APPENDIX G:

Scoring Guidelines for Environmental Evaluation Matrix Tool

Construction (Gate 1)

C1,1
Life Stage: Construction: Supply Processes
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on water quantity and/or water quality?	5	1

If the supply processes do have an environmental impact on water resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The extraction of raw material creates residues with high water pollution potential (see Water Resource Table for information) to the ambient environment.
- The packaging of raw material that enters the construction site contains toxic or hazardous substances that might leak from it if improper disposal occurs.
- Acids are required during the ore extraction of virgin materials.

C1,2
Life Stage: Construction: Supply Processes
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on regional air quality and/or global conditions?	5	1

If the supply processes do have an environmental impact on air resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The materials used cause substantial emissions of toxic, smog-producing or greenhouse gases into the environment and suitable alternatives that do not do so are available.
- Resources (raw material, consumables etc) are manufactured or extracted by processes generating residues with air pollution potentials.

C1,3
Life Stage: Construction: Supply Processes
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on land quality and/or land quantity?	5	1

If the supply processes do have an environmental impact on land resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The extraction of raw material creates substantial toxic solid and/or liquid residues.
- Large amounts of the raw material required for the construction phase is restricted, toxic and/or radioactive.
- Acids are required during the ore extraction of virgin materials.

C1,4
Life Stage: Construction: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on mineral and/or energy resources?	5	1

If the supply processes do have an environmental impact on Mined Resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- A scarce material is used where a reasonable alternative is available
- One or more of the principal materials used during the construction process requires energy-intensive extraction.
- Large quantities of scarce consumables are used in the construction process
- All incoming packaging is from virgin sources and consists of three or more type of materials

C2,1
Life Stage: Construction: Site Selection & Development
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the site selection and development have an impact on water quantity and/or water quality?	5	1

If the site selection and development does have an environmental impact on water resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- The site is developed with any disturbance of river flows and/or groundwater sources.
- Toxic residues result from the development and are not recycled but discharged into the water system.

C2,2
Life Stage: Construction: Site Selection & Development
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the site selection and development have an impact on regional air quality and/or global conditions?	5	0

If the site selection and development does have an environmental impact on air resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic residues (gaseous and/or solid) are generated during site development and no recycling is practiced.

C2,3
Life Stage: Construction: Site Selection & Development
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the site selection and development have an impact on land quality and/or land quantity?	5	1

If the site selection and development does have an environmental impact on land resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- The site is developed with massive disturbance or any destruction of natural areas.
- Toxic residues or large quantities of solid residues are generated during site development and no recycling is practiced.

C2,4
Life Stage: Construction: Site Selection & Development
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the site selection and development have an impact on mineral and/or energy resources?	5	1

If the site selection and development does have an environmental impact on Mined Resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- A complete new energy infrastructure is installed during site development.
- Energy use for construction is high and less energy-intensive alternatives are available.

Operation (Gate 1)

O1,1
Life Stage: Operation: Supply Processes
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on water quantity and/or water quality?	5	1

If the supply processes do have an environmental impact on water resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The extraction of raw material creates residues with high water pollution potential (see Water Resource Table for information) to the ambient environment.
- The packaging of raw material that enters the plant contains toxic or hazardous substances that might leak from it if improper disposal occurs.
- Acids are required during the ore extraction of virgin materials.

O1,2
Life Stage: Operation: Supply Processes
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on regional air quality and/or global conditions?	5	1

If the supply processes do have an environmental impact on air resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The materials used cause substantial emissions of toxic, smog-producing or greenhouse gases into the environment and suitable alternatives that do not do so are available.
- Resources (raw material, consumables etc) are manufactured or extracted by processes generating residues with air pollution potentials.

O1,3
Life Stage: Operation: Supply Processes
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on land quality and/or land quantity?	5	1

If the supply processes do have an environmental impact on land resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The extraction of raw material creates substantial toxic solid and/or liquid residues.
- Large amounts of the raw material required for the operation phase is restricted, toxic and/or radioactive.
- Acids are required during the ore extraction of virgin materials.

O1,4
Life Stage: Operation: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on mineral and/or energy resources?	5	1

If the supply processes do have an environmental impact on Mined Resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- A scarce material is used where a reasonable alternative is available
- One or more of the principal materials used during the operational process requires energy-intensive extraction.
- Large quantities of scarce consumables are used in the primary and/or complementary process
- All incoming or outgoing packaging is from virgin sources and consists of three or more type of materials

O2,1
Life Stage: Operation: Primary Process
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the primary process have an impact on water quantity and/or water quality?	5	1

If the primary process does have an environmental impact on water resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic residues (liquid/gaseous/solid) result from the primary process and are not recycled or reused but discharged into the water system.

O2,2
Life Stage: Operation: Primary Process
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the primary process have an impact on regional air quality and/or global conditions?	5	1

If the primary process does have an environmental impact on air resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic gaseous and/or solid residues result from the primary process and are not recycled or reused but discharged into the ecosystem.

O2,3
Life Stage: Operation: Primary Process
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the primary process have an impact on land quality and/or land quantity?	5	1

If the primary process does have an environmental impact on land resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic or radioactive of solid and/or liquid residues result from the primary process.

O2,4
Life Stage: Operation: Primary Process
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the primary process have an impact on mineral and/or energy resources?	5	1

If the primary process does have an environmental impact on Mined Resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Energy use in the primary process is very high

O3,1
Life Stage: Operation: Complementary Processes
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the complementary processes have an impact on water quantity and/or water quality?	5	1

If the complementary processes do have an environmental impact on water resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic residues (liquid/gaseous/solid) result from the complementary processes and are not recycled or reused but discharged into the water system.

O3,2
Life Stage: Operation: Complementary Processes
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the complementary processes have an impact on regional air quality and/or global conditions?	5	1

If the complementary processes do have an environmental impact on air resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic gaseous and/or solid residues result from the complementary processes and are not recycled or reused but discharged into the ecosystem.

O3,3
Life Stage: Operation: Complementary Processes
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the complementary processes have an impact on land quality and/or land quantity?	5	1

If the complementary processes do have an environmental impact on land resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Toxic or radioactive of solid and/or liquid residues result from the complementary processes.

O3,4
Life Stage: Operation: Complementary Processes
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the complementary processes have an impact on mineral and/or energy resources?	5	1

If the complementary processes do have an environmental impact on Mined Resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Energy use in the complementary processes is very high

O4,1
Life Stage: Operation: Products
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the products have an impact on water quantity and/or water quality?	5	1

If the products do have an environmental impact on water resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Product generates a significant quantity of hazardous/toxic residues that have an impact on water during use or disposal.

O4,2
Life Stage: Operation: Products
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the products have an impact on regional air quality and/or global conditions?	5	1

If the products do have an environmental impact on air resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Product generates a significant quantity of hazardous/toxic residues that have an impact on air during use or disposal.

O4,3
Life Stage: Operation: Products
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the products have an impact on land quality and/or land quantity?	5	1

If the products do have an environmental impact on land resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- Product generates a significant quantity of hazardous/toxic residues during use.
- Product contains significant quantities of mercury, asbestos or cadmium that are not clearly identified and easily removable.

O4,4
Life Stage: Operation: Products
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the products have an impact on mineral and/or energy resources?	5	1

If the products do have an environmental impact on Mined Resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- Product use and/or maintenance are energy intensive.
- Consumables used during product use or maintenance contains significant quantities of materials in restricted supply or toxic/hazardous substances.
- Recycling/Disposal of this product is relatively energy intensive due to its weight, construction and/or complexity.

Decommissioning (Gate 1)

D1,1
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on water quantity and/or water quality?	5	1

If the supply processes do have an environmental impact on water resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The packaging contains toxic or hazardous substances that might leak from it if improper disposal occurs.
- The extraction of raw material creates residues with high water pollution potential (see Water Resource Table for information) to the ambient environment.

D1,2
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on regional air quality and/or global conditions?	5	1

If the supply processes do have an environmental impact on air resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The materials used cause substantial emissions of toxic, smog-producing or greenhouse gases into the environment and suitable alternatives that do not do so are available.
- Resources (raw material, consumables etc) are manufactured or extracted by processes generating residues with air pollution potentials.

D1,3
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on land quality and/or land quantity?	5	1

If the supply processes do have an environmental impact on land resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- The extraction of raw material creates substantial toxic solid and/or liquid residues.
- Large amounts of the raw material required for the construction phase is restricted, toxic and/or radioactive.
- Acids are required during the ore extraction of virgin materials.

D1,4
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the supply processes have an impact on mineral and/or energy resources?	5	1

If the supply processes do have an environmental impact on Mined Resources, the matrix element is 5. As an example, one of the following conditions may be applicable for the evaluated system:

- A scarce material is used where a reasonable alternative is available
- One or more of the principal materials used during the construction process requires energy-intensive extraction.
- Large quantities of scarce consumables are used in the construction process

- All incoming packaging is from virgin sources and consists of three or more type of materials

D2,1
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Water

In order to determine the rating answer the following question:

	Yes	No
Will the process implementation have an impact on water quantity and/or water quality?	5	1

If the process implementation does have an environmental impact on water resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Process equipment contains primarily unrecyclable materials with high water pollution potential.
- Large amounts residues with high water pollution potential will be produced by facility closure.

D2,2
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Air

In order to determine the rating answer the following question:

	Yes	No
Will the process implementation have an impact on regional air quality and/or global conditions?	5	1

If the process implementation does have an environmental impact on air resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Process equipment contains or produces primarily unrecyclable gaseous material that is dissipated to the atmosphere at the end of its life.
- Large amounts residues with high air pollution potential will be produced by facility closure.

D2,3
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Land

In order to determine the rating answer the following question:

	Yes	No
Will the process implementation have an impact on land quality and/or land quantity?	5	1

If the process implementation does have an environmental impact on land resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Large amounts of solid residues that cannot be recycled will be produced by facility closure

- Site structure must be completely demolished with major impacts on natural areas or existing ecosystems.
- Process equipment contains primarily unrecyclable materials with a land impact potential

D2,4
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Mined Resources

In order to determine the rating answer the following question:

	Yes	No
Will the site process implementation have an impact on mineral and/or energy resources?	5	1

If the process implementation does have an environmental impact on Mined Resources, the matrix element is 5. As an example, the following condition may be applicable for the evaluated system:

- Recycling/Disposal of this process facility is relatively energy intensive due to its weight, construction and/or complexity

Construction (GATE 2)

C1,1
Life Stage: Construction: Supply Processes
Environmental Factor: Water

If the supply processes do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with end effects on water resources (water pollution potential)? (See Water Resource Table attached for potential causes of water pollution)	2	0
Will the transport of material to the facility result in significant residues with the potential to pollute ambient water?	1	0
Is water used to extract, clean or transform supplied components or materials?	1	0
Do the construction processes require supplied water?	1	0

C1,2
Life Stage: Construction: Supply Processes
Environmental Factor: Air

If the supply processes do have a significant environmental impact on air, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with air pollution potential? (See Air Resource Table attached for potential causes of air pollution)	2	0
Will the transport of material to the facility result in significant residues with the potential to pollute air?	1	0
Are any proposed materials ozone-depleting substances or global-warming substances?	1	0
Is any proposed material or energy source a substance with an air pollution potential (e.g. mercury)?	1	0

C1,3
Life Stage: Construction: Supply Processes
Environmental Factor: Land

If the supply processes do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction or purification or conversion involves the generation of residues with land impact potential? (See Land Resource Table attached for potential causes of land impacts)	2	0
Will the transport of material to the facility result in significant residues with the potential to have an impact on land?	1	0

Are any proposed materials toxic and/or radioactive in nature?	1	0
Have raw material and part suppliers been contacted to encourage them to minimize the amounts and types of packaging material that enters the facility?	1	0

C1,4
Life Stage: Construction: Supply Processes
Environmental Factor: Mined Resources

If the supply processes do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are any proposed materials or energy sources in restricted supply or are they likely to become over the process's life cycle?	3	0
Have raw material and part suppliers been contacted to encourage them to minimize the amounts and types of packaging material that enters the facility?	0	2

C2,1
Life Stage: Construction: Site Selection & Development
Environmental Factor: Water

If the site selection and development do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the construction process designed to avoid the use of water?	0	1
Is the construction process designed to minimize the use of materials and energy whose extraction, purification or conversion involves the generation of residues with water pollution potential and have alternatives been investigated?	0	1
Is the site such that it can be made operational with only minimal production of residues with high water pollution potential (see Water Resource Table)?	0	1
Is necessary development activity, if any, planned that will cause a disturbances of riverflows?	1	0
Do the residues from the construction process have water pollution potential?	1	0

C2,2
Life Stage: Construction: Site Selection & Development
Environmental Factor: Air

If the site selection and development do have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are the site selection and development designed to avoid the use of materials and energy with air pollution potential? (see the Air Resource Table for potential causes of air pollution	0	1
Are the construction process designed to avoid or minimize the generation of residues with air pollution potential? (see Air Resource Table)	0	1

Do the residues from the construction processes have air pollution potential?	2	0
Is the site such that it can be made operational with only minimal production of residues with high air pollution potential (see Air Resource Table)?	0	1

C2,3
Life Stage: Construction: Site Selection & Development
Environmental Factor: Land

If the site selection and development do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are the site selection and development designed to avoid the use of materials and energy with land impact potential? (see the Land Resource Table for potential causes of land impacts)	0	1
Are the site selection and development designed to minimize the generation of residues with land impact potential? (See Land Resource Table attached	0	1
Do the residues from the construction processes have the potential to impact land resources?	1	0
Is necessary development activity, if any, planned to avoid disruption of existing biological communities?	0	0.5
Can all areas that are disturbed during site development be carefully restored?	0	0.5
Is the biota of the site compatible with all planned facility emissions, including possible exceedances?	0	1

C2,4
Life Stage: Construction: Site Selection & Development
Environmental Factor: Mined Resources

If the site selection and development do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are the construction process designed to minimize the use of energy-intensive process steps, especially process steps that require non-renewable energy sources, and to utilize otherwise wasted energy?	0	1
Are the construction process designed in such a way as to minimize the use of any non-renewable mineral resources?	0	2
Is energy-intensive product transportation avoided or minimized?	0	1
Are arrangements made to take back product packaging for reuse or recycling?	0	1

Operation (GATE 2)

O1,1
Life Stage: Operation: Supply Processes
Environmental Factor: Water

If the supply processes do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with end effects on water resources (water pollution potential)? (See Water Resource Table attached for potential causes of water pollution)	2	0
Will the transport of material to the facility result in significant residues with the potential to pollute ambient water?	1	0
Is water used to extract, clean or transform supplied components or materials?	1	0
Do the primary and complementary processes require supplied water?	1	0

O1,2
Life Stage: Operation: Supply Processes
Environmental Factor: Air

If the supply processes do have a significant environmental impact on air, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with air pollution potential? (See Air Resource Table attached for potential causes of air pollution)	2	0
Will the transport of material to the facility result in significant residues with the potential to pollute air?	1	0
Are any proposed materials ozone-depleting substances or global-warming substances?	1	0
Is any proposed material or energy source a substance with an air pollution potential (e.g. mercury)?	1	0

O1,3
Life Stage: Operation: Supply Processes
Environmental Factor: Land

If the supply processes do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction or purification or conversion involves the generation of residues with land impact potential? (See Land Resource Table attached for potential causes of land impacts)	2	0
Will the transport of material to the facility result in significant residues with the potential to have an impact on land?	1	0
Are any proposed materials toxic and/or radioactive in nature?	1	0
Have raw material and part suppliers been contacted to encourage them to minimize the amounts and types of packaging material that enters the facility?	0	1

O1,4
Life Stage: Operation: Supply Processes
Environmental Factor: Mined Resources

If the supply processes do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are any proposed materials or energy sources in restricted supply or are they likely to become over the process's life cycle?	3	0
Are recyclable material used in the transport and retail packaging?	0	2

O2,1
Life Stage: Operation: Primary Process
Environmental Factor: Water

If the primary processes do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the primary process designed to avoid the use of water?	0	2
Is the primary process designed to avoid or minimize the generation of residues with an end effect on water resources (water pollution potential)? (see Water Resource Table for potential causes of water pollution)	0	1
Is the process designed to minimize the use of materials and energy whose extraction, purification or conversion involves the generation of residues with water pollution potential and have alternatives been investigated?	0	1
Is the use of material whose transport to the facility will result in significant residues with the potential to pollute ambient water avoided or minimized ?	0	1

O2,2
Life Stage: Operation: Primary Process
Environmental Factor: Air

If the primary processes do have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the primary process designed to avoid the use of materials with air pollution potential?	0	1
Is the primary process designed to avoid or minimize the generation of residues with air pollution potential? (see Air Resource Table for potential causes of air pollution)	0	2
Is the process designed to minimize the use of materials whose extraction, purification or conversion involves the generation of residues with air pollution potential? (see Air Resource Table)	0	1
Is the use of material whose transport to the facility will result in significant residues with the potential to pollute air avoided or minimized?	0	1

O2,3
Life Stage: Operation: Primary Process
Environmental Factor: Land

If the primary processes do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the primary process designed to avoid the use of materials with land impact potential?	0	1
Is the process designed to minimize the use of materials whose extraction, purification or conversion involves the generation of residues with land impact potential? (See Land Resource Table attached for potential causes of land impacts)	0	2
Is the use of material whose transport to the facility will result in significant residues with the potential to have an impact on land avoided or minimized? (See Land Resource Table attached)	0	1
Is the primary process designed to minimize the generation of residues with land impact potential? (See Land Resource Table attached)	0	1

O2,4
Life Stage: Operation: Primary Process
Environmental Factor: Mined Resources

If the primary processes do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below:

	Yes	No
Is the primary process designed to utilize recycled materials or components where possible?	0	1
Does the primary process use co-generation, heat exchange, and other techniques to utilize otherwise wasted energy?	0	2
Is the primary process designed in such a way as to minimize the use of energy intensive process steps and methods that depends on non-renewable mineral resources?	0	2

O3,1
Life Stage: Operation: Complementary Processes
Environmental Factor: Water

If the complementary processes do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Have the potential sales of residues with an end effect on water resources been considered?	0	1
Are the complementary processes designed to avoid the use of water?	0	0.5
Is the process designed to minimize the use of materials and energy whose extraction, purification or conversion involves the generation of residues with water pollution potential and have alternatives been investigated?	0	0.5
Are the complementary processes designed to avoid or minimize the generation of water pollutants? (see Water Resource Table for potential causes of water pollution)	0	1

Have maximum precautions been taken to prevent hazardous liquid spills during product storage and transportation?	0	1
Do the residues from the primary and complementary processes have water pollution potential?	1	0

O3,2
Life Stage: Operation: Complementary Processes
Environmental Factor: Air

If the complementary processes do have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Have the potential sales of residues with an end effect on air resources been considered?	0	1
Are the complementary processes designed to avoid the use of materials and energy with air pollution potential? (see the Air Resource Table for potential causes of air pollution)	0	1
Are the complementary processes designed to avoid or minimize the generation of residues with air pollution potential? (see Air Resource Table)	0	1
Do the residues from the primary and complementary processes have air pollution potential?	1	0
Are product distribution plans designed to minimize residues, with air pollution potential, from transport vehicles?	0	1

O3,3
Life Stage: Operation: Complementary Processes
Environmental Factor: Land

If the complementary processes do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Have the potential sales of residues with an end effect on land resources been considered?	0	1
Are the complementary processes designed to avoid the use of materials and energy with land impact potential? (see the Land Resource Table for potential causes of land impacts)	0	1
Are the complementary processes designed to minimize the generation of residues with land impact potential? (See Land Resource Table attached	0	1
Do the residues from the primary and complementary processes have the potential to impact land resources?	1	0
Do any proposed materials or residues have potential disposal problems, i.e. a Type I or II hazardous rating?	1	0

O3,4
Life Stage: Operation: Complementary Processes
Environmental Factor: Mined Resources

If the complementary processes do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are the complementary processes designed to minimize the use of energy-intensive process steps, especially process steps that require non-renewable energy sources, and to utilize otherwise wasted energy?	0	1
Are the complementary processes designed in such a way as to minimize the use of any non-renewable mineral resources?	0	2
Is energy-intensive product transportation avoided or minimized?	0	1
Are arrangements made to take back product packaging for reuse or recycling?	0	1

O4,1
Life Stage: Operation: Products
Environmental Factor: Water

If the products do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the use and disposal of this product avoid the release of residues with end effects on water resources?	0	2
Does the **design** of the product minimize the releases of residues with end effects on water resources during the use and disposal phase of the product's life cycle?	0	1
Does the design of the product minimize the storage, transport and distribution requirements with consequent residues with end effects on water resources?	0	2

O4,2
Life Stage: Operation: Products
Environmental Factor: Air

If the products do have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the use and disposal of this product avoid the release of residues with air pollution potential?	0	2
Does the **design** of the product minimize the releases of residues with air pollution potential during the use and disposal phase of the product's life cycle?	0	1
Does the design of the product minimize the storage, transport and distribution requirements with consequent residues with air pollution potential?	0	2

O4,3
Life Stage: Operation: Products
Environmental Factor: Land

If the products do have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the use and disposal of this product avoid the release of residues with land impact potential? (see the Land Resource Table for	0	2

potential causes of land impacts)

Does the **design** of the product minimize the releases of residues with land impact potential during the use and disposal phase of the product's life cycle?	0	1
Does the **design** of the product minimize the storage, transport and distribution requirements with consequent residues with land impact potential?	0	2

O4,4
Life Stage: Operation: Products
Environmental Factor: Mined Resources

If the products do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Do the product use and disposal phases of products rely on non-renewable mineral resources i.e. input for waste treatment?	1	0
Is the product design to minimize energy use during the product use and disposal phase?	0	1
Is the product design to minimize consumable materials necessary in the product use and disposal phases?	0	1
Is the product design to minimize the use of packaging materials?	0	2

Decommissioning (GATE 2)

D1,1
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Water

If the supply processes do have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with end effects on water resources (water pollution potential)? (See Water Resource Table attached for potential causes of water pollution)	2	0
Will the transport of material to the facility result in significant residues with the potential to pollute ambient water?	1	0
Is water used to extract, clean or transform supplied components or materials?	1	0
Do the decommissioning processes require supplied water?	1	0

D1,2
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Air

If the supply processes do have a significant environmental impact on air, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction, purification or conversion involves the generation of residues with air pollution potential? (See Air Resource Table attached for potential	2	0

causes of air pollution)		
Will the transport of material to the facility result in significant residues with the potential to pollute air?	1	0
Are any proposed materials ozone-depleting substances or global-warming substances?	1	0
Is any proposed material or energy source a substance with an air pollution potential (e.g. mercury)?	1	0

D1,3
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Land

If the supply processes do have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Does the process use materials or energy whose extraction or purification or conversion involves the generation of residues with land impact potential? (See Land Resource Table attached for potential causes of land impacts)	2	0
Will the transport of material to the facility result in significant residues with the potential to have an impact on land?	1	0
Are any proposed materials toxic and/or radioactive in nature?	1	0
Have raw material and part suppliers been contacted to encourage them to minimize the amounts and types of packaging material that enters the facility?	1	0

D1,4
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Mined Resources

If the supply processes do have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Are any proposed materials or energy sources in restricted supply or are they likely to become over the process's life cycle?	2	0
Is the decommissioning process designed to utilize recycled materials or components where possible?	0	1.5
Is the decommissioning process designed in such a way as to minimize the use of any non-renewable mineral resources?	0	1.5

D2,1
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Water

If the process implementation does have a significant environmental impact on water resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the decommissioning process designed to avoid the use of water?	0	2
Is the decommissioning process designed to minimize the use of materials and energy whose extraction, purification or conversion	0	1

involves the generation of residues with water pollution potential and have alternatives been investigated?		
Is the decommissioning process designed as such that the site can be repaired with minimal production of residues with high water pollution potential (see Water Resource Table)?	0	1
Do the residues from the decommissioning process have water pollution potential?	1	0

D2,2
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Air

If the process implementation does have a significant environmental impact on air resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the decommissioning process designed to avoid the use of materials and energy with air pollution potential? (see the Air Resource Table for potential causes of air pollution	0	1
Is the decommissioning process designed to avoid or minimize the generation of residues with air pollution potential? (see Air Resource Table)	0	1
Do the residues from the decommissioning processes have air pollution potential?	2	0
Is the decommissioning process designed as such that the site can be repaired with minimal production of residues with high air pollution potential (see Air Resource Table)?	0	1

D2,3
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Land

If the process implementation does have a significant environmental impact on land resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the decommissioning process designed to avoid the use of materials and energy with land impact potential? (see the Land Resource Table for potential causes of land impacts)	0	1
Is the decommissioning process designed to minimize the generation of residues with land impact potential? (See Land Resource Table attached	0	1
Do the residues from the decommissioning processes have the potential to impact land resources?	1	0
Is necessary development activity, if any, planned to undo any disruption of existing biological communities?	0	1
Can all areas that are disturbed during decommissioning be carefully restored?	0	1

D2,4
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Mined Resources

If the process implementation does have a significant environmental impact on Mined Resources, the matrix element is 5. In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Yes	No
Is the decommissioning process designed to minimize the use of energy-intensive process steps, especially process steps that require non-renewable energy sources, and to utilize otherwise wasted energy?	0	1
Is the decommissioning process designed in such a way as to minimize the use of any non-renewable mineral resources?	0	2
Is energy-intensive material or residue transportation avoided or minimized?	0	2

GATE 3

If any of the life cycle phases do have a significant environmental impact on a resource, the matrix element is 25. In order to determine the rating complete the checklist below. The final value for each question can be read from the following risk table.

		Intensity of occurrence		
		High	Medium	Low
Probability of occurrence	High	5	4	2
	Medium	4	3	1
	Low	2	1	1

CONSTRUCTION

C1,1
Life Stage: Construction: Supply Processes
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with water pollution potential during the extraction, purification or conversion of material and energy (See Water Resource Table attached for potential causes of water pollution)	H M L	H M L	2 x Risk Factor
Generation of residues with water pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Water requirements for extraction, cleaning or transformation of supplied components or materials.	H M L	H M L	Risk Factor
Water Requirements of the construction processes	H M L	H M L	Risk Factor

C1,2
Life Stage: Construction: Supply Processes
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with air pollution potential during the extraction, purification or conversion of material and energy (See Air Resource Table attached for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

Generation of residues with air pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Material requirements for ozone-depleting substances or global-warming substances	H M L	H M L	Risk Factor
Material requirements for material or energy source that is a substance with air pollution potential (e.g. mercury)	H M L	H M L	Risk Factor

C1,3
Life Stage: Construction: Supply Processes
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with land impact potential during the extraction, purification or conversion of material and energy (See Land Resource Table attached for potential causes of land impacts)	H M L	H M L	2 x Risk Factor
Generation of residues with land impact potential during transport of material to facility.	H M L	H M L	Risk Factor
Requirements for toxic and/or radioactive materials	H M L	H M L	Risk Factor
Amounts and types of packaging material that enters the facility	H M L	H M L	Risk Factor

C1,4
Life Stage: Construction: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Materials or energy sources in restricted supply or are likely to become over the process's life cycle.	H M L	H M L	3 x Risk Factor
Impact of proposed packaging material of components and materials	H M L	H M L	2 x Risk Factor

C2,1
Life Stage: Construction: Site Selection & Development
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the construction process on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the construction process on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	2 x Risk Factor

C2,2
Life Stage: Construction: Site Selection & Development
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the construction process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the construction process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

C2,3
Life Stage: Construction: Site Selection & Development
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the construction process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the construction process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	2 x Risk Factor

C2,4
Life Stage: Construction: Site Selection & Development
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the construction process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the construction process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	2 x Risk Factor

OPERATION

O1,1
Life Stage: Operation: Supply Processes
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with water pollution potential during the extraction, purification or conversion of material and energy (See Water Resource Table attached for potential causes of water pollution)	H M L	H M L	2 x Risk Factor
Generation of residues with water pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Water requirements for extraction, cleaning or transformation of supplied components or materials.	H M L	H M L	Risk Factor
Water Requirements of the primary and complementary processes	H M L	H M L	Risk Factor

O1,2
Life Stage: Operation: Supply Processes
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with air pollution potential during the extraction, purification or conversion of material and energy (See Air Resource Table attached for potential causes of air pollution)	H M L	H M L	2 x Risk Factor
Generation of residues with air pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Material requirements for ozone-depleting substances or global-warming substances	H M L	H M L	Risk Factor

Material requirements for material or energy source that is a substance with air pollution potential (e.g. mercury)	H M L	H M L	Risk Factor

O1,3
Life Stage: Operation: Supply Processes
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with land impact potential during the extraction, purification or conversion of material and energy (See Land Resource Table attached for potential causes of land impacts)	H M L	H M L	2 x Risk Factor
Generation of residues with land impact potential during transport of material to facility.	H M L	H M L	Risk Factor
Requirements for toxic and/or radioactive materials	H M L	H M L	Risk Factor
Amounts and types of packaging material that enters the facility	H M L	H M L	Risk Factor

O1,4
Life Stage: Operation: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Materials or energy sources in restricted supply or are likely to become over the process's life cycle.	H M L	H M L	3 x Risk Factor
Impact of proposed packaging material of products	H M L	H M L	2 x Risk Factor

O2,1
Life Stage: Operation: Primary Process
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the primary process on ambient water resources. (see	H M L	H M L	3 x Risk

Water Resource Table for potential causes of water pollution)			Factor
Effect of unplanned releases during the primary process on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	2 x Risk Factor

O2,2
Life Stage: Operation: Primary Process
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the primary process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the primary process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

O2,3
Life Stage: Operation: Primary Process
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the primary process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the primary process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	2 x Risk Factor

O2,4
Life Stage: Operation: Primary Process
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the primary process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the primary process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	2 x Risk Factor

Note: Complementary Processes include storage and transport of product from facility to clients

O3,1
Life Stage: Operation: Complementary Processes
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the complementary processes on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the complementary processes on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	2 x Risk Factor

O3,2
Life Stage: Operation: Complementary Processes
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the complementary processes on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the complementary processes on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

O3,3
Life Stage: Operation: Complementary Processes
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the complementary processes on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the complementary processes on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	2 x Risk Factor

O3,4
Life Stage: Operation: Complementary Processes
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the complementary processes on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the complementary processes on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	2 x Risk Factor

O4,1
Life Stage: Operation: Products
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the product use and phase out phases on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the product use and phase out phases on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	2 x Risk Factor

O4,2
Life Stage: Operation: Products
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the product use and phase out phases on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the product use and phase out phases on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

O4,3
Life Stage: Operation: Products
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the product use and phase out phases on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the product use and phase out phases on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	2 x Risk Factor

O4,4
Life Stage: Operation: Products
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the product use and phase out phases on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the product use and phase out phases on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	2 x Risk Factor

DECOMMISSIONING

D1,1
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with water pollution potential during the extraction, purification or conversion of material and energy (See Water Resource Table attached for potential causes of water pollution)	H M L	H M L	2 x Risk Factor
Generation of residues with water pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Water requirements for extraction, cleaning or transformation of supplied components or materials.	H M L	H M L	Risk Factor
Water Requirements of the decommissioning processes	H M L	H M L	Risk Factor

D1,2
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with air pollution potential during the extraction, purification or conversion of material and energy (See Air Resource Table attached for potential causes of air pollution)	H M L	H M L	2 x Risk Factor
Generation of residues with air pollution potential during transport of material to facility.	H M L	H M L	Risk Factor
Material requirements for ozone-depleting substances or global-warming substances	H M L	H M L	Risk Factor
Material requirements for material or energy source that is a substance with air pollution potential (e.g. mercury)	H M L	H M L	Risk Factor

D1,3
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Generation of residues with land impact potential during the extraction, purification or conversion of material and energy (See Land Resource Table attached for potential causes of land impacts)	H M L	H M L	2 x Risk Factor
Generation of residues with land impact potential during transport of material to facility.	H M L	H M L	Risk Factor
Requirements for toxic and/or radioactive materials	H M L	H M L	Risk Factor
Amounts and types of packaging material that enters the facility	H M L	H M L	Risk Factor

D1,4
Life Stage: Decommissioning: Supply Processes
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Materials or energy sources in restricted supply or are	H M L	H M L	3 x

likely to become over the process's life cycle.			Risk Factor
Impact of proposed packaging material of components and materials	H M L	H M L	2 x Risk Factor

D2,1
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Water

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the decommissioning process on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the decommissioning process on ambient water resources. (see Water Resource Table for potential causes of water pollution)	H M L	H M L	2 x Risk Factor

D2,2
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Air

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the decommissioning process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the decommissioning process on air resources. (see Air Resource Table for potential causes of air pollution)	H M L	H M L	2 x Risk Factor

D2,3
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Land

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the decommissioning process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	3 x Risk Factor

Effect of unplanned releases during the decommissioning process on land. (see Land Resource Table for potential causes of land impacts)	H M L	H M L	2 x Risk Factor

D2,4
Life Stage: Decommissioning: Process Implementation
Environmental Factor: Mined Resources

In order to determine the rating complete the checklist below and add the subsequent indicated values:

	Intensity of occurrence	Probability of occurrence	Score
Effect of planned (designed) releases during the decommissioning process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	3 x Risk Factor
Effect of unplanned releases during the decommissioning process on mined resources. (see Mined Resource Table for potential causes of impacts)	H M L	H M L	2 x Risk Factor