

PETRORISK VERSION TRACKER

Yves Verhaegen (yves.verhaegen@concawe.eu)

25 April 2024

Version 8.02 (release date 25/04/2024) incorporates the various smaller updates reported below:

- Removed duplicate constituents from the constituent library, thereby reducing the number of representative constituents from 1,560 to 1,504 constituents.
- Allow the user to apply a Mixture Allocation/Assessment Factor (MAF) in 'General Settings'. By default, a MAF value of 1 is applied.
- The industrial and professional end uses 'Oil and Gas Drilling and Production Operations' (PetroRisk use IDs 10 and 11) have been split up into 'Onshore' and 'Offshore' uses (PetroRisk use IDs 45 - 48).
- Implemented the most recent ESIG-ESVOC and Concawe spERCs. Detailed documentation can be retrieved from [ECHA's Use Map Library](#). The 'spERC' and 'Release Factors' tables have been updated accordingly.
- The 'spERC' and 'Release Factors' tables have been incorporated into 2 related components, which allow the user to easily modify these tables and reset these to the standard settings upon desire.
- Incorporated 'generic' air and wastewater treatment techniques, which apply a single default removal efficiency to all representative constituents. In reality, in any treatment, different constituents are removed at different efficiencies. In absence of appropriate treatment models, a generic air or wastewater removal efficiency can be applied to all constituents.
- Split up the 'Emission Specific RCRs' component into 3 separate components: (1) 'Review Air Treatment', (2) 'Review Wastewater Treatment' and (3) 'Review Emission specific RCRs'. The first 2 components are editable tables that allow the user to apply custom removal efficiencies.
- An additional worksheet has been added to the .xlsx output file: it reports the non-default settings and values the user applied during the PetroRisk assessment.
- Several small corrections in the workflow to avoid potential variable type (string, double, integer) mismatch errors.

08/11/2022:

- Made corrections to the allocation of missing compositional mass to Hydrocarbon Blocks.

In the metanode 'Product Composition & DNELs' > 'Constituent Mass Fractions' > 'Assign Orphan Masses' > 'Assign Orphan Masses', forced the starting and ending carbon number to be integer values.

In the metanode 'Product Composition & DNELs' > 'Product Composition' > 'Extract Block Concentrations', corrected the cutoff of 1% to 100% compositional coverage for allocating missing mass to hydrocarbon blocks.

26/10/2022:

- The extraction of the hydrocarbon block concentrations (in the metanode 'Product Composition and DNELs' > 'Product Composition') was updated to convert integer value attributes (columns) to double value attributes.
- The Excel Reader node 'Open Product Lifecycle tab of Input File' (in the 'Release Estimation (before RMMs)' metanode) was limited to extracting data from columns B - D, to prevent the creation of empty attributes (columns).

Version 8.01 (release date 27/07/2022) is a complete overhaul of the PetroRisk Tool, developed in the [KNIME](#) environment instead of in Excel and Visual Basic. It applies, on top of the REACH Guidance approach, the main principles that were developed during previous PetroRisk versions to facilitate

the implementation of the Guidance approach on complex hydrocarbon substances. Several of the Guidance methods and adopted PetroRisk principles have been further improved and corrected during the development of version 8.01. Amongst others, version 8.01 implements the most recent versions of the ECHA Guidance documents, of the SimpleTreat and SimpleBox models, and of the ESIG specific Environmental Release Categories (spERCs) that were available at the time of release. These and other improvements and corrections are explained in large detail in the most recent Concawe Report on PetroRisk (*i.e.* the PetroRisk 'Manual').

Versions 1.01 to 7.09 were developed as macro-enabled Microsoft Excel workbooks. With increasing version number, the tool was initially repeatedly updated with new functionalities and subsequently repeatedly adapted with minor improvements and corrections. The main principles developed during these PetroRisk versions have been adopted in PetroRisk version 8, and are discussed in large detail in the most recent PetroRisk Report. Corrections to the Excel worksheets and Visual Basic code of previous versions are no longer relevant, and are no longer captured in the Version Tracker.