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*Striving to make something better
every day*

A Tactical Environmental Management System – Twelve Elements of Effective Compliance

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**What has your EMS
done for you lately?**

HOW TO MANAGE OUR COMPLIANCE WORK?

- An Environmental Management System (EMS) provides the framework for a consistent, complete and accurate compliance program
- The EMS is a risk mitigation tool that can take many forms
- Tactical EMS elements are based on a practical, effective approach that can be scaled to fit many different organizations

October

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Checklist

<input checked="" type="checkbox"/>	Check that water level of leachings tank does not exceed 100mm level
<input checked="" type="checkbox"/>	Check that daily oil spill alarm system water level is correct
<input type="checkbox"/>	Check that all maintenance and repair work has not been completed
<input type="checkbox"/>	Check that weekly inspections are all up to date
<input type="checkbox"/>	Check that all gas flow (Oxygen) data and discharge register value
<input type="checkbox"/>	Check that P&ID records for each industrial process are up to date
<input type="checkbox"/>	Check that all maintenance work has been completed

Policy

The refinery environmental policy is a minimum standard of operation. It has the support of refinery manager and should be fully supported by all layers of management and support staff as a matter of priority. It is assumed that sufficient resources will be provided at all times to implement necessary compliance actions.

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TASK MANAGEMENT VS. USING TACTICAL ELEMENTS

- **Task-Management-Centric EMS** programs can be very complex:
 - Large number of tasks
 - Granularity of documentation steps
 - Avalanche of reminder and “badger” mail to multiple staff members
 - Can devolve into “check” tasks done after the fact
 - Extensive maintenance effort required
- **Tactical EMS Elements:**
 - Result from the identification of what an organization needs as its highest priority elements
 - Address key needs with very limited development effort
 - Can augment task management system, or can be stand alone
 - Should provide short-term return on investment

HERE ARE OUR TOP SIX / TWELVE TACTICAL ELEMENTS

(NOT NECESSARILY IN RANK ORDER)

1. **Strategy - Policy for Compliance**
2. **Strategy - Policy for Management Review**
3. **Tactics - Environmental Procedures**
4. **Tactics - Task Management**
5. **Tactics - Compliance Assurance**
 - **Self Audit**
 - **QC Process**
 - **Reasonable Inquiry**
6. **Tactics - Communications**
 - **Subject Matter Expert Call-Out Listing**
 - **Incident Notification Procedure**
 - **Succession Planning**

**Do you
have
each of
these?**

KEY PROGRAM DOCUMENTS

- Two foundational policies (Strategy)
 - Environmental Compliance Policy
 - Management Review Policy
- Series of Environmental Procedures (Tactics)
 - Task Management
 - Compliance Assurance
 - Communications



ENVIRONMENTAL COMPLIANCE POLICY

- Environmental Compliance Policy is the foundation for the EMS
- Key elements:
 - Compliance is a critical business function that is shared by all employees
 - Employee awareness of obligations and requirement to report; no retaliation for good faith reporting
 - Necessary resources will be provided
 - Performance will be tracked and communicated
 - Self-audit program
 - Signed and communicated by facility manager – signals organizational commitment
 - Identifies organization's risk-based priorities

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STRATEGY – RIGHT PRIORITIES

- Drivers for Priorities (not all inclusive)
 - Consent decrees – especially stipulated penalties
 - Agency enforcement initiatives
 - Previous inspection and audit findings
 - Areas where environmental staff experience is limited (or where there is a job opening)
 - Contributions to permit limits (including measurements)

[Study the topics you know will be on the test first; avoid working every problem in the book – there isn't time]

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STRATEGY – RIGHT TOOL FOR THE JOB

- Fatal Mistake – Manage all aspects of your compliance using the same tool
- Better – Right tool for the job:
 - **Procedures** – communicate complicated collaboration between departments (consider tabular procedures)
 - **Tasks** – where no other system tracks critical actions and/or when completion-associated data collection in real time is important
 - **Checks** – useful for engaging a broad group of stakeholders in following their compliance obligations and managing them proactively (what gets checked gets done)
 - **Formal Audits** – help determine when staff has too much to do and systems are not in place or are not working (consider a collaborative approach to developing the audit check protocol)

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MANAGEMENT REVIEW POLICY

- Management Review Policy provides “check” function in Plan-Do-Check-Act cycle
 - Describes process for regular evaluation of EMS effectiveness
 - Specifies regular meetings (e.g., biennially)
 - Discussions include:
 - Effectiveness of policies and procedures
 - Effectiveness of environmental training
 - Employee suggestions
 - Environmental metrics
 - Effectiveness of corrective actions for deviations/incidents
 - Have designated sponsor
 - Minutes should be kept

Management Review Policy

Policies should be reviewed periodically to confirm they contain current information and meet the latest requirements. As part of this review, the effectiveness of the policy should be evaluated using metrics, feedback from staff and the instances of deviations.

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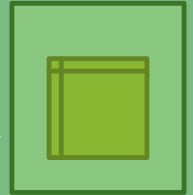
PROCEDURES – TASK MANAGEMENT

- Simple Compliance Calendar Procedure
 - Electronic document on a shared network drive
 - Monthly listing of work products/major activities, with deadlines and assignments (could even be limited to Agency deliverables)
 - Issued prior to calendar month and discussed face-to-face each month
 - Usually 30 – 50 items for smaller facilities
- Electronic Document Filing/Retention Procedure
 - Retain scanned final (signed) versions of documents with supporting docs & responses (critical element for CD termination)
 - Establish folder structure and naming conventions
 - Consider a retention schedule – vet with legal counsel

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USING A TABULAR PROCEDURE FOR ROLE CLARITY



Example Tank Inspection Tabular Procedure

Required Task	<i>Environmental</i>	<i>Inspection</i>	<i>Operations</i>	<i>Maintenance</i>	<i>Inspection Contractor</i>
(1) Schedule Tank Inspection	Determine Applicability	Apply API 653 Requirements	Identify Possible Tank Outage Dates	Contract for Tank Service Work	
(2) Conduct Inspection	Report Seal Gap Exceedances	Enter Results Into Tracking System	Plan for Alternative Tanks if Outage Is Extended for Repair	Repair Excessive Gaps Identified	Use Checklist to Document Inspection

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[In our experience, procedures are seldom read during task execution, but tables are often consulted]

PROCEDURES – COMPLIANCE ASSURANCE

- Compliance Assurance procedures are the heart of the EMS
 - Self-Audit Procedure
 - External and Internal topics
 - Single point of accountability
 - What resources will be used?
 - When these be conducted under attorney-client privilege
 - Frequency of self audits (**consider an ongoing process**)
 - Work process (notifications, briefings, fieldwork, document review, report preparation and review)
 - Only Findings, or Best Practices recommendations, too?
 - Corrective action management
 - Managing audit materials

Checklist

<input checked="" type="checkbox"/>	Check that weekly trend of haze/ling rates does not exceed permit limits
<input checked="" type="checkbox"/>	Check that daily calibration failures were promptly addressed
<input type="checkbox"/>	Check that calibration gas expiration date has not been exceeded
<input type="checkbox"/>	Check that weekly inspections are all on file
<input type="checkbox"/>	Check that flow gas DTU content does not drop below required value
<input type="checkbox"/>	Confirm that MOC records for each proposed project are on file
<input type="checkbox"/>	Check that required annual training has been completed
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

HOW TO WRITE A CHECK

- **Requirement:** The floating roof on a tank should be landed only when taking the tank out of service (this bypasses the control) and this action should be performed in a continuous fashion

A  B

- **Check:** Compare **tank leg height** to **tank gauge level** (could set an alarm) – if liquid hydrocarbon level is below leg height, the roof is landed.

[A well-written, very specific comparison check (A versus B) can be performed by those other than environmental staff]

Checklist	
<input checked="" type="checkbox"/>	Check that weekly trend of heater firing rates does not exceed prime limit
<input checked="" type="checkbox"/>	Check that daily calibration failures were promptly addressed
<input type="checkbox"/>	Check that calibration gas expiration date has not been exceeded
<input type="checkbox"/>	Check that weekly inspections are all on file
<input type="checkbox"/>	Check that flare gas DTU content does not drop below required value
<input type="checkbox"/>	Confirm that MOC records for each proposed project are on file
<input type="checkbox"/>	Check that required annual training has been completed
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

PROCEDURES – COMPLIANCE ASSURANCE (CONT.)

- Internal Quality Control Procedure
 - Relatively little internal detailed technical review of deliverables by management in our experience
 - Is the basis sound (applicability, MOC performed)
 - Input data checks (right data, right equation, right spreadsheet formulas)
 - Results calculation checks (comparison to previous is your friend; checks get better if reviewers document process)
 - Process for triggering legal Review



[If you structure this process well, the manager can effectively delegate some of this to staff peers]

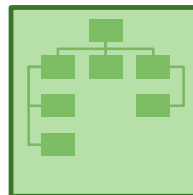
PROCEDURES – COMPLIANCE ASSURANCE (CONT.)

- Title V / MACT / NSPS Reasonable Inquiry Procedure
 - Certified reports require “reasonable inquiry” process for the information submitted
 - Both Organization and Responsible Officials are held accountable
 - Key elements of procedure:
 - Key Managers responsible for information must document queries for info gathering
 - Draft report accompanied by signed checklist verifying the results
 - RO meets face-to-face with key Managers to resolve questions before report is finalized
 - Signed checklists are retained in facility compliance files

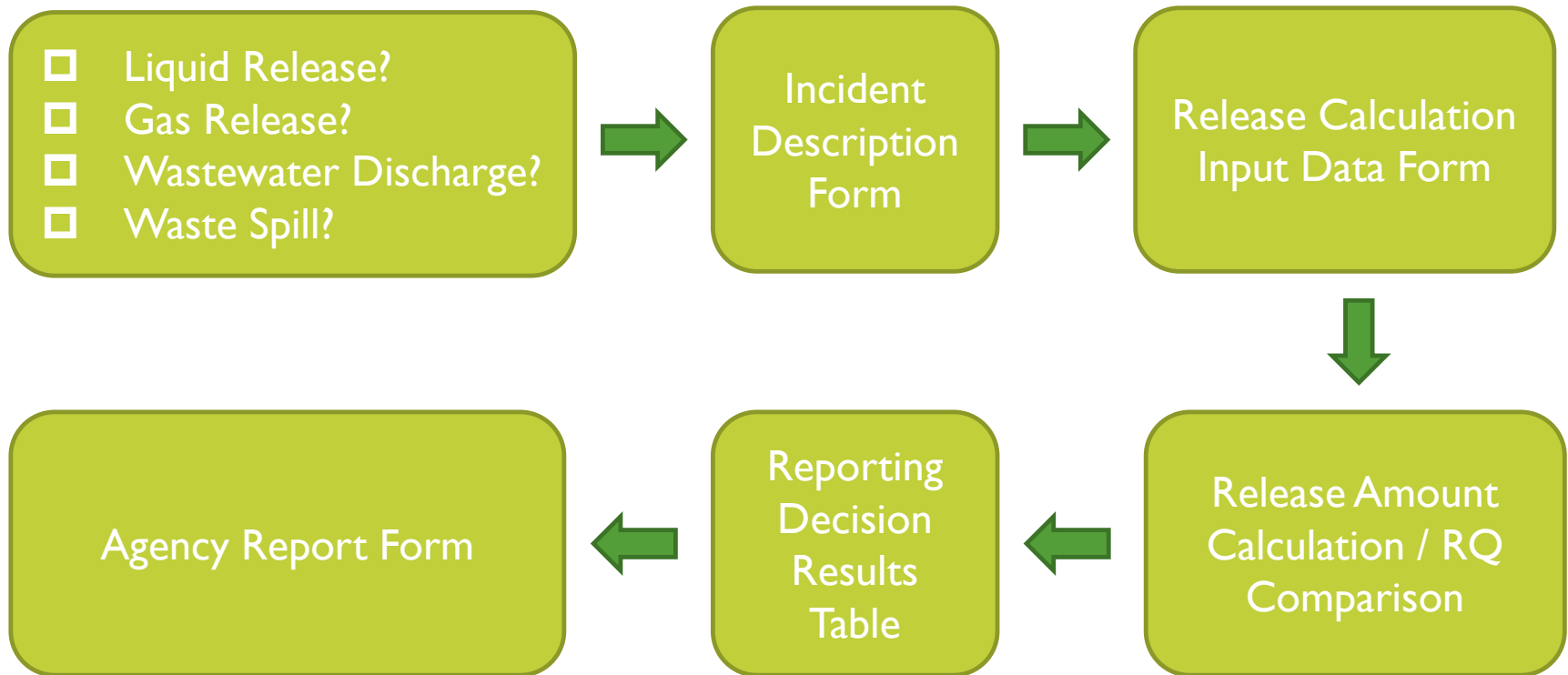
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<input type="checkbox"/>	Check that required annual training has been completed.
<input type="checkbox"/>	
<input type="checkbox"/>	
X <u>Joe Supervisor</u>	

PROCEDURES -- COMMUNICATIONS

- Subject Matter Expert Call-Out Listing
 - Provides efficient guidance to Operations supervisors during off-hours
 - List SMEs (with contact info) by topical area
- Incident Notification Procedure
 - Notification requirements are complex – provide guidance for non-Environmental staff
 - Provide tools to compile information needed for notification, and call logging
 - Include internal reporting process
- Environmental Department Succession Planning
 - Provides a tool for all staff to capture key information about their work and tools used
 - Review and update annually



INCIDENT NOTIFICATION TOOL




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[The entire process can be automated for site-specific likely scenarios using a macro set and Excel]

RESOURCE NEEDS FOR TACTICAL EMS ELEMENTS

- Resource needs will be highly variable – “your mileage may vary”
- Development of policies and basic procedures – 500 to 800 labor hours for a typical small facility
 - Legwork can be done by third party, but a good deal of facility input is needed
- Ongoing EMS operation and maintenance
 - Self-audit: \$20K - \$75K for annual third-party audit (depends on scope)
 - Internal annual labor resources: ~600 to 1000 labor hours (< 0.5 FTE)
 - Much less cost than other facility quality assurance programs, such as product quality labs



**What has your EMS
done for you lately?**

QUESTIONS?

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