Postprocessor Tests

Objective

These testcases are designed to test the following capabilities of the postprocessor:

- creation of restarts
- creation of visualisation files
- postprocessor diagnostics
- recovery of linear aborts

For each postprocessor testcase, the *truchas* code is run and the output postprocessed using pre-existing macro files. The resulting output from the postprocessor is then verified. The verification method used depends on the particular type of testcase.

Restarts

Both standard and mapped restarts are tested. Mapped restarts where the mapping occurs from one mesh to one mesh and from two meshes to one mesh are tested. The resulting restart file from the given restart testcase is then verified by running a *truchas* restart simulation.

Visualisation

The following visualisation packages are tested:

- GMV
- TecPlot
- EnSight
- VTK

For each package binary writes are tested except for the *TecPlot* testcase where only an ascii writer is currently supported. Verification methods for the resulting outputted graphics file are employed using batch commands to ensure automation. For example, *gmvbatch* is used for the *GMV* testcases and *ens_checker* is used for the *EnSight* testcases.

Diagnostics

The following postprocessor diagnostic commands are tested:

- query
- stat
- probe

Verification of the results from these commands involves simply checking for the existence of text files that contain postprocessor output resulting from these commands.

Aborts

Linear residual aborts are tested. Note that in this testcase a *truchas* simulation that is designed to fail is run. *GMV* files are created containing the aborted residual variables. These are verified using the *gmvbatch* command.