

‘Capacity building to the Mongolian vegetable tanned yak leather cluster on bio-leather and bio-leather products’



Guidelines for LWG and OEKO-TEX

Publicity Disclaimer

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2.1 Executive Summary

This report includes specific guidelines for the Cluster members to be able to join the Leather Working Group (LWG) and/or to apply for OEKO-TEX certification.

The aim of this deliverable is to provide all the necessary information and guidelines in order for the Cluster members to prepare their processes and systems in order to enable them to submit a successful application to either or both organisations.

The guidelines are based on the “LWG Tannery of the Future self-assessment” – LWG’s learning tool that allows leather manufacturers outside the LWG membership to gain an understanding of the core principles of the auditing programme, to evaluate their current environmental and social performance, to identify areas where there is room for improvement and to understand how ready they are to undergo an LWG audit.

The Project team will support the Cluster members to complete a comprehensive assessment of the Cluster’s capabilities, on the 17 areas to be examined in the formal LWG audit: general facilities, subcontracting, social audit, operations, production data, inputs traceability, outputs traceability, environmental management system, restricted substances, energy consumption, water usage, air/noise emission, waste management, effluent treatment, Occupational Safety and Health (OSH), chemical management and operations management.

Technical support will be also provided for the implementation of the plan to join the LWG and possibly on other certification aspects (according to the beneficiaries needs), such as STeP by OEKO-TEX®.

LWG GUIDELINES FOR THE LEATHER MANUFACTURER AUDIT PROTOCOL

Introduction to LWG

The latest version of the LWG manufacturer auditing protocol (issue 7.2.3, published on 2023) contains 17 sections as noted below:

1. General facility details
2. Subcontracted operations
3. Social audit
4. Operating permits
5. Production data
6. Traceability (incoming)
7. Traceability (outgoing)
8. Environmental management systems
9. Restricted substances, compliance, chromium VI management
10. Energy consumption
11. Water usage
12. Air and noise emissions
13. Waste management
14. Effluent treatment
15. Health, safety, emergency preparedness
16. Chemical management
17. Operations management

Each section consists of a number of questions. Depending on the answers recorded by the auditor, the auditee scores points. Awards (audited, bronze, silver or gold) are given based on the final score.

The answer of each question must be accompanied by data, paperwork and/or photographs, in order for the auditee to prove that the answers are true and correct. In some specific questions, lack of proof can lead to a negative number of points, or even an automatic audit failure.

The introduction to the auditing protocol also includes information regarding calculations (especially for production data), certification periods and re-audits, a glossary, and various specifications.

Lastly, the introduction describes auditing in the case of an organization which sub-contracts some or all of their operations, especially regarding traceability and restricted substances.

2.2 SECTION 1 – GENERAL FACILITY DETAILS

Section 1 focuses on introductory information about the facilities and the employees responsible for audit-related issues.

To be more precise, facility information needed include site names and registration numbers, geographical coordinates and addresses, total site(s) area plus contact info (telephone numbers and email addresses).

The person(s) responsible for environmental issues, along with the principal contact, must be stated. Their contact information is also required.

A site plan with all operations taking place is also needed, along with a description of the facility and the surroundings. Any changes (such as significant construction projects or utility changes) that are planned for the next 3 years must be noted, as long as they require environmental review, action or modification.

Operations undertaken on behalf of other organizations must be stated, along with the contact info of clients and the percentages of outputs that are owned by them.

Lastly, the company should state the number of people working at the site along with their shifts, and days of operation per year.

The final question asks for the minimum output of produced material; if the output during the relevant period is less than 25000 square meters, 25000 pieces or 175 tons then the manufacturer is not eligible for audit and certification.

2.3 SECTION 2 – SUBCONTRACTED OPERATIONS

The second section is used only if one or more operations are being undertaken on behalf of the organization at a different site.

Two lists are provided: one is used to list sub-contractors who have been assessed via the “leather manufacturer audit protocol”, and the other for those assessed by the “subcontractor audit protocol”. In both cases, each sub-contractor should be noted along with their location, range of operation, and their LWG audit score.

The details of the sub-contractors should be provided to the auditor prior to the beginning of the audit. If that is not the case, the auditor can either continue the audit (with a -40 score applied) or fail the audit if it cannot be carried out within the time allowed.

The last question of the section is used to calculate a fractional score for each sub-contractor. This score is based on the sub-contractor’s audit score multiplied by the percentage of total sub-contractor energy consumed for operations.

2.4 SECTION 3 – SOCIAL AUDIT



This section will become critical in future versions of the LWG audit protocol. The organization must be audited via a social audit system or an auditing organization, with a list of LWG-recognized systems and organizations given in the Leatherworking Group’s site.

The first question in this section is used to gather information regarding the auditing program used, the audit body, and the dates of completed and future audits. Information for more than one social audit can be recorded, provided that they occurred in the 2 years before

the LWG audit.

The second question records if any satisfactorily completed social audits took place, strictly from the LWG approved list. Proof of successful completion must be provided, in the form of images of the certificates, executive summaries or report conclusions.

The third question records any critical or zero-tolerance compliance issues that might have been discovered during social audits that took place within the past 24 months.

Lastly, the fourth question records any social audit related non-conformances that have been identified and which remain unresolved at the time of the current LWG audit. The nature of each non-conformance and the corrective action(s) must be noted, along with the auditing body, the audit date, and the required completion date.

2.5 SECTION 4 – OPERATING PERMITS

This section consists of 7 questions related to the operating permits and licenses, and the facility's compliance with these and the local legislation. It also includes information regarding any violations, warnings, or fines issued, along with the relevant corrective actions.

The leather manufacturer might have to supply copies of all necessary permits to the auditor before the start of the audit, as an assurance that all paperwork is available for assessment. Additionally, the auditor may ask for contact names and details of the responsible authorities.

The first question asks whether the company maintains a register with all operating permits, alongside the data needed to prove their validity. This register should include titles, issuing authorities, the date of permit issued and expiry, date for the submission of renewal application, the reporting frequency and the date of the most recent report submitted.

The second question is a record of all operating permits regarding environmental discharges or emissions, alongside all relevant information (permit number, issuing authority, expiry date, etcetera). The reports of all relevant tests must be archived and made available in order to demonstrate compliance.

Regarding water discharges, relevant information provided must include data such as volume discharged by day/week/month/year, plus recorded values for substances such as chemical and biological oxygen, nitrogen, suspended solids, chlorides, heavy metals, etcetera (for water that is discharged either to the environment or to drainage for treatment by a third party).

Regarding air emissions, relevant information include volumes discharged, the odour and noise, and any particulates and VOC (volatile organic compounds).

Permits for solid waste disposal and boilers must also be provided to the auditor, along with any permits related to the purchase and storage of chemical.

Lastly, other permits might be needed, such as any permits regarding the stability of the facility's buildings.

Regarding regulatory environmental enforcement actions, any warnings or fines must be recorded, along with evidence of corrective action taken. Details and dates of past regulations and corrective actions must be provided.

Question #4 asks whether the company has notified LWG of any regulatory enforcement actions issued within the past 24 months, and whether such notification happened within 30 days of the issued action.

Questions #5 and #6 relate to visits from regulatory authorities with the goal of checking that the facility is operating in accordance with the permit conditions. The frequency of such visits and the occurrence of enforcement actions or improvement requirements must also be recorded.

Finally, question #7 asks if the facility operates within the designated limits of permits or other legislation/restriction. If evidence that demonstrates compliance is not presented, the audit fails. Evidence to the opposite, or a negative score in this section also leads to an audit fail.

2.6 SECTION 5 – PRODUCTION DATA

Information regarding the production operations of the organization is gathered and assessed in this section. Additionally, the various parts of the leather supply chain are connected, alongside with the suppliers of raw or part-processed material. Regarding the organizations that begin operations with part-processed material supplied by others, the suppliers' engagement with the LWG audit process is also assessed. Finally, sub-contractors might be assessed if they are used by the organization.

Before the questions of the section, the protocol states the definitions of sub-contracting (both out and in), and also states what information is needed for verification of the material that is obtained from traders.

Lastly, any data used must be drawn from the most recent 24-month period; This data includes production, energy usage and water consumption (question 2).

Questions 3 and 4 indicate the skins/hides used by the organization (for example, fresh hides, limed splits, crust hides, etcetera) and the activities performed (for example, raw, limed or pickled hide to tanned, or tanned hide to finished leather). Both questions ask for the number of skins/hides per year, their weight, and the area produced (in square meters).

In question 5, the organization must state any organizations for which it has undertaken any sub-contracting work along with the scope of operations and the total area of leather produced.



Question 6 asks for the mass of input in tons and the area of output, in order to calculate if the company is a small or a large leather manufacturer, for classifying the company in the appropriate sub-group.

Question 7 asks for a breakdown of the weight/substance of leathers made.

Question 8 asks for the percentages of the types of leather manufacturing operations undertaken by the company. Operations are divided by leather type (such as calfskin, full grain, nubuck, etcetera), the wet part-processed input (such as cow, sheep, goat, etcetera), and the industries served by the organization (such as apparel, footwear, upholstery, etcetera). Additional information needed is the tannage type (chrome based, vegetable tanned, or chromium free). Lastly, the output divided in tanned, crust and finished leather is needed.

Questions 9 to 15 are used to state the information (name, location, material types, LWG rating if applicable, percentage of supply chain) of leather manufacturers, processors and traders that supply part-processed material to the organization. Question 16 asks for the percentage of hide/skin supply chain, for the past 24 months, from suppliers and traders. Suppliers are divided based on their LWG rating, with higher ratings giving more score for the organization.

Question 17 asks what percentage of the final output is tanned on site; if 100% of the output is not tanned on site (or if it is processed to pickled condition only), then questions 18 to 25 are not applicable.

Questions 18 to 25 are only used by the organizations that do their own tanning, at least for part of the production. These questions are used to gather information regarding the usage of chrome during the tanning process.

In question 18, the percentage of output that is tanned via chrome and chrome-free methods is stated; chrome-free methods give a higher score per percentage point.

Questions 19 to 22 ask for the frequency of measuring the chrome content in various stages of tanning; higher frequencies of testing giving more score.

Questions 23 and 24 ask for the percentage of chrome- that has been purchased for use in the tanning of raw/cured (question 23) or pickled (question 24) hides/skins- that is used or treated in such a way that it does not enter the environment. Chrome waste that has been rendered safe is excluded from these calculations. Both questions utilize an equation in order to calculate score.

The final question of the section asks for the frequency of testing the waste streams that are used for the calculation in questions 23 and 24.

2.7 SECTION 6 – TRACEABILITY (INCOMING)

Incoming traceability consists of the systems the organization uses to trace their incoming material back to specific slaughterhouses or regions of origin. Descriptions of these systems are also needed. Finally, Sub-contractors might be assessed regarding incoming traceability, depending on the scope of the company's operations.

The first question asks if there is a written procedure that describes how traceability of incoming material is ensured; such a procedure will have to be described in the next questions.

Question 2 is broken down into 4 questions: question 2a relates to hides/skins that are individually physically marked in order to identify the slaughterhouse from which the hide/skin was obtained. 2b relates to hides/skins that are accompanied by documentation that identifies the slaughterhouse, if physical marking is not used. 2c related to part-processed hides/skins that are traceable to a group of slaughterhouses due to the supplier being able to physically trace the incoming material, with each hide/skin being individually marked. Finally, question 2d is used to hides/skins that are only traceable to the supplier's trading premises via geo-referencing.

In all 4 of these questions, the organization must list the countries from which the hides/skins are obtained, with a percentage based on total output and a percentage of hides/skins that can be traced with the specific method.

In questions 3a to 3d the organization must provide a detailed description of the traceability system used, for the four methods described in questions 2a to 2d: physical marking of hides/skins, documentation ensuring that each entire pallet load originates from the same slaughterhouse, documentation ensuring that each entire pallet load originates from a known group of slaughterhouses, or documentation ensuring that the entire pallet load originates from a georeferenced region.

The next four questions (4, 5, 6 and 7) are used for the description of traceability systems used in case of any hides/skins originating from Brazil or Paraguay. To be more precise, these questions ask how the organization can ensure that the slaughterhouses supplying the hides/skins are not involved with deforestation and invasion of indigenous lands. At the same time the slaughterhouses must meet some minimum acceptable criteria, described in the questions. Finally, any slaughterhouses in Brazil or Paraguay must be listed along with geo-reference information, quantity of material supplied, and evidence of compliance.

Questions 8 to 11 are used to list the slaughterhouses outside of Brazil and Paraguay that supply the organization with fresh or cured hides/skins; each one of the questions is based on one of the four traceability methods specified in questions 2a to 2d.

Question 12 is used to calculate the overall sourcing factor, based on the scores of questions 6 to 11.

Finally, question 13 is used for the traceability of exotic materials (if such are used by the organization). If there is less than 100% traceability to legal sources, the audit is a failure.

2.8 SECTION 7 – TRACEABILITY (OUTGOING)

Outgoing traceability signifies the manufacturer's ability to trace material through their manufacturing processes, and the ability to identify outgoing material. It also signifies the extent to which the recorded data about each process stage is allowed to be retrieved.

For the sake of clarity, each batch of leather consists of one drum-load of leather.

There are 5 questions in this section:

In the first question the organization must state if there is a written procedure which describes and ensures the traceability of the material through its processes. The written procedure is needed even if each hide/skin is physically marked, and it has to describe in detail the manner in which traceability is assured. Additionally, the batch codes used must give information about the recipe sheet, the type of material used, and the origin (Immediate supplier) of the material.

The second question asks for procedures that can be used to follow batches from the immediate source to the end of the process. The marking of each hide/skin and identification of batches and exact supplier (or group of suppliers) are used to give the score for this question.

Question 3 is divided in two parts: in the first part the organization must provide a detailed description of the traceability system implemented for physically marked hides/skins. Photographs are mandatory. In the second part, the organization must provide a detailed description of the way that documents can ensure an entire batch can be traced through the manufacturing processes. Photographs, while not mandatory, are recommended.

The fourth question is used in case the manufacturer processes exotic materials subject to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In that case, the organization must dispatch the materials supported by all required permits and identification, in order to prove the full traceability to legal sources. If traceability to legal sources is not 100%, the audit is a failure.

Finally, question 5 focuses on the physical stamping of any splits (wet blue or crust) generated during manufacturing process. Score is based on traceability to the producing manufacturer with or without physical marking or the existence of robust documentation (if not physically marked).

2.9 SECTION 8 – ENVIRONMENTAL MANAGEMENT SYSTEMS

The questions in this section check the effectiveness of the documented environmental management systems, in order to manage and control the environmental aspects of the business.

The first question pertains to the existence of a written environmental policy; if it is a one-paragraph statement the score will be 1, while a detailed breakdown gives a score of 3.

The communication of the policy to the staff of the facility is the focus of the second question. Communicating the policy gives positive score, while a lack of communication gives a negative score.

The third question is divided into two parts. In the first part, the organization is asked if there are any written environmental procedures for ensuring that they operate in accordance to legal and customer requirements. The second part asks for proof that the procedures described in question 3, part a, have been implemented. The proof includes a register of legal requirements and a register of customer-restricted substance requirements; both registers must be up to date. If these two registers do not exist, the company must provide two alternative means of ensuring the company is operating in accordance to legal and customer requirements.

In question 4 (part a), the company is asked if there are any written environmental procedures for ensuring that at least 5 environmental objectives are set. Two of these must be quantifiable. The title and reference number of the procedure must also be provided. In the second part of the question the company must provide evidence that the procedures of question 4a have been implemented for at least two objectives.

The two parts of question 5 focus on the procedures regarding the resources, roles and responsibilities needed in order to fulfill the environmental objectives. The first part asks if these procedures exist, while the second part asks for proof that the procedures are implemented. This can be done by providing written records identifying why the objectives were chosen, how or why the performance targets were determined, who the project leader and team members are, and what the budgetary requirements are.

Question 6 focuses on the procedures for ensuring that all personnel understand the environmental objectives, are competent and trained (for the personnel that are responsible for the objectives). In part a, the company is asked if such environmental procedures exist in written form; in part b the company must present proof that the procedures described in the 6a have been implemented, via training on environmental awareness for all staff (at least once per year) and via the academic or professional experience of the project leaders (provided that such experience is appropriate to the objectives).

The two parts of question 7 are used for the documentation of the Environmental Management System (EMS). The first part asks if procedures for maintaining the EMS documentation exist, while part b asks for proof that the procedures have been implemented.

Question 8 consists of 3 parts. In the first part the company is asked if there are written environmental procedures for ensuring that internal audits are undertaken at specific intervals, by competent personnel. The title and reference number of the procedure must be stated. In the second part, the company must provide evidence that the procedures of the first part are implemented monthly, quarterly, biannually, less frequently than twice per year, or not at all. In the third part, the company must state who carries out the audits. The nominal internal auditor must be from a different area of the facility, and the training must be provided by a nationally certified or registered trainer, a professional consultant, or another member of staff. If the auditor is untrained, or if the training records are unavailable, the score given by 8c is negative.

Question 9 is divided in three parts. In the first question the company is asked if there are procedures for ensuring that the environmental reviews are undertaken at defined intervals; the title and reference number of the procedure are also required. In the second part the company must provide evidence that the reviews are undertaken with a specific frequency. Lastly, in 9c the company must provide a list with the members of the management review committee (along with their positions in the company).

Question 10 asks to whom the person with the primary responsibility for environmental issues reports to (the board of directors, the managing director or chief executive, the production or technical director, or none with a formal relationship).

Question 11 asks if the company has undertaken an environmental aspects and impacts analysis, as part of its environmental management system. Photographic evidence is mandatory in this question.

In question 12, the company is asked to provide evidence that the aspects and impacts analysis is used to improve the environmental performance of the business.

2.10 SECTION 9 – RESTRICTED SUBSTANCES, COMPLIANCE, CHROMIUM VI MANAGEMENT

The ninth section is used to assess the familiarity with, management of, and actions taken regarding restricted substances and the formation of Chromium VI. More importantly, the organization is assessed on its ability to minimize the formation of CrVI (Chromium VI) and its ability to test materials for any restricted substances (such as heavy metals and formaldehyde). The questions are filled by companies that do not use subcontractors; companies that both subcontract and produce their own material will be assessed on the restricted substance management of their own material.

The introduction to this section offers some details related to the subject:

Leathers are considered by LWG to be chrome-free as long as they contain less than 1000 mg/kg chromium, based on dry leather weight. This particular value is based on the BS EN 15987 standard.

The first part of the section is used for the Restricted Substances List (RSL); this is used by customers/clients in order to control and restrict the presence of unwanted substances in material that they are purchasing. The list is developed by the leather manufacturers and applied on the leathers they supply to their customers (who might not have submitted an RSL). To be more precise, RSL is applied on leathers, not on chemical products used in the manufacture of leather.

The second part is used for the RSL that a company may apply to its own suppliers, in order to make sure that they will be able to conform to clients' and own RSL; in this case, the RSL is applied to incoming part-processed material and is used to ensure compliance with RSL of outgoing products.

Please note that RSL is different to MRSL (Manufacturing Restricted Substance List). The MRSL is used to control or restrict the presence of unwanted substances in chemicals that are used in the manufacture of leather. MRSL is covered by section 16, "Chemical management".

Finally, "batch of leather" in this section refers to a production drum load of leather. Small sample and development loads may be ignored. In the case of incoming material in the form of crust leather, a batch of leather is a group of hides/skins that are processed together as a unit.

The first question asks if the company has a written restricted substance management system, and/or a set of written procedures regarding the restricted substances.

In the second question the company is asked for the method used to communicate with clients, in order to determine their specifications regarding restricted substances. Photographic evidence must be provided for this question.

Additionally, the company must have its own specifications for restricted substances, to be used when a client does not provide their own. This is covered by the third question.

Question 4 asks for a register with all client specifications along with the company's compliance. Specifications must be up to date, and information in the register must include date and means of contact, date of response, reference numbers and review dates.

Additionally, the specifications must be reviewed with a set frequency, either every 6 or 12 months (question 5). A lower frequency does not offer a score. Reviews must also be accompanied with evidence which should be shown to the auditor.

Question 6 is divided in two parts. In 6a, the company must show the limits for various restricted substances as they are specified in the internal restricted substances specification. Substances include chromium VI, formaldehyde and chlorinated paraffins among others. Score is based on the limits in the company's specifications. Tighter or lower limit ranges offer better score. Additionally, if leather produced by the company is used in child products, further limits for formaldehyde must be stated

The second part is used for the limits stated for a series of heavy metals. If one or more of these limits is not stated, then no score is issued for this question. As in the first part, an additional part must be filled if leather is used in child products, regarding the limits for cobalt, copper and lead.

Question 7 asks for details regarding the management system for restricted substances: the frequency of testing, the qualifications and credentials of third-party testing organizations, and the definition of product lines.

The product lines are the subject of question 8; the top three product lines must be stated along with their percentage of production. The question also defines what a product line is, for the purposes of restricted substance control.

In question 9, the company must prove that the laboratories that undertaken testing are certified by ISO 17025, or that they are approved by a client.

The frequency of testing by third-party organizations must also be stated, as a percentage of all batches produced by the manufacturer (question 10), along with the evidence that said third-party testing is done in accordance to the procedures specified in questions 1 to 9 (question 11).

Questions 12 and 13 ask if product lines are tested in a set frequency, with or without artificial ageing methods, for the amount of chromium VI contained. The percentage of batches tested is also required.

Questions 14 and 15 are used for CrVI testing: the frequency (question 14) and the procedures used to respond to CrVI failures in order to minimize or eliminate future occurrences. Additionally, question 16 asks for the incidence of CrVI failures in the past 2 years, as a percentage of crust and/or finished leather produced.

Questions 17 and 18 are used to check the company's conformance to customer restricted substances specifications (question 17) and to its own specifications (question 18). The company must be able to present evidence that there is conformance to the specifications, and that in the case of failures steps are taken to identify causes, retest affected product lines, and resolve the underlying reasons.

The following questions are used for incoming material.

Question 19 asks if the company has restricted substance specifications for all incoming part-processed leather, while question 20 asks if the company requires evidence (test reports, declarations, etcetera) from their suppliers regarding restricted substances. Question 21 asks if the company maintains a register with such records, with points scored for the number of details archived (date and means of contact, date of response, amount of material used annually, etcetera).

Question 22 asks for the procedures used when a chemical used in a process is substituted by an alternative.

Questions 23 to 25 ask if incoming leathers and chromium-containing chemicals are subject to compliance verification or testing regarding the amount of Chromium VI contained in them.

Questions 26 to 28 are used for the amount of fat that is found in wet blue and tanned on-site materials, as it can contribute to the formation of CrVI if it exceeds specific percentages.

Questions 29 to 33 are used regarding the pH values in the retanning process, the oxidizing agents and the fatliquors, as these have the potential to contribute to the formation of CrVI. Additionally, the company is asked if subcontractors for chemical processing comply with the RSL requirements.

2.11 SECTION 10 – ENERGY CONSUMPTION

The usage of energy per unit produced must be calculated and recorded. Operations that are subcontracted out must be included, although extra points due to use of renewable energy are only scored only if it is generated on site.

The introduction to this section includes details about the time period used for the collection of data, along with the factors that must be taken into account when auditing processors of skins and splits, and limed and pickled material.

The first two questions ask for a list of subcontractors, the operations they undertake, the area of leather they process and how much energy they use per square meter of leather produced, both from non-renewable energy sources ([question 1](#)) and renewable ones ([question 2](#)).



[Question 3](#) is divided in 4 parts. The first part is a table that must be filled with information regarding the types of fuel used annually, the sustainable and self-generated renewable energy sources, and the conversion factors. Information must also be given regarding the kind of processes done (for example, raw skin to wet blue, raw to finished, etcetera). Part b is used for the justification for the use of sustainably sourced renewable energy. Parts c and d are used to calculate the energy use per unit output, depending on the kind of operations

done (for example, tanned hide to finished leather, crust hide to finished leather, etcetera).

[Question 4](#) is used for the percentage of energy usage that comes from various sustainably sourced renewable sources.

The [fifth and final question](#) is used in case the company undertakes operations on behalf of other organizations; In this case, the energy used per square meter of leather processed must be filled, for each operation that is undertaken on behalf of another organization.

2.12 SECTION 11 – WATER USAGE

Section 11 is similar to section 10- information regarding the use of water must be provided.

The [first question](#) is a list of all subcontractors that have undertaken work from the organization, along with the operations they take care of, the area of leather processed, and the amount of cubic meters of water used per square meter.

The quantity of fresh water used must be noted down on [question 2](#), divided by the sources of water (for example, municipal water systems, boreholes, rivers, etcetera).

[Question 3](#) asks the amount of water that enters the site per year (fresh water, water recycled after treatment in CETP (Cholesteryl ester transfer protein) or METP, etcetera).

The fourth question asks for evidence regarding the proper and effective measurement of all incoming sources of water; photographic evidence must be provided, otherwise 40 points will be subtracted from the section's score.

Water usage must be accompanied by monthly data, for the past 24 years. For each month of missing data, 10 points are subtracted from section score, according to [question 5](#).

[Question 5](#) asks for the use of water, divided by type of operations (for example, raw hides to wet blue, wet blue to crust, etcetera), while [questions 6b and 6c](#) asks for the current level of water consumption in the company's facility.

Finally, the last questions ask if there are any active boreholes or wells on-site ([question 7](#)) and if the scope of the manufacturer has changed since the last assessment ([question 8](#)).



2.13 SECTION 12 – AIR AND NOISE EMISSIONS

Information about air and noise emissions of the facility is collected here, along with information regarding inventory, management and monitoring. The section consists of 20 questions.

The first question asks if the organization has an air emission inventory compiled. Points are scored depending on how detailed the inventory is (e.g. a list of emission points or a diagram, the type of material emitted from each source, etc.). If an inventory is not created, -40 points are scored.

Question 2 is a list of all emission sources that need a device for limiting the emission quantity. Information regarding the kind of devices, the pollutants restricted by said devices and the number of emission sources and devices must be provided.

Question 3 is a list of emission sources that do not require emission limiting devices. The organization must also state why the devices are not required. The auditor has the right to move emission sources in the list of question 2, if the explanations given here are not adequate (or if the auditor believes a device is required).

Question 4 is used to calculate the percentage of properly functioning air emission control devices. Not functioning or not fitted devices give a negative score.

Question 5 asks if there is a preventative maintenance program for the devices used in the facility. Demonstration that the maintenance department's schedule conforms to recommendations offer a higher score.



Question 6 is used in the case that wastes or byproducts are incinerated, either on site or off site. Special care must be given to the fact that incineration is a controlled process with specified parameters, not uncontrolled burning. Non-regulated burning with no monitoring evidence leads to automatic audit failure.

Photo credit: Environmental Protection Agency

If the monitoring or control of emissions is mandatory for compliance with permit conditions, the organization must state so in question 7.

Question 8 is used to specify the frequency of monitoring of the boiler stack emissions. Data and evidence must be provided for the last 24 months. The highest score is given if the analysis is undertaken by a third party, as specified by permit. If no such specifications exist then the highest score is given if the third-party analysis is undertaken on a monthly basis, at least.

Question 9 is the same as question 8, used for the frequency of monitoring emissions generated by stacks other than boiler ones. Evidence for the monitoring of the past 24 months is also needed

Question 10 is used for the monitoring (or assessment) of ammonia. The highest score is given if the monitoring is done on a monthly basis both near release points close to workers and outside the facility building.

Question 11 is used to state the name of the organization that undertakes the monitoring of air emissions, while question 12 is a summary of air emissions. Various emissions from boilers, spray machines and other sources must be noted down, along with the annual average emissions and any regulatory limits that might be applicable.

In question 13, the organization must state the presence of odours that can be detected inside the facility buildings, inside the property limits, and on the site's boundaries.

Obvious potential sources of air pollution that are located in neighboring sites must also be stated, along with details (distance from facility, location, pollutants). This information is used on questions 14 and 15.

Question 16 asks for calculations regarding the total amount of solvents used in the finishing process. Depending on the amount of solvent used and the frequency of data collection, the organization can score from -5 to 10 points.

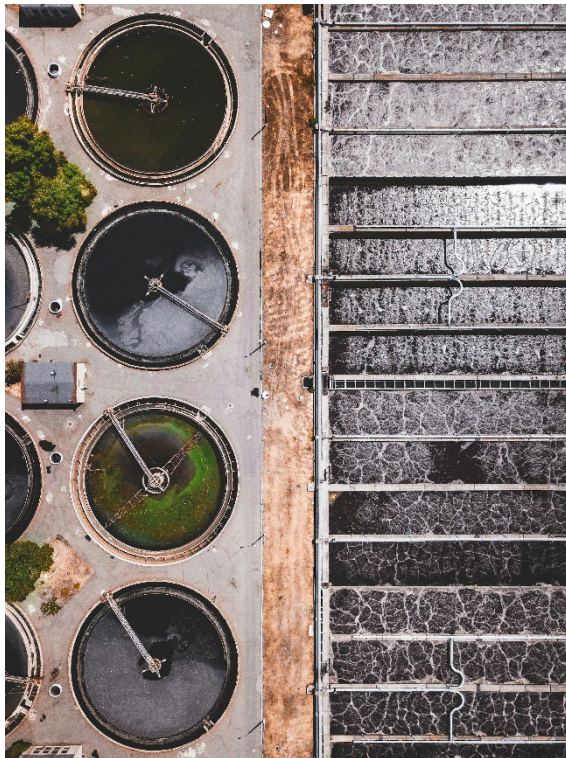
In question 17, the organization must state the amount of VOC (volatile organic compounds) emissions that is generated by commissioned subcontractors. The name of the subcontractor, their operations and the area of leather processed must also be stated. VOC emissions must be expressed in terms of grams of solvent emitted per square meter of leather processed.

Question 18 is used to calculate a score depending on the amount of VOC emitted by the organization and by any subcontractors.

Question 19 is used for the VOC emissions that are generated by solvent degreasing. If the amount of solvent emissions is more than 100g per kilogram of dry degreased product, the question gives a -10 score; otherwise, score is 0.

Finally, question 20 is used for sound/noise emissions. Sound level values outside the facility's building must be measured and controlled; a high frequency (at least three times per year, in several periods of the day and in several locations) gives higher score, while no testing within the past 12 months offers a negative score.

2.14 SECTION 13 – WASTE MANAGEMENT



The management and control of wastes generated by the organization is very important, and audited in this section. Inventories, categorization, and appropriate storage and disposal of wastes are required. The section consists of 36 questions.

Question 1 asks if the facility has a formal procedure regarding waste management. Ideally, the procedure must include guidelines about the identification, collection, storage and disposal of wastes (both hazardous and non-hazardous), and a list of all individuals who manage them.

Question 2 asks if the waste management procedure has references to any local regulatory standards regarding the matter.

In question 3, the organization must provide evidence that the procedure complies with the regulatory standards. This evidence might be visits from the authorities (with no corrective actions needed in relation to wastes), or the notification of the authorities about the company's procedures.

Questions 4, 5 and 6 refer to the authorities relevant to waste management. More precisely, in question 4 the organization must state which authorities are involved in waste management issues, question 5 asks if the authorities inspected the site within the past 24 months, and question 6 asks if the facility was found to be in compliance to permit and legal requirements during the last inspection.

Question 7 asks if the company maintains a register of the type and quantity of wastes (both hazardous and non-hazardous), by-products and part-products that are either disposed of, or sold.

At the end of the seventh question, LWG gives definitions regarding wastes and recycling. A table is also provided, which can be used to specify the type and quantities of waste that is reused, recycled, recovered or disposed of.

In question 8 the company must provide a list of all disposal agents or carriers along with their relevant information (company registration number, permit number and permit expiration date).

Continuing from question 8, question 9 asks if there is a legal disposal route used for wastes that are subject to disposal or recycling.

Question 10 asks if the company maintains records regarding the collection and disposal of hazardous wastes. These can include manifests or collection receipts. If no records exist, or if they are incomplete, the audit fails.

Question 11 is the same as question 10, and is used for the records regarding collection and disposal of non-hazardous materials. In the case that the company does not maintain such records, 6 points are deducted from the score.

Questions 12 and 13 are used for the salt found in hides; the company must specify how the excess salt is removed before processing (question 12) and what is the final destination or use of the salt recovered (question 13). In case of uncontrolled disposal of salt, the audit fails. In case that the company uses a landfill for salt disposal, the operating permit details of the landfill site must be provided.

Questions 14 to 24 ask for the final destination of various wastes and by-products generated by the facility's operations, such as fleshings, trimmings, hair, shavings, etcetera. Definitions for recycling, recovery and refusing of said wastes are also provided.

Questions 25 and 26 are applicable only if the company uses wastes as a fuel source. In this case, the company must specify which gases (question 25) and possible contaminants of residues (question 26) are monitored annually.

In question 27 the company must specify if the quantity of by-products (to be recovered or reused) is monitored, in order to ensure that operations are controlled.

Question 28 is similar to question 27; the amount of waste (to be disposed of) must be monitored to ensure that excessing quantities are not generated.

Questions 29 and 30 are used to describe the arrangements that are in place for the storage of empty chemical containers, for hazardous (question 29) and non-hazardous chemicals (question 30). If the storage can lead to ground or soil contamination the audit fails. Both questions need to be supported by photographic evidence.

Questions 31 and 32 are similar to questions 29 and 30, and are used for the on-site storage of hazardous and non-hazardous wastes. Photographic evidence is also mandatory.

On-site waste disposal methods must be listed in question 33, along with off-site methods if such facilities are owned and managed by the audited organization. Photographic evidence and permit details must be included.

Questions 34 and 35 are used for the final destination of empty containers (barrels, pallets, etcetera) that were used to store hazardous (question 34) and non-hazardous chemicals (question 35).

Question 36 is used to specify any cleaning procedures employed for containers of non-hazardous chemicals.

2.15 SECTION 14 – EFFLUENT TREATMENT

Effluent consists of liquid wastes generated by the organization's operations. Effluents must be managed and treated, at a site that is owned either by the organization or a third-party provider. Wastewater must be legally discharged after being treated with appropriate technologies. This section consists of 32 questions.

Question 1 asks if the outgoing water is measured effectively. Acceptable effective measurement can be done via automatic metering, such as Parshall with ultrasound, in-line meters, or tankers with known volume and supporting transfer records. Any internal use of water for non-production purposes must also be measured. In case of measurement of outgoing water, photographic evidence must also be provided.

In the second question, the organization must calculate and state the percentage of incoming water that is discharged as effluent.

In question 3, the organization must state what types of wastewaters are discharged: process wastewater (associated with leathermaking), sanitary wastewater (from bathrooms, showers, etcetera) and surface water (storm water runoff).

In question 4 the organization must state if there are separate drainage systems for surface water, sanitary effluent and process effluent. Scoring depends on the number of the above systems; no systems existing gives a -10 score.

In question 5 the organization must state how the wastewaters are treated; using a treatment plant owned by the organization, or using an external common plant (accompanied by 24 sets of monthly analysis results undertaken by an ISO 17025 certified lab) give the highest quantity of points. Using an external common effluent treatment plant with 8 to 23 monthly sets of analysis results scores -60 points. If the organization does not undertake treatment, or if there are less than 8 data sets, or if the regulatory limits are not complied with, the audit fails.

Question 6 asks for information regarding the operating permit of the CETP/METP, along with data regarding average values for effluents and the limits specified by the permit.

Question 7 is used for the discharge of salt. The organization must calculate and state the mass of salt (expressed as chloride) discharged to the environment per unit of production. This does not include legal discharges to controlled or approved receptors, as long as the organization can provide evidence of permitted disposal.

The means by which treated wastewaters enter the environment must be stated on question 8: used in irrigation, discharged to inland water course, discharged to coastal or tidal waters, and evaporation.

Question 9 asks what is the destination of salt that is washed out of salt-preserved hides. Percentages must be calculated and additionally, photographic evidence must be provided if wastewaters with salt are sent to an effluent treatment plant. Evidence must also be provided if salt is recovered on site. If the organization cannot provide evidence for a legal disposal route, the audit fails.

The average values (based on 24 monthly data points) from the analysis results must be stated in question 10, along with the regulatory limits for each parameter.

The frequency of the monitoring for the wastewater's discharge quality is also important; in question 11 the organization must state how frequently such monitoring is done. If the frequency is less than once per quarter, the audit fails.

Third party verification monitoring of wastewater discharges must also be done. The frequency of such monitoring must be stated in question 12; if the frequency is less than once per quarter, the audit fails.

Questions 13 to 24 are used to state the annual average emissions for each parameter that is tested: Chemical oxygen demand (COD), Biological oxygen demand (BOD), total Kjeldahl nitrogen, total nitrogen, ammonia nitrogen, suspended solids, total chromium, chromium VI, sulphide, oil and grease, phosphorous, and phenol. The lower the concentration (measured in parts per million, ppm), the higher the score attained.

Questions 25 to 31 are used in case the organization uses wastewaters for irrigation:

Question 25 asks if irrigation is subject to permit conditions, which must be listed in Section 2 of the audit protocol.

Question 26 asks which properties of the wastewater are analyzed prior to its use for irrigation. Additionally, the data for question 26 must be obtained from an independent laboratory, otherwise question 27 gives a score of -40.

Questions 28 and 29 are similar to questions 26 and 27, where soils are analyzed after irrigation with leather manufacturer wastewaters. Data must be obtained from an independent soil analyst, otherwise question 29 gives a score of -40.

In question 30, the organization must state which types of primary treatment system are used and observed to be functioning correctly. Photographic evidence must be provided for each type used on-site; such evidence is not mandatory but recommended for off-site use.

Questions 31 and 32 are similar to question 30, regarding the techniques used for reduction of biological loading of effluent (question 31) and for tertiary treatment (question 32). Similarly to question 30, photographic evidence is mandatory for on-site techniques and recommended for off-site ones.

2.16 SECTION 15 – HEALTH, SAFETY AND EMERGENCY PROCEDURES

The organization must be capable of managing various emergencies, and health and safety risks. Systems, processes and responsibilities are parts of this capability, along with assessment of risk and management regarding the creation of hydrogen sulphide on the facility. This section consists of 35 questions.

In question 1, the organization must state if a staff member is on-site in order to manage health and safety issues. The emergency planning and response procedures must be part of the member's duties. If the member has no other duties, this question gives a higher score.

In question 2, the organization must state if a health and safety risk assessment of all chemicals used in the facility has been undertaken. Extra points are scored if the relevant documents are available freely to all workers who use chemicals.

Question 3 is used to understand how detailed the assessment of question 2 is. The score depends on whether the assessment was done for the factory as a unit, for each department, or for each role/workstation. Photographic evidence is mandatory for this question.

The chemical hazard assessment must be undertaken by an assessor who is suitably qualified (question 4). The scoring of this question depends on the qualifications and specialization of the assessor.

The organization must also ask its chemical suppliers to provide safety data information in the GHS (Globally Harmonized System) format (question 5), while the critical information contained in the safety data sheets must be transcribed in a standard simplified format for workers and make it available in the workplace (question 6). Additionally, a chemical compatibility matrix must be made clearly visible in the workplace (question 7).

In question 8, the organization must answer if it has identified the appropriate PPE to be used, for each chemical group and each workstation.

In question 9, the company must answer if the PPE is assessed regularly, in order to maintain the functionality or replace/renew according to a defined schedule or procedures.

Question 10 is used for the incident response equipment (safety showers, eye wash facilities, etcetera) that must be provided in all locations where chemicals are present and used. For each equipment provided, 2 points are scored.

Question 11 asks if the company has a written procedure in place so that workers can bring incidences or adverse chemical reaction to the attention of managers and worker representatives.

Question 12 is used to state if any automated delivery systems have been installed, in order to minimize or eliminate the manual handling of chemicals.

In question 13, the company must specify if there is a formal induction program for new employees. The number of points scored depends on when the program is completed; completing it before the first day of employment gives the highest number of points.

The assessment of workplace exposure to VOCs (Volatile Organic Compounds) must be undertaken frequently. Question 14 is used to specify how and when such assessments take place. In case of no assessment and usage that exceeds 35 g per square meter of finished leather, a negative score is given (-30).

Question 15 is used if the company has a beamhouse or other workplace where the exposure to hydrogen sulphide is possible; in this case, a risk assessment must be undertaken. The assessment must include risks of hydrogen sulphide release associated with beamhouse operations, management of sulfur-containing chemicals, and maintenance activities.

A site plan would be helpful when it comes to recognizing areas where release of hydrogen sulphide is probable. The plan should also include the location of any fixed-point detectors, unless entry to such areas is not permitted without a personal H₂S (hydrogen sulphide) detector. Photographs of site plans are mandatory for question 16.

Question 17 pertains to mechanisms used to detect the release of H₂S in general production areas. Such mechanisms are categorized and the more thorough they are the bigger the number of points they give. A lack of constant, fixed or personal detection monitoring leads to automatic failure of the audit, unless the company can prove that no beamhouse operations take place (or that sulfur containing chemicals are not used in such operations). Photographic evidence is mandatory.

Questions 18 and 19 is similar to questions 15 and 16, but they are used for the risk assessment for exposure to H₂S (question 18) and the detection mechanisms (question 19) in the waste water treatment plant.

Questions 20 and 21 pertain to the safety of third parties that might spend substantial time on site, in areas where chemicals are stored or used. Such third parties might include visitors, contractors, etcetera. More importantly, the company is asked if they instruct third parties in the health and safety procedures that must be followed while on-site (question 20), and if they provide and require the wearing of relevant PPE (question 21).

Environmental, chemical and health & safety related emergencies must have a formal set of written procedures in order to be properly addressed. For each set of procedures (divided into environmental, chemical and health & safety) that the company has prepared, it scores 2 points. In case the company cannot offer evidence of evaluation for potential emergencies, the audit fails (question 22).

Question 23 is a list of all items that can be included in the written emergency procedures described in question 22. These can include, but are not limited to, an emergency contacts list, first aid measures, evacuation procedures, etcetera. For every item that is identified and included in the procedures, the company scores 1 point. Additionally, the company must state how the emergency responses procedures are reviewed and updated in question 24.

Emergency responses also include a team of trained members. Their training is the focus of question 25, where the company must provide documentary evidence regarding how it is provided (for example, external training provided by a certified third-party authority).

The frequency of emergency practice drills must be stated on question 26.

The local authorities must also be informed of the company's emergency procedures and the operations undertaken in the facility (question 27).

In question 28, the organization must state how many events that require implementation of an emergency response have occurred in the past 3 years. Natural phenomena and events that originated off-site due to third-party activities are to be excluded.

Companies that are undergoing re-audit are also obliged to notify the Leather Working Group of any fatalities that might have happened in the period since the previous audit (question 29). Such notification must be given in writing, within 30 days of the fatality. If the company does not notify LWG within this time period, the audit fails.

Question 30 gives a list of the ways that emergency response actions can be facilitated by. Such ways include exit signs are areas (clearly marked and accessible), evacuation routes and destinations, etcetera.

Question 31 pertains to the production drums and vessels and how they are guarded at ground level. The question offers a list of possible methods (such as having fine grill, full height level guarding, solid metal bar guarding, etcetera). Photographic evidence is mandatory. Additionally, any guarding at ground level on production drums should be fitted with an automatic cut-off mechanism; a lack of such mechanism deducts 2 points from the score (question 32).

Question 33 is used for platforms and overhead working areas of the production drums, and how they are guarded. The company must provide evidence that such areas are appropriately and sufficiently guarded. Photographic evidence is mandatory.

Similarly to question 32, question 34 asks if the drum platforms/overhead working areas include automatic cut-off mechanisms.

Finally, question 35 pertains to laboratory or trial drums and vessels and how they are guarded. The company must provide the methods used to appropriately and sufficiently guard such equipment, alongside mandatory photographic evidence.

2.17 SECTION 16 – CHEMICAL MANAGEMENT

Due to the nature of the processes done during leather manufacturing, the awareness, understanding and proper management of chemical substances is important. For that reason, the LWG auditing protocol has a section dedicated to chemical management.

Section 16 makes references to the Manufacturing Restricted Substances List (MRSL). This looks similar to the RSL used in section 9; however, unlike an RSL (which applies to the final product/leather), MRSL is used to control or restrict the presence of unwanted substances in chemicals that are used in the manufacture of leather.

The section also gives the definition of chemical formulations, and commodity chemicals. A chemical formulation is a manufactured product which is sold to a leather manufacturer. A formulation can include complex formulations (for example, dyes) and commodity products (for example, formic acid). Commodity products are not taken into consideration in this version of the protocol.

The first question asks if the company has a written chemicals management system, and/or a set of written procedures regarding chemicals management.

In the second question, the management system is checked to see if it makes reference to specific information. This information includes the person responsible for chemical management, the qualifications and/or experience of that person, the procedures to be followed during normal (working) and emergency conditions, and others.

Question 3 asks if the chemical management policy has been communicated to the staff of the facility. Communication can be



done via training, visual communication (for example, posters), or written communication. Extra points are rewarded if the company maintains a record of manuals issued, or of training being given; the employees must sign the record to confirm understanding of training and/or receipt of manuals.

Communication with clients is also important, as the company must determine their MRSL requirements. Hence, question 4 asks in what way the company contacts its clients regarding such matters. A formal contact with evidence (for example, emails) is one option while an informal way with no written records can also be used (although informally contacting clients gives no score). Photographic evidence of formal communication must be provided.

Question 5 pertains to the register in which the company records the information regarding compliance to clients' MRSL requirements. Scoring depends on what kind of information is recorded, such as the date the customer was contacted (regarding MRSL requirements) and the date a response was received, the date of review, and others.

Question 6 is used for the register of MRSL compliance declarations, and gives score based on the information provided; such as the use of third-party platforms for MRSL compliance, and the review date, among others.

Declarations from suppliers are also needed; to be more precise, the company can contact its suppliers (of wet blue, crust leather, etcetera) who in turn can ask their chemical suppliers to supply declarations of MRSL compliance. In this case, the company is asked if it maintains a register with information regarding the declarations. Similarly to questions 5 and 6, scoring depends for question 7 on the information that has been collected and maintained.

Question 8 asks if the company has listed all process chemicals used and stored within the facility. The largest amount of points is scored if all chemicals on site (used in production, in R&D, and dormant ones) are listed, along with accurate quantities for each one. Incomplete or nonexistent records subtract 2 points from section score.

Question 9 pertains to any written procedures for the selection and purchase of process chemicals. Ideally, the company must only use chemicals that comply with its chemicals management policy, chemicals that are supported by a statement or declaration of quality, and chemicals whose suppliers can present their own chemical management policy statement.

Similarly, question 10 is used in the same way as question 9; however, the written procedures described in question 10 are used for the selection and purchase for inputs other than chemicals (such as wet blue, crust, etcetera).

In question 11, the proportion of incoming chemicals obtained from companies with documented compliance to MRSL is calculated. The score is based on the percentage calculated.

Question 12 pertains to the presentation of all declarations to the auditor for examination. Score depends on whether the declaration is a self-declaration by the supplier or an independent verification. Score also depends on the examination of at least 2 declarations per category of chemicals.

Question 13 is similar to question 11; the proportion of incoming (part processed) raw material supplied by companies that have documented commitments to MRSL compliance must be calculated. Score depends on this calculation.

Question 14 asks if the company has written procedures governing the use of controls which identify any potential contamination or product integrity prior to storage.

Question 15 asks if the company maintain material inventory lists. Such lists should include the quantity and location of each material. Extra points are scored if the lists include coding related to the nature of each product (such as flammable or corrosive).

Question 16 is a continuation of question 15; if a computer-based inventory (such as a spreadsheet) is maintained, the company must state how often is a full physical stock take performed, in order to compare and reconcile the quantities between physical stock take and computer-based inventory.

Question 17 asks if chemical warehousing takes account of the shelf life of each chemical. Methods that can be used include using a first in, first out stock control, using labels to indicate production date and date of entry, and processes to identify out of date products. Score depends on the amount of methods used.

In question 18, the company must state if it reconciles actual quantities of chemicals used, against the theoretical quantities that are suggested in recipe cards.

Question 19 pertains to the extent that the company can identify which chemicals have been used in the manufacture of individual leather batches. Maximum score is attained if the company can identify each chemical used, along with the quantity, supplier and batch number of each chemical used. This is done via the recipe card/sheet which includes such relevant information.

Question 20 asks if the company has written procedures regarding the safe handling of chemicals, in order to ensure that storage and conditions are appropriate for each chemical hazard class. Maximum score is attained if the procedures refer to main storage area, each process area, and to transfers between storage and process area.

Training for all employees that handle chemicals is also checked; such training can be provided by nationally certified trainers, chemical suppliers, or safety technician (in-house); nationally certified training offers the highest score (question 21). Additionally, the company must provide evidence that the training provided has been understood by the trainees (through the application of an examinable component).

In question 23, the appropriate storage of chemicals held in the production department is checked. For each category provided by the question (flammable, liquid, corrosive, etcetera chemicals) the company must provide evidence that suitable storage locations are used.

In question 24 the company is asked if it has safety data sheets (SDS) of the chemicals purchased and used, and if such files are readily available.

In the last question, the company must provide photographic evidence regarding the storage of chemicals (within the main storage area). Score depends on various elements, such as having chemicals clearly labelled, having weight labels on racking, having health and safety information available to all workers in the area, and others.

2.18 SECTION 17 – OPERATIONS MANAGEMENT

The final section of the protocol is used to assess the company's ability to control manufacturing processes. This can be done in various ways, such as reviewing best practices, measuring equipment use and calibrations, and others.

The auditor will assess three departments of the facility at random, for housekeeping-related issues. Assessment of external areas will also take place. Scores in this section will be the average of the scores recorded for each department. In certain occasions, the auditor might assess more than three departments. In case that three distinct departments cannot be identified, scores are based on departments that can be assessed; justifications must be included in the report in this case.

This section consists of 28 questions.

Question 1 asks if the company has any procedures regarding cleaning/housekeeping.

Question 2 asks if there is a traffic management system in order to control motor vehicle and pedestrian movement, both in the internal production areas and the external perimeter of the site. Examples include written documents, site map, signs for pedestrian and/or motor vehicle movement, signs for access routes, etcetera.

Access routes are the focus of question 3; such routes must be checked to see if they are clearly marked (for example, via the use of visible lines) and free of obstruction. Similarly, WIP (Work in progress) areas must be similarly checked (question 4), as are areas with chemicals ready to be weighted or used in machines (question 5). Photographic evidence must be provided in all three questions.

In question 6, equipment used by staff must be held in clearly defined storage locations.

The general cleanliness is also assessed, by checking the state of machinery of each department (question 7) alongside photographic evidence which proves that machines are clean and in good order. The state of grounds/outside areas is also examined regarding cleanliness (question 8). Both questions need photographic evidence.

Another element examined in this section is the calibration of any measuring equipment used in the facility's processes. Such equipment includes factory weight scales, pH meters, water metering systems, thermometers, and others (question 9).

In question 10, the organization must specify which method it uses to control the amount of water used in processing. Available options are a dosing/metering system, a manual measurement, or a visual/estimation method, with the metering system offering the highest score.

Question 11 asks the state in which fleshing operation is normally carried out; either in green state, or in limed state.

In question 12 a general description of the unhairing process must be given. Hair can be saved, or burned (with beamhouse sludge either used for controlled agricultural applications or landfilled).

Question 13 asks if the processes are controlled at key points in order to ensure efficiency and exhaustion (time, temperature, Ph, etcetera). Scoring depends on the frequency of the checks; if processes are always checked (with required information indicated on process sheets) the company scores the highest amount of points.

Question 14 asks how the uniformity of mixing (for finishing chemicals) is achieved (either by electric stirrers or manually; electric stirrers offer the highest amount of points).

Question 15 asks how color control is achieved (either by instrumental color matching and assessment, or via manual assessment; instrumental color matching offers the highest score).

VOC emissions must also be managed; one way to do so is through the formulation of low solvent finishing systems. The organization is asked in question 16 if it uses such systems, with score being calculated by determining the amount of VOC used, expressed as a percentage of the total amount of finishing chemicals used.

The use of solvents is also the focus of question 17. The organization must provide evidence that solvent usage is monitored, and that monitoring data is used to either reduce or control the use of such substances. Score is based on the frequency of the monitoring.

In question 18, the company must state what wetting agents are used. Biodegradable and NPE-free agents offer a positive score, while non-biodegradable and NPE-containing agents offer negative score.

Questions 19, 20 and 21 focus on the use of bactericide, de-greasing chemicals and fungicide, respectively. Such substances must be well controlled, regulated in accordance with written work instructions, and selected appropriately.

The reduction of sulphide is also important; in question 22 the company is asked to state the nature of the chemical or technology used for the reduction of sulphide, along with its percentage. Similarly, in question 23 the company must state what system is used for the delime process and the percentage of ammonium salt.

In question 24, the company is asked which is the earliest point at which waste liquors from the beamhouse are mixed with other liquors, from within the leather manufacturer. Mixing such liquors in the waste water treatment plant offers the highest amount of points, while mixing within the building offers a negative score.

Question 25 is used to state if neighbors or the public have complained about any nuisances or visual impact in the past 18 months. The company must also state what kinds of complaints have been received (for example, site aesthetics, lighting at night, litter, noise, etcetera).

The complaints from question 25 must be properly processed. In that regard, the company must state in question 26 the method used to investigate and act upon them. A defined written procedure along with records offer the highest score.

In question 27 the company must state if there have been any regulatory enforcement actions or prosecutions outstanding, related to the complaints of question 25.

The final question asks if the company operates in a manner that can be considered to conform to globally recognized standards. In the same manner, it asks if there are practices that could lead to detriment of LWG's reputation, in the case that the leather manufacturer is awarded certification. For these reasons, the auditor should examine the leather manufacturer in order to assess if the manufacturer operates suitably, in respect to various subjects. These subjects include the good maintenance of buildings and infrastructure, the appropriate and sufficient guarding of moving equipment, the provision and use of appropriate PPE, and others that focus on safety and environmental protection. Photographic evidence is mandatory in this question.

STEP BY STEP APPROACH AND PREPARATION GUIDELINES FOR OEKO-TEX® CERTIFICATION

2.19 INTRODUCTION and GENERAL INFORMATION OEKO-TEX® LEATHER STANDARD

Expectations of on-trend fashion textile and leather products

- Innovative functions
- Durability and dimensional stability
- Colour fastness and light resistance
- No harmful substances
- Easy care
- Sustainable production
- Social responsibility
- Attractive price.

The original safety standard:

- Protection of consumers from harmful substances
- Globally standardized
- Independent and objective testing and certification system for harmful substances
- System which can identify and eliminate the sources of problematic substances at every stage along the production chain
- Every item bearing the OEKO-TEX® STANDARD 100 label is certified as having passed safety tests for the presence of harmful substances.

Textile and Leather articles can be OEKO-TEX® STANDARD 100 certified following 4 different product classes:

- Product class I: Babies and small children up to 3 years
- Product class II: Skin contacts materials
- Product class III: Material without skin contact
- Product class IV: Home textiles

The basic elements:

- 1) Standardized worldwide
- 2) Synergetic Effects
- 3) Modular System (*items can be tested and certified at any processing stage with the following benefits:*
 - a) *Cost reduction due to the avoidance of multiple tests*
 - b) *Reliable relationships between suppliers*
 - c) *Distribution of certification costs across all production phases*
 - d) *Quick processing*
- 4) Independent Test Institutes that perform the product tests *according to certain criteria for:*
 - a) *product quality,*
 - b) *banned and controlled substances,*
 - c) *substances that are potentially harmful for human health, and for*
 - d) *biologically active and flame retardants)*
- 5) On-Site Audits (*every 3 years*)

- 6) Annual Reassessment
- 7) Regular Control Tests
- 8) Operational Quality Management

Coordination with existing Regulations:

- The OEKO-TEX® Association also observes the developments of the European Community Regulation on Chemicals REACH, the ECHA SVHC Candidate List (substances of very high concern) and the EU POPs regulation.
- The strict tests for harmful substances and the criteria catalogue of OEKO-TEX® STANDARD 100 includes important legal regulations such as banned azo colorants, pentachlorophenol, per-fluorinated substances (PFAS, PFCs), cadmium, lead, etc.
- The STANDARD 100 by OEKO-TEX® is recognised by the American Consumer Product Safety Commission (CPSC) as proof of compliance with the limit values for the total content of lead in products for children.
- The tests for harmful substances conducted in accordance with the STANDARD 100 by OEKO-TEX® take into account important statutory regulations such as, for example, banned AZO colouring agents, formaldehyde, pentachlorophenol, cadmium, nickel etc., requirements from the US Consumer Product Safety Improvement Act (CPSIA) regarding lead, numerous chemicals that are harmful to health, even if they have not yet been legally regulated, as well as various parameters for safeguarding health.
- Textiles with a biologically active finish are not accepted in any of the four product classes.
- Flame retardants that are prohibited by law are banned in all four OEKO-TEX® product classes.

Leathers and skins that can be certified:

Leather and skins from the following animal species can be certified:

- Cattle, Sheep, Goat, Pig, Horse.
- Leather from other animal species can be certified if the raw hides and skins are a by-product of the meat, milk or wool production which must be proven. In such cases, the possibility of certification can be requested at an approved OEKO-TEX® Institute or OEKO-TEX® Secretariat.

Certification according to the Standard 100 by OEKO-TEX® is not possible for:

- Exotic leather materials from animals like crocodiles, snakes, armadillos, etc. or for articles, into which exotic leathers are processed (e.g. bags, belts, shoes, etc.).
- Furs. *(Furs are materials, which are made from animal skin with hair on, but contrary to leather or skins, the animals are exclusively or almost exclusively kept or hunted for the purpose of producing fur or their body does not or almost not serve the purpose of producing fur and their body does not or almost not serve the purpose of feeding humans)*

In questionable cases the final decision about an approval or exclusion for certification or the rejection lies within the OEKO-TEX® Secretariat (Secretary General). This decision is not contestable.

Origin, traceability and deforestation:

- The origin of the processed hide or skin is expected to be known and the source shall be in accordance with CITES (*Convention on International Trade in Endangered Species of wild fauna and flora*) as well as other legal requirements.
- It is also recommended that hide and skins from animal farming/facilities are used, which are tested for species-appropriate husbandry, animal well-fare, etc.
- An implemented traceability system and risk analysis is highly recommended to control and monitor the possible involvement of farms and hide or skin suppliers in any way of

deforestation to exclude the risk of hide and skins coming from areas of both legal and illegal deforestation.

- Physical marking and a reliable data system is recommended to be implemented in the production process to ensure traceability for unprocessed or incoming leather material at least back to the slaughterhouse group, region or country by targeting full transparency back to the farm.

Articles can be certified according to two Test programs (included in the Appendices):

- Annex 4 (includes the fundamental requirements with the goal to protect consumer health).
- Annex 6 (includes doubtful chemicals used in production, with no direct health effect, but possible harmful effect to the environment).

2.20 THE CERTIFICATION PROCESS



Basic Requirements for Certification:

- All components correspond to the specifications for the same OEKO-TEX® product class
- Declaration of conformity of company: *Quality of samples corresponds to quality of products in production*
- Proof of a suitable operational quality assurance system
- Representative test samples from current production

Information for the Application:

- Detailed description of article to be tested
- List of all processing steps
- List of all chemicals, dyes, auxiliaries used
- Safety data sheets for chemicals used
- List of all suppliers and all accessory parts used
- Copies of certificates for raw materials that have already been certified

Representative Samples:

Selection for the entire Product Group

- *An incomplete selection of samples may result in limitation of the certified product group*

Worst case method

- *Articles with the darkest colouring, thickest coating application or the highest quantity of finishing agent are usually tested*

Packaging

- *For reproducible and meaningful test results, the packaging of the test samples must meet specific quality requirements (Annex 3 of the Standard).*

Test Reports:

Every Certificate should be accompanied and connected with a Test Report issued by the OEKO TEX® Association Member Institute. The Test Report comprises:

- *Description of sample or samples (article or articles group) to be certified*
- *The test results*
- *Definition of product class*
- *Details on article group to be certified*
- *The test report tells the company whether the required article group can be certified or whether improvements are necessary, including a repeat test*

Test Reports from non OEKO TEX® Association Institutes are not recognized even they are Accredited!!!

Only OEKO TEX® Association Institutes' Test Reports are accepted!

The Certificate:

Certificate Number

- *Each Certificate has a unique certificate number, the name of the test institute and the expire date.*

Validity

- *Certificates are valid for 12 months and are issued by the commissioned test institute.*

Objective

- *The certificate is proof of successful laboratory tests in accordance with the STANDARD 100 by OEKO-TEX®.*

Communication

- *With the certificate, the applicant receives the right to label his/her products with the OEKO-TEX® label and to use this label for promotional purposes.*

Costs:

The costs are broken down as follows:

- *Certificate cost*

- *Costs for tests for harmful substances (based on the individual test effort for the respective product or material)*
- *Administrative costs*
- *Costs for the on-site Company Audit (every 3 years)*

Potential Savings:

- *The modular system distributes testing costs among the companies along the textile chain*
- *Certificates from preliminary stages are recognized (no double check)*
- *Use of OEKO TEX® raw materials (ECOPASSPORT, STANDARD 100, LEATHERSTANDARD)*

Buying Guide and Validity Check:

Buying Guide

- *OEKO-TEX® Association online directory lists products, brands and manufacturers that are certified according to OEKO-TEX®.*

The online validity check shows:

- *The validity status*
- *The description of the product*
- *The associated Product Class*

This enables customers:

- *Check the Article and its purpose*
- *Check legitimacy*

And make Justified buying decisions!

The Compelling Benefits of OEKO-TEX® STANDARD 100 Certification:

- *One of the world's most recognized and widely used labels for textile and*
- *Leather Products that have been tested for harmful substances and document your product stewardship to protect the consumers.*
- *The independent evaluation of an OEKO-TEX® institute represents a confidence- building measure for your materials and products.*
- *The STANDARD 100 certificate is often the key to new business partnerships since the criteria of the OEKO-TEX® STANDARD 100 are often the basis of*
- *Restricted Substances Lists (RSLs) of retail chains, discounters, producers, etc.*
- *You have the opportunity to present your certified product range and your*
- *company in the Buyer's Guide on the OEKO-TEX® homepage – in detail and free of charge.*
- *A network of over 21,000 companies around the world makes it easier for you to select raw materials and business partners along the textile and leather*
- *products value chains.*
- *You receive practical assistance for your operational quality assurance without having to allocate resources yourself.*
- *The modular certification system saves you money when certifying your products in case you are using materials that have already been certified according to the OEKO-TEX®*

LEATHER STANDARD. This is because valid

- *certificates also apply to subsequent production stages, which helps avoid duplicate tests.*
- *You have the opportunity to present your certified product range and your*
- *company in the Buyer's Guide on the OEKO-TEX® homepage – in detail and free of charge.*

2.21 TESTING AND LIMIT VALUES

- Each leather product has to fulfil specific requirements according to Annexes 4 and 5 of the OEKO-TEX® Leather Standard.
- Any value measured in the laboratory must be below the specified limit to obtain the certificate.
- All tests should be executed only in the laboratories of the Institutes which are members of the OEKO-TEX® Association according to certain methods developed and belong to OEKO-TEX® Association as intellectual property.
- For any type of product or group of products the responsible OEKO-TEX® Institute outlines a test program according to certain certification criteria (no full or excessive testing for not applicable parameters for all kinds of products).
- A complete list of all substances which may be involved in all kinds of leather products is presented in Annex 4 and Annex 5 of the Standard, that include:
 - 1) pH
 - 2) Formaldehyde Heavy metals Pesticides
 - 3) Chlorinated phenols Phthalates
 - 4) Organic tin compounds
 - 5) Polycyclic aromatic hydrocarbons (PAHs) PFAS
 - 6) N-Nitrosamines
 - 7) Carcinogenic, classified and further banned colorants, etc.
- Leather materials are tested in general on both sides of the leather (finished side and flesh side) for compliance with the colour fastness requirements. Leather materials, at which only the finished leather side was tested for compliance
- with the colour fastness requirements as a result must respectively have to be processed (latest at the final consumer product) in such a way, that the flesh
- side is completely covered through an additional material and consequently the flesh side shows no direct contact to skin or other items of articles.
- Colour fastness is measured to different means: to water, to acidic and alkaline perspiration, to rubbing etc.

2.22 ON-SITE AUDIT

ON-SITE AUDITS – OBJECTIVES



The first on-site visit (OSV) and audit take place within the first 6 months of the date of the certificate issuance on the premises of the owner of the certificate and then once every 3 years.

After the OSV the auditor provides the company with the “On-Site Visit Report” which includes among others:

- “General Information” for the company and the production facility
- “Executive Summary” with the main findings
- “Recommendations and Obligations” that must be fulfilled by the company according to a time schedule.
- Description of the “Production Process” (A comprehensive description of the production process is necessary and usually the Auditor asks the manufacturer to provide it before the On-Site Visit).
- The use of the “OEKO-TEX® label” (if the use of the label is according to OEKO-TEX® guidelines, if and how it is used on the products, on the website and/or on social media, if and how it is used in brochures, on packing materials and/or on delivery papers, etc).
- “Quality Management”
- Findings during the “Tour On-Site”
- Auditors can pick samples of the certified products from production or from warehouses.

Quality Management

Main topics to be examined:

- Is a responsible person for the Quality Management System nominated?
- Is there a Quality Management System in place?
- Is the QM System or any other management system certified (i.e. ISO 9001, ISO 14001, ISO 45001 etc) and are the certificates genuine?
- Is the QM System documented in a proper way?
- Are OEKO-TEX® certificates for sourced materials available?
- Is incoming material (raw materials, etc) checked upon delivery?
- How is the conformity to the OEKO-TEX® Standard guaranteed in case external suppliers or external service providers without an own OEKO-TEX® Standard certificate are involved?

- Is the quality of the products tested in a laboratory?
- Is there an adequate process for corrective actions of non-conformities?

It is important to clarify that the existence of a certified Quality Management System is not a prerequisite for the certification of products according to the Leather OEKO-TEX® Standard. However, undoubtedly the existence of such a QM System is particularly useful primarily for the company (ensuring a consistent quality of its products) and secondarily for the success of the On-Site Audit. In case the company does not have an integrated certified QM System, it must have developed and follow specific written procedures in the following areas:

- Supplier evaluation procedure
- Purchase procedure
- Quality control procedure
- Non-conformity handling procedure
- Traceability procedure

Tour On-Site

During the On-Site tour the Auditor will visit the production areas as well as the warehouses and will check the following:

- Can all materials in the production and storage areas be clearly and easily identified?
- Can products be traced back through the whole process to the raw materials and/or suppliers?
- Do the raw materials in stock correspond with the data given in the application as well as in the test report?
- Are certified (*according to OEKO-TEX®*) and not certified raw materials clearly marked in the storage area?
- Do the dyes, auxiliaries and chemicals in formulations for Leather Standard by OEKO-TEX® certified production correspond to the data given in the application and the test report?
- Can all chemical containers be clearly identified in stock?
- Are dead stocks as well as dyes, auxiliaries and chemicals used for internal test purposes isolated and marked accordingly?
- Is there a risk that materials/chemicals/dyes are contaminated or mixed up during production?
- Are certified (*according to OEKO-TEX®*) and not certified end products clearly marked in the finished goods storage?
- Do the process papers, recipes, etc. have a clear identification if the product is OEKO-TEX® certified?
- Are production machines and laboratory equipment in a well maintained condition?
- Are non-conforming products separated and clearly marked?
- Does the facility provide necessary Personal Protective Equipment (e.g. ear protection, goggles, gloves, safety shoes, etc)?
- Are all products which are sold as OEKO-TEX® certified fully covered by the existing certificate?

Photos

Pictures are confidential and not shared outside the company.

Permission from the company must be taken, or pictures can be taken by the company according to the Auditors' instructions.

Taking pictures of people is not necessary even with their consent.

Photos are not mandatory, but they could be an added benefit to the Audit Report because they:

- are evidence for good and bad findings
- document situations that are not compliant
- help to visualize situations for the company
- help to understand the situation better
- are difficult to negotiate
- are proof
- help the Quality Assurance Officer to prepare better for the next visit. Photos should be taken from samples and from certified products.

Changes

All major changes should be reported to the certifying Institute and the Auditor must ask and check if there are any changes in areas leading to the need for modification or amendment of the certificate. Such changes are:

- Relocation of the production or of the warehouse (even partly) or additional production and/or warehouse facilities to the same or at different place.
- Company ownership and/or company structure.
- Changes in personnel (*especially in the QM Department*)
- Installation of new machinery
- Development of new production processes
- New suppliers
- Changes in the company's product mix (*especially in the certified products*)
- Modifications in the article scope

The manufacturer must notify the OEKO-TEX® responsible testing institute immediately if changes occur to the materials and their mixtures, technical processes, formulations, or supply relationships. If this obligation is disregarded, OEKO-TEX® may withdraw the customer's certificate.

Recommendations and Obligations:

- The purpose of Obligations and Recommendations are not to punish the manufacturer but to give an unbiased view of the production based on the experience from many different production facilities. (*Often, with time comes a certain operation blindness, where the manufacturers no longer see the mistakes*).
- Obligations and Recommendations aim to make clear to the manufacturer where to improve.
- The necessary changes must come from the manufacturer to be sustainable. (*If the manufacturers have ownership of their solutions, it will be better*).
- The Auditors don't give detailed solutions for the nonconformities but clarify the necessary changes and improvements and help the manufacturer to understand what must be improved. (*Not how the improvements should be implemented. Consulting leads to a conflict of interest*).
- Obligations must be fixed in a certain timeframe and the manufacturer should provide evidence of implementing the corrective actions and improvements.
- The Recommendations usually are challenges for doing things better and making improvements in a flexible timeframe.

2.23 PREPARATION FOR OEKO-TEX® CERTIFICATION

Organize your production and storage areas.

- Put signs and labels for traceability and easy access to raw materials and final products.
- Separate certified and not certified raw materials, semi-products and final products and mark respectively.
- Organize the storage area for the dyes, the auxiliaries and the chemicals. Mark everything and use the safety warning signs.
- Separate ECOPASSPORT certified chemicals.
- Keep the production machines and all equipment in a well maintained condition. Prepare preventive maintenance plans and instructions. Keep records for the maintenance with information and all necessary data.
- Do regular cleaning and housekeeping in all areas of your facility.

Organize your files and documents

- Organize a file with all MSDS for every dyestuff, auxiliary and chemical in electronic as well as hard copy form. Make backups and copies in at least two places.
- All Safety Data Sheets should be the most recent ones. Make updates at least once a year.
- Organize, review and update all Standard Operating Procedures. Keep them in written form and create a file with all SOPs in digital form. Organize also and provide employees with hard copies of SOPs for each department.
- Distinguish the process papers, recipes, etc. for the products which are OEKO-TEX® certified and identify them using the term “OEKO-TEX®”.

Review, update and upgrade your safety standards

- Take care of your hazardous materials (chemicals and wastes) and treat them as is foreseen.
- Make risk assessment studies for all critical processes and prepare contingency plans.
- Make risk assessments for every working place, prepare safety instructions and provide regularly Personal Protective Equipment for all workers (*e.g. ear protection, goggles, gloves, safety shoes, etc.*).
- Provide regular training on safety procedures to all employees.

Make your factory operate according to the principles of a QMS

- Organize your work according to a Quality Management System (QMS) even if you are not certified. Prepare written procedures for the critical processes like:
 - 1) Supplier evaluation procedure
 - 2) Purchase procedure
 - 3) Quality control procedure
 - 4) Non-conformity handling procedure
 - 5) Traceability procedure
- Separate, clearly mark and handle according to a specific way all non-conforming products.

Raw and other critical materials sourcing

- Define the critical raw materials as well as other critical materials used in your production processes affecting the quality of your final products as well as the ability to be certified according to OEKO-TEX® criteria.
- Try to reduce the number of the materials, chemicals and auxiliaries you used by evaluation

according to certain criteria including OEKO-TEX® criteria.

- Review your suppliers and look for alternatives. Consult the Shopping Guide from OEKO-TEX® database.
- Prefer ECOPASSPORT by OEKO-TEX® dyestuffs, chemicals and auxiliaries. Using such materials you avoid excessive laboratory testing on your products, risks and increased certification costs.
- Find an OEKO-TEX® Institute and collaborate to implement a pretesting program on your final products for crucial parameters. Pretesting will help you to prepare your company for the certification process, will give you the time to make necessary adjustments or changes and avoid failures when you start the official certification process.

Traceability - Labelling

- Review, evaluate and improve your traceability processes.
- Develop and implement an ERP System supported by software (*if you don't have in place a system like that*). Such a system is not a prerequisite for OEKO-TEX®, but it helps a lot to monitor and control your production.
- Consider that from 2027 all textile and leather products in the EU market (either produced in EU or imported from other non-EU Countries) should be
- accompanied and carry on the Digital Product Passport (DPP) with a range of necessary information and data for the consumer. So, a digital ERP System is necessary to support the DPP and allow the imports of leather products in the EU market.
- Ideally, every company must develop and implement an integrated and
- computerized ERP System supported by Software customized for the factory. All warehouses and all production processes must be digitally monitored. For the inventories and for the materials' flow, the use of a "Two Dimensional Barcode System" or a "QR Code System" in the entire production processes is of great importance. In such a system all data - including information for the quality of the raw materials and the final products - is entered and kept. Every final product should have a unique serial number with all information necessary for the customers (*product ID, lot number, expiry date, quality profile, compliance with the legislation, certificates, labels, instructions for use, etc*).

APENDICES

1. LWG Leather Manufacturer Audit Protocol Responses Report – Issue 7.2.3
2. Annex 4: Product classes specific limit values according to OEKO-TEX Leather Standard
3. Annex 5: Individual substances according to OEKO-TEX Leather Standard