SAFE® 2014 (v14.2.0)
Release Notes

Notice Date: 2016-02-29

This file lists all changes made to SAFE since the previous version. Incidents marked with an asterisk (*****) in the first column of the tables below are more significant.

It is strongly recommended that you update to v14.2.0 if you are using v14.1.0 or v14.1.1 and review results from models run in those versions for possible changes. See the first Analysis Incident Resolved (82080, 85182, 85385) below for details.

Changes from v14.1.1 (Released 2015-07-14)

Analysis
Enhancements Implemented

*	Incident	Description
	83337	The hyperstatic load case used to calculate secondary forces due to prestress and other self-equilibrating loads has been enhanced to provide additional control over the solution method. The user can now select between distributed flexible spring supports or a statically-determinant set of three restraint points. In addition, the stiffness of the distributed springs can now be modified. Previously distributed springs were always used, since the three-point restraints only work for fully continuous structures, and the spring constants were determined automatically. The new options enable more user control for sensitive models, and are not normally needed. In addition, a warning is issued in the analysis log file (.LOG) if the applied reaction loads from the prestress load case do not appear to be self-equilibrating.

Miscellaneous
Enhancements Implemented

*	Incident	Description
	89215	The version number has been changed to v14.2.0 for a new minor release.

Loading
Incidents Resolved

*	Incident	Description
*	88066	An incident was resolved where the P/T loads calculated from the tendons onto the slabs were sometimes not in equilibrium with themselves. This happened when the tendons were drawn improperly and part of them lay outside of the slab. This is now trapped and internally corrected. A check of the total base reaction for the P/T load case would have revealed the error.

Analysis
Incidents Resolved

*	Incident	Description
*	82080 85182 85385	An incident was resolved where analysis and design results could be incorrect for certain models when run in versions 14.1.0 and 14.1.1. Analysis and design results from these versions should be re-run in the new version for verification. No other versions were affected. Following are the conditions where this error could occur: (1.) When property modifiers were assigned to area (slab or wall) objects, they could actually be applied to incorrect area elements in the analysis model, resulting in the stiffness of the slab or wall being incorrectly distributed. This could significantly affect the analysis and design results. Property modifiers specified in slab and wall property definitions were not affected, only those assigned directly to objects. Property modifiers applied to beam properties or objects were not affected. (2.) When edge releases were assigned to slab area objects, they could actually be applied to incorrect area elements in the analysis model. This could affect the analysis and design results, but the effect would generally be localized. (3.) Tabulated results for area (slab and wall) forces and stresses, as well as soil pressures, were correct for each area element presented. However, the elements could be listed in the tables as being associated with the incorrect objects. The correct mapping was presented in the table "Objects and Elements - Areas". Tabulated strip forces were not affected. (4.) Tabulated wall forces and reactions at wall joints could be incorrect. Reactions at joints not connected to walls were not affected. (5.) When plotting area (slab and wall) forces or stresses, and Contour Averaging at Nodes was requested based on objects, the averaging could be performed at the wrong nodes. This was a display issue only and did not affect any other analysis or design results. Plotting of strip results was not affected. Conditions (1.) and (2.) are the most significant, but only affected models having the specified assignments. Conditions (3.), (4.), and (5.) affected more models, but were not generally significant.
*	83831 84830 86196 86267 86340	An incident was resolved where response-spectrum load cases imported from ETABS that included eccentricity effects could be become incorrectly defined if other load cases were deleted after importing the model from ETABS. In particular, deleting other load cases could cause the imported response-spectrum load cases to reference the wrong linear static load case that represents the torsional effects. When this occurred, the error was obvious by viewing the definition of the response-spectrum load case.

Punching Shear Design
Incidents Resolved

*	Incident	Description
	81484	An incident was resolved for the punching shear check using the Norway national annex of the Eurocode 2-2004 code where the punching shear capacity was calculated using a factor of k^2/3 instead of k^(3/2). The previous results were always conservative.

Database Tables
Incidents Resolved

*	Incident	Description
	82456 84255	An incident was resolved where it was not possible to export to Excel from the Interactive Database Editor when newer versions of Microsoft Office were present on certain machines. This was because the exported file was of Excel type .XLSX but was given the file extension .XLS, which some newer versions of Excel rejected as being incompatible. Now the extension will be exported as .XLS or .XLSX according to the version of Excel present on the machine. No results were affected.