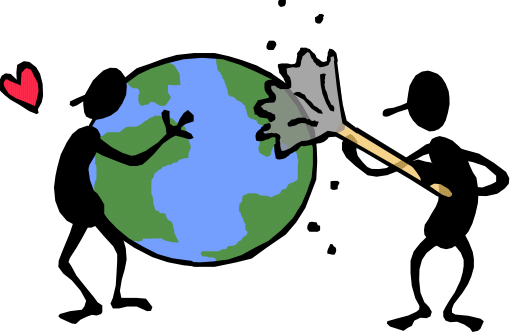


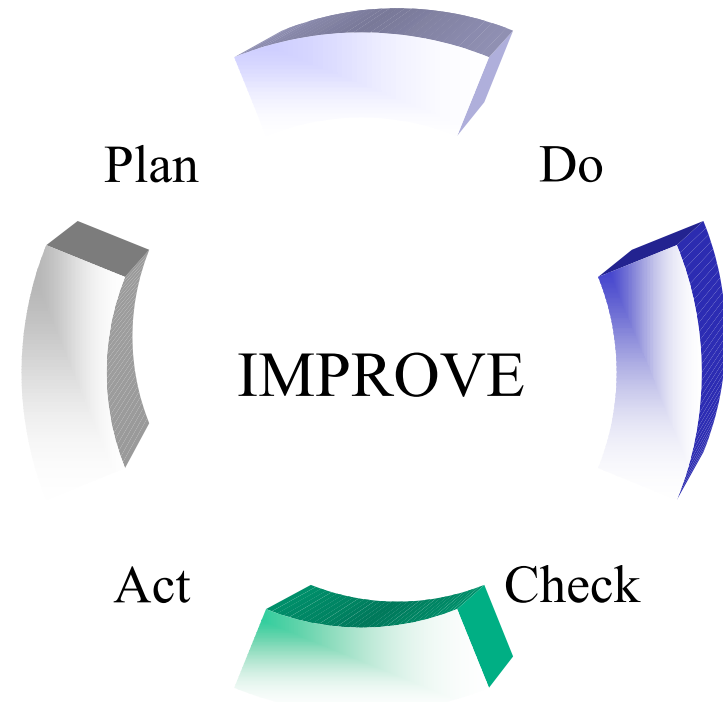
Swine Pilot EMS Audit Training

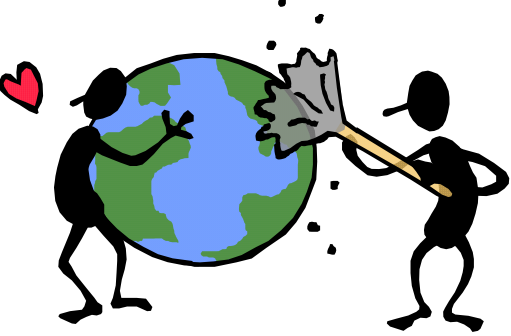
Suzanne W. Sessoms, PE
Principal Consultant
Environmental Mgmt. Services
(910) 520-3641
emsnc@yahoo.com



Environmental Management System

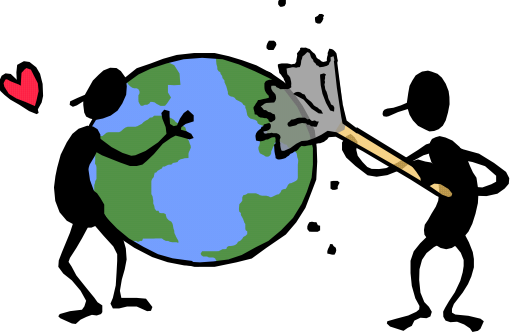
- An EMS is “the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.”





Why does an EMS require an audit?

- To ensure EMS is fully implemented
- To identify best practices
- To identify potential problems
- To promote continual improvement
- To provide feedback to management on system
- It's the Check part of Plan-Do-Check-Act



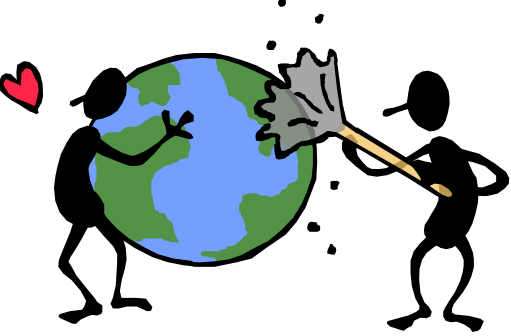
Purpose of EMS Audit

To confirm conformance

NOT

To find non-conformances





EMS Audit

ISO14011 defines an EMS audit as:

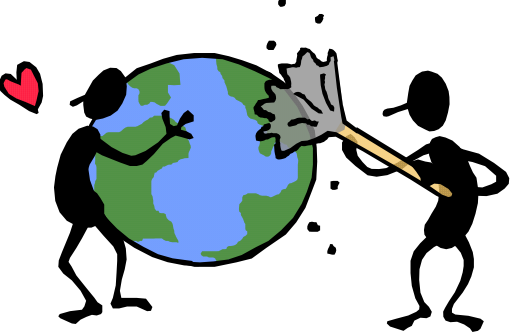
“a systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization conforms to the EMS audit criteria set by the organization, and for communication of the results of this process to management”



Audit Criteria

ISO14011 defines audit criteria as:

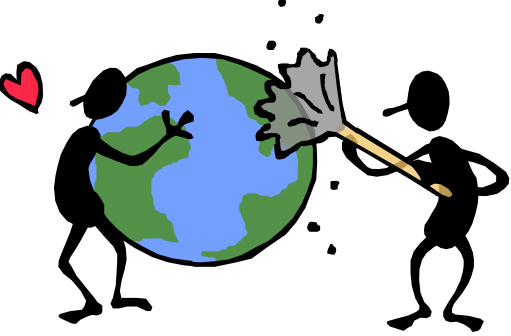
“policies, practices, procedures or requirements, such as those covered by ISO14001 and, if applicable, any additional EMS requirements against which the auditor compares collected audit evidence about the organization’s environmental management system”



ISO14001 Section 4.5.4 Requires:

“Organization shall establish and maintain a program and procedures for periodic EMS audits to be carried out in order to

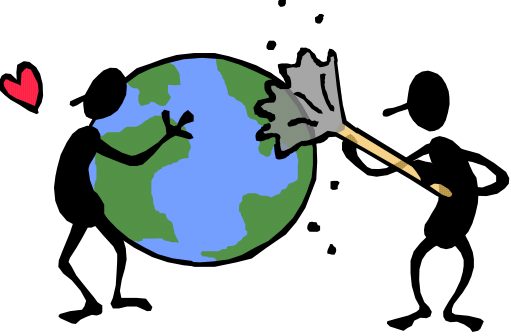
- **a) determine whether or not the EMS**
 - 1) conforms to planned arrangements for environmental management including the requirements of ISO14001
 - 2) has been properly implemented and maintained; and
- **b) provide information on the results of audits to management**



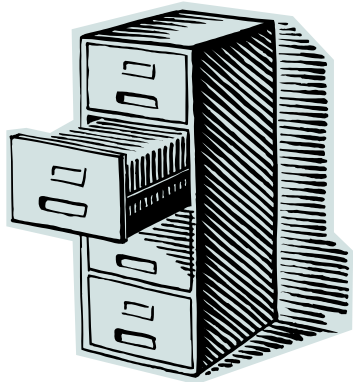
Section 4.5.4 Requires:

“The organization’s audit program, including any schedule, shall be based on the environmental importance of the activity concerned and the results of previous audits.

In order to be comprehensive, the audit procedures shall cover the audit scope, frequency, and methodologies, as well as the responsibilities and requirements for conducting audits and reporting results.”



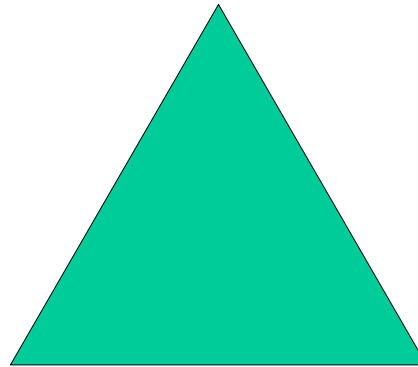
Audit Triangle



Say What You Do
- Documentation

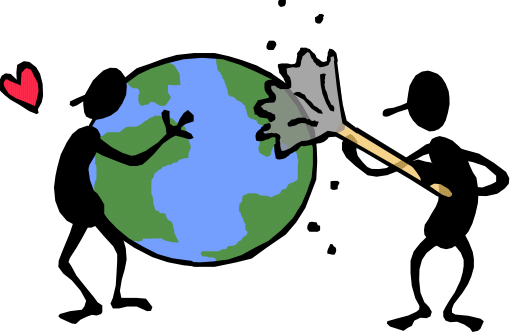


Be Able to Prove It
- EMS Audit

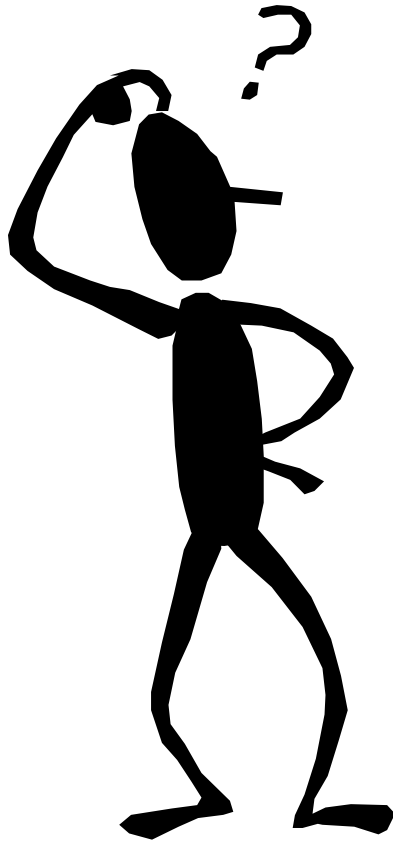


Do What You Say
- Implementation

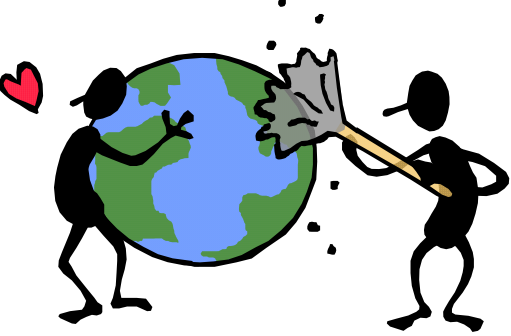




Food for thought

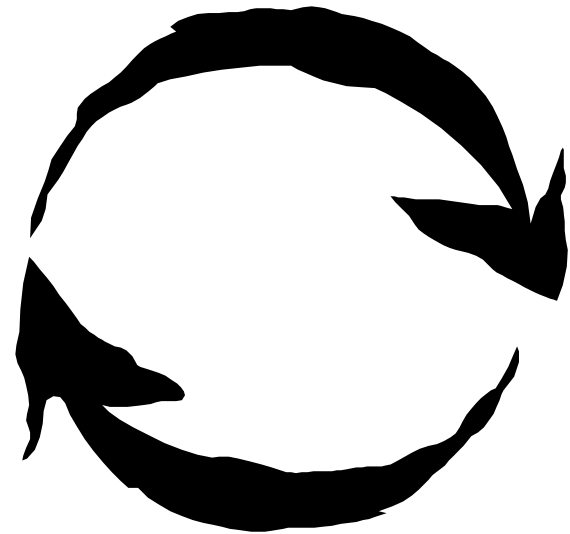


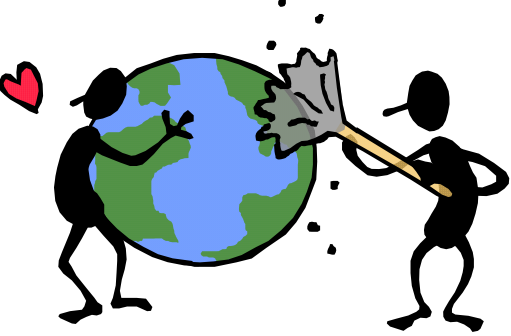
- **Who can be EMS auditors?**
 - **Farm owners?**
 - **Consultants?**
 - **Employees?**
- **How often is often enough?**
 - **Every six months?**
 - **Yearly?**
 - **Every other year?**
- **How could one demonstrate that an audit schedule is based on the environmental importance of the activities?**
 - **Time spent on topic**
 - **Sample size**



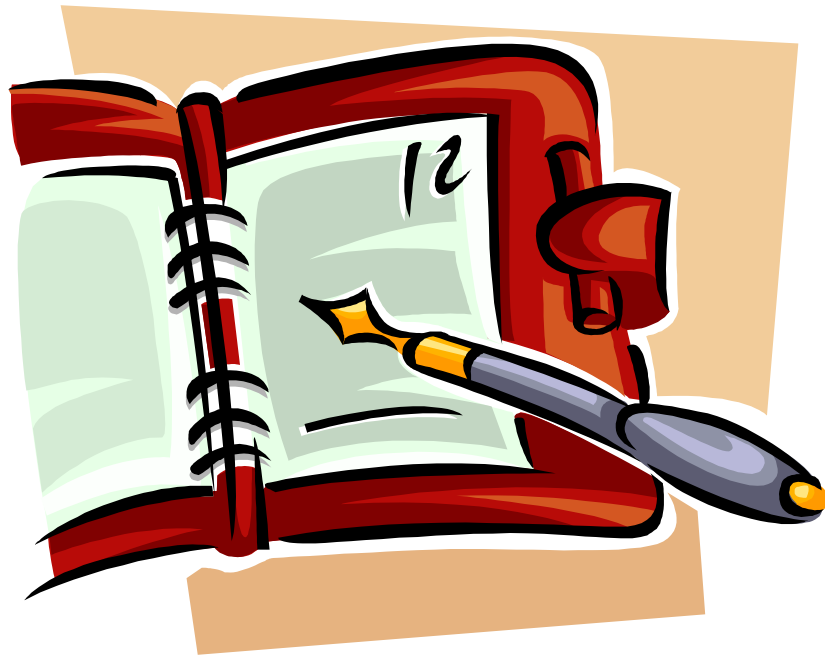
Audit Process

- Initiating/Planning the Audit
- Evaluating the Evidence
- Reporting the Findings
- Continual Improvement

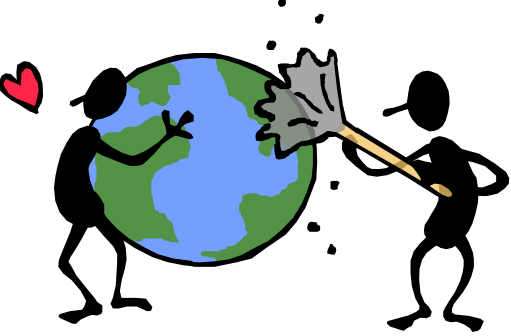




Initiating/Planning the Audit

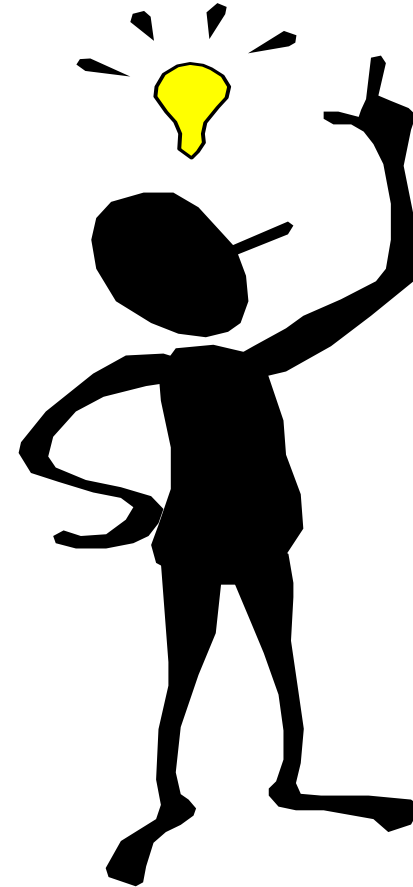


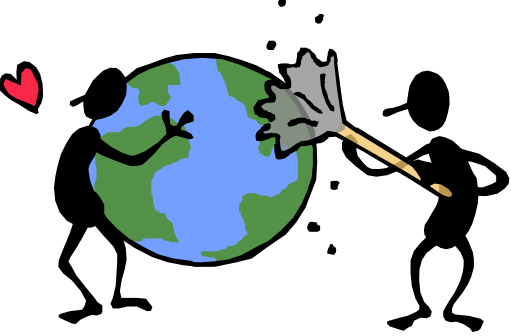
- Request the audit
- Define the audit scope and timing
- Select auditors
- Schedule the audit
- Review documentation
- Prepare checklists
- Prepare interview schedule



Traits of a Good Auditor

- **Knowledgeable of industry and associated regulations**
- **Familiar with management system approaches**
- **Unbiased opinion**
- **No direct responsibility for EMS**
- **No direct authority over auditees**

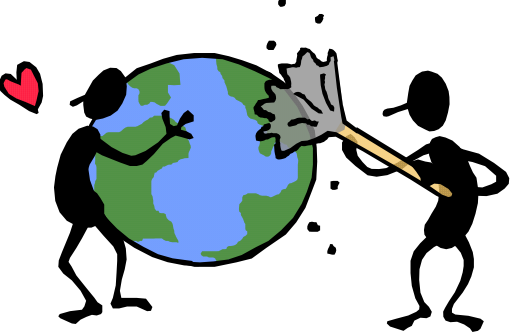




Audit Plan

- Use the audit planning matrix to develop a rough schedule
 - Key audit steps are noted
 - Key interviewees are identified
 - Topics are prioritized
 - Audit trails identified to optimize order of interviews

ISO 14001	Element	Pre-work/Document Review	Farm Owner	Environmental Mgr.	Farm Manager	Farm Employees	Land Applicators	Training/HR	Farm Auditors	Closing Meeting	Report Preparation
4.2	Policy Commitments	x	X								
	Policy Devel./Review		X								
	Policy Awareness				x	x	x	x			
4.3.1	Aspects		x	X							
4.3.2	Legal		x	X							
4.3.3	Objectives/Targets		x	X							
4.3.4	Program		x	X							
	Change Management			X							
4.4.1	Structure and Resp.		X	x	x		x				
4.4.2	Training Needs			X	X		X	X			
	Training Curriculum			X				X			
	Training Effectiveness/Competency				X	X	X	X			
4.4.3	Communication		X	X	x		x				
4.4.4	Documentation	X		X							
4.4.5	Document Control	X		X	X		X				
4.4.6	Operational Control			x	X	X	X				
	Supplier/Contract Mgmt.		X								
4.4.7	Emergency Response Plan			X							
	Development			X			X				
	Understanding/practice		x	x	X	x	X				
4.5.1	Monitor and Measure		x	X	X		X				
	Calibration						X				
	Compliance Audits			X			X		X		
4.5.2	Corrective Action Procedure			X	x		x		X		
	Follow-up		x	x					x		
	True Corrective Action			X					X		
4.5.3	Records			X	X		X	X			
4.5.4	EMS Audit			X					X		
4.6	Management Review		X	X							

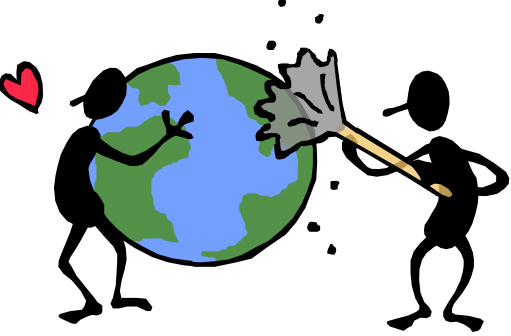


Documentation Review



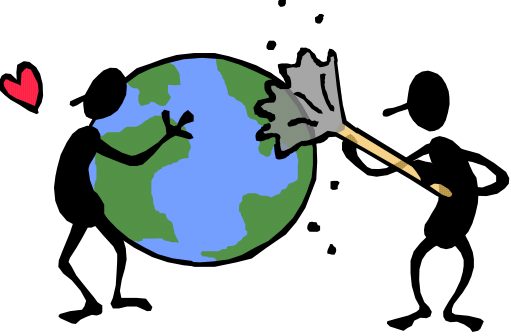
Why do it?

- familiarizes auditor with organization's EMS
- identifies if an element has been overlooked
- allows for refining on-site interview schedule
- identifies audit trails



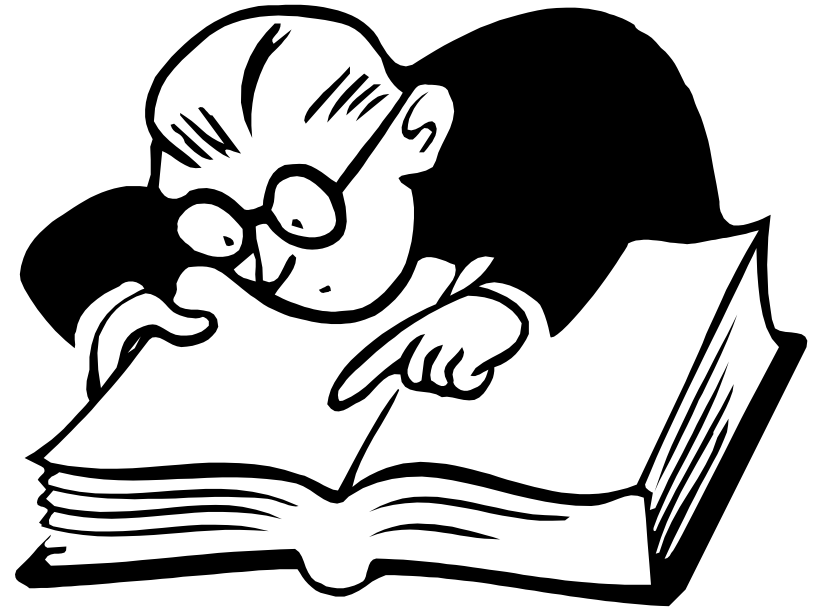
Documentation Review Summary

Clause Number	Clause Description	Who does it?	How often?	How is it done?	What records are kept?	All shall statements are addressed	Some shall statements are not fully addressed.	Element is not addressed
4.2	Environmental Policy							
4.3	Planning							
4.3.1	Environmental Aspects							
4.3.2	Legal and Other Requirements							
4.3.3	Objectives and Targets							
4.3.4	Environmental Mgmt. Program(s)							
4.4	Implementation and Operation							
4.4.1	Structure and Responsibility							
4.4.2	Training, Awareness & Competence							
4.4.3	Communication							
4.4.4	Documentation							
4.4.5	Document Control							
4.4.6	Operational Control							
4.4.7	Emergency Preparedness & Response							
4.5	Checking and Corrective Action							
4.5.1	Monitoring and Measurement							
4.5.2	Non-conformance and Corr./Prev. Action							
4.5.3	Records							
4.5.4	EMS Audit							
4.6	Management Review							



Workshop: Review documentation

- **Individually, review the assigned sections of your EMS manual and fill out the associated rows on the review form**
- **Spend about 15 minutes**
- **Prepare to discuss any findings with the class**



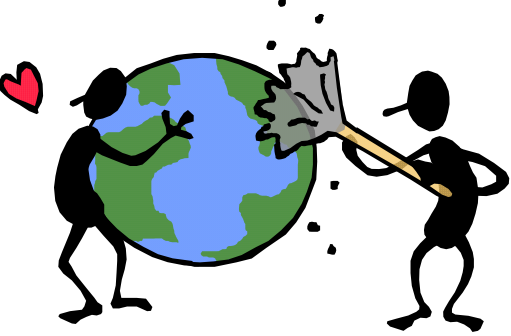


Checklist

Checklist questions are organized by interviewee, not by element of the standard.

Review the spreadsheet worksheet format and a couple sample questions

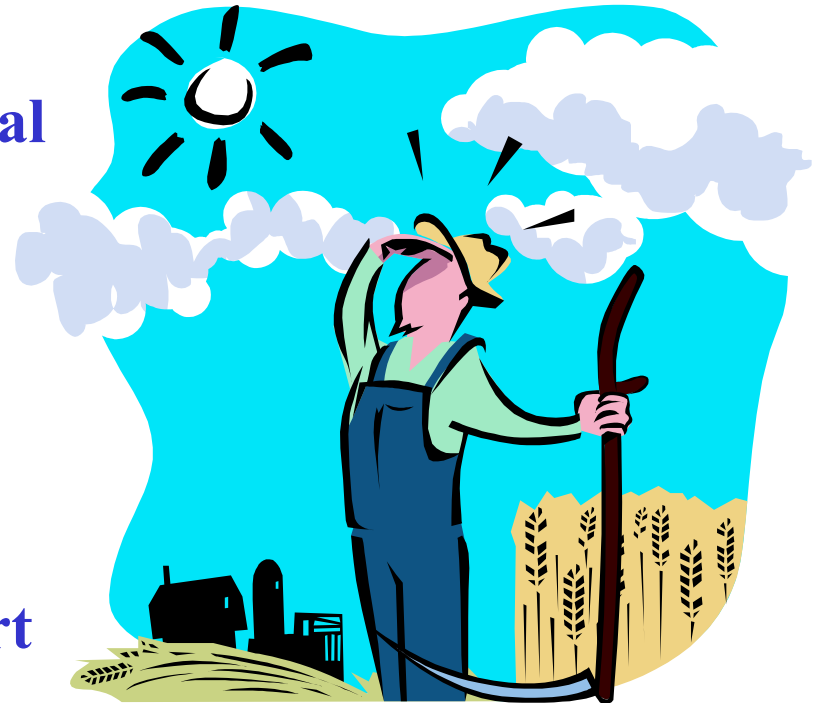
	<i>Farm Owner</i>		
FO-1	What is the history of the farm site? Any prior owners/operations? How old are the structures? Any retrofit work req'd?	4.2/ 4.5.2	Commitment to pollution prevention
FO-2	What considerations did you make when choosing to raise pigs here? (acreage, location to receptors)	4.2	Commitment to pollution prevention
FO-3	What, if any, close receptors did you have to consider? (neighbors, schools, churches, etc.)	4.3.2	Knowledge of legal requirements

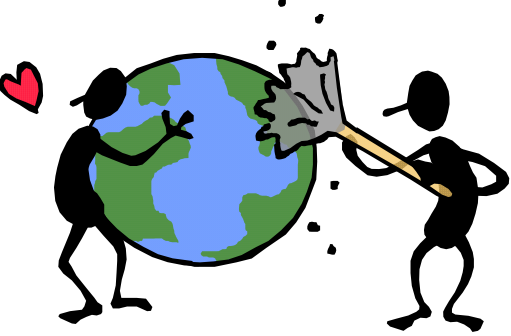


Interview Questions

Farm Owner/Env. Mgr.

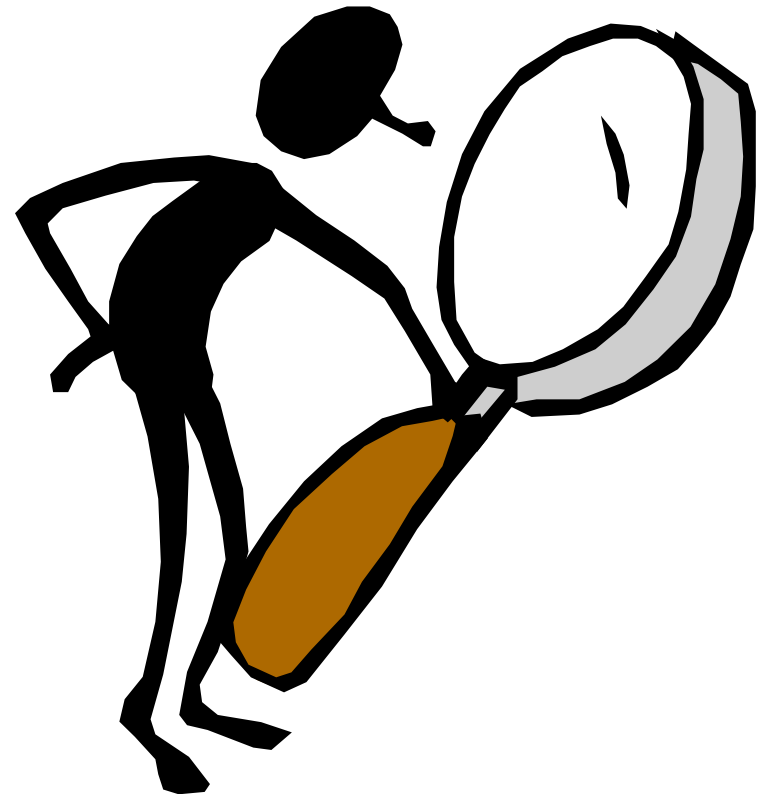
- Individually, read scripted interview questions for the farm owner and environmental manager
- Do any of the questions seem unusual or irrelevant.
- Discuss any concerns with your table group
- Record any issues on flip chart
- Pick a spokesperson
- Spend about 20 minutes

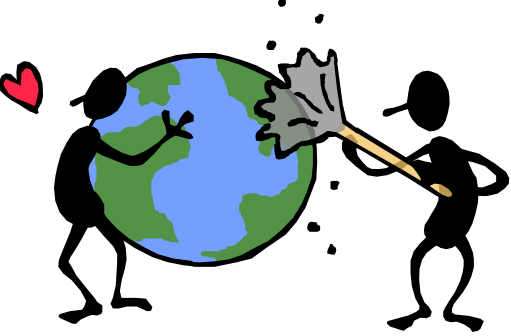




Evaluating Evidence

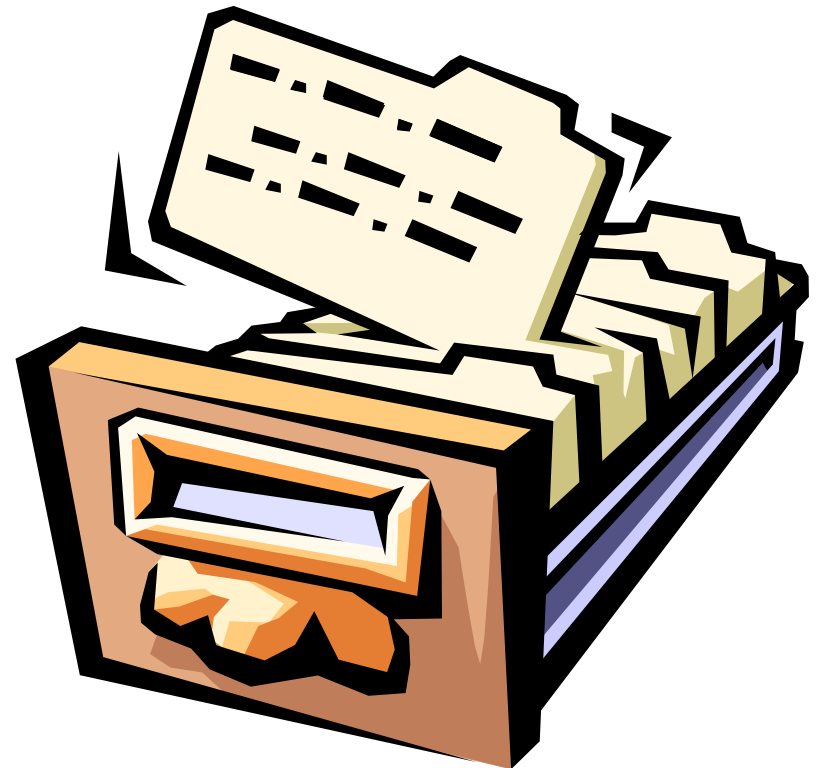
- **Conduct opening meeting**
- **Interview employees**
- **Review documentation**
 - **SOPs**
 - **Records**
- **Observe activities**
- **Daily caucus**

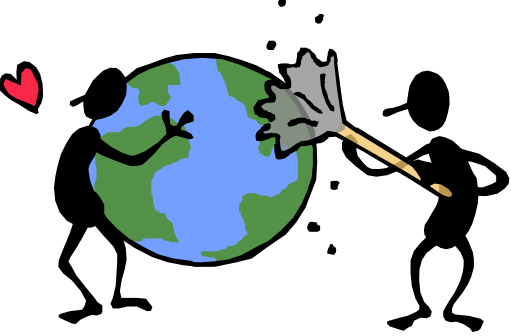




Objective Evidence

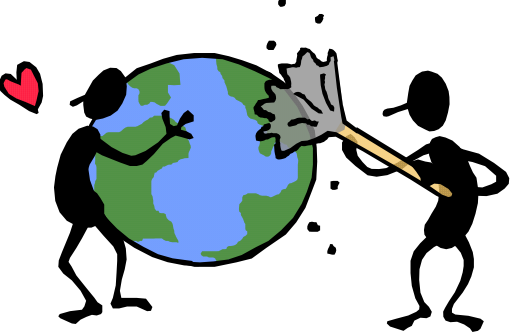
- can be verified
- can be physical
(activity observed)
- can be documented
- can be stated
(watch out for hearsay)
- is based on facts not
opinion



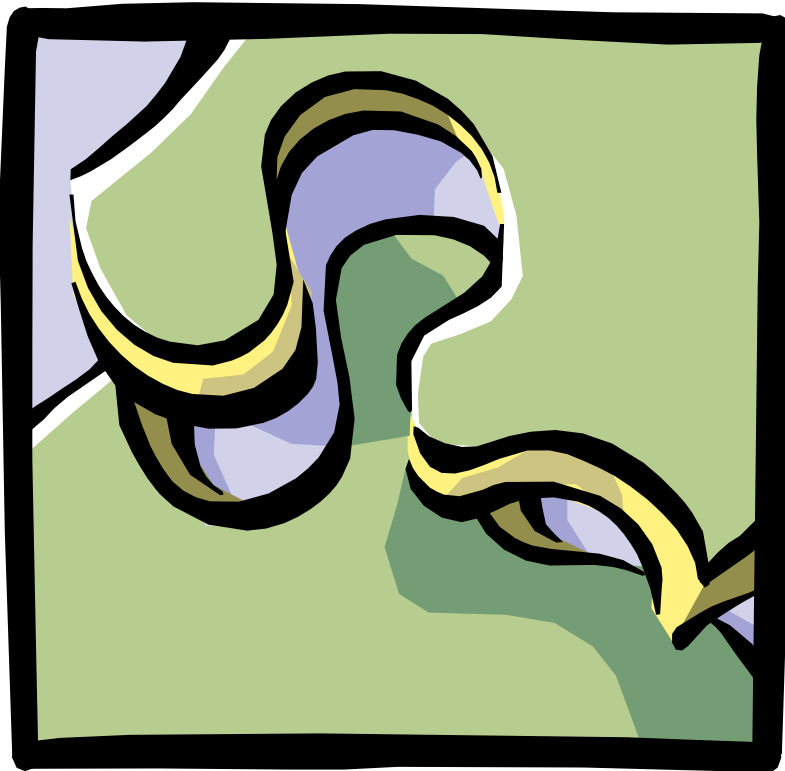


Types of Evidence

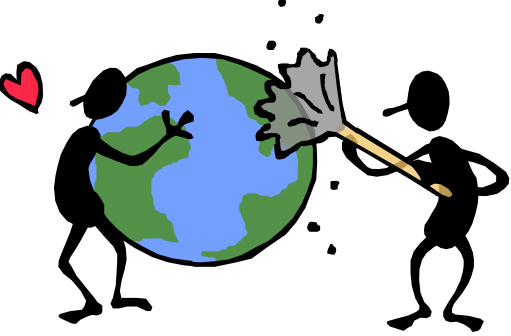
- Conforming Evidence
- Non-conformance
 - Minor Non-conformance
 - Major Non-conformance
- Non-compliance
- Opportunities for improvement/Observations



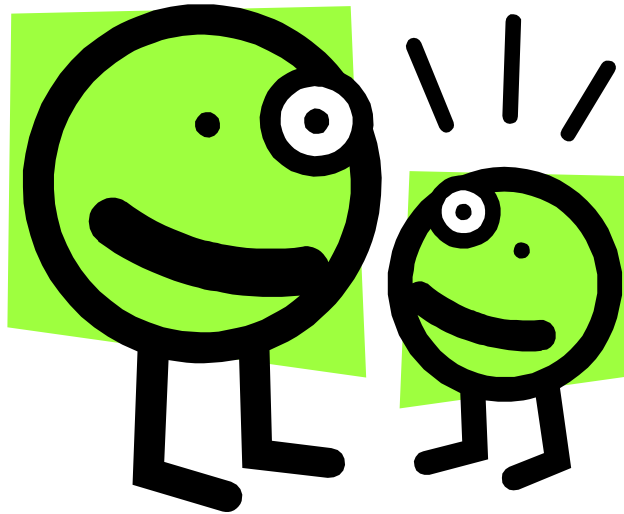
Non-conformance



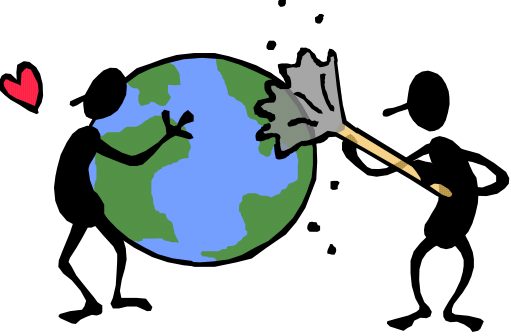
- **Objective evidence does not agree with stated program - pieces don't fit**
- **Procedure says that preventive maintenance is performed annually; however records show last action over 18 months ago**



Minor/Major Non-conformances



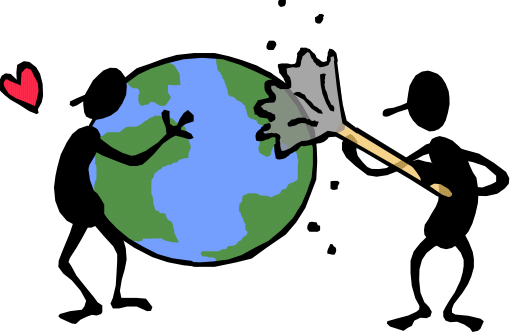
- A minor non-conformance is not systematic
 - Isolated occurrence
 - Low priority issue
- A major non-conformance indicates a system breakdown
 - Failure to address a “shall” statement
 - Several issues regarding the same element of the EMS



Non-compliance

- **Objective evidence exists which shows operation in conflict with permit or regulatory requirement**
- **May require immediate attention**
- **May require regulatory agency notification**
- **What is the auditor's role?**

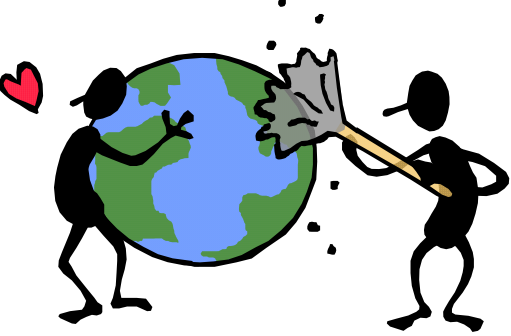




Observation

- **Something that could pose a problem in the future**
- **Something that could be improved**
- **Not in conflict with procedure or EMS**
 - **could be a safety concern**
 - **attitude issue**





Reporting the Findings

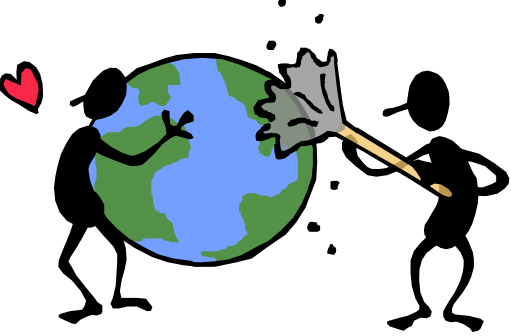
- Report finding to interviewee and escort during or upon conclusion of interview
- Report finding to audit team leader and EMR during daily debriefing session
- Report finding to management at closing meeting and audit report





Audit Summary

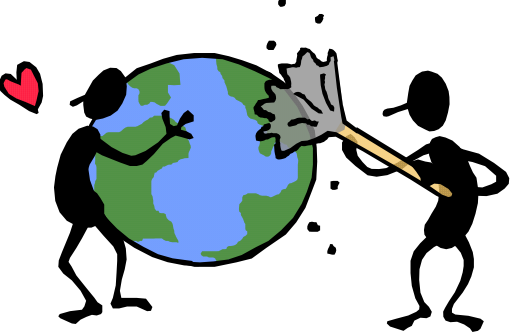
ISO 14001 Environmental Management Systems - Specification	Yes	No	Comments
4.1 GENERAL			
The organization shall establish and maintain an environmental management system, the requirements of which are described in this section.			
4.2 ENVIRONMENTAL POLICY			
Top management shall define the organization's environmental policy and ensure that it:			
• a) is appropriate to the nature, scale, and environmental impacts of its activities, products, or services			
• b) includes a commitment to continual improvement and prevention of pollution			
• c) includes a commitment to comply with relevant environmental legislation and regulations and with other requirements to which the organization subscribes			
• d) provides the framework for setting and reviewing environmental objectives and targets			
• e) is documented, implemented and maintained and communicated to all employees			
• f) is available to the public			
4.3 PLANNING			
4.3.1 Environmental aspects			
• The organization shall establish and maintain procedures to identify the environmental aspects of its activities, products, or services that it can control and over which it can be expected to have an influence, in order to determine those which have or can have significant impacts on the environment. The organization shall ensure that the aspects related to these significant impacts are considered in setting its environmental objectives.			
• The organization shall keep this information up to date.			
4.3.2 Legal and other requirements			
• The organization shall establish and maintain a procedure to identify and have access to legal requirements and other requirements to which the organization subscribes directly that are applicable to the environmental aspects of its activities, products, and services.			



Closing Meeting

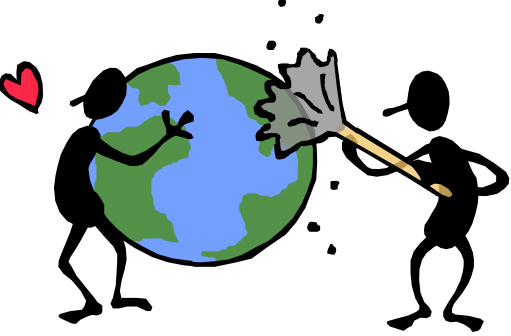
- Review findings
- Identify next steps
 - corrective action plan
 - follow-up visit
- Coordinate report
 - timing
 - distribution list





Auditor's Role In Corrective Action

- **Identify need for corrective action**
- **Evaluate if true root cause analysis has been performed**
- **Verify that corrective actions have been taken and that the problem does not reoccur**



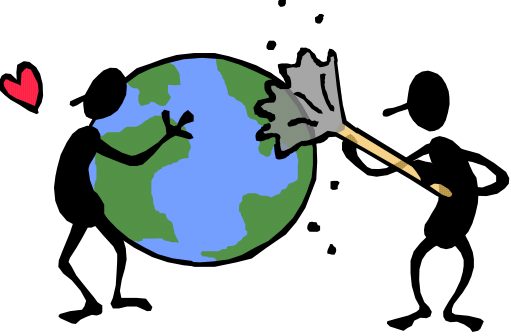
Verifying Corrective/Preventive Actions

Nonconformance 1:

Crop cover listed in CAWMP, dated 6/30/99 for Farm XX field 3 is bermuda; however cows were seen grazing in the field on 5/4/01.

Corrective Actions:

- a) Identified the root cause to be the failure of the technical specialist to complete and approve a revised CAWMP
- b) Technical specialist completed new CAWMP
- c) Old CAWMP stamped obsolete



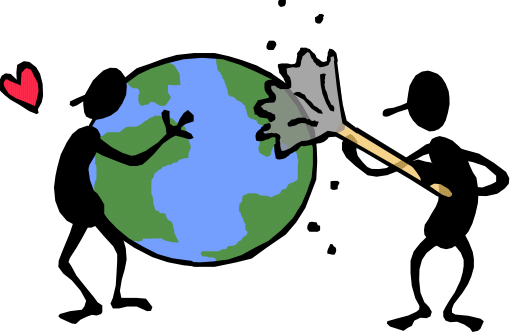
Verifying Corrective/Preventive Actions

Nonconformance 2:

Pager numbers and extensions for farm personnel have not been updated on contact list.

Corrective Action:

- a) Farm manager called production manager and got new numbers.
- b) New numbers were added to the list. Farm manager dated and initialed the changes.



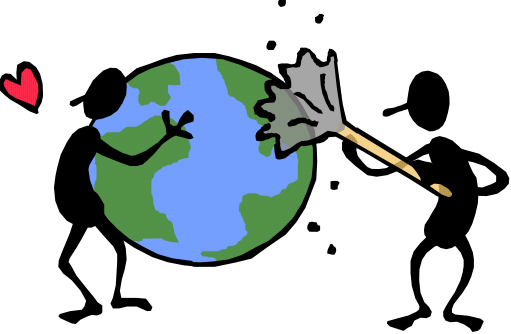
Verifying Corrective/Preventive Actions

Nonconformance 3:

Daily inspection form dated 4/15/01 stated there were cracks in building 4's foundation and that a maintenance request had been placed. On 5/15/01 the cracks were still evident and stains indicated potential leakage.

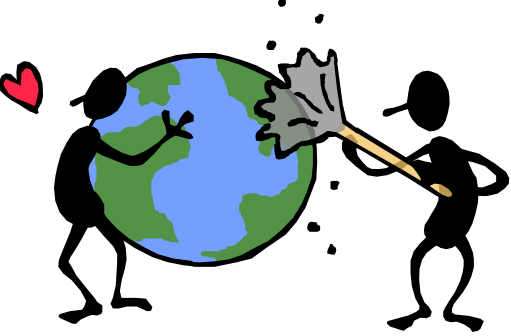
Corrective Action:

- a) Farm manager was advised by EMS coordinator to repeat observation if problem not resolved in a time frame appropriate to the nature and potential environmental impacts.
- b) EMS coordinator issued a reminder to maintenance regarding the status of the work order.



Non-conformance Report

- Any findings requiring corrective action will be written up on a non-conformance or corrective action request (CAR) form
- It is critical that complete information be given to the auditee to ensure they can do a root cause analysis and prevent recurrence.
- This record could be used
- Sometimes data is input into a database to watch for recurring trends and to ensure timely closure



Summary Report

- Thank you
- Participants
- Scope/Methodology
- Overall conclusions
- Recap of findings
 - Details in non-conformance reports
- Next steps
 - Corrective action
 - Follow-up audit

Utah 2002 EMS Audit Summary Report – November 1, 2002

Lead Auditor – Suzanne W. Sessoms, RAB-certified Lead Auditor
Auditors – Judy Schaub, EMS Coordinator
Al Witt, Corporate EMS Mgmt. Representative
Jim Webb, Utah Environmental Manager

Scope of Audit: The scope of the EMS audit included all swine production, nutrient storage, and associated activities for Circle 4 (C4) Farms in Milford, UT. As noted in WO's EMS manual, the EMS audit requirements for ISO14001 are met by a combination of bi-annual farm audits and the annual EMS audit. For details on what is covered by each audit, please refer to WO's EMS manual, section 4.5.4.

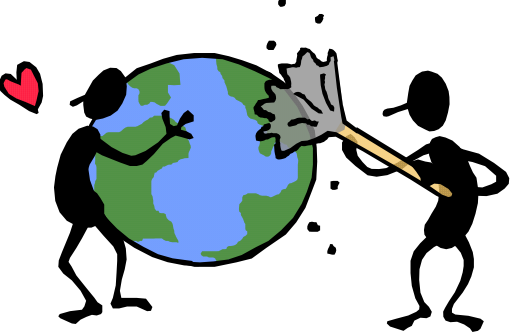
Audit Criteria: The audit criteria included ISO14001:1996 Environmental Management Systems – Specification with guidance for use along with WO's EMS policies, manuals, and procedures.

Audit Schedule: The audit included interviews with C4 Upper Management, Human Resources, Public Relations, Environmental Management, and visits to 5 farms. See attached audit plan matrix, schedule, and participants list for details of personnel interviewed and elements covered.

Good Practices: The audit confirmed management's true commitment to environmental stewardship, regulatory compliance and continual improvement. The dedicated efforts of the Environmental Manager and EMS coordinator are to be commended. The thorough, yet user-friendly documentation allow for efficient and value-added environmental monitoring. The awareness training was successful in reaching a diverse, multi-lingual workforce. The housekeeping and audit preparation was evidenced by well-groomed yards, orderly office/break areas, readily accessible records, available personnel and receptive atmosphere. For additional details, see attached color-coded table – best practices are identified in green.

Findings: Follow-up is recommended in the following areas: 1) completion of farm and EMS audit corrective actions, 2) clarification of MSDS procedure, 3) chemical labeling and 4) clarification of inquiry tracking requirements. For details, see attached color-coded table, which details objective evidence for conformance (in black) as well as non-conformance (in red). Some suggestions for system optimization are also noted in the summary (in purple).

Next Steps: A corrective action plan should be developed to address all non-conformances (red items). Internal decisions regarding the observations (purple items) are also recommended. The Phase 1 audit is scheduled for early December and will focus on understanding WO's EMS Process – in-depth review of the EMS Manual, figures, tables, etc., review of aspects analysis and regulatory requirements, and visits to farms to understand processes/technologies. The Phase 2 detailed audit schedule will then be developed. Completion of farm audits per schedule, completion of corrective actions from this audit and participation in WO management review should be sufficient preparation for the phase 2 registration audit in February 2003.



Next Steps

- Finish Implementation
 - Implement SOPs
 - Train Employees
 - Keep Records
 - Audit Your System
 - Take Corrective Action
 - Conduct Mgmt. Review
- Consider Recognition
 - Attestation
 - Registration
 - External Communication

