

**Table S1.** Assumptions and limitations considered in the life cycle assessment of remediation activities of the environmental liability SA\_124\_02D.

Assumptions/Limitations	Detail
Assumptions	To quantify the inputs related to the use of heavy machinery and mobil equipment, the specific time of use and quantity of parts and lubricants were estimated for each machinery previous their preventive maintenance. This information was obtained from specific records. After that, this information was extrapolated to the time of the use of the machinery in the remediation of the environmental liability SA_124_02D. Next, there were calculated the principal component of each part and lubricant from the technical data sheet available from the distributor.
	Similar requirements related to fuel consumption, tools and materials were assumed for the reshaping and revegetation as for the phase of access routes and facility construction.
	The porcentual composition material of face masks and safety boots was estimated according with technical sheet available from the distributor.
	There were considered only the tools, materials for remediation and PPE that are hazardous waste after the use, therefore they are discarded.
	The PPE lifetime was calculated from the usage record sheets. There were considered only the tool and PPE with a duration of a lifetime specific for the activities of remediation of the studied environmental liability. Materials with low rotation were not included in the inventory.
Limitations	Single-use plastic used in the food delivery for alimentation of workers in the place of work was not considered because the number of personal is variable depending of the activities.
	Components of tools and equipment used in the topographic activities and physical-chemical analysis in the monitoring of soil and water were not considered because their long-lasting lifetime.
	During all the remediation process, there were two monitoring of soil and water, therefore the reagents used in the physical-chemical analysis were not considered because the amount of reagents used is small compared with total resources in the remediation activities.
	The components of shoelace of safety boots were not considered because their high variety of designs and compositions.