



Making the transition to ISO 14001:2015

We at SCCM are convinced – and our experience has proven – that any organization, large or small, will achieve better environmental performance by using the ‘plan-do-check-act’ approach outlined in the ISO 14001 standard.

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Making the transition to ISO 14001:2015

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I Introduction

This document aims to simplify the transition to the new ISO 14001 standard for certified organizations. No rights can be derived from this information; the certification process is determined by the ISO 14001 standard and the SCCM certification scheme. This document offers suggestions and examples of how to apply the new standard. Other solutions and examples are also possible. We have tried to provide information about elements of the new standard which have prompted the most frequently asked questions. You will still need to study the ISO 14001 standard yourself, since there will be other differences not covered in this document.

The following documents are relevant in addition to this one:

- NEN-EN-ISO 14001:2015
- IAF ID 10: Informative Document 'Transition Planning Guidance for ISO 14001:2015'
- Certification scheme ISO 14001:2015

This document gives some sample advice using a fictitious company called 'Keizer's Pet Foods'. It indicates what the company must change from the previous guide, describing the environmental management system, to meet the new standard.

2 Transition to a certificate based on ISO 14001:2015

From the date the new standard is published, an organization can be certified based on the new standard. Since the ISO 14001:2004 standard will be valid for another 3 years, an organization can choose itself the best time to switch to ISO 14001:2015. One obvious a time to switch is when it is time for recertification. Since recertification requires a complete audit of the system anyway, there will be a minimum of additional time needed to look at the new standard. Of course, this is only feasible if there is sufficient time between publication of the standard and recertification. However, the transition can be made during a surveillance audit, although the organization will need extra time to determine if it meets the new standard.

New certificates according to ISO 14001:2015 can be issued immediately. An organization may still be certified for ISO 14001:2004 during the transition period until mid-September 2018. The certificate's validity will be less than the standard 3 years, however, since it must be converted to ISO 14001:2015 before mid-September 2018.

The [IAF ID 10: Informative Document 'Transition Planning Guidance for ISO 14001:2015'](#) has recommendations for accreditation and certification bodies about the transition to ISO 14001:2015. The following points are of importance for certified organizations.

Gap analysis

The IAF ID 10 recommends that organizations wishing to be certified perform a 'gap analysis'.

The organization can save certification body (CB) time on its evaluation by conducting a gap analysis, documenting how the differences between the requirements in the ISO 14001:2004 and ISO 14001:2015 standards are, or will be, interpreted. To do so, the organization can use:

- the overview of important changes between the two standards, found in IAF ID 10:2015;
- the overview of documents necessary for certification (see annex 1);
- this SCCM guide to differences between ISO 14001:2015 and ISO 14001:2004;
- the SCCM-certification scheme for ISO 14001:2015.

An organization can also hire the CB to conduct a gap analysis.

Planning the certification audit for ISO 14001:2015

The certification audit for ISO 14001:2015 can be planned separately, or combined with a surveillance or recertification audit for ISO 14001:2004. In the latter case, the ISO 14001:2004 certification will be maintained until all requirements of ISO 14001:2015 have been met.

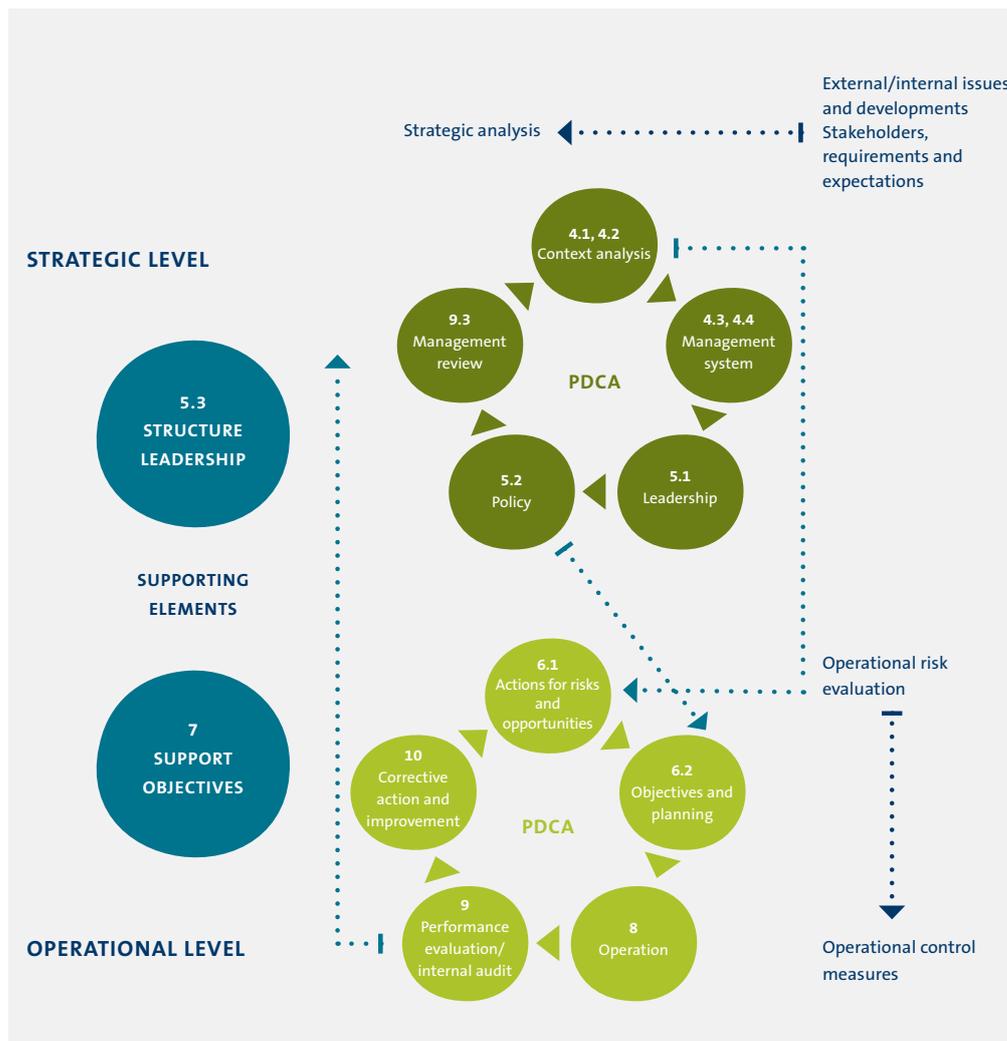
The CB must evaluate the complete conformity with the ISO 14001:2015 standard. Like an initial audit for ISO 14001:2015, both the documentation and implementation must be evaluated in the transition as well. The CB must decide on a case-by-case basis if these evaluations can be combined in a single audit or are better done separately. This will primarily involve the differences from 14001:2004, and is based on the gap analysis mentioned above.

3 Purpose of ISO 14001:2015

To make the differences between ISO 14001:2004 and ISO 14001:2015 as elaborated in chapter 4 easier to identify, the purpose of ISO 14001:2015 and the relationship between the elements of the standard are summarized in the following figures.

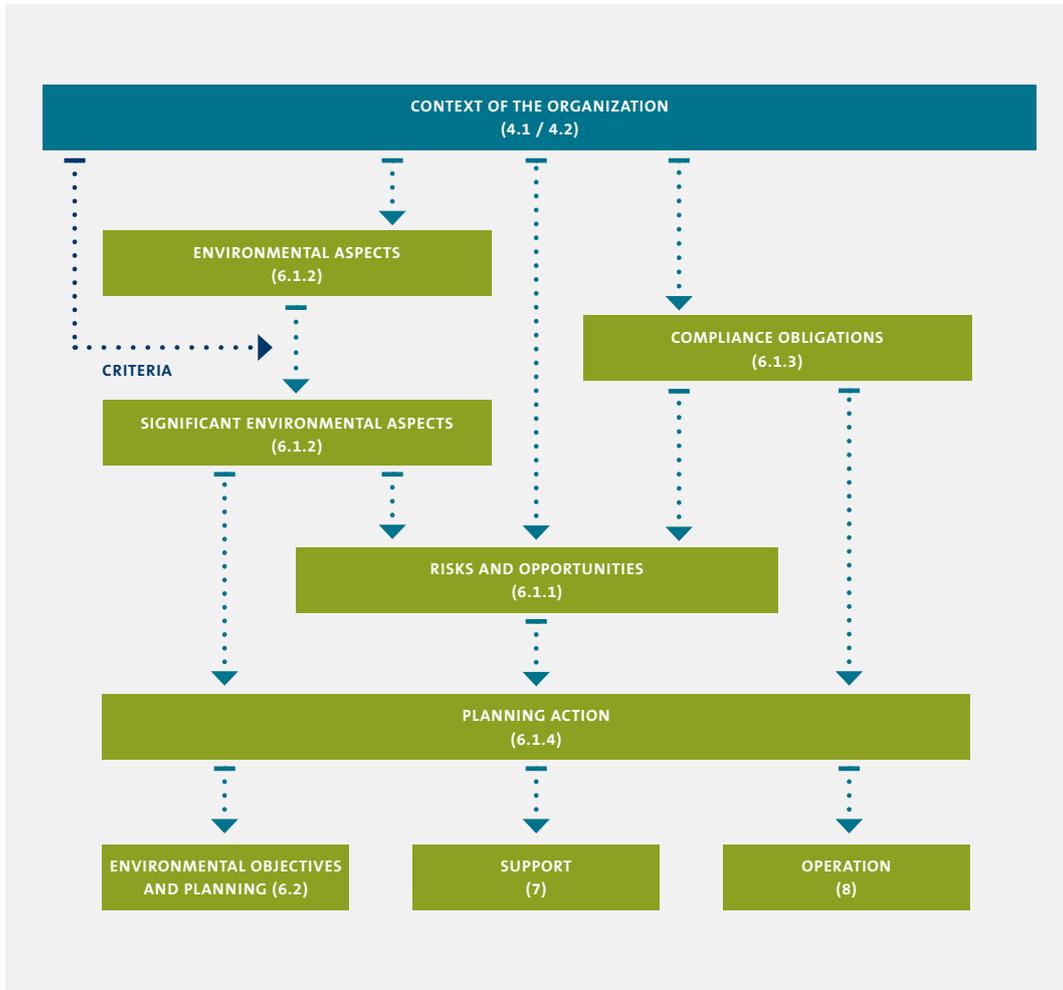
Figure 1 makes it clear that ISO 14001:2015 contains improvement cycles at both the strategic and operational levels. Analysing both context and interested parties (stakeholders) is an important input for the improvement cycle at strategic level. The strategic improvement cycle makes it easier to use ISO 14001 as a basis for sustainability policy (based on ISO 26000, for example).

FIGURE 1: PDCA CYCLES AT STRATEGIC AND OPERATIONAL LEVELS (SOURCE: NEN)



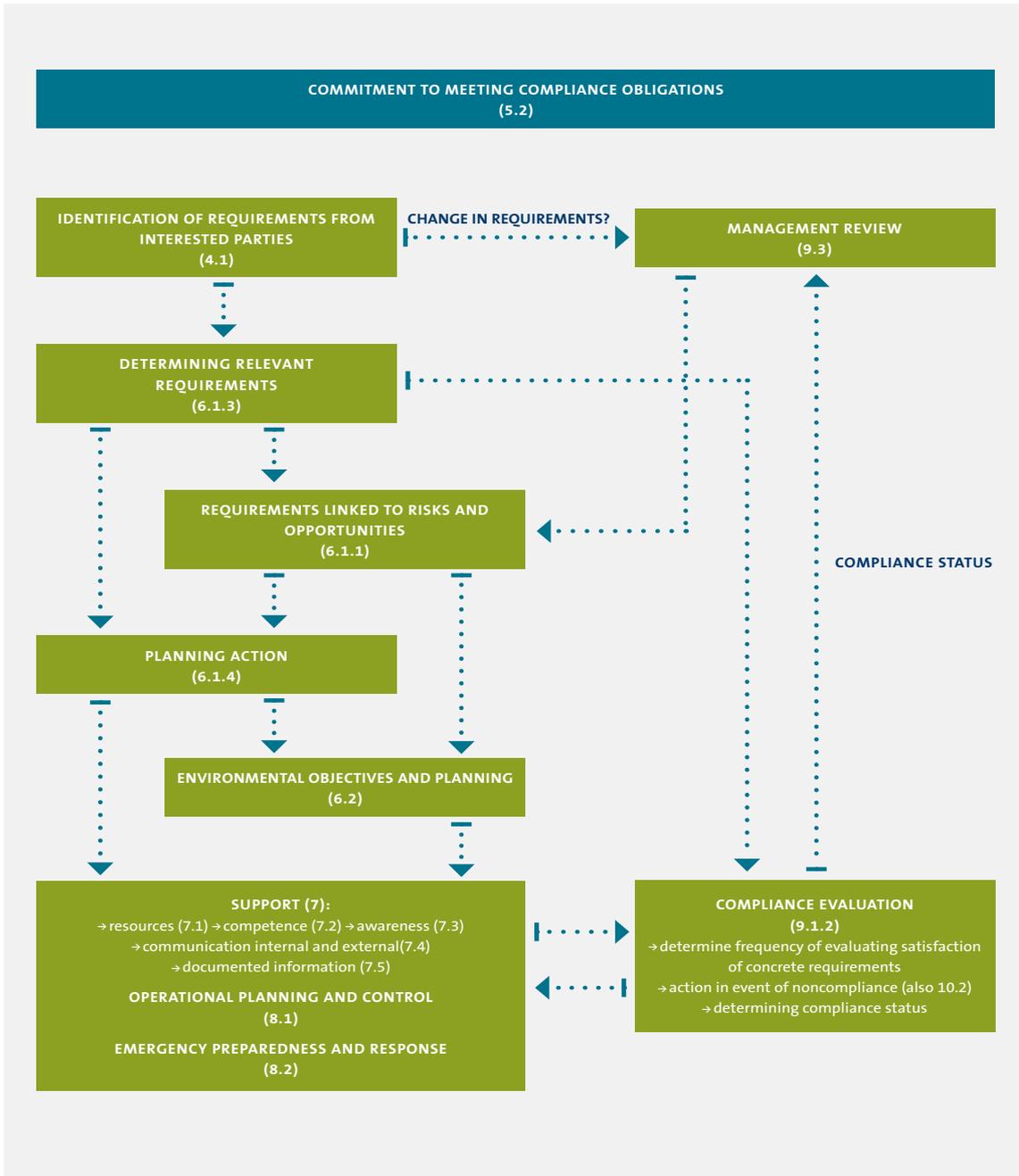
The ISO 14001:2015 standard introduces the terms 'risks and opportunities'. Figure 2 illustrates how the risks and opportunities are related to the outcomes of the context analysis and to the environmental aspects and compliance obligations, familiar from the ISO 14001:2004 standard.

FIGURE 2: RISKS AND OPPORTUNITIES



Fulfilling compliance obligations (which includes legal and other requirements) is one important objective of the environmental management system. Figure 3 shows the relationship between all of the elements of ISO 14001:2015 that are important for compliance management.

FIGURE 3: RELATIONSHIP OF ELEMENTS OF THE STANDARD RELEVANT FOR COMPLIANCE MANAGEMENT



4 Differences between ISO 14001:2004 and ISO 14001:2015

4.1 Chapter division of standard based on ISO High Level Structure

ISO 14001:2015 has a new division of chapters and sections, based on what is known as the ISO High Level Structure (HLS). ISO has determined that the structure of all standards for management systems will be based on the HLS and will use the basic text from the HLS with requirements for a management system.

ISO 9001:2015 is also based on the HLS. The basic HLS text for a management system can be recognized in both ISO 14001:2015 and ISO 9001:2015, as well as in the new ISO 45001 standard for occupation safety and health (OSH) management systems, which is still being developed and which will replace the OHSAS 18001.

In the various management system standards, requirements for the specific area in question are added to the basic HLS text. Roughly half of the ISO 14001:2015 standard is the HLS text and the other half is standard-specific.

Many organizations with more than one management system have already integrated their management systems on the basis of the old standards. Having management systems with the same structure and basic text makes it easier for organizations to integrate them.

TIP:

- The new chapter/section structure based on the HLS is not a reason to change anything in the management system. The important thing is that all requirements of the standard are met. If there is a manual for the management system (note this is not necessary!), it can be kept, although it is a good idea to add a reference table showing where the elements of the new standard are incorporated.
- Annex B of ISO 14001:2015 has a reference table of requirements from ISO 14001:2015 and ISO 14001:2004.

4.2 The main differences in a nutshell

The following table shows the main differences between the old and the new system, and whether the difference comes from the HLS or not. If an organization combines several management systems it is important to know whether difference also applies between, for example, ISO 9001 and the future ISO 45001 (for OSH management systems). The organization may want to consider a combined implementation of the various management systems.

The consequences of the differences listed in this document will differ for each organization:

- For a number of subjects, the text in the new standard is more ‘precisely’ formulated, and is more or less consistent with the ‘spirit’ of the old standard. Organizations that have implemented the spirit of the old standard will have fewer major differences.
- The ISO 14001:2015 standard contains a number of new requirements for using the environmental management system to interpret the environment element of a company’s sustainability policy. The differences will be smaller for organizations that have taken the implementation of their sustainability policy farther, based on ISO 26001.

Since the ISO 14001:2015 is a completely new text, all the differences cannot be listed. The table below shows the most important differences.

The column ‘HLS’ indicates whether or not the difference comes from the HLS, which applies to all ISO management systems. For some sections of the standard, there is both a ‘Yes’ (difference is due to HLS) and a No (difference is not due to HLS). This is connected to the fact that there are requirements in ISO 14001 additional to those in the HLS. These requirements are not in ISO 9001:2015, for instance.

The first column indicates how different the section is from the ISO 14001:2004:

++: completely new;

+ : an existing requirement has been added to or toughened.

STANDARD SECTION	DIFFERENCE BETWEEN ISO 14001:2015 AND ISO 14001:2004	HLS	NOTES (IF NECESSARY)
1 General	No written procedures are required.	Yes	The standard often uses the term ‘processes’. These processes must be ‘established, implemented and maintained’. In addition, ‘documents’ or ‘records’ are often required to demonstrate that elements of the system are present and functioning and that the processes are running correctly, under control and according to plan. An organization can choose to document its processes, either partly or completely. This can have several advantages: - transferring tasks from one employee to another is easier; - It is easier to find how to perform tasks that are not performed so often; - for the certification process, it is simpler to demonstrate that the processes are in place and that they are performed as described. The certification body will save time as a result.
2 General	The standard is geared to developing and implementing environmental policy at both ‘strategic’ and ‘operational’ levels.	Yes	ISO 14001:2004 made it possible to limit the environmental management system (EMS) to the operational environmental policy (controlling the environmental aspects and meeting legal requirements). Based on the new standard (the requirements in 4.1/4.2/5.1/6 etc), it is necessary to involve risks and opportunities for the environment in the organization’s strategic policy and conversely, to ensure that its environmental policy is consistent with its strategic policy. See the example in Annex 2.

STANDARD SECTION	DIFFERENCE BETWEEN ISO 14001:2015 AND ISO 14001:2004	HLS	NOTES (IF NECESSARY)
4.1 ++	Understanding the organization and its context (internal and external).	Yes	This element is to understand the important points or developments both inside and outside the organization that are (or can be) relevant for achieving the outcomes envisaged by the EMS. The points or developments become relevant when they entail relevant risks or opportunities for the environment and/or the organization in the short or long term. The objective of the new standard is to coordinate the environment and sustainability with the organization's strategy (see also 5.1 leadership). Some very diverse points can emerge. See the example in Annex 2.
4.2 ++	Understanding the needs and expectations of interested parties.	Yes	This is an entirely new requirement, which is also in line with the principle that under ISO 14001, the EMS must be usable to elaborate the environment element of sustainable entrepreneurship (e.g. based on ISO 26000). Interested parties (stakeholders) exist both within and outside the organization. See the example in Annex 2.
4.3 +	<ul style="list-style-type: none"> - Requirements are set for the description of the scope. - All activities within the scope must be included. - The description must be made available to interested parties. 	Yes	The 2015 standard states that the boundaries and applicability of the EMS must be determined to establish the scope. The ISO 14001:2004 standard only required that the scope be established. While with ISO 14001:2004 often only the activities were listed, it is important to also indicate other relevant 'boundaries' to make clear what is and is not covered by the certificate. Examples include physical boundaries, legal boundaries, or Chamber of Commerce data. One point to consider is that the description of the scope must be consistent with the approach to environmental aspects from a life-cycle perspective (see section 8.1), defining what does and does not belong to the system. Outsourced processes are now considered processes that the organization can control. The organization will have to establish how much influence it has in its scope. See the example in Annex 2.
5.1 ++	<p>Emphasis on management's leadership role:</p> <ul style="list-style-type: none"> - Top management must take responsibility. - Relationship between strategy / business processes. 	<p>Yes</p> <p>No</p> <p>Yes</p>	<p>ISO 14001:2015 makes top management's involvement in the environmental management system explicit in nine points. The first of these is that top management must also '[take] accountability' for the effectiveness of the EMS (supplement in ISO 14001 to the HLS text). Under ISO 14001:2004 it was possible for a company's top management to be uninvolved or hardly at all involved, only signing the management statement. ISO 14001:2015 requires top management to take an active and proactive role, for example taking initiatives to improve environmental performance and/or the EMS. Top management will now have to be aware of the significant risks and opportunities, the expectations of interested parties and the organization's compliance status.</p> <p>In the 2015 standard, top management is responsible for ensuring compatibility between the organization's environmental policy and its strategy. This means, on the one hand, that principles from the organization's strategy that are relevant for its environmental policy can also be found in the environmental policy, and conversely, that significant risks and opportunities from the environmental policy can also be found in its strategy. A total integration is of course also possible.</p>

STANDARD SECTION	DIFFERENCE BETWEEN ISO 14001:2015 AND ISO 14001:2004	HLS	NOTES (IF NECESSARY)
5.2 +	Environmental policy: main point for attention is point c): a commitment to the protection of the environment, including prevention of pollution.	No	<p>The term 'protection of the environment' is new, and it includes 'protection of the environment'. Annex 2 provides examples of the difference between the two.</p> <p>The policy must be specific and to also contain commitments that are appropriate to the context of the organization.</p> <p>Here as well there is a relationship with the life-cycle perspective and the scope described.</p>
5.3	Roles and responsibilities: there is not a designated 'management representative'.	Yes	As also indicated under 5.1, ISO 14001:2015 puts a great deal of emphasis on the importance of leadership. Top management can delegate tasks but not responsibility. ISO 14001:2015 requires personal involvement from top management in the environmental management system.
6.1 ++	The terms 'risks' and 'opportunities' are new.	Yes	<p>The ISO 14001:2004 standard requires the identification of significant environmental aspects, in order to determine the potential risks and possible opportunities for improvement. The compliance obligations were also implicitly determined under ISO 14001:2004. The following are new:</p> <ul style="list-style-type: none"> - not all significant environmental aspects or compliance obligations are necessarily risks or opportunities. This means that it must be made clear which of the significant environmental aspects is/are a risk or opportunity. This is an extra step, which can be done using a risk analysis; - the various risks and opportunities (emerging from the significant environmental aspects, compliance obligations and context analysis) must be brought together to satisfy, for example, section 10.1 in which the opportunities for improvement must be determined; - the more strategic risks and opportunities arising from the context of the organization (4.1 and 4.2) must be documented.
6.1.1	Addressing risks and opportunities related to: <ul style="list-style-type: none"> - the effect of external environmental conditions on the organization; - potential emergencies. 	No	<p>Generally, ISO 14001:2004 is interested in the environmental aspects and the influence the organization has on the environment. Issues can also emerge from the context analysis showing that environmental conditions can influence the organization's objectives.</p> <p>See the example in Annex 2.</p>
6.1.2 +	<ul style="list-style-type: none"> - Approaching environmental aspects from a 'life-cycle perspective'. - Including emergencies as an environmental aspect. - Determining the criteria for determining significance. 	No	<p>Under ISO 14001:2004, the organization must identify the environmental aspects which it can control or influence. The assumption was that environmental aspects connected with suppliers and customers would also be included. ISO 14001:2015 is more specific in this regard, since the identification of the environmental aspects must be done from a life-cycle perspective. This means that the organization must be familiar with the significant environmental aspects both at its suppliers as of the use/disposal phases of its products and services. It must then determine if it can also influence these environmental aspects. Some organizations will have used the life-cycle perspective under ISO 14001:2004. Now it is explicitly required. See the example in Annex 2.</p> <p>ISO 14001:2015 requires that the environmental aspects arising from potential emergencies also be included in the identification of the environmental aspects. In ISO 14001:2004 this requirement was listed in the Annex. Based on section 4.4.7 in ISO 14001:2004 we expect organisations to have this already in place.</p>

STANDARD SECTION	DIFFERENCE BETWEEN ISO 14001:2015 AND ISO 14001:2004	HLS	NOTES (IF NECESSARY)
6.1.4 ++	Planning action: the consequences of the identified risks and opportunities, significant environmental aspects and compliance obligations must be explicitly stated.	Yes	This is a new element of the standard. The essence is that it be clear how the management system addresses the risks, opportunities, significant environmental aspects and compliance obligations arising from 6.1.1, 6.1.2 and 6.1.3. This can take the form of control measures in the implementation section (8), or formulating objectives (including for improvement), as seen in 6.2. The 'environmental programme' from the ISO 14001:2004 standard is now linked to the objectives (6.2.2). See figures 2 and 3 in chapter 3 and the example in Annex 2.
6.2 +	Environmental objectives: - Indicate how objectives are evaluated (including indicators). - consider integration with other business processes.	No	In essence the requirements from ISO 14001:2004 agree with those in the 2015 standard. The evaluation of objectives was included under monitoring in ISO 14001:2004. New is that indicators must be determined to be able to evaluate progress. Another new aspect is that the organization must consider how the action(s) it takes to realize its objectives can be integrated in other business processes.
7.2 +	Determining necessary competences.	Yes	Under ISO 14001:2004 the organization had to ensure that 'everyone' had the necessary skills to perform their assigned tasks. Although it was not required to document these skills (in the form of competences), the training needs had to be identified. ISO 14001:2015 states that the necessary competences must first be established, and that the necessary training must be determined (as in ISO 14001:2004). Training courses, together with education and experience can ensure the necessary competences.
7.4 ++	- A process for internal and external communication must be implemented. - Contents of communication must be consistent and reliable.	Yes No	In ISO 14001:2004 the organization had to decide whether it wanted to communicate externally or not. The ISO 14001:2015 standard states that the organization must communicate internally and externally if it is relevant for the environmental management system. Communicating involves both receiving and sending information. The relevance of communication is related to such things as the significant environmental aspects, compliance obligations and needs of interested parties (see Annex A.7.4.). Obligations to communicate externally with suppliers and customers can also come from 8.1. Another new aspect is that there are more specific requirements for the communication process; the organization must work out 'to whom', 'what', 'when', and 'how' it communicates. Another new requirement is that the organization must ensure that the information it communicates is reliable and is consistent with the information generated within the environmental management system. Annex A.7.4 provides more information about the quality and reliability of communication.
7.5.3 ++	Control of documented information has been added (7.5.3 b).	Yes	
8.1 +	Operational planning and control: - The control of planned and unintended changes (management of change or MoC) is new. - The control or influencing of outsourced processes is new. - From a life-cycle perspective the organization must consider controlling all stages of the life cycle. - It must consider providing information about significant environmental aspects during the delivery, use and disposal stages.	No	- ISO 14001:2004 did not completely cover the control of consequences of planned and unplanned changes. However, many organizations did include management of change (MoC) procedures, based on the requirements for environmental aspects in ISO 14001:2004. ISO 14001:2015 requires organizations to control planned changes, and to review the consequences of them and take any necessary action. Annex A.1 of ISO 14001:2015 explicitly discusses the importance of MoC. - In ISO 14001:2004, organizations had to inform suppliers of their processes. In ISO 14001:2015 the EMS must also ensure control or influence and must define the extent of its 'control or influence'. - An organization must ensure that the environmental requirements are included in its design and development activities, and consider the various stages of the life cycle.

STANDARD SECTION	DIFFERENCE BETWEEN ISO 14001:2015 AND ISO 14001:2004	HLS	NOTES (IF NECESSARY)
8.2 +	Emergency preparedness and response.	No	Added: - supplying information and if necessary training of relevant interested parties; - maintaining documented information.
9.1.1 +	The following have been added: - methods for monitoring, measuring, analysis and evaluation must be determined in order to ensure valid results - criteria and indicators for evaluating environmental performance must be determined.	Yes No	- The quality of information is an important point for attention in ISO 14001:2015. According to ISO 14001:2015, monitoring must yield valid results, interpreted in Annex A.9.1.1 as reliable, reproducible and traceable results. This is also consistent with the requirement in 7.4.1 to communicate reliable information. - ISO 14001:2004 requires that monitoring be geared to, among other things, environmental performance and achieving the objectives. ISO 14001:2015 adds the requirement to determine 'criteria' and 'indicators'.
9.1.2 +	The organization shall maintain knowledge and understanding of its compliance status.	No	The term 'compliance status' is new. It is considered to be the presence of an overall view of the state of affairs regarding compliance with legal and other requirements. ISO 14001:2004 included the obligation to conduct an internal evaluation of compliance. This made it possible to delegate the evaluation and handling of any nonconformities to the departments or other levels, without acquiring an overview of the organization as a whole. Under ISO 14001:2015, the organization must have an up-to-date view of its compliance.
9.3 +	- For the management review, instead of input, top management must determine which topics must be considered. Other new elements include changes in the needs and expectations of interested parties; risks and opportunities; the adequacy of means. - There are additional specifications for decisions to take about the output.	Yes No	A number of changes in the ISO 14001:2015 come together in the management review. This standard requires (on the basis of 5.1) more involvement from top management. Whereas under ISO 14001:2004 the emphasis lay mainly on the 'input' – drawing up a document that was then approved by top management – the emphasis now lies on the 'output'. The standard provides points that must be considered by top management. For a certificate to be issued, it must be clear that top management is actually involved in this process. There are other new elements in the management review, such as changes in the context analysis (4.1 and 4.2). There must also be an evaluation of the adequacy of the resources the organization has made available. There is more emphasis on decisions that must be taken by top management, and these decisions have been specified. New elements requiring a decision include what action to take when objectives have not been achieved; opportunities for integration with other business processes, and the consequences for the organization's strategic direction.
10 +	The organization shall determine and select opportunities for improvement and implement the necessary action to improve its environmental performance.	No	With a separate chapter in the HLS dedicated to 'improvement', there is more emphasis on the subject. ISO 14001:2015 now has section 10.1. An organization must determine its opportunities for improvement. These may be realizable in both the short and longer term. Examples of long-term opportunities are modifying production technology and products/services. Also see Annex A.10.1 for a more details. The previous standard stated that the opportunities for improvement had to be determined in the management review. In practice, this meant that the only opportunities for improvement mentioned were those planned for the near term.

Overview of documented information required in ISO 14001:2015

NORM PAR.	DOCUMENTATIE VEREISTEN ISO 14001:2015	HLS	TOELICHTING (DAAR WAAR NODIG)
4.3	Scope.	HLS	
5.2	Environmental policy.	HLS	
6.1.1 +	Adequate evidence is needed to ensure confidence that the processes to identify measures for addressing risks and opportunities are implemented according to plan.		
6.1.1 ++	Risks and opportunities.		
6.1.2 +	- Environmental aspects and related environmental impacts. - Criteria used to determine significant environmental aspects. - Significant environmental aspects.		
6.1.3 +	Compliance obligations.		Although the 2004 standard did not explicitly state that compliance obligations had to be documented (although this happens in practice), the 2015 version does so.
6.2.1	Environmental objectives.	HLS	
7.2	Evidence of competencies.	HLS	
7.4.1 ++	Evidence of communication (as appropriate to the situation).		In the previous standard, only the decision whether to communicate externally had to be documented.
8.1 +	Adequate evidence is needed to ensure confidence that the processes for operational planning and control are implemented according to plan.	HLS	In the previous standard procedures had to be documented. According to the new standard, the implementation must also be documented.
8.2	Adequate evidence is needed to ensure confidence that the processes for emergency preparedness and response are implemented according to plan.		
9.1.1 +	Evidence of the results of monitoring, measuring, analysis and evaluation.	HLS	Documentation information as evidence of the analysis and evaluation must also be made available.
9.1.2 +	Evidence of the results of the compliance evaluation.		One of the results is understanding the 'status' of compliance. This is a new concept, entailing an understanding the organization as a whole meeting the compliance obligations (for example, its strong/weak points).
9.2.2	Evidence of the implementation of the audit programme and the audit results.	HLS	
9.3	Evidence of the results of the management review.	HLS	Although not a new requirement, there are new points which must be given attention during the management review.
10.1	Evidence of: - the nature of the nonconformities and the measures taken; - the results of corrective measures.	HLS	

Documents available for certification

The organization must have and keep the following documents/records available (for a period of three years for recertification):

- Description of the scope (4.3)
- Environmental policy (5.2)
- Risks and opportunities needing attention (6.1.1)
- The processes for addressing the risks and opportunities in 6.1.1-6.1.4 (6.1.1)*
- Environmental aspects and their associated environmental impacts, significant environmental aspects and the criteria used to determine them (6.1.2)
- Compliance obligations (6.1.3)
- Environmental objectives (6.2.1)
- Evidence of competences (7.2)
- Evidence of communications activities (7.4.1)
- Processes for operational planning and control (8.1)*
- Processes for emergency preparedness and response (8.2)*
- Evaluation of compliance (9.1.2)
- Internal audit programme and results of internal audits (9.2.1)
- Results of management review (9.3)

Documents/records SCCM recommends be available:

- Results of the context analysis (see 4.1 and 4.2)
- Description of the organization and responsibilities
- Overview of documented information and records (including any descriptions of processes/procedures other than those more or less required on the basis of 6.1.1, 8.1 and 8.2)

* The documented information must be retained and updated to the extent necessary to create confidence that the processes have been implemented as planned.

Guide to ISO 14001:2015 using the fictitious company 'Keizer's Pet Foods'

Based on the description below of Keizer's Pet Foods, table 1 of this annex has worked out a possible interpretation for a number of elements of the ISO 14001 standard.

Company description Keizer's Pet Foods

Keizer's Pet Foods Ltd is a manufacturer of pet foods made from ingredients of animal origin. Some of the intermediate products are sold to other companies.

Keizer's Pet Foods Ltd has several shareholders. The shares are distributed among management (10%), the Keizer family (30%) and two outside investors who each own 30%.

The company has 110 employees, in the following divisions:

- management and support (quality, environment, HRM, secretarial)
- purchasing and logistics
- warehouse
- financial administration
- manufacturing
- laboratory
- sales
- technical services

About 30 people work in the office, 14 in technical services, 6 in the laboratory, 41 in manufacturing and 10 are cleaners (some part-time). Nine people work in the field (sales and transport of ingredients). Transport of finished products is outsourced to a transport company.

The management system has been combined for ISO 9001, ISO 14001 and HACCP (food safety). Where possible, procedures and instructions have been integrated. The company has been certified for ISO 9001 since 1995. ISO 14001 and HACCP were added later.

The scope is: developing, manufacturing and selling food for house pets.

The following manufacturing operations take place at the company's site:

- pre-treatment of ingredients
- drying and evaporation
- mixing, compressing and packaging

Major supporting processes are water treatment and storage of ingredients, excipients and finished products. The water treatment company is separate from Keizer Pet Foods, since wastewater from third parties is also treated on the site.

Building

The oldest parts of the building were built in 1924, the newest in 2006. The company is located in a small industrial park. The nearest residence is about 300 meters away on one side and the other side borders on a pasture. The building consists of various spaces including a receiving room for ingredients, the manufacturing room, waste-water treatment, storage for excipients, semi-finished products and finished products. Part of the building also houses the offices.

Description of processes

Delivery of ingredients

Ingredients (including offal and various dry materials) are delivered to the company in its own trucks. Ingredients are unloaded indoors in order to minimize noise nuisance for neighbours.

Pre-treatment

The offal is pre-treated before manufacturing. These operations include sorting (removing impurities such as bits of plastic, metal, etc.), cutting and breaking off attached bone, removing fat (by heating and washing) and drying.

The company uses groundwater in its pre-treatment process. It pumps 540,000 m³ of groundwater annually (and has a permit to do so). This water is discharged to surface water after treatment in the plant. The company also has a permit for the water discharge.

Production of pet foods

The company manufactures pet foods using the semi-finished products created in the pre-treatment process, along with other ingredients that it purchases. The ingredients are first mixed and kneaded, then made into kibble by cutting, drying and other processes. The company makes only dry pet foods, which makes drying the most significant environmental aspect of manufacturing (due to its energy consumption).

Packaging

The factory produces various brands of pet food (mainly for dogs and cats), both its own brand for the high-end segment and other house brands for its customers. Each brand has its own packaging, in plastic or paper bags. Customers indicate the type of packaging and size(s) they wish and Keizer 's Pet Foods has the packages produced and printed in the customer's house style. Each product has several packaging sizes. Finished and packaged product is then packed into boxes for transport to distribution centres, after which it is sent to the various sales points. The boxes are piled onto a pallet and shrink-wrapped to prevent damage.

Outside transport companies deliver the finished product from Keizer Pet foods to the distribution centres. On average, there are 2 freight movements per day taking the finished product from the plant.

Facility processes

The process produces waste water that is too polluted to discharge without treatment. There is therefore an organic water treatment plant on the site. Groundwater is used for toilets etc, and there is also a connection to the local water supply system. The company has a steam boiler to produce the steam necessary for the manufacturing process. There is also a compressed-air system with 4 compressors located in the boiler house.

The industrial park has two buildings set up for storing hazardous substances, one for up to 10 tonnes, the other for large volumes of over 10 tonnes with substances such as acids/alkalines. It also has a large sulphuric-acid tank. Both building meet the PGS (Hazardous Substances Publication Series) 15 requirements.

TABLE 1: SAMPLE INTERPRETATION OF ISO 14001:2015 FOR KEIZER'S PET FOODS

SECTION OF ISO 14001:2015	INTERPRETATION FOR KEIZER'S PET FOODS
2 Link with strategic policy	<p>Sustainable entrepreneurship is part of the strategy of Keizer's Pet Foods. It must be made clear how this is linked to its environmental policy. In the case of Keizer's Pet Foods, there are important environment-related strategic issues:</p> <ul style="list-style-type: none"> - the composition of the product range, both from the perspective of availability of ingredients and from the desire of the consumer market for sustainably produced products; - the efficiency of the (partially antiquated) production process. For example, manufacturing requires a lot of energy and water. The company should perhaps consider different processes (including its own water treatment) and possibly outsourcing parts of the process; - the local situation. The possibilities on site are limited (among other things, due to potential complaints from neighbours about strong odours).
4.1 Understanding of organization and its context	<p>Based on its intention to be a sustainable entrepreneur, Keizer's Pet Foods conducted a broad-based stakeholder analysis in which the ISO 26000 standard was used to identify which issues it should use. The following emerged as important points regarding the environmental issues.</p> <p><u>Internal</u></p> <p>Examples of issues originating from the organization itself:</p> <ul style="list-style-type: none"> - the significant environmental aspects (e.g. water consumption; ingredients; energy); - issues that have been the subjects of complaints; - historical issues (e.g. soil pollution, asbestos); - technological opportunities for improvement; - the condition of the facilities (maintenance situation; economically depreciated). <p><u>External</u></p> <p>The following may be 'issues' based on information from outside parties:</p> <ul style="list-style-type: none"> - strategic and/or financial expectations of shareholders; - changes in planning/zoning in the area; - availability and composition of ingredients; - developments among competitors (what product range); - developments in legislation and regulations; - desires of end users (e.g. organics, animal welfare); - availability of water (in connection with groundwater extraction); - flora and fauna nature management (boundary with pasture).

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<p>4.2 Needs and expectations of interested parties</p>	<p>The interested parties for Keizer's Pet Foods are:</p> <ul style="list-style-type: none"> - shareholders; - employees; - competent authority (municipality/environment agency, water district board, fire department); - insurers; - umbrella organization; - neighbours; - local environmental and other organizations; - customers (retail and wholesale); - suppliers; - pet-food purchasers / consumer organizations; - NGOs (animal protection, environmental/nature organizations). <p>It is important to consider whether all the above organizations have relevant interests. The company must investigate the expectations of each interested party. This can be done using written research (such as an internet search) or by contacting the various parties. The way in which information is gathered and parties are directly involved will depend on the seriousness of the interest and the degree of direct involvement.</p> <p>For example, in conducting a customer-satisfaction survey as part of ISO 9001, respondents can be directly asked to state their wishes and expectations in the area of the environment.</p>
<p>4.3 Scope</p>	<p>The scope of the environmental management system involves all operations on the site of Keizer's Pet Foods BV located at Industrieweg 1 in Wameldam. The legal boundaries are limited to the following limited partnerships, owned by Keizer's Pet Foods: Keizer's Production Ltd (which includes all manufacturing and support divisions (including facilities, HSE), Keizer's Zuivering Ltd and the sales-office operations of Keizer Verkoop Ltd in the Netherlands. Both companies have their offices at the same location. The sales offices in Belgium and Luxembourg are not covered under the scope of the certificate.</p> <p>Transport of finished product is outsourced. Transportation is also covered by the environmental management system, as far as the company's influence extends. This means that the company evaluates the policies of the outside transport companies, and makes agreements with the transport company about its execution of the contract with regard to type of truck (fuel consumption and emissions), fill rate and level of training of the drivers. Purchasing of ingredients belongs to the management system in the same way as transport. The company carefully selects the products it purchases with an eye to their origins and the how they are transported to Keizer.</p>

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5.1	<p>Top management has final responsibility for the functioning of the environmental management system. To satisfy the points listed in 5.1, top management makes active efforts and is involved enough that it is aware of the most significant important risks and opportunities as regards the environment; the organization's compliance status; the views of interested parties; and the various elements of the environmental management system. Top management has regular contact with leaders of improvement projects, follows their progress and if necessary can give guidance in a timely manner. The necessary resources are also made available.</p> <p>Top management can also stay well informed about the state of its operations by taking part in 'walkthrough' visits and internal audits, which at the same time can emphasize the importance of the issue of the environment for the employees.</p> <p>Once per quarter, top management devotes attention to the progress of achieving the environmental objectives during one of their weekly meetings.</p> <p>To promote the continual improvement of its environmental performance (section 5.1) top management devotes much attention to the importance of improvement and the input from employees on the subject, for example by:</p> <ul style="list-style-type: none"> - when communicating with the employees (e.g. during staff meetings and internal newsletters), indicating what the risks and opportunities are and inviting employees to submit their input; - openly rewarding employees with ideas for improving manufacturing processes, for example; - devoting attention in communications to finished projects and their consequences for the environment.
5.2 Difference between 'protection of the environment' and 'prevention of pollution'	<p>In 'prevention', processes are done differently in order to prevent environmental pollution. In 'protection' of the environment, something 'extra' is done (that is good for the environment). For example, Keizer's Pet Foods has the following opportunities to 'protect' the environment (although there is no reduction of pollution involved):</p> <ul style="list-style-type: none"> - To encourage biodiversity, certain materials such as seeds (for flowers or for bird food) are added to the pet foods. This gives nature a helping hand since the seeds are spread through the animals' excrement. - Hanging nesting boxes on the industrial park site helps the bird population.
6.1 Risks and opportunities	<p>The environmental aspects inventory of Keizer's Pet Foods provided a thorough understanding of the operational risks (the significant environmental aspects) associated with the company's own manufacturing processes. To comply with ISO 14001:2015, a few points have been elaborated on as follows:</p> <ul style="list-style-type: none"> - The company was partly familiar with the environmental aspects of suppliers but are now systematically identifying and evaluating them. - The opportunities to exert influence on the environment through customers (e.g. through packaging) had not been included, but is now. - The company knew of opportunities in the form of improvements in the manufacturing process, and has added the opportunities for improvement (reducing pollution) to be realized through influencing suppliers and customers. - Keizer's Pet Foods had an emergency response plan. The overview of the underlying risks has been updated and is now included in the overview of environmental aspects. <p>Keizer's Pet Foods did not have a systematic picture of its strategic risks and opportunities. These have now been linked with the policy plan. Points for attention include:</p> <ul style="list-style-type: none"> - Risks: the company intends to expand its manufacturing operations but there are the risks that there will be insufficient groundwater, there will be more complaints about bad odours and the water-treatment plant will no longer function properly. - Risks: new legal requirements for the functioning of the water-treatment operations. - Opportunities: in the composition of the product line and the manufacture of animal-welfare-friendly and/or organic pet foods.

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6.1.1 Effect of the environment on the organization's policy	The following change in the environment may influence the continuity of Keizer's Pet Foods: <ul style="list-style-type: none"> - A shortage of groundwater could result in disruptions to the manufacturing process and/or make future growth impossible.
6.1.2 Determining environmental aspects from a life-cycle perspective	Keizer's Pet Foods has determined the following additional environmental aspects using a life-cycle perspective (in addition to the environmental aspects of its own manufacturing processes): <ul style="list-style-type: none"> - the raising of the animals whose remains it uses (food, use of growth promoters, animal welfare etc.); - the production of vegetable ingredients; - transport at various places along the chain; - the packaging of finished products (size and recyclability); - the excrement of the animals who eat Keizer's Pet Foods products.
6.1.4 Planning action	To indicate what is being done with the identified risks, opportunities and compliance obligations, Keizer's Pet Foods has added a column in both its inventory of environmental aspects and in the inventory of legislation and regulations in which the company can indicate if the issue is procedurally controlled (by a procedure or operational instruction), organizationally controlled (through training, consultation, training new employees, etc.), controlled by supervision (inspection, checks, measuring, records) or technically controlled (technical/technological measures or provisions). Both records have links which can be clicked to go directly to the measures in question.
6.2 Environmental objectives	One new element in Keizer's working method is that the company has established indicators for monitoring the achievement of all of its objectives. Where possible, the indicators have been formulated such that performance can also be tracked at department level. There are indicators for: <ul style="list-style-type: none"> - the objective of reducing energy consumption by 5%, presented as the amount of energy per kg of product by department; - reducing water consumption at both the level of the entire organization and the departments to which this objective applies. <p>The MT has agreed on regular times to discuss progress, and if necessary to formulate measures for improvement.</p>
7.2 Competences	Keizer's Pet Foods had an overview of the necessary education/training for each position. In order to comply with ISO 14001:2015 the following have been determined for each position: <ul style="list-style-type: none"> - description of tasks and responsibilities; - main risks (linked to environmental aspects and compliance obligations); - knowledge and experience needed (to perform tasks and manage the risks); - possible degree/training courses to take to acquire this knowledge (any required education) - way in which competences are taught in addition to education/training (e.g. familiarization programme, internal training course or informational meeting/campaign, toolbox, etc.); - frequency of repeating training / supplying information (if necessary).
7.3 Awareness	Keizer's Pet Foods does the following to ensure that employees are aware of the environmental aspects/risks and compliance obligations: <ul style="list-style-type: none"> - Employees have a basic knowledge and awareness based on the competences required for their positions. - Awareness is 'maintained' through regular communication of the monitoring results, results of internal audits and environmental performance and toolbox measurements. - Company policy calls for employees to personally address each other about their own behaviour in relation to the significant environmental aspects and obligations. - Top management indicates the importance of the environmental policy by expressing the importance of achieving the environmental objectives in its communications. <p>The degree of awareness is calculated from an analysis of reports of non-conformities and near-non-conformities, the frequency with which people need to call each other to account about attitudes and behaviour, and results of internal audits and walkthroughs.</p>

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<p>7.4 Communication</p>	<p>Keizer's Pet Foods has made an analysis of the necessity for communication. In the past, there was both internal and external communication, usually on an ad hoc basis. In order to comply with ISO 14001:2015, communication has been worked out more systematically.</p> <p>Fixed times have been set for internal communication (an overview of environmental performance and the progress of improvement projects). These are discussed four times per year in department meetings.</p> <p>It emerged from the context analysis that several interested parties (in particular those living nearby) have a need for regular communication (not only when a problem occurs). There is now communication with these neighbours once a year. A warning is also sent in advance out about any anticipated nuisance from odours.</p>
<p>8.1 Operational planning and control</p>	<p>To be able to comply with requirements of ISO 14001:2015, Keizer's Pet Foods has modified their operational planning and control on two points.</p> <p>To be better able to anticipate planned and unplanned changes, an analysis was done of where in the organization these changes might occur. Some of the places where they could be found were:</p> <ul style="list-style-type: none"> - purchasing of new material/ingredients, or a change to the composition of routinely purchased products; - changes in process equipment, process conditions, procedures; - renovating or enlarging buildings; - engineering projects; - change in the amount of polluted water coming to the treatment plant. <p>Responsibilities for the MoC processes are established in the job descriptions and are recorded.</p> <p>Based on the modified inventory of environmental aspects, agreements have been made for several significant environmental aspects that occur in the chain. Some have been made with outside transport companies. These agreements are part of the contracts, and the agreements are followed by each transport company.</p>
<p>9.1 Monitoring, measuring, analysis and evaluation</p>	<p>Unlike the previous standard, the new standard requires the organization to continually know its 'compliance status' – how well it is meeting its compliance obligations. To meet this requirement, Keizer's Pet Foods has determined a frequency to check each of its compliance obligations. These vary from:</p> <ul style="list-style-type: none"> - 1x per 2 months (requirements that are soon violated or neglected); - 1x per year; - 1x per 3 years (more 'static' obligations, such as building-related requirements that only change in the event of renovations). <p>The frequency was determined using a risk analysis.</p> <p>Each department has an overview of its own requirements, and the results are compiled quarterly by the QSE (quality, safety & health, and environment) coordinator.</p> <p>The QSE coordinator is informed immediately of nonconformities that cannot be corrected right away.</p> <p>This provides an up-to-date picture of the compliance status.</p> <p>The measurements taken are related to the environmental aspects of Keizer's Pet Foods. In order to meet the requirement to supply reliable, reproducible and traceable results, it has a list of records and measurements to keep track of, indicating where the risk is with regard to reliability and reproducibility (although not explicitly required in ISO 14001:2015). These risks are covered by measures or agreements. If necessary, there are measuring protocols to ensure that reliable values are obtained.</p>

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9.3
Management
review

The management review at Keizer was formerly an annual evaluation, most of which was conducted by the QSE coordinator. The report was discussed in the MT. To comply with the new standard, the implementation of the environmental policy is now on the agenda for top management every quarter. Keizer has made a format in which records of the significant environmental aspects and the progress of environmental objectives are incorporated. Identified nonconformities with regard to compliance with legislation and regulations are also discussed.

At the close of the year, an evaluation is made in which attention is devoted to issues not subject to quarterly review, and the output of the system is also evaluated in the light of the context analysis. The management review is then used as the basis for reviewing the strategic and other policies and formulating new objectives.

10
Continual
improvement

Keizer's Pet Foods maintains a list of all its improvement measures. The list indicates for each measure if it is being dealt with, the date by which it has to be remedied and the person responsible, as well as the origin of the improvement measure and if applicable, a reference to a report or other document. If necessary, the measures are confirmed by top management in the quarterly review (for example, if time and resources must be made available or if measures are related to identified risks and opportunities or strategic policy). Measures that do not have immediate priority but must not be forgotten are noted and scheduled for later review. The list is kept up by the QSE coordinator, who makes it a living document that receives continual updates, and in which improvements can be marked 'done'.

Contact

Please do not hesitate to contact us if you have any questions. We will gladly help companies, organizations, consultants, supervisory bodies, certification bodies and other stakeholders.

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