Description of cumulative DOE-2.2R version 52m bug fixes (since public release of version 52d):

1. In version 048n (imported from 2.2 standard release: 1) The Intel compiler, used in place of the previous Watcom compiler, does not automatically support the use of environment variables in file path names. Modifications were made to incorporate the Get_Environment_Variable function for this purpose. No differences in results expected.
2. In version 048p (imported from 2.2 standard release): 1) Maximum size of libraries increased. No differences in results.
3. In version 048q (imported from 2.2 standard release): 1) POLYGONS with very large displacements (X or Y > 99,999 ft) could produce round-off errors that cause polygon calcs to be inaccurate or fail. Polygon vertices now restricted to less than 52,800 feet (10 miles). Differences in results can be expected for vertex values greater than this limit. 2) If an hourly-report contained both loads and hvac blocks, the D2SimViewer would not itemize the reports correctly in the selection list. The report page header was modified to be unique for each module. No difference in results.
4. In version 048r (imported from 2.2 standard release): 1) Program modified to allow hourly report page numbers greater than 999. 2) More detailed error trapping added to report generator for when write statement fails. Diagnostic aid only; no difference in results. 3) The LOAD-MANAGEMENT command did not properly set several DO loop end boundaries; could result in a circulation-loop or other component pointer having a zero value which could result in memory being overwritten; most likely in a SCHEDULE block but possibly elsewhere. Unpredictable but possibly serious simulation errors could result when the LOAD-MANAGEMENT command was used.
5. In version 52h: 1) The keword limit for the COMPRESSOR:INTERNAL-THROTTL allowed a value of 0.; resulting in a simulation crash. Low limit was changed to disallow 0, as this value does not make sense. 2) Hourly report files forced to have a length of zero if unused. No difference in results. 3) A cascaded condenser could sometimes experience a divide-by-zero when iteratively solving for the suction and demand refrigerant flows; resulting in a program crash. No difference in results expected if program didn't crash. 4) In a mechanical subcooler, the calculation for heat exchanger film resistance used an out-of-date value for refrigerant mass flow. This could result in a divide-by-zero and program crash. Very small difference in simulation results possible. 5) The DetachFromList function had a Watcom/Intel compiler incompatibility which could result in a program crash when encountered. No difference in results.
6. In version 052i: 1) BDL program would crash if a BLOCK-CHARGE were defined but not referenced by a UTILITY-RATE. Problem traced to a Watcom/Intel compiler incompatibility in routine CheckBlockRef. No difference in results expected. 2) When WIN-SPEC-METHOD was required but not defined, the keyword's value was improperly set; causing a BDL crash. No difference in results expected.
7. In version 052m: 1) BDL was updated with various bug fixes ported over from DOE-2.2 (2015-07-13). 2) For a window, CONDUCT-TMAX-SCH and MIN-SOLAR-SCH would be ignored unless CONDUCT-TMIN-SCH and/or MAX-SOLAR-SCH were also specified. 3) The WALL-PARAMETERS output routine in BDL was writing over the 3rd data array (display area) rather than the 4th. 4) Optimization was turned off for the REP.F module in an effort to eliminate the random format errors encountered in the report generator.