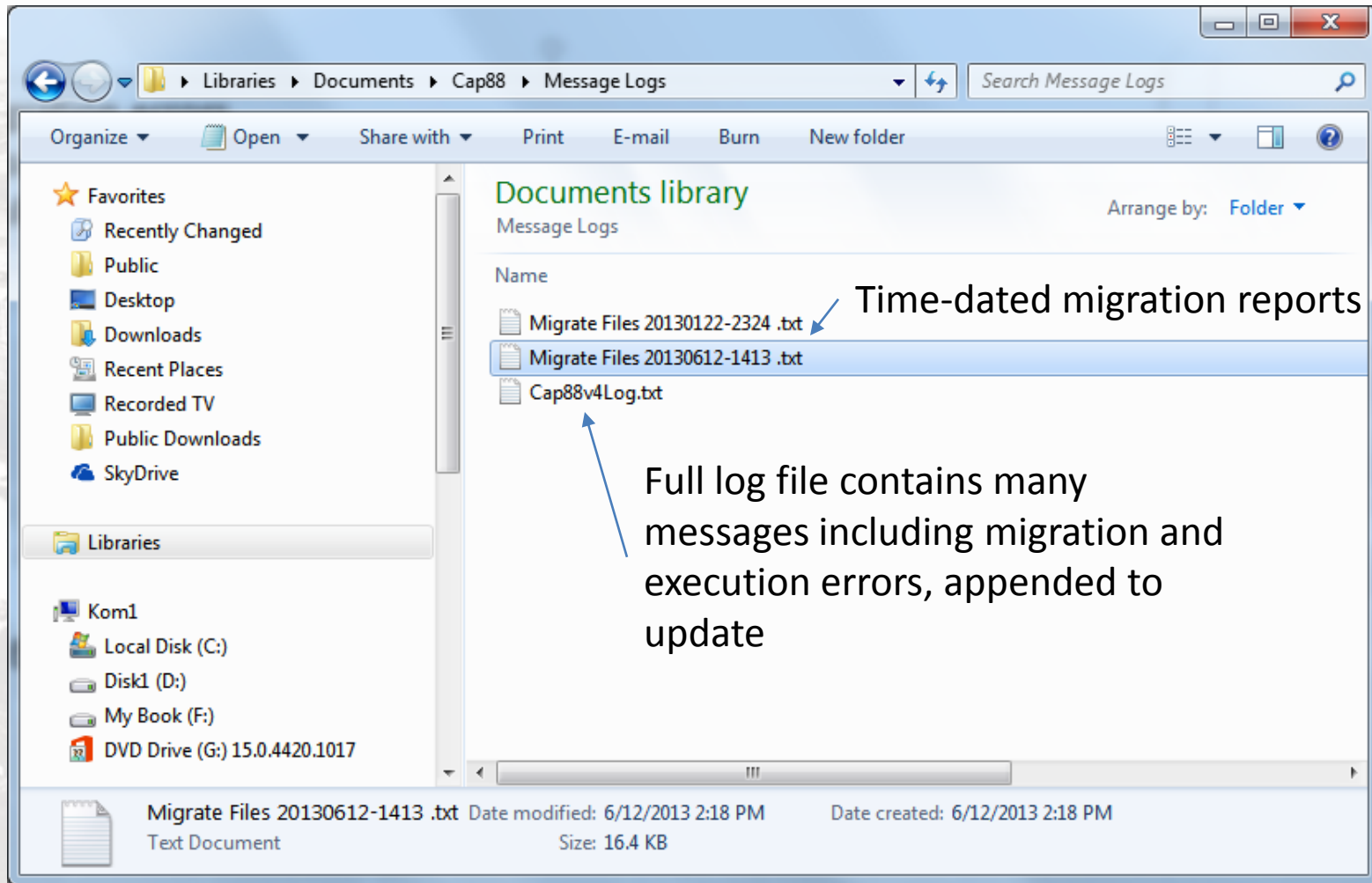
Reports are written to the dataset folder

Reports are written as ASCII text files with some formatting information

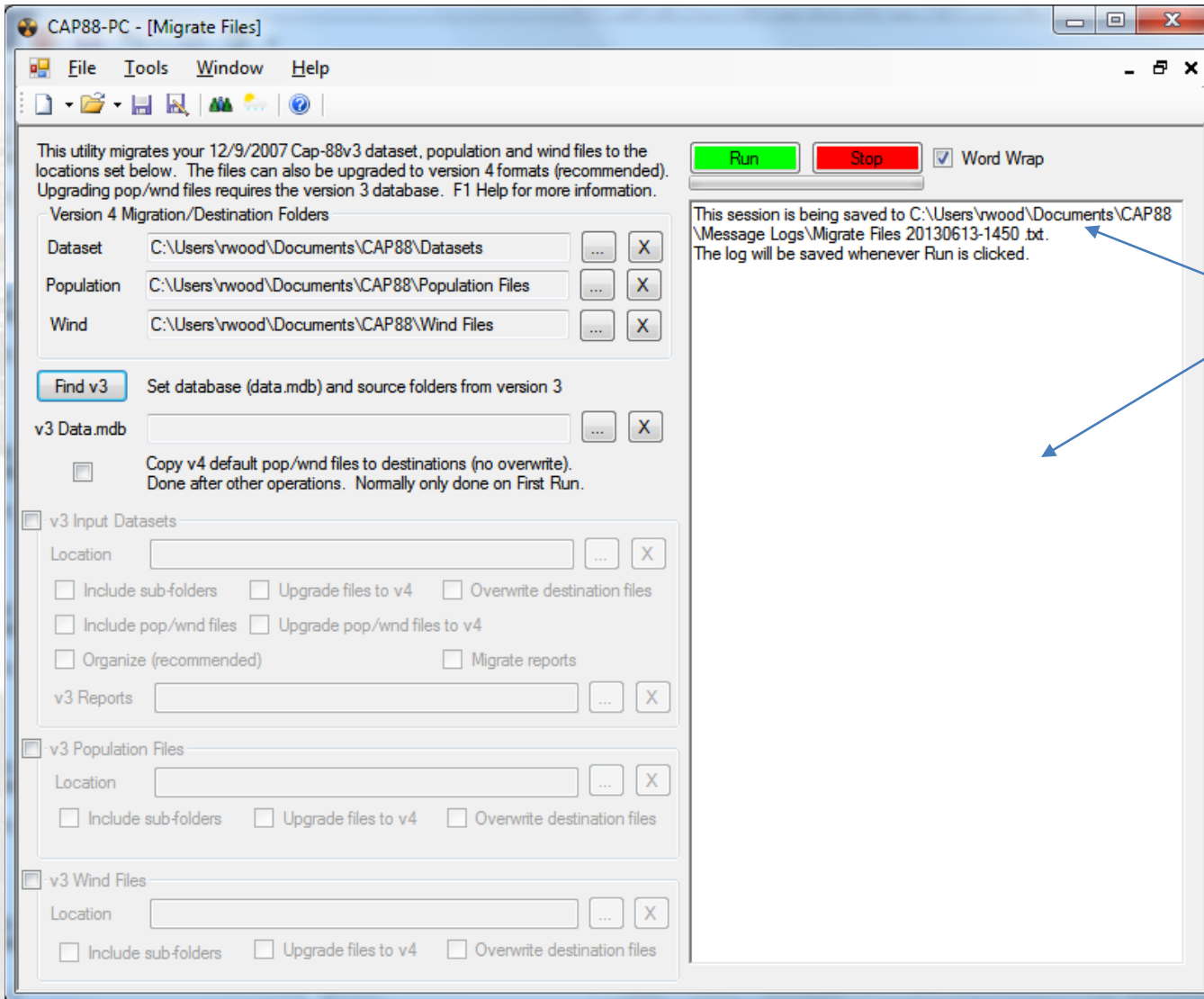


# ERROR REPORTING

## 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

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

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

Midpoints: 10

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

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

**Invalid value**

**Error description**

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

**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'

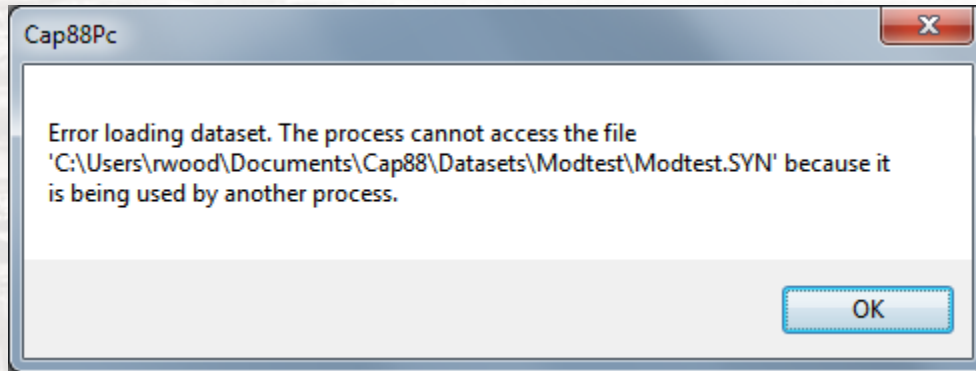
Cannot save dataset with open errors





# EXECUTION ERRORS

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



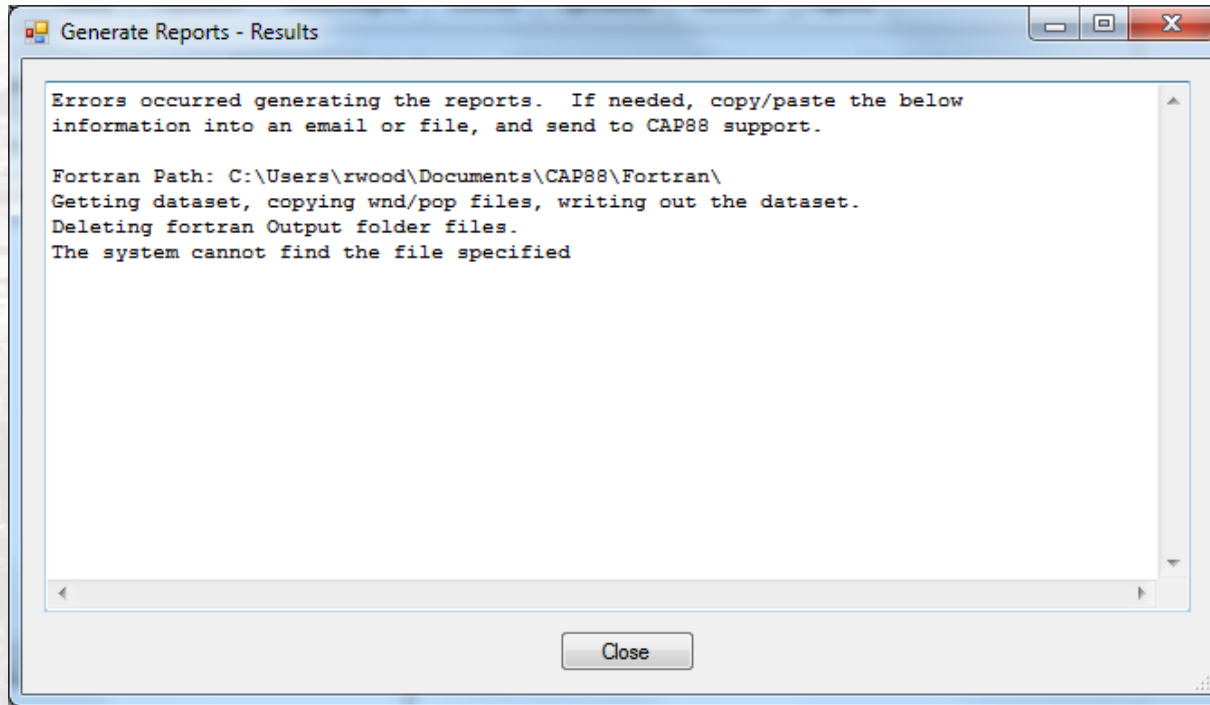
Usually somewhat descriptive

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!



```
Generate Reports - Results

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

Close
```

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

