



INTERDEPENDENCY OF MANAGEMENT SYSTEMS AND REGULATORY COMPLINACE

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Steps

1. Define an integrated management system.
2. Determine how and where to incorporate the regulatory compliance audit into the management system.
3. Determine if the new system is fully integrated.

Step 1

Define an Integrated Management System

- EH&S share similar practices, procedures, processes and resources
- Creation of one management system
- Common standards (ISO 14001 and OHSAS 18001) make integration easy

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Comparison Between ISO 14001 and OHSAS 18001			
	ISO 14001		OHSAS 18001
4.2	Environment Policy	4.2	OH&S Policy
4.3	Planning	4.3	Planning
4.3.1	Environmental aspects	4.3.1	Planning for hazard identification, risk assessment and risk control
4.3.2	Legal and other requirements	4.3.2	Legal and other requirements
4.3.3	Objectives and targets	4.3.3	Objectives
4.3.4	Environment management program(s)	4.3.4	OH&S management program(s)

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Comparison Between ISO 14001 and OHSAS 18001

	ISO 14001		OHSAS 18001
4.4	Implementation and operation	4.4	Implementation and operation
4.4.1	Structure and responsibility	4.4.1	Structure and responsibility
4.4.2	Training, awareness and competence	4.4.2	Training, awareness and competence
4.4.3	Communication	4.4.3	Consultation and communication
4.4.4	Environmental management system documentation	4.4.4	Documentation
4.4.5	Document Control	4.4.5	Document and data control
4.4.6	Operational Control	4.4.6	Operational Control
4.4.7	Emergency preparedness and response	4.4.7	Emergency preparedness and response

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Comparison Between ISO 14001 and OHSAS 18001

	ISO 14001		OHSAS 18001
4.5	Checking and Corrective Action	4.5	Checking and Corrective Action
4.5.1	Monitoring and measurement	4.5.1	Performance measurement and monitoring
4.5.2	Non-conformance and corrective and preventative action	4.5.2	Accidents, incidents, non-conformances and corrective and preventative action
4.5.3	Records	4.5.3	Records and records management
4.5.4	Environmental management system audit	4.5.4	Audit
4.4.5	Management Review	4.4.5	Management Review

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Step 2

Determine How and Where to Incorporate the Regulatory Compliance Audit into the Management System

- Problem: unmanageable management system
 - elaborate policy
 - objective, target and management program overkill

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Solution: simplify the management system

- control those activities that may cause an adverse impact
- identify activities, aspects, impacts, legal requirements, risk and control measures
- develop a control table

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Control Table

- lists and organizes relevant items
- simple and easy to use
- versatile

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Environmental Control Table

Air Quality

ACTIVITY	ASPECT	IMPACT	LEGAL REQUIREMENTS	RISK	CONTROL MEASURES
Autoclave processing nickel sulphate solution	Stack emissions	Air pollution - ammonia	5 kg/hr ammonia (Approval)	Low	Vent Condenser Stack SM-HX-22
Nickel powder classification	Vent emissions	Air pollution - particulate and visible emissions	0.2 g/kg effluent and 40% opacity (Approval)	Medium	Dust collector

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Health & Safety Control Table

Respiratory Protective Equipment

ACTIVITY	ASPECT	IMPACT	LEGAL REQUIREMENTS	RISK	CONTROL MEASURES
Autoclave processing nickel sulphate solution	Interior fugitive emissions	Respiratory problems from ammonia	25 mg/m ³ nickel (Chemical Hazards Regulation)	Medium	Half mask with ammonia cartridge
Nickel powder classification	Dust	Respiratory problems from nickel dust	1 mg/m ³ nickel (Chemical Hazards Regulations)	High	Ventilation hood Half mask with particulate cartridge

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EH&S Control Table

Nickel Powder Production

ACTIVITY	ASPECT	IMPACT	LEGAL REQUIREMENTS	RISK	CONTROL MEASURES
Autoclave processing nickel sulphate solution	Stack emissions	Air pollution - ammonia	5 kg/hr ammonia (Approval)	Low	Vent Condenser Stack SM-HX-22
Autoclave processing nickel sulphate solution	Interior fugitive emissions	Respiratory problems from ammonia	25 mg/m ³ nickel (Chemical Hazards Regulation)	Medium	Half mask with ammonia cartridge

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Simplified system uses ISO 14001 requirements as an audit checklist

- plan (control and deadline tables)
- implement (control measures)
- check
- review

Each requirement is rated based on its importance to regulatory compliance.

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Regulatory compliance audit is incorporated into the MS audit after “Legal requirements”

4.2	EH&S policy
4.3	Planning
4.3.1	EH&S aspects
4.3.2	Legal requirements
4.3.3	Objectives and targets
4.3.4	EH&S management program(s)

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Regulatory compliance audit checks:

- compliance to legal requirements
- thoroughness of control and deadline table

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Step 3 Determine if the Simplified System is Fully Integrated

- integrates EH&S
- provides framework for regulatory compliance
- management system audit does not measure EH&S performance

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The regulatory compliance audit measures:

- EH&S performance
- true performance of the management system

Interdependency of the management system and regulatory compliance promotes continuous improvement, therefore the simplified system is fully integrated.

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Conclusion

Take my word for it, the silliest woman can manage a clever man; but it needs a very clever woman to manage a fool.

R. Kipling