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Real World Approaches to Establishing HSE Compliance Management Systems

Brian Freeman, PE, PMP
bfreeman@iestech.net



Real World Approaches to Establishing HSE Compliance Management Systems

or How I learned to stop worrying and love my Regulator

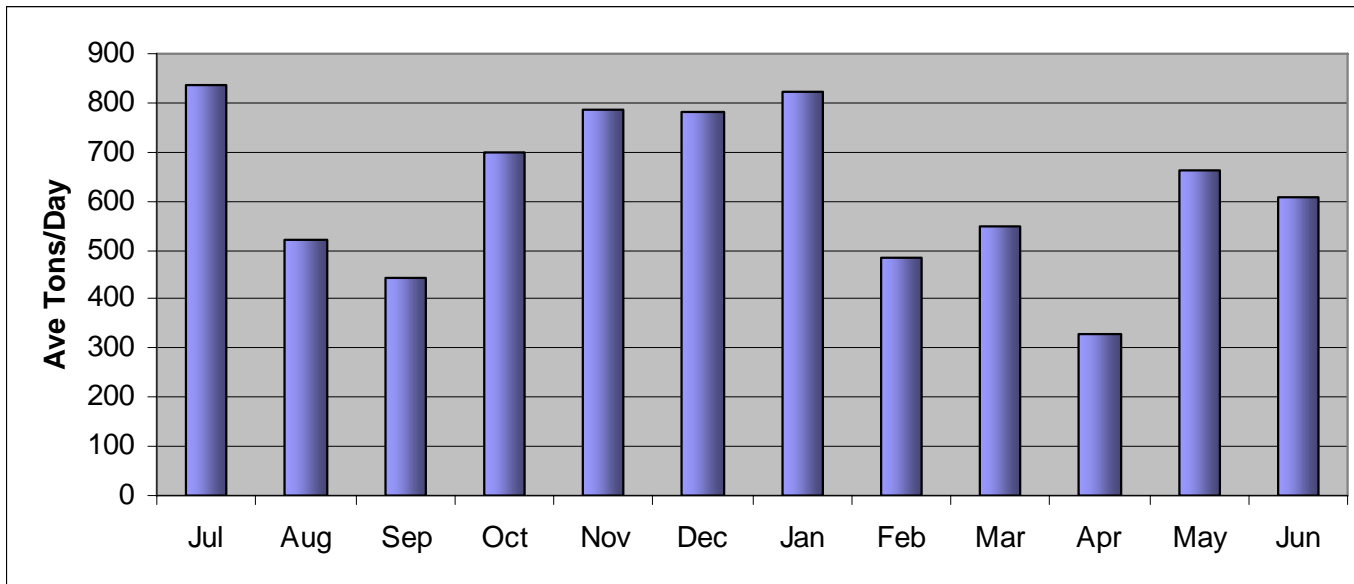
Agenda

- The Value of Compliance
- Universal Compliance Checklist
- Background and Regional Compliance Issues
- Compliance Spectrum
- Strategic Partnering – ODC Case Study
- Regulatory Review – KOC Case Study



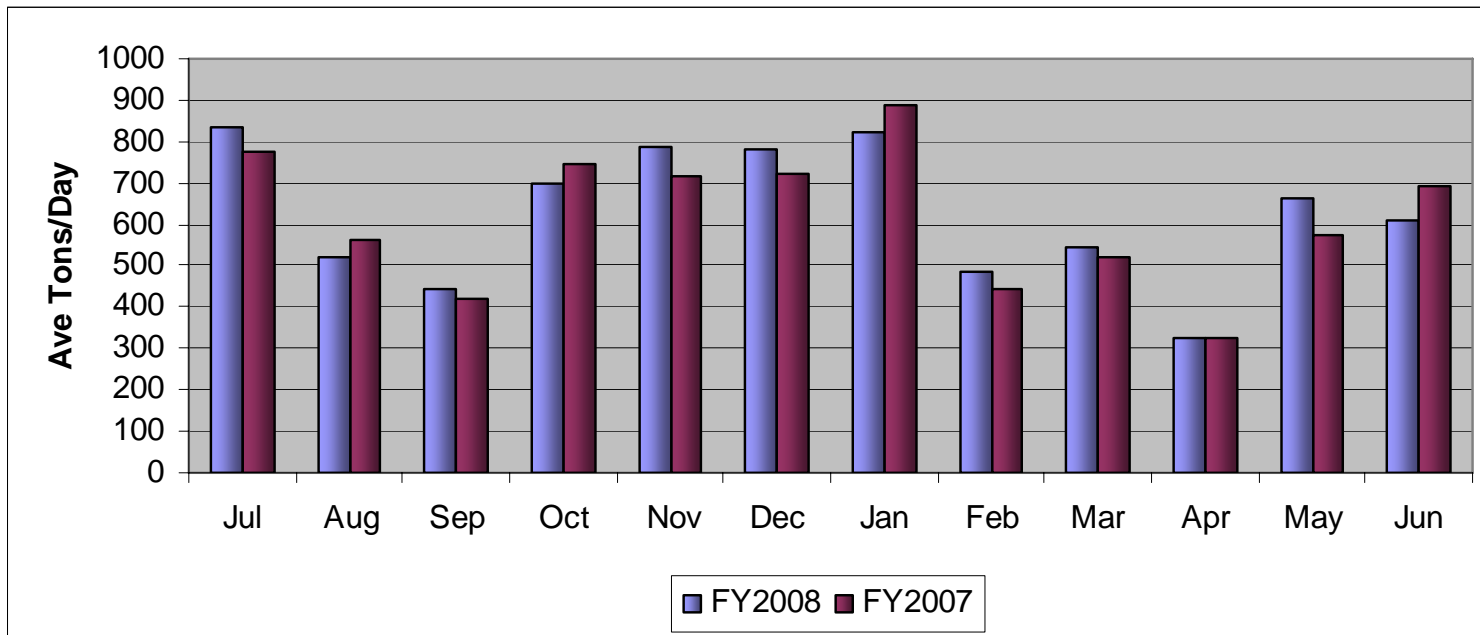
Why Compliance Matters

This chart means nothing.



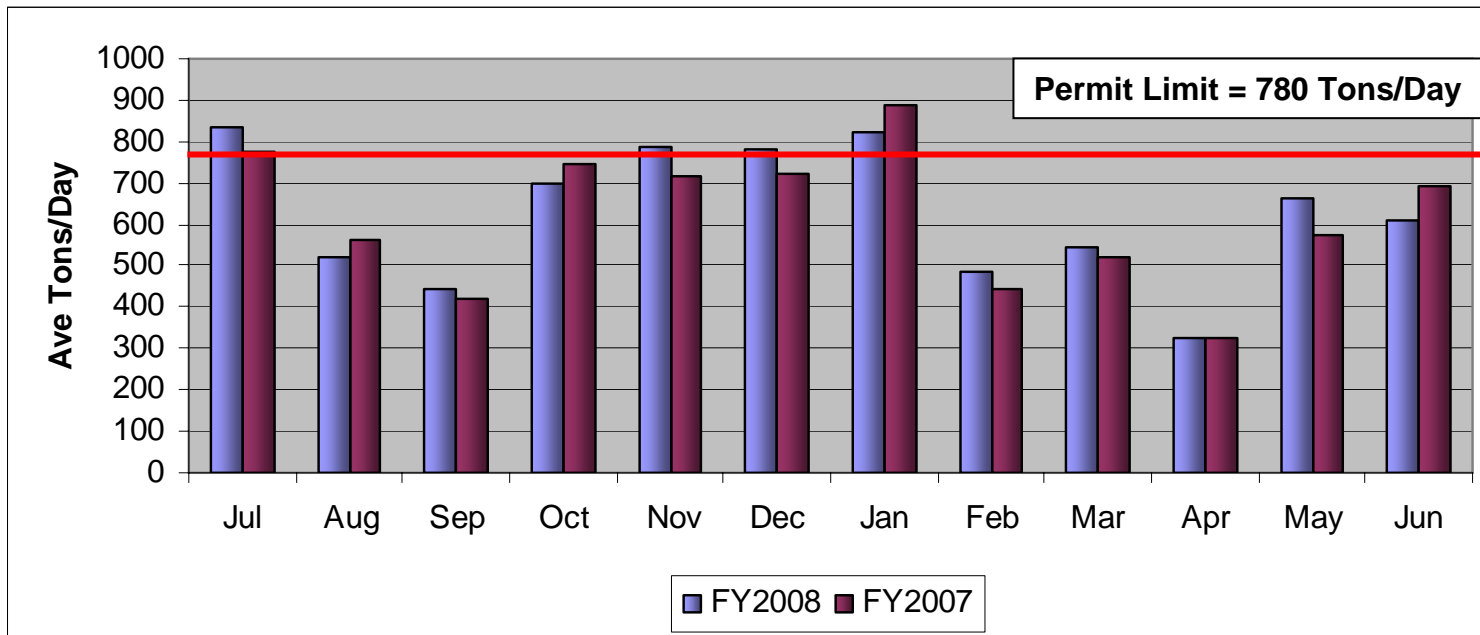
Why Compliance Matters

This chart provides more information.



Why Compliance Matters

Now we know we have to do something...



The Universal Compliance Checklist

If you can't answer:

1. Are we in compliance?

2. What are we in compliance with?

Who will???

(BTW – If you can't answer both, you don't have a compliance program)



Who's Going To Ask the Questions?

- Internal Stakeholders
 - Senior Management
 - Enterprise Risk Mgmt Teams

- External Stakeholders
 - Local Community
 - Local/National Government
 - Insurance Underwriters
 - Credential Auditors
 - Customers/Clients
 - Suppliers and Sub-Contractors



Compliance Spectrum

- **Corporate Policies**
- **Local Governance**
- **International Governance**



Traditionally – **Local Governance** provides the most Compliance jurisdiction

Current Status – Local/Regional Governance

- Vague and Ambiguous Laws
 - Ambient standards vs. Point Sources
 - No or limited promulgation to specific sectors
- Lack of Baselines and Processes
 - Poor data collection and management programs
 - No established procedures
- New or Weak Enforcement Agencies
 - Infrastructure not in place
 - Personnel not trained or insufficient resources
- Internal and International Pressure

Regional companies cannot rely on local governance for guidance



Problem Statement

- Regional Companies **want** robust compliance programs
- Local governments are **not ready** to meet those requirements



Case Study #1 – ODC Strategic Partnering

Oil Development Company (ODC)



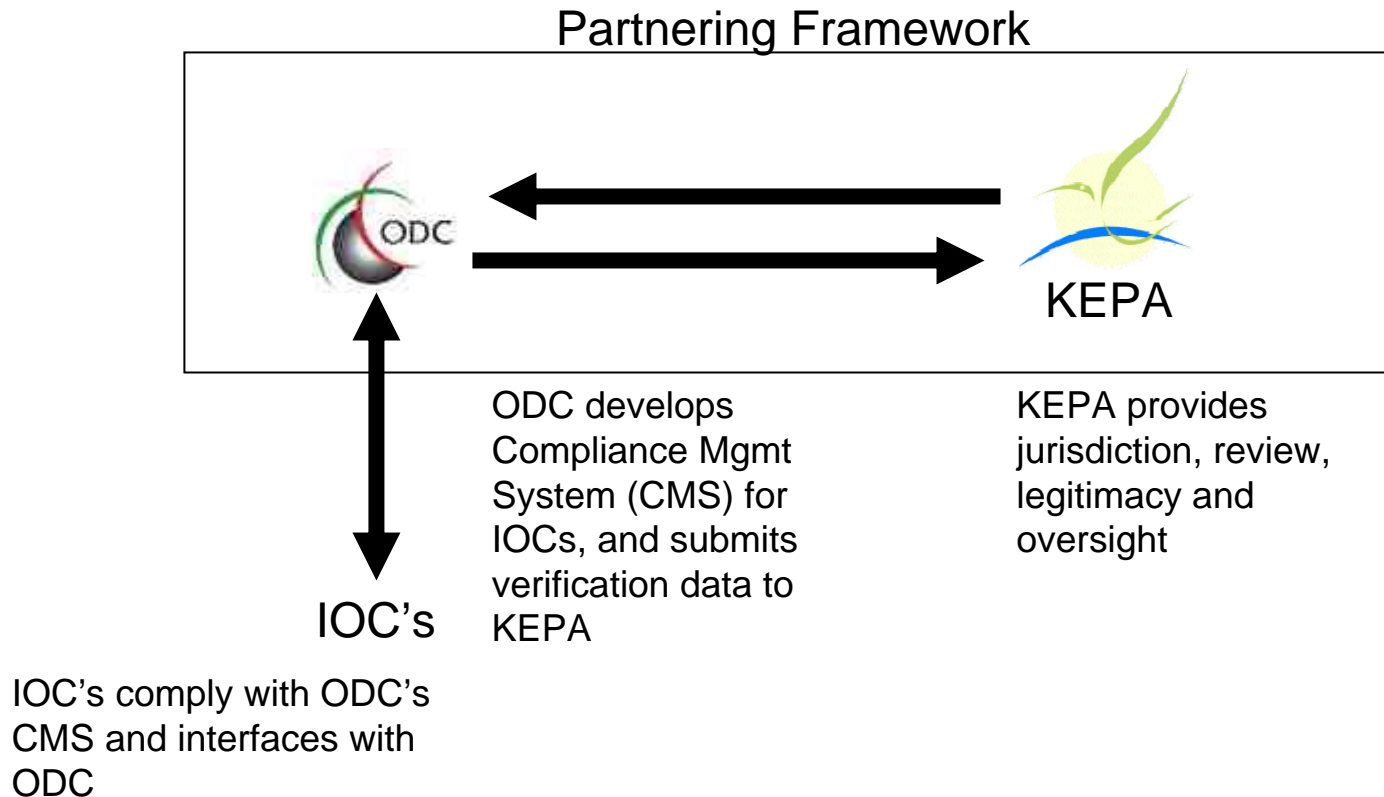
- Subsidiary of the Kuwait Petroleum Corporation (KPC)
- Responsible for managing IOCs that will eventually operate in Kuwait

Problem: Management of multiple foreign companies

Solution: Established Partnering Agreement with the Kuwait Environment Public Authority (KEPA) allowing compliance responsibility to rest within ODC, while allowing KEPA oversight and jurisdiction (Trust – but Verify!)



Case Study #1 – ODC Strategic Partnering



Case Study #2 – KOC Regulatory Review

Kuwait Oil Company (KOC)



- Subsidiary of the Kuwait Petroleum Corporation (KPC)
- Responsible for exploration and production for Kuwait
- 4th Largest Oil producer in the World
- Largest land owner in Kuwait
- Required to be “in compliance” by EOY 2010

Problem: Ambiguous local governance

Solution: Regulatory review of Kuwait Environment Public Authority (KEPA) Decision 210/2001 using Regulatory Decomposition

Case Study #2 – Regulatory Review

- Applicability Review
 - 1873 individual items reduced to 495 potentially applicable legal objects
- Conversion Analysis
 - Effort required to define regulations and protocols from existing object language
- Deficiencies Analysis
 - What specific language is missing?
 - How do they compare to US laws?



Case Study #2 – Regulatory Review

Methodology

- Kuwait Conversion Analysis Tool (KCAT)
 - MS Access DB tool
 - 10 Categories
 - 35 Individual criteria
 - High/Low Risk Ratings for each category
 - Level of Confidence Rating
- Delphi Technique
 - Criteria given to other Subject Matter Experts
 - Results compared to give “best answer”



Case Study #2 – Regulatory Review

Typical KCAT screen

The screenshot displays the KEPA Conversion Analysis Tool (KCAT) interface. The window title is "KEPA Conversion Analysis Tool (KCAT) - [KCAT Applicable Article Conversion Analysis Form]". The interface includes a menu bar (File, Edit, View, Insert, Format, Records, Tools, Window, Help, Adobe PDF) and a toolbar. The main content area is divided into several sections:

- Chapter:** II. The Work Environment and the Indoor Environment
- Article:** 13 Radiation
- Reference:** KEPA/Chapter II.doc
- Media:** OH
- Sub-Media:** OH - Radiation
- Process Stage:** All
- Article Text:** All facilities should abide with the following levels and rates of in-active radiation exposure:
- Paragraph 2:** A- Levels of Exposure to Ultraviolet Ray:
 - (1) Ultra-violet ray intensity within a spectrum field of (320-400 Nanometer) dropping on naked eye should not exceed (1 mm/cm2) for more than 16 minutes, and shall not exceed (1 joule/cm2) if exposure time is less than 16 minutes)

Below the text, there is a tabbed interface for "Applicability" with the following tabs: Enforcement, Audit, Measureability, Permits, Exemptions, Non-Compliance Risk, Cost Ratio, Receptor, Responsible, US Laws, IES Comments, Clients Comments, Arabic Text.

The "Applicability" section includes a "Not Applicable" checkbox and a table for "Value" and "Level of Confidence" for various entities:

Entity	Value	Level of Confidence
<input checked="" type="checkbox"/> All Subsidiaries	5	0
<input type="checkbox"/> KPC	1	1
<input type="checkbox"/> KOC	1	1
<input type="checkbox"/> KNPC	1	1
<input type="checkbox"/> KGDC		
<input type="checkbox"/> PIC		
<input type="checkbox"/> KOTC		
<input type="checkbox"/> ODC		

Below the table, there is a "Comments" section with a text box containing the text: "Applicable only to processes that used UV radiation."

Summary

- Data without references are useless
- If you can't answer the Universal Compliance Checklist now – you will soon
- Local government is not yet robust enough – but they will be
- Be pro-active now, or reactive later
(guess which costs more!)

Questions...?



BACK-UP SLIDES



KCAT Criteria

Enforceability	Applicability	Auditable	Measurability	Claimant
Current Enforcement	Individual	External	Direct	Individual
Future Enforcement	Point Source	Internal	Indirect	Point Source
	Facility			Facility
	Corporate			Corporate
	Uniqueness			Public

Responsibility	Permits	Exemptions	Risk of Non-Compliance	Cost Ratio of Non-Compliance to Compliance
Individual	Individual	None	Health	Health
Point Source	Point Source	Current Operations	Environment	Environment
Facility	Facility	Past Operations	Operation	Operation
Corporate	Corporate	Future Operations		
Public				



Identification of Compliance Requirements

Example: Air Emissions

*Chapter VII. Protection of Ambient Air from Pollution:
Article (76):*

All air pollutants emitted from their various sources should be within limits that may not affect the quality of the ambient air at the residential or industrial areas shown in the Appendix Nos. (17-1) (17-2) successively included herein.

The concerned parties should take all necessary measures if the criteria of ambient air quality is breached.

Identification of Compliance Requirements

Example: Air Emissions

Appendix No. (17-1) Ambient Air Quality Standards for Residential Areas

Pollutant	Unit	Hour*		8 hours		Day**		Year	
		ppb	mg/m ³	ppb	mg/m ³	ppb	mg/m ³	ppb	mg/m ³
Sulfur Dioxide (SO ₂)		170	444	-	-	60	157	30	80
Hydrogen Sulphide (H ₂ S)		140	200	-	-	30	40	6	8
Nitrogen Dioxide (NO ₂)		100	225	-	-	50	112	30	67
Carbon Monoxide (CO)		30000	34000	10,000	11500	8000	9000	-	-
Ozone (O ₃)		80	157	60	120	-	-	-	-
Ammonia (NH ₃)		#800	850	-	-	-	-	140	148
Hydrocarbon Compounds without Methanes	1/10 from specified rate in works environment (TLV's) 0.24 ppm for three hours from 6:00 – 9:00 morning (a.m)								
Suspended particulate matter (PM-10)		-	-	-	-	-	350	-	90
Dust – Fall out Matter		-	-	-	-	-	-	7.5 ton /km ²	
Lead		-	-	-	-	-	-	1.5 mg/m ³	
Chlorine ##		30.0 (30 min.)	100	-	-	10	30	-	

Notes:

* Average hour should not occur more than twice during the period of 30 days on the same site.

** Daily average (24 hours) should not occur more than once during the year.

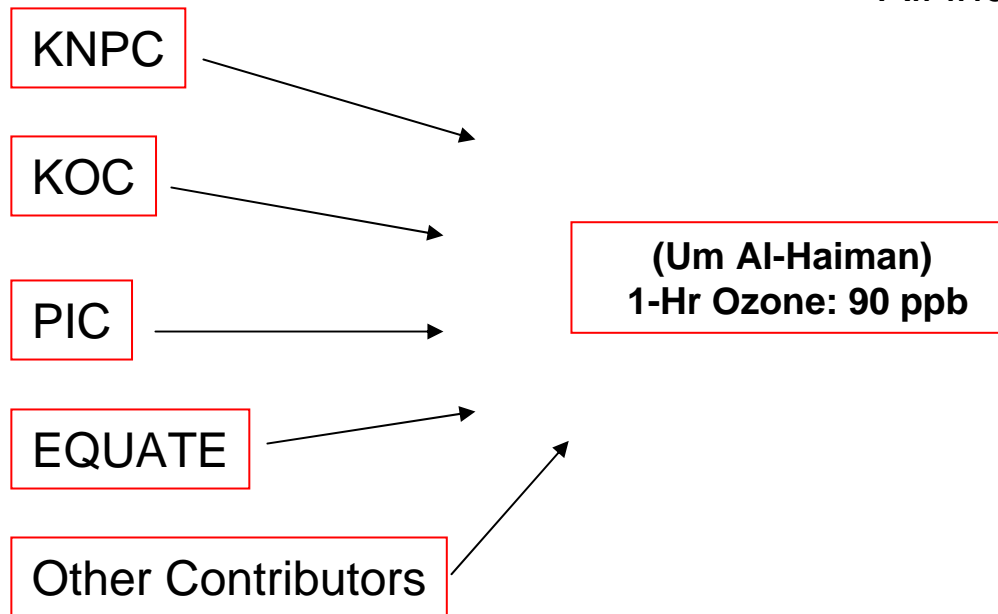
Should not occur more than once per year.

- Should apply in residential dominated areas that lie on the border of industrial areas.



Ozone (O₃)1-Hour Standard: **80 ppb**

The concerned parties should take all necessary measures if the criteria of ambient air quality is breached.



All industries: $Q = 90/80 = 1.125$

- What are the necessary measures?
- How can KEPA prove that a particular facility/industry is violating?
- How can KEPA determine what is the contribution of each facility/industry?
- What is the methodology of determining violators?
- What are the penalties?
- How can KEPA enforce this article?