

UL 110 Standard for Sustainability for Mobile Phones

Verification Requirements

7 Supply Chain Management of Materials

7.1 Compliance with the European Union REACH Regulation

7.1.1 Required - Compliance with the European Union REACH Regulation

- a) Documentation of disclosure of substances on REACH SVHC list present in the product above the reporting threshold, as applicable

Or

- b) Statement from the manufacturer that the product does not contain any SVHC substances above the reporting threshold

7.2 Reduction of European Union REACH Candidate SVHC substances

7.2.1 Optional - Reduction of European Union REACH Candidate SVHC substances

- a) List of applicable substances and method for determining applicable substances

And either:

- b) Demonstration of a conformance assurance process used to ensure that the product does not contain applicable substances above the thresholds. The process must include:
 - i. A description of how supplier, materials, parts, and/or subassemblies risk factors are evaluated and allocated
 - ii. The utilization of risk rating (or high risk status) to determine what evidence is required for suppliers, materials, parts, and/or subassemblies, as determined to be applicable by the manufacturer
 - iii. The collection and evaluation of the evidence determined necessary for applicability, quality and accuracy, and associated action taken for a negative result
 - iv. A procedure to refresh the evidence in accordance with the manufacturer's evaluation of risk

Or

- c) Demonstration that the manufacturer:
 - i. Restricts or prohibits the use of applicable substances above the thresholds
 - ii. Implements a quality control process to monitor supplier conformance with the restriction or prohibition

7.3 Substitution assessment

7.3.1 Optional – Substitutions assessment

- a) Documentation of chemical hazard assessment of alternatives performed by manufacturer, a supplier or a recognized competent and reliable scientific expert in partnership with the

manufacturer on one or more substances that are on the IEC 62474 Declarable Substances List and that have been used in previous products manufactured within 5 years prior to declaration of conformity to this standard

- b) Demonstration that the alternatives assessment is conducted using the tools and endpoints specified in the criterion
- c) Evidence that the manufacturer either:
 - i. Elected to use a lower-hazard alternative to replace the target substance, or
 - ii. Demonstrates that the target substance is a lower hazard than evaluated potential alternatives

7.4 Requesting and receiving substance inventory

7.4.1 Optional - Requesting substance inventory

- a) Evidence of request for information from suppliers in accordance with this criterion
- b) Documentation of process for collecting and recording requested information
- c) Demonstration of an information management system or tool to address the nature and quantity of parts, suppliers and information relevant to the requested substance information (e.g. screen shot, system overview)
- d) Summary of information used to calculate percentage of suppliers or mass

7.4.2 Optional – Receiving substance inventory

- a) Summary of data or other information within or from the information management system or tool, per criterion 7.4.1
- b) Calculation demonstrating how the percentage of total product mass in Table 7.1 in the criteria is achieved
- c) Demonstration of a system or process for validating supplier information received (e.g. reports, substance ingredient declarations)

8 Sustainable Materials Use

8.1 Post-consumer recycled and biobased plastic content

8.1.1 Required – Declaration of post-consumer recycled and biobased plastics content

- a) Supplier letter(s) or other supplier documentation stating minimum percentage of post-consumer recycled and biobased plastic content in material(s) supplied to manufacturer or to manufacturer's part supplier
- b) Documentation of calculation for the product, including plastic component part name(s) or other part identifiers and the total weight of their plastic content, as well as the weight of plastic content that is post-consumer recycled or biobased plastic
 - i. For instances where there are multiple accessory combinations, and for which there are not material differences associated with the product, the manufacturer may choose a representative combination

- c) List of excluded components and materials from the calculation
- d) Demonstration that the declaration(s) is available to the public
- e) If the declaration is 0%, a) through d) is not required.

8.1.2 Optional – Post-consumer recycled plastic and biobased plastic content in the mobile phone

- a) Supplier letter(s) or other supplier documentation stating minimum percentage of post-consumer recycled and biobased plastic content in material(s) supplied to manufacturer or to manufacturer's part supplier
- b) Documentation of calculation for the mobile phone, including plastic component part name(s) or other part identifiers and both the total weight of plastic content as well as the total combined weight of post-consumer recycled or biobased plastic content
- c) List of excluded components and materials from the calculation

8.1.3 Optional – Post-consumer recycled plastic and biobased plastic content in accessories

- a) Supplier letter(s) or other supplier documentation stating minimum percentage of post-consumer recycled and biobased plastic content in material(s) supplied to manufacturer or to manufacturer's part supplier
- b) Documentation of calculation for the mobile phone accessories, including plastic component part name(s) or other part identifiers and both the total weight of plastic content, as well as the total combined weight of post-consumer recycled or biobased plastic content
 - i. For instances where there are multiple accessory combinations, and for which there are not material differences associated with the product, the manufacturer may choose a representative combination
- c) List of excluded components and materials from the calculation

9 Substances of Concern

9.1 Compliance with the European Union RoHS Directive

9.1.1 Required – Compliance with the European Union RoHS Directive

- a) Demonstration of a conformance assurance process used to ensure that the product does not contain applicable substances above the thresholds. The process must include:
 - i. A description of how supplier, materials, parts, and/or subassemblies risk factors are evaluated and allocated
 - ii. The utilization of risk rating (or high risk status) to determine what evidence is required for suppliers, materials, parts, and/or subassemblies, as determined to be applicable by the manufacturer
 - iii. The collection and evaluation of the evidence determined necessary for applicability, quality and accuracy, and associated action taken for a negative result
 - iv. A procedure to refresh the evidence in accordance with the manufacturer's evaluation of risk

Or

- b) Test results utilizing IEC 62321, or other applicable chemical analysis method with demonstration of adequate performance for the analytes and matrices

Or

- c) Technical documentation that demonstrates conformity to this criterion, which has been compiled in accordance with EN50581, IEC 63000 or equivalent, which is defined as all of the following:
 - i. General description of product
 - ii. Documentation of conformance to RoHS substance restrictions for the materials, parts, and/or subassemblies in the product, where the manufacturers determine the information needed, collects the information, and evaluates the applicability, quality and trustworthiness of the documentation
 - 1. Contractual agreements, or
 - 2. Material declarations, or
 - 3. Analytical or empirical test results
 - iii. Information showing the relationship between the documents in (c)(ii) and the corresponding materials, parts and/or sub-assemblies in the product
 - iv. List of standards and/or other technical specifications that have been used to collect or establish the documents in (c)(ii)

Or

- d) Demonstration that the manufacturer:
 - i. Restricts or prohibits the use of applicable substances above the thresholds
 - ii. implements a quality control process to monitor supplier conformance with the restriction or prohibition

9.2 Restrictions of substances

9.2.1 Required – Restrictions of extractable nickel

- a) List of metal or metal coated exterior surfaces of the product that can be touched with a test finger using IEC 60065 or determined to be accessible parts per IEC 62368-1

And either:

- b) Test results for each metal or metal coated exterior surface(s) in Verification Requirement a), or a representative sample per the criterion, using referenced test methods

Or

- c) Documentation (such as supplier declaration) that nickel is not used in the exterior surface material in Verification Requirement a)

9.2.2. Optional – Restriction of DEHP, DBP, and BBP

- a) Demonstration of a conformance assurance process used to ensure that the product does not contain applicable substances above the thresholds. The process must include:

- i. A description of how supplier, materials, parts, and/or subassemblies risk factors are evaluated and allocated
- ii. The utilization of risk rating (or high risk status) to determine what evidence is required for suppliers, materials, parts, and/or subassemblies, as determined to be applicable by the manufacturer
- iii. The collection and evaluation of the evidence determined necessary for applicability, quality and accuracy, and associated action taken for a negative result
- iv. A procedure to refresh the evidence in accordance with the manufacturer's evaluation of risk

Or

- b) Technical documentation that demonstrates conformity to this criterion, which has been compiled in accordance with EN50581, IEC 63000 or equivalent, which is defined as all of the following:
 - i. General description of product
 - ii. Documentation of conformance to RoHS substance restrictions for the materials, parts, and/or subassemblies in the product, where the manufacturers determine the information needed, collect the information, and evaluate the applicability, quality and trustworthiness of the documentation
 1. Contractual agreements, or
 2. Material declarations, or
 3. Analytical or empirical test results
 - iii. Information showing the relationship between the documents in (b)(ii) and the corresponding materials, parts and/or sub-assemblies in the product
 - iv. List of standards and/or other technical specifications that have been used to collect or establish the documents in (b)(ii)

Or

- c) Demonstration that the manufacturer:
 - i. Restricts or prohibits the use of applicable substances above the thresholds
 - ii. implements a quality control process to monitor supplier conformance with the restriction or prohibition

9.2.3 Optional – Restriction of bromine and chlorine

- a) Test results for non-metal and non-ceramic homogeneous materials in the mobile phone and/or accessories (wire, cable, and external power supply)

Or

- b) Demonstration of a conformance assurance process used to ensure that the product does not contain applicable substances above the thresholds. The process must include:
 - i. A description of how supplier, materials, parts, and/or subassemblies risk factors are evaluated and allocated

- ii. The utilization of risk rating (or high risk status) to determine what evidence is required for suppliers, materials, parts, and/or subassemblies, as determined to be applicable by the manufacturer
- iii. The collection and evaluation of the evidence determined necessary for applicability, quality and accuracy, and associated action taken for a negative result
- iv. A procedure to refresh the evidence in accordance with the manufacturer's evaluation of risk

Or

c) Demonstration that the manufacturer:

- i. Restricts or prohibits the use of applicable substances above the thresholds
- ii. implements a quality control process to monitor supplier conformance with the restriction or prohibition

9.2.4 Required – Restriction of cadmium and mercury in the mobile phone battery cell

- a) List of batteries contained in the product, including composition type (e.g. lithium ion, metal hydride, etc.)
- b) At least one of the following for each battery (cell or battery pack):
 - i. Test results demonstrating that battery(ies) in the product meet the specified substance limits
 - ii. Statement or declaration from the battery supplier(s) indicating that the battery meet the specified substance limits
 - iii. Material declaration from the supplier documenting all substances in the battery(s)

9.2.5 Required – Restriction of substances in textile and leather

- a) List of textile and leather used in the product

And one or more of the following:

- b) Test results demonstrating that the concentrations of pentachlorophenol (including salts and esters), dibutyltin and dioctyltin, azo dyes and colorants, and dimethylfumarate are not present at levels specified in the criterion, in textile or leather covered by this criterion

Or

c) Demonstration of a Conformity assurance process used to ensure that the product does not contain applicable substances above the thresholds. The process must include:

- i. A description of how supplier, materials, parts, and/or subassemblies risk factors are evaluated and allocated
- ii. The utilization of risk rating (or high risk status) to determine what evidence is required for suppliers, materials, parts, and/or subassemblies, as determined to be applicable by the manufacturer
- iii. The collection and evaluation of the evidence determined necessary for applicability, quality and accuracy, and associated action taken for a negative result

- v. A procedure to refresh the evidence in accordance with the manufacturer's evaluation of risk

Or

- d) Demonstration that the manufacturer:
 - iii. Restricts or prohibits the use of applicable substances above the thresholds
 - iv. implements a quality control process to monitor supplier conformance with the restriction or prohibition

10 Energy Use Requirements

10.1 Mobile phone battery charging system efficiency

10.1.1 Required –Battery Charger Systems

- a) Test report demonstrating that the product meets:
 - i. The CEC rulemaking requirements for “maximum 24-hour charge and maintenance energy (Wh)” (until June 13, 2018)
 - ii. The requirements of the Federal Energy Conservation Standards for Battery Chargers; Final rule (after June 13, 2018)
- b) If the product is declared to conform in a country or region with different voltage and frequency combinations, demonstration that the test report includes 115 V/60 Hz and 230 V/50 Hz, including the least efficient set of test results

10.1.2 Optional – Reduction in energy consumption of battery charging systems

- a) Test report demonstrating a 10%, 20% or 30% reduction in:
 - i. The CEC “maximum 24-hour charge and maintenance energy (Wh)” (until June 13, 2018)
 - ii. The Federal Energy Conservation Standards for Battery Chargers; Final rule – reduced unit energy consumption (after June 13, 2018)
- b) If the product is declared to conform in a country or region with different voltage and frequency combinations, demonstration that the test report includes 115 V/60 Hz and 230 V/50 Hz, including the least efficient set of test results

10.1.3 Required – External power supply energy efficiency

- a) Test report demonstrating that the external power supply meets the efficiency requirements of the U.S. DOE Efficiency Regulations for External Power Supplies for “Maximum Power in No-Load Mode (W)” for direct EPS
- b) If the product is declared to conform in a country or region with different voltage and frequency combinations, demonstration that the test report includes 115 V/60 Hz and 230 V/50 Hz, including the least efficient set of test results

10.1.4 Optional – Reduced maintenance mode power

- a) Test report demonstrating that the external power supply exceeds the efficiency requirements of the U.S. DOE Efficiency Regulations for External Power Supplies for “Maximum Power in No-Load Mode (W)” for direct EPS in accordance with Table 10.2 in the criterion
- b) If the product is declared to conform in countries or regions with different voltage and frequency combinations, the test report includes both 115 V/60 Hz and 230 V/50 Hz, as representative voltages and with the least efficient set of test results used to meet the criterion requirements

11 End of Life Management

11.1 Mobile phone take-back program

11.1.1 Required – Take-back program (Corporate criterion)

- a) Demonstration that product take-back service is provided or evidence of participation in a government-or jurisdictionally sanctioned take back/recycling program within a region for the covered product
- b) URL of public disclosure of program on the manufacturer’s public website

11.2 Primary recyclers third party certified

11.2.1 Required – Primary recyclers third party certified (Corporate criterion)

- a) A list of primary recyclers
- b) Either (i) or (ii):
 - i. Evidence that each primary recycler is both:
 1. Certified to an environmental management system standard (ISO 14001, RIOS, or similar)
 2. Certified to a standard listed in (b)(1), (b)(2) or (b)(3) in the criterion, or documentation that annual audits have been conducted on all primary recyclers by a qualified third party auditor demonstrating recyclers meet the Recycling Program Minimum Technical Requirements

Or

- ii. In jurisdictions where there are existing laws and/or regulations which establish a program for the collection and recycling of products, demonstration of compliance with those legal requirements (e.g. demonstration of participation in a jurisdictionally sanctioned program)

11.3 Rechargeable battery removability/replacement

11.3.1 Required – Battery removability/replacement by qualified repair service providers or authorized repair providers

- a) Instructions demonstrating how qualified repair service providers or authorized repair providers can remove and replace batteries that can provide primary power, without damage that would preclude re-use or refurbishment of the mobile phone
- b) List of non-proprietary tools needed

- c) Documentation of how the instructions are made available to qualified repair service providers or authorized repair providers (e.g. sample of relevant language from the contract, URL where information is made available)
- d) Documentation that information on how to recycle used batteries is provided in electronic or printed formats, or on the battery
- e) Instructions specifying who are the appropriate parties to remove the battery

11.3.2 Optional – Battery removability instructions

- a) Demonstration that the removal of batteries covered by this criterion by qualified repair service providers and authorized repair providers is achievable without the use of tools for removal of the battery alone (i.e. use of tools to get to the battery is acceptable)
- b) URL for manufacturer’s website containing information on how to obtain removal instructions in accordance with 11.3.1

11.3.3 Optional – Battery removability/replacement without use of tools

- a) Instructions demonstrating how the user can remove and replace batteries covered by this criterion without the use of tools and without causing damage to the mobile phone that would preclude re-use or refurbishment of the mobile phone
- b) One of the following:
 - i. Evidence that the instructions specified in 11.3.1 applicable for user removable batteries are provided with the product

Or

- ii. URL on the manufacturer’s public website for instructions specified in 11.3.1 applicable for user removable batteries

11.4 Ease of disassembling mobile phone

11.4.1 Required – Ease of disassembling mobile phone

- a) Documentation that the mobile phone housing is removable or detachable to allow access to the screen, primary circuit board and battery by a qualified repair service provider or authorized repair provider without causing damage that would preclude re-use or refurbishment
- b) List of tools needed for removal or detachment
- c) Evidence that the adhesives are not used or do not prevent removal of listed components
 - i. Documentation that any adhesive tapes claimed to be exempted are used are for EMC compliance

11.4.2 Optional – Further ease of disassembling mobile phone

- a) Evidence that product has same screw head design and size to remove every part required to remove the display and primary circuit board

And/or

- b) Evidence that product has same screw head design and size to remove every part required to remove batteries

11.5 Feature of erase user data from mobile phone

11.5.1 Required – Feature to erase user data from mobile phone

- a) Documentation of software function or option that allows the user to erase user data from the mobile phone's internal storage

11.6 Repair and refurbishment

11.6.1 Required –Repair and refurbishment

- a) Option 1
 - i. Repair and disassembly information/manual, including technician-ready service documentation, in one or more of the formats listed in the criterion
 - ii. Demonstration that repair and disassembly information, including technician-ready service documentation, is available online for use by qualified repair service providers

Or

- b) Option 2
 - i. Evidence that field replaceable service parts, manuals and diagnostic tools are available to qualified repair service providers
 - 1. Documentation of manufacturer commitment if the product was released within 90 days of verification of this criterion
 - 2. Terms under which field replaceable service parts, manuals and diagnostic tools are made available
 - 3. Evidence that documentation is available in one of the formats listed in the criterion
 - ii. Documentation of publicly available program for qualified repair service providers to become qualified to repair the manufacturer's mobile phones

Or

- c) Option 3
 - i. List of manufacturer-authorized service centers in the countries or regions for which the product is declared to conform and this option is selected
 - ii. Documentation that manufacturer-authorized service centers provide troubleshooting, repair and replacement of product (e.g. relevant language from contract with manufacturer authorized service center)
 - iii. Documentation of how the manufacturer publicly communicates how the user can send or bring the product for services

11.6.2 Optional – Further repair and refurbishment

- a) Evidence that manufacturer conforms to 2 of the Options in 11.6.1

11.7 Availability of replacement parts

11.7.1 Required – Availability of replacement parts

- a) URL on manufacturer's website regarding the availability of replacement of parts and/or product service

11.8 Notification regarding and the identification of materials and components requiring selective treatment

11.8.1 Required – Notification regarding and the identification of materials and components requiring selective treatment

- a) Documentation that identifies the presence and location of all materials and components requiring selective treatment as listed in Annex VII in the European Union WEEE Directive 2012/19/EU
- b) Documentation that the information required is provided to reuse and recycling facilities

12 Packaging

12.1 Use of fiber based packaging materials

12.1.1 Optional – Use of fiber based packaging materials

- a) List of all individual assembled packaging parts in Point of Sale (POS) packaging, their material type, weights, and whether wax or latex coatings are used
- b) Calculation of percentage of fiber based material in packaging

12.2 Separability and labeling of plastics in packaging

12.2.1 Required – Separability and labeling of plastics in packaging

- a) List of all individual plastic parts in POS packaging ≥ 25 g, their material type, and weights
- b) Demonstration of separability for packaging components covered by this criterion (e.g. manufacturer's packaging part or assembly drawing, photographs, or packaging disassembly instructions)
- c) Photographs of applicable plastic markings

12.3 Use of post-consumer recycled plastic packaging

12.3.1 Optional – Use of post-consumer recycled plastic packaging

- a) List of all plastic packaging materials including supplier, % post-consumer content, and weights (excluding plastic protective and stretch wraps)
- b) Either:

- i. Documentation that the POS packaging contains < 5 g of plastic packaging (excluding plastic protective and stretch wraps)

Or

- ii. If the POS packaging contains ≥ 5 g of plastic packaging (excluding plastic protective and stretch wraps):
 - 1. Supplier documentation indicating post-consumer recycled content percentage for each plastic packaging material

2. Calculation of post-consumer recycled plastic content in the plastic packaging by % mass of total plastic packaging, excluding plastic protective and stretch wraps

12.4 Expanded polystyrene packaging (EPS) restriction

12.4.1 Required – Expanded polystyrene packaging (EPS) restriction

- a) Manufacturer's packaging part or assembly drawing, packaging photographs, or list of all individual parts in POS packaging and the material type of each

12.5 Recycled content in fiber packaging

12.5.1 Required – Recycled content in fiber packaging

- a) List of all chipboard and corrugated fiberboard packaging materials, suppliers and weights
- b) Supplier declaration indicating recycled content percentage for each chipboard and corrugated fiberboard packaging material
- c) Calculation of recycled fiber content in chipboard and corrugated fiberboard materials based on the mass of the recycled content and total mass of each material

12.6 Environmentally preferable paper/paperboard packaging and printed content

12.6.1 Optional – Environmentally preferable paper/paperboard in POS packaging

- a) List of all virgin fiber materials in POS packaging, including suppliers, weights and if the material is from a source certified by a listed program or is a non-wood based material
- b) Documentation that the chosen certification includes both chain-of-custody certification and chain-of-custody documentation for virgin fiber materials from a source certified by a listed program
- c) Documentation of fiber materials produced from non-wood biobased material, including but not limited to bagasse, bamboo, hemp, kenaf, mushroom, and straw
- d) Calculation of % of total combined materials from a source certified from a listed program and/or using non-wood biobased material

12.6.2 Optional – Environmentally preferable paper/paperboard for printed content

- a) List of all paper and paperboard utilized in printed content contained in the POS packaging, suppliers, and weights
- b) Supplier documentation for materials in Verification Requirement a) of:
 - i. Recycled content
 - ii. Sourced from a listed sustainable forestry program
 - iii. Produced from non-wood biobased material
- c) Calculation of % of total combined materials in Verification Requirement a) using recycled content and/or sourced from listed sustainable forestry programs, and/or using non-wood biobased material

12.7 Restriction of chlorine in packaging materials

12.7.1 Required – Restriction of chlorine in packaging materials

- a) Supplier documentation that fiber-based materials are not bleached with elemental chlorine (e.g., supplier letter or supplier data submission to manufacturer). Documentation that packaging is made Elemental Chlorine Free (ECF), Total Chlorine Free (TCF), or Processed Chlorine Free (PCF) meets this verification requirement

Or

- b) Manufacturer packaging specification that requires packaging that is Elemental Chlorine Free (ECF), Total Chlorine Free (TCF), or Processed Chlorine Free (PCF)

12.8 Heavy metal restrictions in packaging

12.8.1 Required – Heavy metal restrictions in packaging

- a) List of all packaging and packaging components and suppliers

And either:

- b) Supplier statement for each packaging component and/or packaging material that the packaging meets criterion requirements

Or

- c) Documentation of a conformance assurance system that demonstrate conformity to this criterion through effective control of the supply chain

12.9 Improve packaging efficiency

12.9.1 Optional – Improve packaging efficiency

- a) Documentation of packaging dimensions such as photos, assembly drawings, or specification
- b) Calculation of the ratio of the total volume of the product, user guide, and accessories to the volume of the outer POS packaging

13 Corporate Sustainability (CS)

13.1 Corporate sustainability (CS) reporting

13.1.1 Corporate sustainability (CS) reporting (Corporate criterion)

- a) Corporate sustainability report or equivalent information published at least every other year and in accordance with either the core reporting requirements of the GRI Sustainability Reporting Standards (GRI Standards) or the equivalent (e.g. CDP (formerly Carbon Disclosure Project), Electronic Industry Citizenship Coalition (EICC), or Sustainability Accounting Standards Board (SASB))
- b) Documentation that the report or equivalent information addresses elements a), b) and c) in the criterion
- c) URL for public access to report or equivalent information on manufacturer's website

13.2 Corporate sustainability (CS) reporting in the supply chain

13.2.1 Optional – Corporate sustainability (CS) reporting in the supply chain (Corporate criterion)

- a) Copy of public disclosure for at least three suppliers of GRI indicators for supplier operations covered by this criterion, published at least every other year and in accordance with the GRI Standards
- b) List of GRI indicators reported by each supplier
- c) URL for public disclosure on manufacturer's website or supplier's website

13.3 Third party assurance of corporate sustainability (CS) reporting

13.3.1 Optional – Third party assurance of corporate sustainability (CS) reporting (Corporate criterion)

- a) Documentation of independent third party assurance of the data associated with a minimum of 5 topics from the reporting specified in 13.1.1 criterion requirement (c)

14 Life Cycle Assessment

14.1 Conducting a life cycle assessment

14.1.1 Optional – Conducting a life cycle assessment

- a) Documentation of the LCA assessment that demonstrates the following:
 - i. Assessment conducted in accordance with methodologies and calculations in ISO 14040 and 14044
 - ii. Covered product is listed in the scope of the LCA
 - 1. If covered product is not listed in the scope, demonstration of how the product differs from products within the LCA scope, and how and whether the differences affect the LCA results
 - iii. Assessment includes a “comprehensive set of environmental issues” in accordance with ISO 14044
 - iv. Description of how the impact categories are “justified and consistent with the goal and scope of assessment” in accordance with ISO 14044

14.2 Product LCA third-party verification or making LCA publicly available

14.2.1 Optional – Product LCA third-party verified or making LCA publicly available

- a) Declaration whether LCA from 14.1.1 is third-party verified or the summary of results is publicly available
- b) Documentation of the assessment
- c) If third-party verification was conducted, a document confirming that the process used to determine results of LCA conducted under 14.1.1 were verified by an independent third party in conformance with ISO 14040 and ISO 14044, or another method referenced in one of the standards referenced in 14.1.1 (ISO14040/14044). The document shall include credentials and contact information of third-party verifier.

Or

- d) If the summary of results of the LCA were made publicly available:
 - i. Documentation of where the summary of results is publicly available

- ii. The summary shall include all elements specified in the criterion

15 Supply chain Impacts

15.1 Supplier responsibility

15.1.1 Optional – Supplier responsibility (Corporate criterion)

- a) Listed program(s) used by the manufacturer to assess suppliers
- b) Documentation of manufacturer’s risk-based approach to determine application of listed program for all suppliers of materials, parts, assemblies, and final assemblers of product, including an evaluation of risk for topics covered by the listed program
- c) If an equivalent program is used to meet the requirements of part (a)(3) of the criterion, demonstration that it is consistent with the requirements of one of the therein listed programs
- d) Documentation of a procedure to refresh information at a frequency in accordance with the requirements of the program
- e) Documentation of corrective action procedure for supplier with non-conformities, and re-audit procedure based on evaluation of risk

15.2 Manufacturing facilities environmental management systems (EMS)

15.2.1 Required – Final assembly facilities environmental management system (Corporate criterion)

- a) List of manufacturing facilities used in final assembly of mobile phone, including both manufacturer owned and contract facilities
- b) Demonstration of current third-party certification(s) to ISO 14001 or EU EMAS for facilities in Verification Requirement a) (e.g. copy of certificate or URL where certification is posted)

15.2.2 Optional – Supplier production facilities environmental management system

- a) List of suppliers used towards demonstrating conformity with this criterion
- b) List of all facilities of claimed suppliers providing components or assemblies for the product
- c) Demonstration of current ISO 14001 or EU EMAS certificate(s) (e.g. copy of certificate or URL where certification is posted) for each facility covered by this criterion

15.3 Conflict minerals

15.3.1 Required – Conflict minerals public disclosure (Corporate criterion)

- a) Disclosure of conflict minerals necessary for the functionality or production of the product in accordance with the requirements of the criterion
- b) Location of the public disclosure, and demonstration that the disclosure is in accordance with OECD Guidance

Note: If a manufacturer is required to file a Conflict Minerals Report with the U.S. SEC, conformance to this criterion can be met by providing a website link to the manufacturer’s Form SD (specialized Disclosure) and/or Conflict Minerals Report, which are submitted annually pursuant to Rule 13p-1 of the U.S. Securities and Exchange Act of 1934.

15.3.2 Optional – Conflict minerals sourcing (Corporate criterion)

- a) List of conflict minerals used in the covered product
- b) Demonstration that conflict minerals in a) are sourced from
 - i. Recycled or scrap sources

Or

- ii. 90% of smelters and/or refiners for each conflict mineral claimed in accordance with Table 15.2 meeting one or more of the following:
 - 1. Appear on CFSI's list of validated smelters and refiners
 - 2. Verified by independent third party that the manufacturer, smelter and/or refiner conducted a RCOI and implemented the OECD due diligence guidance, where appropriate
 - 3. Minerals not sourced from a conflict-affected region as determine through an RCOI

15.3.3 Optional – Participating in conflict mineral responsible sourcing program (Corporate criterion)

- a) Evidence of participation in at least one in-region responsible sourcing program for conflict minerals that meets the requirements specified in the criterion

15.4 Reduce fluorinated gas emissions resulting from LCD display manufacturing

15.4.1 Optional - Reduce fluorinated gas emissions resulting from flat panel display manufacturing

- a) In instances where abatement technology is employed, letter(s) from LCD panel supplier(s) for the product that includes:
 - i. Declaration that technologies designed specifically to recover or destroy F-GHGs are installed, operated, and maintained in accordance with the control technology supplier's specifications
 - ii. Declaration of recovery or destruction of at least 90% of F-GHGs used in manufacturing and ancillary operations of flat panel displays
 - 1. Method for determining success in recovery, destruction or removal of F-GHGs
 - iii. The extent of the fab operation covered, and if only a portion of the fab, and explanation of how the relevant portions have been addressed
- b) In instances when emissions are reduced with something other than abatement technology, demonstration of how 90% was achieved (e.g. calculation, supplier declarations, comparisons of gases)

INNOVATION

16 Innovation

- a) URL to publicly accessible description of the innovation on manufacturer's website or on another public website, including identification of the technology associated with the innovation or inclusion of a high-level description of the nature of the innovation
- b) Description of innovation
- c) Demonstration, including data, that innovation will result in measurable and meaningful improvement in environmental performance of the product, and relevance to the product(s)

- d) Demonstration that the innovation either differs from or exceeds other criteria in the standard
- e) Calculation quantifying improved product environmental performance
- f) Documentation of overall scale and impact of the claimed innovation for the current product