Implementation of ISO 14001 at EPA's Environmental Science Center

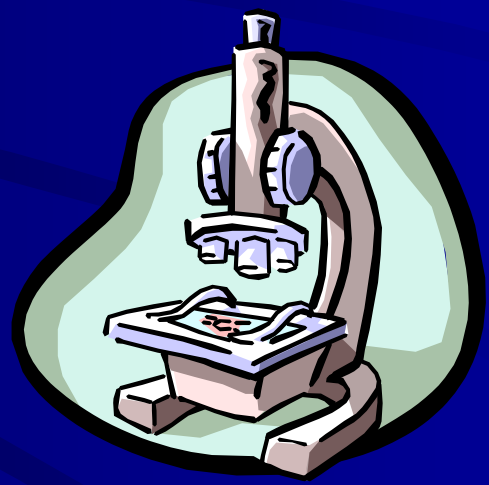
Greg Allen

EPA Region III (allen.greg@epa.gov)

EPA's Environmental Science Center

About EPA's Environmental Science Center (ESC)

- Environmental testing laboratory (Region III) and pesticide residue/ microbial effects laboratory (OPPTS)
- 140,000 gross square feet
- 70 laboratories
- 130 occupants
- Green Building Design - e.g. variable flow hoods



EMS Timeline - A 24 month Adventure (page 1 of 3)

1 Management Commitment
2 Environmental Policy
3 Choose EMS Coordinator and Establish Implementation Team
4 Awareness Training Phase 1 *
5 Implementation Training *
6 Develop EMS Programs and Docs
7 Gap Analysis *

EMS Timeline - A 24 month Adventure (page 2 of 3)

8	Gap Analysis Corrective Actions
9	Internal Auditor Training *
10	Internal Audit
11	Internal Audit Corrective Action
12	Management Review
13	Management Review Corrective Action
14	Awareness Training – Phase II *

EMS Timeline - An 24 month Adventure (page 3 of 3)

15 Pre-Registration Review *

16 Pre-Registration Corrective Action

17 Registration Audit

* Indicates direct support from contractor

Gaining Management Commitment for an EMS

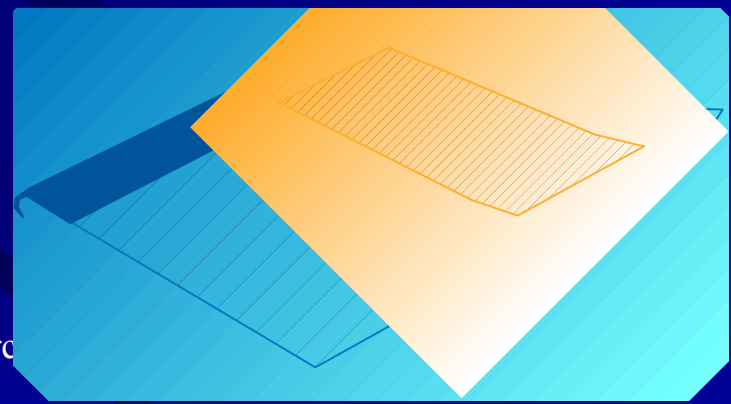
- Consider the work place environment and focus on EMS benefits that relate to the current environment
- Gain allies early – provides firmer ground to deal with nay-sayers
- Most likely allies are those who can tolerate change

The EMS Business Challenge Our Desire To:

- Be the best neighbor we can be
- Extend the green design to green management
- Demonstrate environmental leadership by example
- Employ consensus best-practice management systems

Environmental Policy

- Top management must be fully engaged
- Give all staff an opportunity to provide input
- Be careful not to include commitments where there is no program to support those commitments



Choosing the EMS Coordinator

- Important skills for the EMS Coordinator:
  - Team leadership
  - Project management
  - Communications
  - Change management
  - Patience and persistence

Forming the EMS Implementation Team

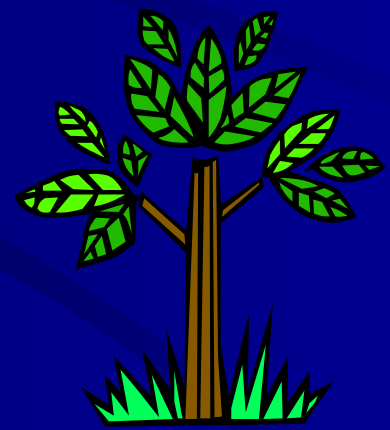
- Best reaction when EMS Coordinator meets face-to-face with organizational units
- Team volunteers reacted positively to the following expected benefits:
  - Personal skill enhancement
  - Better environmental performance
  - A challenge with an end-point

EMS Awareness Training

- Combined delivery by Management, EMS Coordinator, and an EMS Expert
- Convey the following messages:
  - Define an EMS
  - ISO 14001 and other models
  - Project timeline
  - What is their role in the system
  - How we will need them to participate

Determining Significant Environmental Aspects

- Understand the difference between an Activity, Aspect, Objective, and Target
- Solicit input from entire facility
- Group Activities by Aspect
- Be patient and flexible



Aspects Considered for the ESC (page 1 of 2)

- Air Emissions
- Chemical Resources
- Storm Water Discharge
- Electricity Consumption
- Fuel Consumption
- Microbial Contamination (not significant)
- Noise (not significant)

Aspects Considered for the ESC (page 2 of 2)

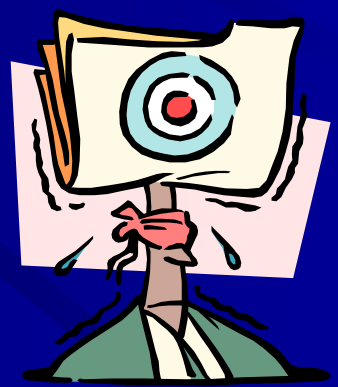
- Paper Consumption
- Radiation
- Vehicle Exhaust Emissions
- Waste Generation
- Waste Water Discharge
- Water Consumption

Developing Management Programs for Significant Aspects

- Phase 1 – Determining Final Draft Targets and Objectives
  - Determine legal requirements
  - Determine existing program
  - Write Targets and Objectives to address any activities that are not managed by existing programs
  - Gain the views of interested parties

Developing Management Programs for Significant Aspects

- Phase 2 – Determine Final Targets and Objectives
  - Prepare resource estimates for existing programs and new initiatives
  - Present resource needs to top management for buy-in and any needed prioritization



Developing Management Programs for Significant Aspects

- Phase 3 – Develop EMS components for each management program
  - Performance indicators
  - Operational controls
  - Structure, Authority, Responsibilities
  - Records
  - Documents
  - Competence of operators
  - Maintenance plans

ESC EMS Next Steps

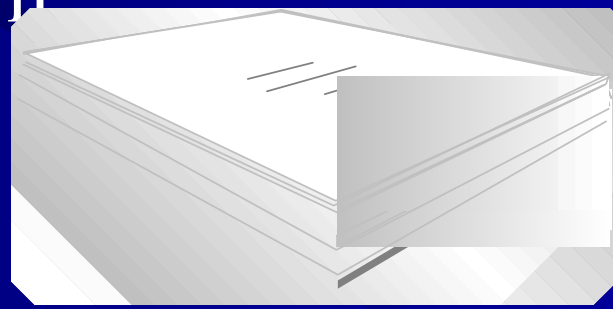
- Document EMS components for each significant aspect
- Awareness sessions – Phase 2
- Launch new initiatives
- Internal audit
- Management review
- Self-declare/Registration

ESC EMS Contractor Selection

- GSA MOBIS
  http://www.northwest.gsa.gov/fss/services/msc.htm
- Best Value
- Three contractors received RFQ
- Entire process about 8 weeks after RFQ
- Offers were all highly qualified
- Best scored offer was also the low bid

ESC EMS Contractor Selection - What we were looking for...

- Personnel (40%)
- Past Performance (30%)
- Technical Approach (30%)
- Understanding of the project objectives and it's context
- Empowerment to create our own environmental program/system



EMS Costs - the Bottom Line

- Approximately 75K for contractor support
- Implementation Team
  - Cross-section of organization needed
  - 10 - 20 % of team member time
- EMS Coordinator (50-100% of time)
- Awareness Training for all-staff (4 hrs/year)
- Specialized Training for Select Staff

Environmental Science Center EMS Return on Investment to Date

- Cross-facility cooperation and coordination
- Increase awareness of impacts
- Awareness of existing programs
- EMS framework demonstrates linkages of aspects
- Identified possible improvements to safety and health procedures

Environmental Science Center EMS Return on Investment to Date

- Expanded compliance focus to include EOs
- Connection to Ft. Meade
- Skill development – expertise and leadership in EMS implementation
- Desirable public relations inside and outside of EPA
- Assistance to other EPA facilities

Environmental Science Center EMS
Future Return on Investment

- More complete transfer of techniques and lessons learned to other EPA facilities
- Conformance with EO 13148
- A showcase of federal environmental leadership
- Responsible behavior and sustained compliance
- Cost savings

ESC EMS – The Way It Won't Be