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**STATE OF ACTIVATION CROSS SECTION UNCERTAINTIES AND THEIR EFFECT ON FUSION APPLICATIONS.**

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Errors in activation calculations have been obtained considering the activation cross sections uncertainties included in the latest available nuclear data libraries, assuming the neutron environment in the ITER vacuum vessel.

The most relevant cross sections and corresponding uncertainties regarding isotopic concentration limits for hands-on and remote recycling, and shallow land burial have been identified. The methods used to determine these uncertainties, based either on theoretical models or experimental data evaluations, have been analyzed.

When the uncertainties are extracted from theoretical models such as systematics, graphical information or estimates, their values may vary from less than one percent to a factor of five. Here, we consider these errors as acceptable and only in some critical reactions the need of experiments is proposed. In those cases when the experimental data have been used, a study of the experimental data library EXFOR has been developed and new uncertainty values have been proposed. The comparison between results using these new values and those considering the original uncertainties is very useful in the quality assessment of activation data libraries and shows the need for new cross sections measurements and evaluations.