




Words Mean Things

What if I said....



Today's discussion

- ▶ More questionable words
- ▶ Why you roll your eyes when you see the letters EPA
- ▶ So, what do you do?
- ▶ Order rises from the Greeks, sort of?
- ▶ Process Improvement you say?
- ▶ More weight on the new frame
- ▶ It works I tell ya!
- ▶ Cliff notes version
- ▶ Shameless Pandering

Words that aren't enemies but you may think they are...

Sustainability <ul style="list-style-type: none">▶ The ability to be sustained, supported, upheld, or confirmed.▶ To carry on	Profit <ul style="list-style-type: none">▶ An advantageous gain or return
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COMPLIANCE

Air, Water, Waste

If, ands, and buts...


Take a fairly common chemical solvent: XYLENE

Xylene is on the OSHA radar because of flammability, and because of skin and respiratory exposure dangers.




Xylene

From the OSHA perspective it also carries these markers

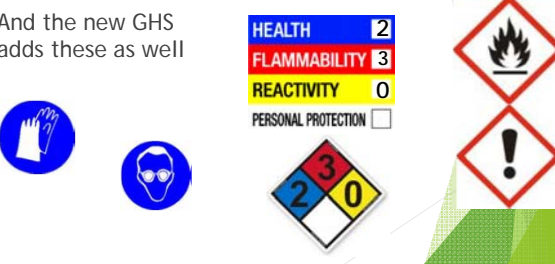


HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	<input type="checkbox"/>




Xylene

And the new GHS adds these as well



HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	<input type="checkbox"/>



Xylene- EPA

The Resource Conservation & Recovery Act (RCRA) says as an ingredient in paint - not hazardous.

BUT


When used as a solvent- it is hazardous and therefore must be managed as a **hazardous waste**.



Xylene- EPA

The Clean Air Act says it is a Hazardous Air Pollutant so if you are painting with it then you need to know how much goes into air.

It gets factored into all other materials that go into air from your facility.



Xylene- EPA

The **Safe Drinking Water Act** says that the maximum Contamination Level is **10** milligrams per liter.



Keeping Score



For Xylene and EPA that's

Air
Land/Waste
Water

3 or 4 regulations for one item.

Compliance is a pain

How do you know what regulations apply to your company?

How do you know if you are in compliance?

Which processes impact or cross paths with regulations?

Have regulations changed?

Just go check the Federal Register

A Daily Publication:

- Proposed new rules and regulations
- Final rules
- Changes to existing rules
- Notices of meetings and adjudicatory proceedings

It is just over 165 Reams of Paper



Or you could try the Ostrich approach

“Regulators haven’t been here so I don’t have to worry....”


Or

“I got this letter from ADEM back in 1983 and it says we’re ok....”



Even Then...

Even if you know how regulations apply in general, does the company as a whole know HOW they do...?



Management Systems in General

A **management system** is the framework of processes and procedures used to ensure that an organization can fulfill all tasks required to achieve its objectives.

Advantages of the structured management system

All parts of the organization can know which regulations apply

Employees can be trained to recognize issues and seek improvement opportunities

From top to bottom a company can know their responsibilities and use this knowledge for innovation and advantages.

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graph TD; Compliance((Compliance)) --> Education((Education)); Education --> Accountability((Accountability)); Accountability --> Compliance;
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The gold standard of standards



The 'International Organization for Standardization' (ISO) is an independent, non-governmental international organization with a membership of 163 national standards bodies.

ISO is derived from the Greek isos, meaning equal. Whatever the country, whatever the language, we are always ISO.


What is ISO 14001?

- ▶ A **model** to follow when implementing an Environmental Management System (EMS)
- ▶ An **auditable standard** for an environmental management system
- ▶ A **frame work** for continual improvement of environmental performance, control and regulatory compliance
- ▶ A **plant-wide** system

Why many companies choose 14001?

- ▶ “The only reason we are doing ISO 14001 is to get more business with Ford”
- *Chemical Facility*
- ▶ “Our corporate owner in Europe told us we had to get registered”
- *Medical Products Facility*
- ▶ “ISO 14001 has forced us to get our act together to stay in compliance”
- *Metal Finishing Facility*

Why more should consider a structured EMS...



The diagram shows a circular arrow labeled 'CONTINUAL IMPROVEMENT' at the top. Inside the circle are four colored segments: a red segment labeled 'PLAN', a green segment labeled 'DO', an orange segment labeled 'CHECK', and a blue segment labeled 'ACT'. A small yellow circle is positioned in the center where the four segments meet.

ISO 14001 Standard – Moving forward

Introduction to the new version **14001:2015**

This International Standard is applicable to **any organization**, regardless of size, type and nature, and applies to the **environmental aspects** of its activities, products and services that the organization determines it can either **control or influence** considering a **life cycle perspective**.

ISO 14001 Standard

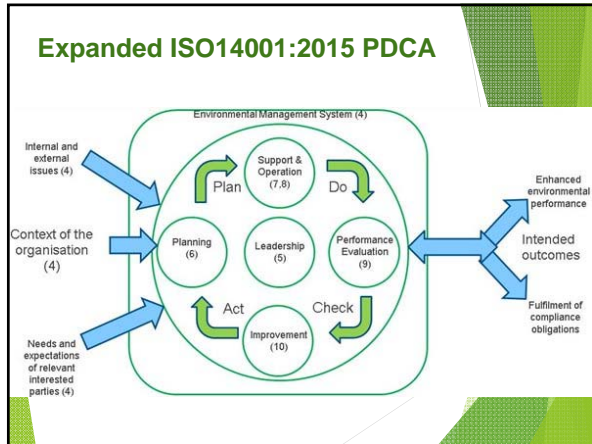
...A Systematic Approach to Sustainability:

- protecting the environment by preventing or mitigating adverse environmental impacts;
- assisting the organization in the fulfilment of compliance obligations;
- enhancing environmental performance;
- controlling or influencing the overall life cycle of your product or service;
- achieving financial and operational benefits that strengthen the organization's market position;
- communicating environmental information to relevant interested parties.

This International Standard, like other International Standards, is not intended to increase or change an organization's legal requirements.

ISO14001:2015 Section Overview

1. Scope
2. Normative References (Placeholder)
3. Terms & Definitions
4. *Context of the Organization (4.1)*
5. Leadership (4.4.1)
6. Planning (4.3)
7. Support (4.4)
8. Operation (4.4)
9. Performance Evaluation (4.5 & 4.6)
10. Improvement (4.5.3)



Context of the Organization

Consider it a new way to define compliance obligations.

What internal and external environmental conditions do we effect?

What internal and external environmental conditions effect us?

Life Cycle considerations

The decisions here impact the scope of the EMS

Compliance Obligations

Compliance Obligations -
“The preferred term. Replaces legal and other requirements.”

Note: Compliance obligations can arise from mandatory requirements, such as applicable laws and regulations, or voluntary commitments, such as organizational and industry standards, contractual relationships, codes of practice and agreements with community groups or non-governmental organizations.

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Simplified Summary of a 14001 EMS



Process Improvement Works

- ▶ An EMS can be an effective process improvement tool
- ▶ Typically an EMS can be coupled with the Quality System you are already utilizing



Back to the words

Sustainability	Profit
<ul style="list-style-type: none">▶ The ability to be sustained, supported, upheld, or confirmed.▶ To carry on	<ul style="list-style-type: none">▶ An advantageous gain or return▶ Income minus expenses

Recent UASafeState Clients

Compliance Audits / ISO14001 Implementation

- ▶ \$375,000 in cost savings through process improvement
- ▶ \$100,000 savings in avoidance of potential fines
- ▶ Identification of compliance issues
- ▶ \$140,000 per year in waste disposal costs
- ▶ Streamlined international chemical approval process for importing
- ▶ Position company for international trade

The Alabama Operation Efficiency and Sustainability Internship Pilot Program

- ▶ 2013
- ▶ 6 Manufacturers, 6 Students
- ▶ \$760,000 in actual cost savings
- ▶ \$263,000 in potential annual savings.
- ▶ 6.4 Million kWh of energy saved.

The Alabama Operation Efficiency and Sustainability Internship Pilot Program

- ▶ 2014
- ▶ 13 Manufacturers, 15 Students
- ▶ \$3.7 Million in actual cost savings
- ▶ \$10 Million in potential annual savings.
- ▶ 1.8 Million kWh of energy saved.

The Alabama Operation Efficiency and Sustainability Internship Pilot Program

- ▶ 2015- EPA Grant Specific Projects
- ▶ 7 Manufacturers, 7 Students
- ▶ \$5.1 Million in actual cost savings
- ▶ \$37 million gallons of water savings.

Numbers mean things too...

- ▶ 3
- ▶ 35
- ▶ 10,000,000

▶ 3 years

▶ 35 projects

▶ \$10,000,000+

Takeaways

- ▶ You will manage environmental issues one way or another, you might as well make them work to your advantage where possible.
- ▶ An active EMS reduces potential for future liabilities
- ▶ Presents ongoing opportunities for continued improvement
- ▶ Establish an auditing system to ensure continuation
- ▶ Becomes "how we do business!"

Questions?

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