Environmental Management System & Safety & Health Management System General Awareness Training – FY14-FY15

EPA Region 7

Region 7 Environmental Management System

Helping you make a difference!

Management System Overview

Region 7 uses the robust Plan-Do-Check-Act continual improvement management system process for both the EMS and SHMS

Policy, Scope, Significant Aspects, Hazards/Risks, Objectives & Targets, MPs

Implement EMPs & SMPs, Training, Monitor, and Operational Controls

Corrective Actions and Management Review

Assess Compliance and EMS Audit

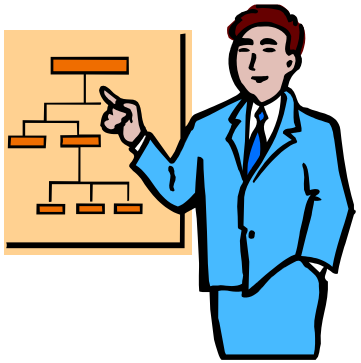
The Region's EMS operates on a fiscal year (FY) cycle, while the SHMS is on a calendar year (CY) cycle

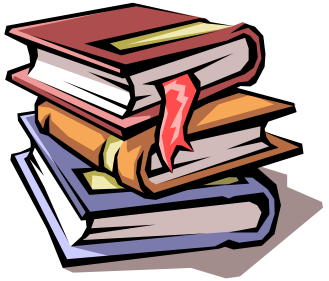
Management System Overview

Definition

That part of an overall management system the includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, archiving, reviewing, and maintaining individual programs and achieving performance goals. Provides a structured framework for:

- Organizing and managing environmental responsibilities;
- Evaluating the quality of the environment and determining how it is affected by the organizational mission; and
- Conducting a self-evaluation of the effectiveness of the MS in achieving desired levels of performance





Management System Overview

Region 7 EMS History

- The Science & Technology Center completed all implementation actions March 2005, the external verification audit in April 2005, and self-declared its EMS to be “in-place” in October 2005
- The Regional Office completed all implementation actions in September 2005, the external verification audit in October 2005, and self-declared its EMS to be “in-place” in October 2005
- The Regional Office and STC EMSs were merged together in November 2007; TLC added
- The Regional EMS was initially certified to the ISO 14001 Standard in February 2009; it was recertified in January 2012 and again in January 2015
- The current cycle started in October 2013

Certified to ISO 14001:2004
Certificate Number 42708

Management System Overview

Region 7 SHMS History

- The Region initiated actions to develop the SHMS as a single system in 2009
- Actions were halted in late 2011 to allow for the RO move to take place (changes the dynamic of the system)
- Implementation of the SHMS resumed in April 2013 and was completed in March 2014
- SHEMD conducted a conformance audit in April 2014; no non conformances were noted and the system was declared “officially complete” at that time.
- The current cycle started in January 2015

MS Planning Phase

Scope

The MS Planning Phase (**PLAN**) begins with defining the MS **scope** and developing a **policy statement**.

- The Scope is a declarative statement of what you purposefully include, and in some cases exclude, from the management system
- The Scope typically encompasses activities within facility's "fenceline" for which they have regulatory authority and liability
  - Can change with the addition or transfer of property and/or the gain or loss of mission
  - Can also include activities over which the facility can exert a certain amount of influence

MS Planning Phase

Scope

The Region's MS **scope** includes the following:

- Locations: The Regional Office (RO), Science & Technology Center (STC), Training & Logistics Center (TLC)
  - EMS: Field Offices (GOV use only)
  - SHMS: Field Offices (All Activities)
- Personnel: All EPA staff, grantees, and contractors working in these locations
  - SHMS: Includes visitors
- Activities: Essentially all activities that take place in these locations; also includes
  - EMS: Influencing employee commuting
  - SHMS: Employee Wellness – commitment to encourage adoption of healthy lifestyle choices

MS Planning Phase

Policy Statement

The Region's MS **policy statements** are written to be specific to our mission, work activities, and any regional concerns

- Per the ISO 14001 Standard, the EMS policy statement shall:
  - Be signed by the Regional Administrator
  - Commit to continual improvement, prevention of pollution, and maintaining regulatory compliance
  - Be reviewed at least once per EMS cycle
- Region 7's Sustainability Policy includes several unique commitments to advance the understanding and implementation of sustainability principles and practices

SUSTAINABILITY POLICY
U.S. EPA Region 7

EPA Region 7 is committed to demonstrating the environmental, economic, and social equity principles of sustainability that are foundational to our mission and activities in the day-to-day conduct of our internal operations. In doing so, we will use our Environmental Management System (EMS) to ensure that we ourselves meet and where possible exceed, all legal and other requirements related to our environmental aspects, while undertaking visionary initiatives that maximize environmental benefits and model the highest standards of sustainability. Through our personal attention and example, we pledge to provide effective leadership by encouraging and considering innovative approaches to meet future challenges by:

- Working collaboratively with all staff members to establish and achieve robust goals to advance sustainable practices including a better than 85% waste diversion rate at all of our major facilities and to work toward net carbon neutrality for employee commuting and travel;
- Continually improving our environmental performance and our EMS by developing and/or applying "best practice models" for travel management, pollution prevention, and sustainable resources management;
- Being an Agency leader in providing opportunities for direct and indirect partnerships, contracts, and sub-agreements for small businesses, socio-economically disadvantaged businesses, and Minority Academic Institutions;
- Holding ourselves accountable by quantifying progress toward our goals and sharing this information both within our organization and our community; and
- Empowering our staff to make sustainable choices at the office, at home, and in their communities by providing opportunities to learn and participate in the ongoing maturity of our sustainable campus.

Signed on March 24, 2014, in the City of Lenexa, Kansas.

MS Planning Phase

Policy Statement

In accordance with OHSAS 18001, the SHMS policy statement defines Senior Staff's desire to "provide and maintain a safe and healthy work environment and encourage all parties to regard injury and ill health prevention as both a collective and an individual responsibility." It includes commitments to:

- Lead by example in complying with legal & other requirements
- Continual improvement in our safety and health performance by proactively identifying and, to the greatest extent practical, mitigating safety and health risks to prevent injury and ill health.
- Communicate the SHMS policy to all levels of the organization, to visitors, and to the public at large.


SAFETY & HEALTH MANAGEMENT POLICY
U.S. EPA Region VII

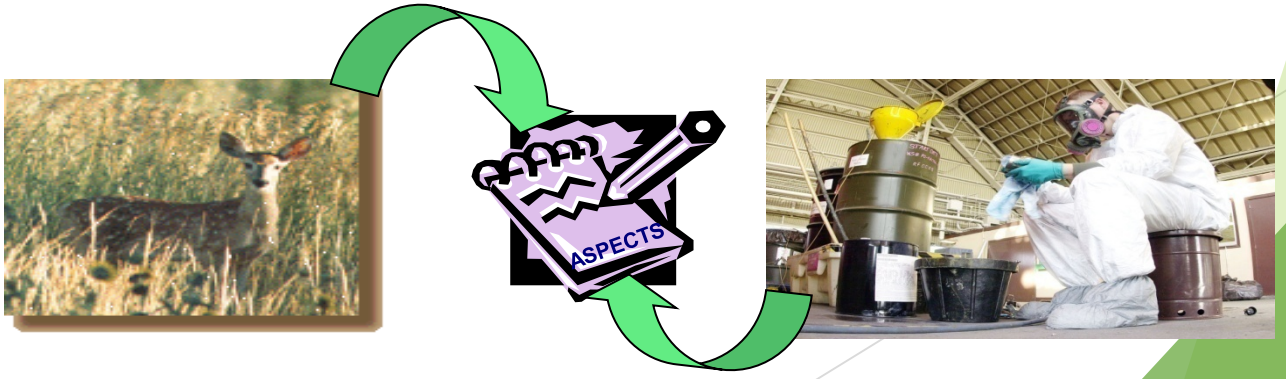
Don't get sick; don't get hurt!

MS Planning Phase

Aspects & Impacts

With the MS scope and policy statement completed, the Planning Phase shifts to identifying appropriate **legal and other requirements** and, for the ***EMS***, **environmental aspects** and **impacts**; setting **objectives and targets**; and developing **management programs**.

- Environmental Aspects: The interaction, or potential interaction of a facility's activities, products, and services (*i.e.,* processes) with the environment. Aspects can be positive (generate recyclable material) or negative (consumption of energy).
- Environmental Impacts: Any change, or potential change, to the environment resulting from the facility's aspects. Impacts can be positive (improve natural resources) or negative (degrade air quality).



MS Planning Phase

Aspects & Impacts

EXAMPLE – Vehicle Maintenance Facility

Activity: Vehicle maintenance

Process: Degrease metal parts, solvent wipe

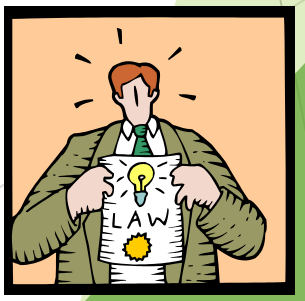
Aspects: Generate hazardous waste (rags)
Generation non-hazardous waste/recyclable materials
Emit VOCs to the air

Impacts: Reduction in landfill space
Degradation of air quality

MS Planning Phase

Aspects & Impacts

- Aspects that represent the greatest harm (or benefit) are designated as **significant aspects**
- Region 7 declares that all aspects governed by **legal or other requirements** will be designated as significant aspects; other aspects whose impacts are considered to be substantial may also be declared to be significant
- EMS Coordinator will also determine if the "breadth and scope" of significance of a generic aspect is such that its application as a significant aspect should be limited
  - Limited to specific locations and/or conditions



MS Planning Phase

Aspects & Impacts

Applicable to all Facilities

- Consumption of Energy to Support Facility Operations
- Consumption of Energy to Support Administrative Functions
- Consumption of Land/Property
- Consumption of Materials to Support Office Administrative Functions
- Consumption of Water to Support Facility Operations
- Emissions to the Air from Employee Travel*
- Emissions to the Air from Employee Commuting
- Generation of Recyclable Materials

Applicable to Select Facilities

- Consumption of Materials to Support Food Services at the RO
- Applications to the Land from Facility Operations at the RO and STC
- Consumption of Fuel for Fleet Vehicles at the STC
- Generation of Hazardous Waste at the STC
- Emissions to the Air from Facility Operations at the TLC

Deleted

- Discharges to the Sanitary Sewer at the STC
- Consumption of Materials to Support Facility Operations
- Consumption of Materials to Support Laboratory Operations

MS Planning Phase

Hazards & Risks

With the MS scope and policy statement completed, the Planning Phase shifts to identifying appropriate **legal and other requirements** and, for the ***SHMS***, completing **hazard identification** and **risk assessments**; setting **objectives and targets**; and developing **management programs**.

- Hazard: A source, situation, or act with a potential for harm in terms of human injury or ill health, or a combination thereof.
- Risk: A combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury or ill health that can be caused by the event or exposure(s).

MS Planning Phase

Hazards & Risks

A **risk assessment** is process of evaluating the risk(s) arising from a hazard(s), taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable.

- Example: Stream Clean-up
- Hazard: Drowning; physical injury from falling; illness from toxic substance on the water.
- Risk:
  - Likelihood of Occurrence – Low (people, life vests)
  - Severity of Injury or Ill Health – Catastrophic (death).

There is no such thing as insignificant risk; all risk must be mitigated to acceptable levels!

Job Hazard Analysis (JHAs)

- Purpose of the JHA process is to determine the jobs people perform, the hazard(s) associated with them, the inherent risk from those hazards (severity & probability), and the resulting residual risk after all controls have been applied
- Most of the Region is covered under three (3) "Generic" JHAs; each governed by one or more operational controls
  - Office Administration
  - General Vehicle Operations
  - General Field Operations

Found on the Health & Safety R7@Work Page; SHMS Section

MS Planning Phase

Management Programs

Under both the EMS and SHMS, we use management programs (MPs) to define the "who, what, where, when, and how" the objectives and targets will be achieved. They typically do not change from one cycle to the next and include the following:

- Designate responsibilities at each functional level including an overall program lead
- Identify pertinent records, documents, and operational controls
- Include clear time lines for achieving milestones and performance indicators for monitoring performance

MS Planning Phase

Management Programs

EMS Management Programs for FY14-15

- Green Meeting Management Program – Diane Harris
- Hazardous Waste Management Program – Mike Davis
- Reduce/Reuse/Recycle Management Program – Jennifer Dawani
- Sustainability Opportunities & Applications Resource (SOAR) Program – Chris Taylor
- Sustainable Facilities Management Program – Chris Taylor
  - Emergency Generator Consultant – Joe Ricard
  - National Environmental Policy Act (NEPA) Consultant – Larry Shepherd
  - Pesticides Management Consultant – Mark Lesher
  - Turf Management Consultant – Darrin Banks
- Sustainable Purchasing Management Program – Janet Shearer
- Sustainable Travel Management Program – Chris Taylor

MS Planning Phase

Management Programs

SHMS Management Programs for CY15

Safety Programs

- Fire & Life Safety Management Program (John Begley)
- General Safety Management Program (Roy Krueger)
  - Slips/trips/falls
  - Machine/hand tool use
  - Confined space entry
  - Electrical Safety
- Vehicle Safety Management Program (Joe Ricard)
  - Land-based motor vehicles
  - Trailering
  - Watercraft

Health Programs

- Industrial Hygiene Management Program (Roy Krueger)
  - Hazard Communication
  - Hearing Conservation
  - Medical Surveillance
  - PPE
  - Respiratory Protection
- Hazardous Material Management Program (Mike Davis)
- Radiation Protection Management Program (Chuck Hooper)

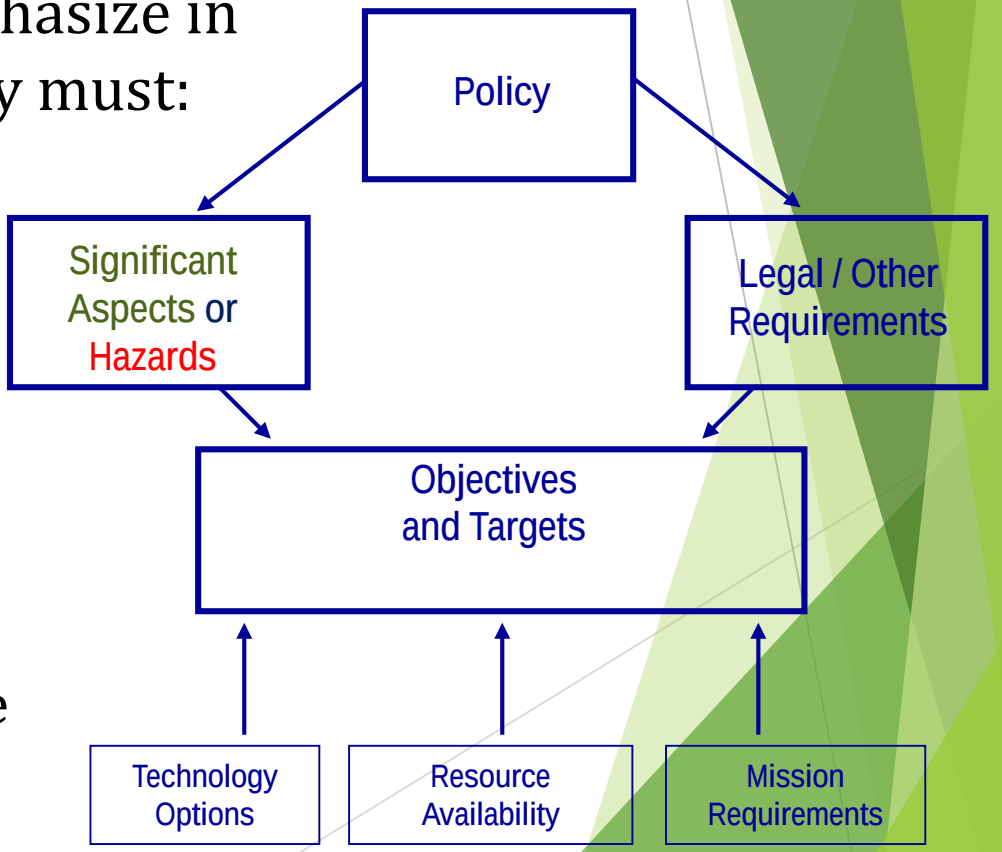
MS Planning Phase

Objectives & Targets

Objectives and targets are established for EMS significant aspects and SHMS hazards. They are what we choose to emphasize in the management system and they must:

- Be consistent with the Region's policy
- Ensure compliance with all legal & other requirements
- Consider available technology, resources, and mission requirements

Objectives and targets often change from cycle-to-cycle as performance improves and emphases shift



MS Planning Phase

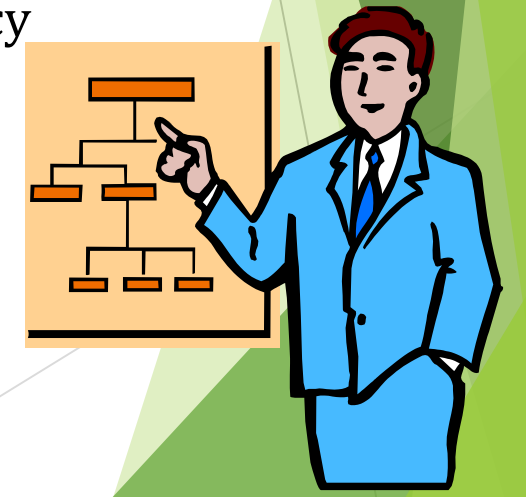
Objectives & Targets

- Objective
  - General statement (*e.g.,* reduce storm water burden)
  - Maintain existing program (*e.g.,* maintain compliance)
  - Support continual improvement (simplify work process)
    - Iterative improvements and/or stretch goals
  - Gather more information (study or design)
- Target
  - Support the achievement of the relevant objective
  - S.M.A.R.T. (specific, measurable, achievable, realistic, time)
  - Supportable with Performance Indicators
  - At least one target per objective

Implementation & Operation Phase

The Implementation Phase (**DO**) is the portion of the cycle where the organization executes the MPs and manages the operation of the management system to ensure the negative impacts of our interactions with the environment are minimized and the risks of our operations are properly mitigated. This phase includes:

- Assigning structure and responsibility
- Conducting training and ensuring technical competency
- Communicating and reporting on environmental performance
- Managing documents and controlling records
- Managing operational controls
- Preparing for emergency response

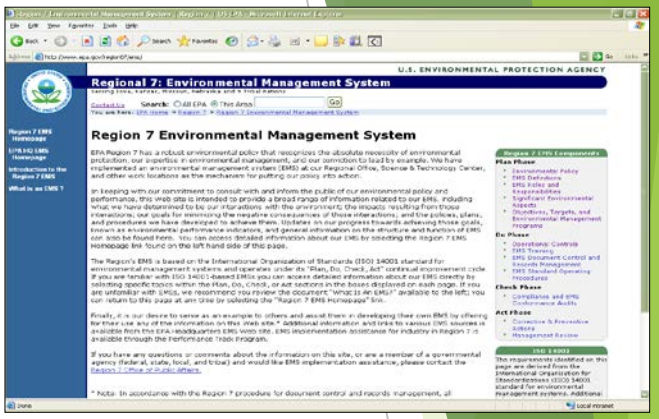


Implementation & Operation Phase

- Structure and Responsibility
  - Senior Management
  - EMS/SHMS Coordinator; Regional Safety & Health Manager (RSHM)
  - EMS Advisory and Integration Team Members; Safety and Health Committee
  - Others with specific MS responsibilities (*i.e.,* auditors)
- Training, Awareness, and Competence
  - Specific to the duties performed
    - Awareness Training – All new employees
    - Competency Training – Role/responsibility dependent
    - Refresher Training – Once per cycle for everyone
  - Task competency is supervisor directed
    - Ability to do your job according to the way you have been trained

Implementation & Operation Phase

- Communication and Reporting
  - Flow of information within the facility and to other "interested parties" outside the facility
    - Local communities, other federal/state agencies, HQ EPA, contractors, etc.
  - External communication well established within OPA
    - Most EMS information is available on the Internet per policy commitment to inform the public; SHMS information is not publicized
  - Internal communication is typically via the Intranet, posters, email, and the LAN Bulletin Board
    - Internal EMS information on the SharePoint Site; Safety & Health information on R7@Work – SHMS SharePoint coming soon!

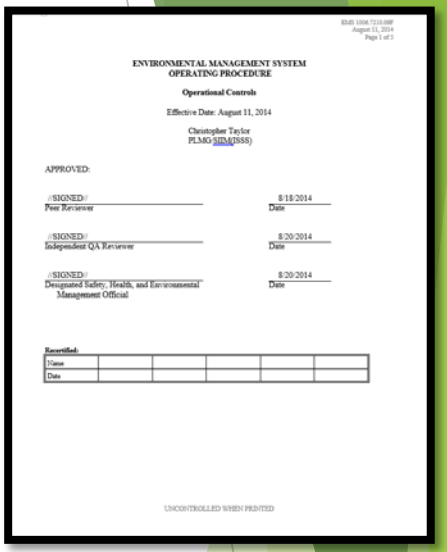


Implementation & Operation Phase

- Document Control – Biggest Challenge in a MS
  - Procedures to:
    - Identify and remove obsolete documents
    - Create and coordinate new documents
    - Review and update existing documents
    - Maintain control of important records
  - Central repository – the MS Manual
    - Includes all relevant MS documents
    - References related plans, permits, etc.
    - Official copy maintained by MS Coordinator
      - "Working Copies" available for download

Implementation & Operation Phase

- Operational Controls
  - Physical, engineering, or administrative measures that mitigate aspect/reduce risk
    - Part of MPs when implemented; most are administrative
    - Primarily ensure in place, functional, and properly monitored



ENVIRONMENTAL MANAGEMENT SYSTEM
OPERATING PROCEDURE

Operational Controls

Effective Date: August 11, 2014

Christopher Taylor
PLMO/SIMMS

APPROVED:

/SIGNED/ 8/18/2014
Peer Reviewer Date

/SIGNED/ 8/20/2014
Independent QA Reviewer Date

/SIGNED/ 8/20/2014
Designated Safety, Health, and Environmental Management Official Date

Recertified:

Name					
Date					

UNCONTROLLED WHEN PRINTED

- Emergency Response
  - Procedure to identify potential emergency situations and respond to them
    - Already well developed
    - Operates through Safety & Health Management System
    - Primarily fulfilled through the OEP

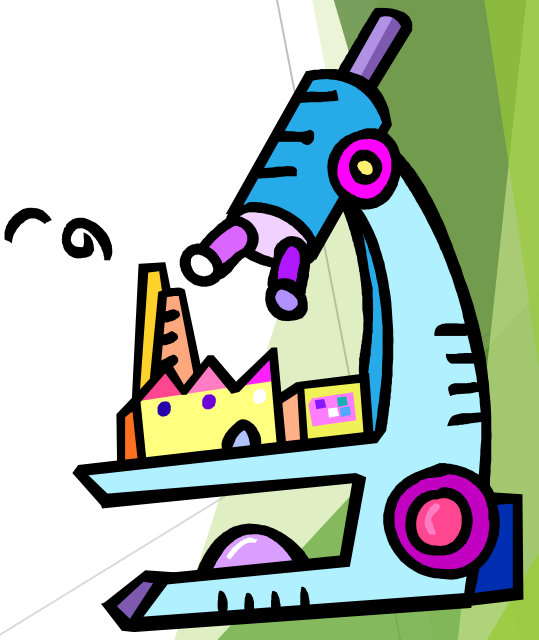
Checking/Corrective Action Phase

The Checking/Corrective Actions Phase (**CHECK**) is the portion where the organization monitors its performance, assesses its compliance status and the adequacy of its MS, and implements corrective and preventive actions to address areas of non conformance and non compliance

- **Monitoring and measurement** is a critical portion of the MS to ensure we are meeting our desired level of performance and we are confident in the results. Includes measurement of:
  - Performance of MPs
  - Compliance
  - Operational Controls
  - Equipment Calibration

Checking/Corrective Action Phase

- Compliance assessments are conducted annually; a "free look" at our compliance status
- MS audits are conducted each cycle to ensure the system is robust, properly maintained, and operating as intended
  - **Internal MS audits** are usually conducted by Region 7 staff who are trained to compare the implemented MS against a standard
    - Comprehensive review of the system – if it isn't written down it wasn't done
    - Focus is on "did we do what we said we were going to do"
    - Employee interviews determine level of awareness
  - MS audits are conformance audits (do we conform to the standard)



Checking/Corrective Action Phase

Corrective actions are implemented to correct non conformances in the EMS and instances of non compliance

- Corrective actions typically result from conformance and compliance audits, but can be implemented anytime
- Discerning the root cause of a finding is critical to prevent reoccurrences

- Preventive actions are implemented to eliminate the cause of a potential non conformity or non compliance
  - As with corrective actions, preventive actions can be implemented anytime

MS Management Review Phase

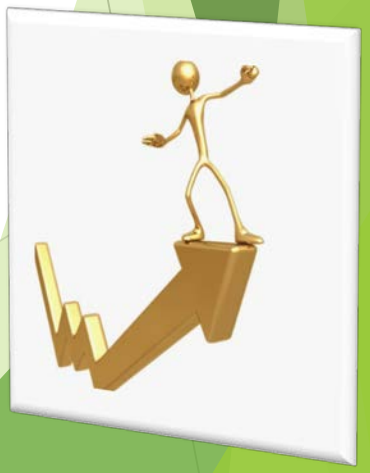
The MS Management Review Phase (**ACT**) represents the part of the system where the organization's Senior Management determines if it is suitable, adequate, and effective in obtaining the level of performance they desire

- **Suitable:**
  - Do Objectives & Performance Measures address potential impacts, concerns of stakeholders, current & future regulatory requirements, and internal organizational or process changes?
- **Adequate:**
  - Are aspects and impacts identified when changes occur (e.g. operations, mission, construction, technology) and are resource allocations adequate to keep the MS effective?
- **Effective**:
  - Does the MS effectively achieve Policy Commitments?
  - Does the MS effectively achieve Objectives & Performance Measures?

Your Role in the Region 7 MSs

- Be aware of the Region's two Management Systems
  - Understand basic MS principles
  - Know what our policies say – in general – and where to find them
  - Know your relevant significant aspects/hazards & risks, MPs and objectives/targets
- Get involved in MS activities
  - Fulfill your roles/responsibilities in MPs and Operational Controls
  - Join the EMS Integration Team
  - Follow established safety & health guidelines
  - Avail yourself to the opportunities available in the Wellness Program and adopt a health lifestyle
  - Bring deficiencies to the attention of management

Success depend on everyone's participation!



Hazardous Waste Management Program

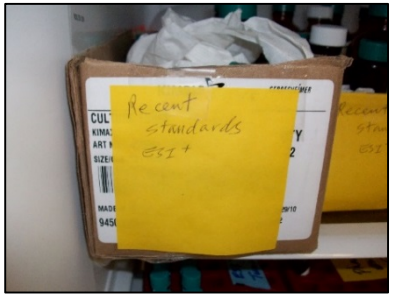
PRIMARY OBJECTIVE: Ensure continued compliance with all legal and other requirements governing generation, storage, and disposal of hazardous and universal wastes.

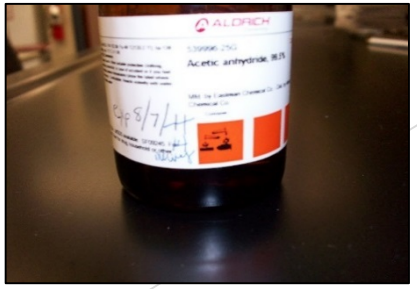
PROGRESS: Overall, compliance continues to be outstanding; however, we occasionally find batteries left on the collection containers and issues with chemical labels/standards disposal

Science & Technology Center

WHAT CAN YOU DO NOW TO HELP

- ✓ Be sure and place all batteries in either the brown or yellow/black container
- ✓ Continue to ensure all containers are properly labeled and expired chemicals and standards are managed in a timely manner





Green Meeting Management Program

PRIMARY OBJECTIVE: To reduce greenhouse gas (GHG) emissions by encouraging the use of VTC capabilities in lieu of travel and minimizing the amount of landfill bound waste generated from meetings, conferences and training events

PROGRESS: A new Green Meeting Policy has been published; VTC process in development; Green Meeting Kits available and in use

WHAT CAN YOU DO NOW TO HELP

- ✓ Use VTC capability (Tanberg, Adobe Connect, Lync, etc.) in lieu of traveling when possible and report your use
- ✓ Use the Green Meeting Kit (reusable/compostable service materials and reusable table tents) for onsite meetings, conferences, and training events

Reduce/Reuse/Recycle Management Program

- Comingled Recycling[1]
  - Paper/Paperboard
  - Corrugated Cardboard
  - Plastic (#1 – #5)
  - Aluminum Cans
  - Steel Cans
- Glass (Not From Home!)
- Tyvek Envelopes
- Batteries
  - Alkaline / Rechargeable
- Techno-Trash
  - Review Box / NO BATTERIES OR CFLs!
- Toner Cartridges
  - Take to Business Center

The Regional Office also has composting

1. Please refer to facility-specific lists for a full accounting of what can and cannot be recycled and/or composted.

Reduce/Reuse/Recycle Management Program

PRIMARY OBJECTIVE: To reduce, to the greatest extent possible, the amount of material transferred to local landfills; achieve at least an 85% diversion rate

PROGRESS: In FY14 the RO recycled 37,420 pounds of materials, composted another 24,888 pounds and sent 26,182 pounds to the landfill for a diversion rate of 71% - also recycled 1,000 pounds of batteries, toner cartridges, and TechnoTrash

A study conducted by the R3 Team in June 2014 indicated that about half the material going in the trash (by weight) could have been either recycled or composted!

Regional Office

WE COMPOST

WHAT CAN YOU DO NOW TO HELP

- ✓ ***PLEASE*** ensure you place compostable, recyclable, and trash items in the correct receptacle

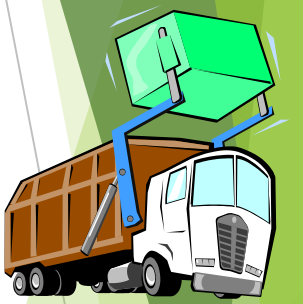
Reduce/Reuse/Recycle Management Program

PRIMARY OBJECTIVE: To reduce, to the greatest extent possible, the amount of material transferred to local landfills; achieve at least an 85% diversion rate

PROGRESS: In FY14 the STC recycled an estimated 2,645 pounds of "comingled" materials and 1,566 pounds of glass; and sent about 7,037 pounds to the landfill for a diversion rate of 39% - also recycled 123 pounds of batteries and TechnoTrash

The STC is actually doing very well; you started collecting plastic sample containers for recycling and started a small "Green Room," and your recycling contamination rate is very low – thank you!

Science & Technology Center



WHAT CAN YOU DO NOW TO HELP

✓ ***PLEASE*** continue to do what you're doing – it's working!

Sustainable Travel Management Program

PRIMARY OBJECTIVE: To reduce greenhouse gas (GHG) emissions by optimizing use of the fleet to reduce miles and increase E85 use in STC-based vehicles; achieve net carbon neutrality for employee commuting and travel by FY20

PROGRESS: The E85 utilization rate for STC-based vehicles is 56%; there are 82 staff members in vanpools & 8 in carpools – more the 18,000 telework days in FY14

WHAT CAN YOU DO NOW TO HELP

- ✓ Travel only when you need to; ask for the right vehicle to meet your needs; "buddy-up" if possible – STC continue to use E85 whenever possible
- ✓ Join a vanpool or carpool; ride the bus or your bike; telework when and if practical; commute in a HE/LE vehicle if possible and report your use

Sustainability Opportunities & Applications Resources (SOAR) Program

PRIMARY OBJECTIVE: To provide educational opportunities to improve understanding of sustainability principles and practices and to develop the SOAR Challenge – an opportunity to apply sustainability in your community and personal life

PROGRESS: Native Grassland Ecosystem Learning Center almost done; member of Green Business Network (GBN); RO Ambassador's developing facility guides

WHAT CAN YOU DO NOW TO HELP

- ✓ Take advantage of the GBN learning opportunities
- ✓ Join the SOAR Team to help shape development of the SOAR Challenge and participate in the Challenge as it rolls out in FY15

Work In Progress

SHMS Objectives & Targets

- **General Objectives & Targets**
  - Ensure residual risks are acceptable
    - Maintain compliance; manage programs per historical practices; complete JHAs
  - Complete implementation of the SHMS SharePoint site
- **Program Specific Objectives & Targets**
  - General Safety – Promote slip/trip/fall prevention and avoiding musculoskeletal injuries
  - Vehicle Safety – Promote situational awareness under a variety of driving scenarios

So – What Happens if You Don't Do Your Part?

Obviously we don't achieve our objectives and targets….

…but the short term, long term, and aggregate consequences can be more devastating.

In Conclusion……..

Questions?

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Region 7
Environmental
Management
System

Helping you make a difference!