



Environmental Management Systems

Internal EMS Audit Training Refresher

October 27, 2022
Webinar

SOLID WASTE Environmental
Management
System

Committed to Continuous Improvement



Agenda

- ① Introduction
- ② Audit Process Overview
- ③ Identifying and Selecting Auditor(s)
- ④ Developing the EMS Audit Plan
- ⑤ Conducting the EMS Audit
- ⑥ Audit Reporting
- ⑦ Recap and Wrap Up

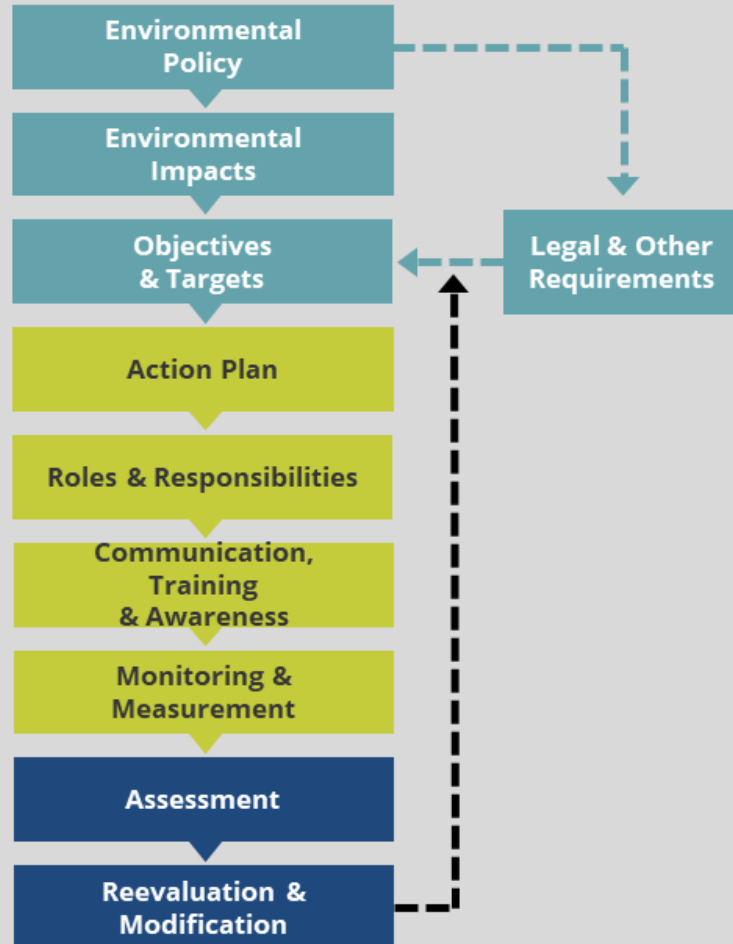


Iowa Solid Waste EMS Framework

- Actively Pursuing Six Program Components



- By Implementing a Framework of 10 Elements



Definition



Audit

A planned, objective and documented **Assessment**, either done internally by the program participant or its designee or externally by an independent third party, to determine the performance of a planning or service area's system in relation to the designation requirements.

Requirements from IAC 567-111

- ① *Internal Audit.* A copy of the result of the latest internal Audit that includes the date(s) it was conducted and the identity of the Auditor(s) shall be provided as part of the report. An internal Audit shall be conducted each state fiscal year.
- ② *External Audit.* An external Audit shall occur each state fiscal year. The date of the latest external Audit or the date the Audit will take place, along with the identity and pertinent qualifications of the independent, third party Auditor(s) shall be provided. The results of the external Audit shall be incorporated into the report. The department has a prequalification process for external Auditors.



**EMS Audit is the way to
proactively identify strengths
and weaknesses in the EMS and
the associated root cause**

EMS Elements Essentials for Audit

“The organization must have documented procedures for assessing the function of each component and its effectiveness of and conformance with the EMS plan. Audit is the process of drawing conclusions from the performance measurements.”



Audit Types

Compliance Audits

- Determine Compliance with Local, State and Federal Laws and Regulations
 - Primarily a Paperwork Review and Site Observations
- Correct Findings

EMS Audits

- Determine Conformance with the EMS
 - Interviews, Paperwork Review, and Site Observations
- Findings are Evaluated for their “Root Cause” and Corrective Action is then Implemented



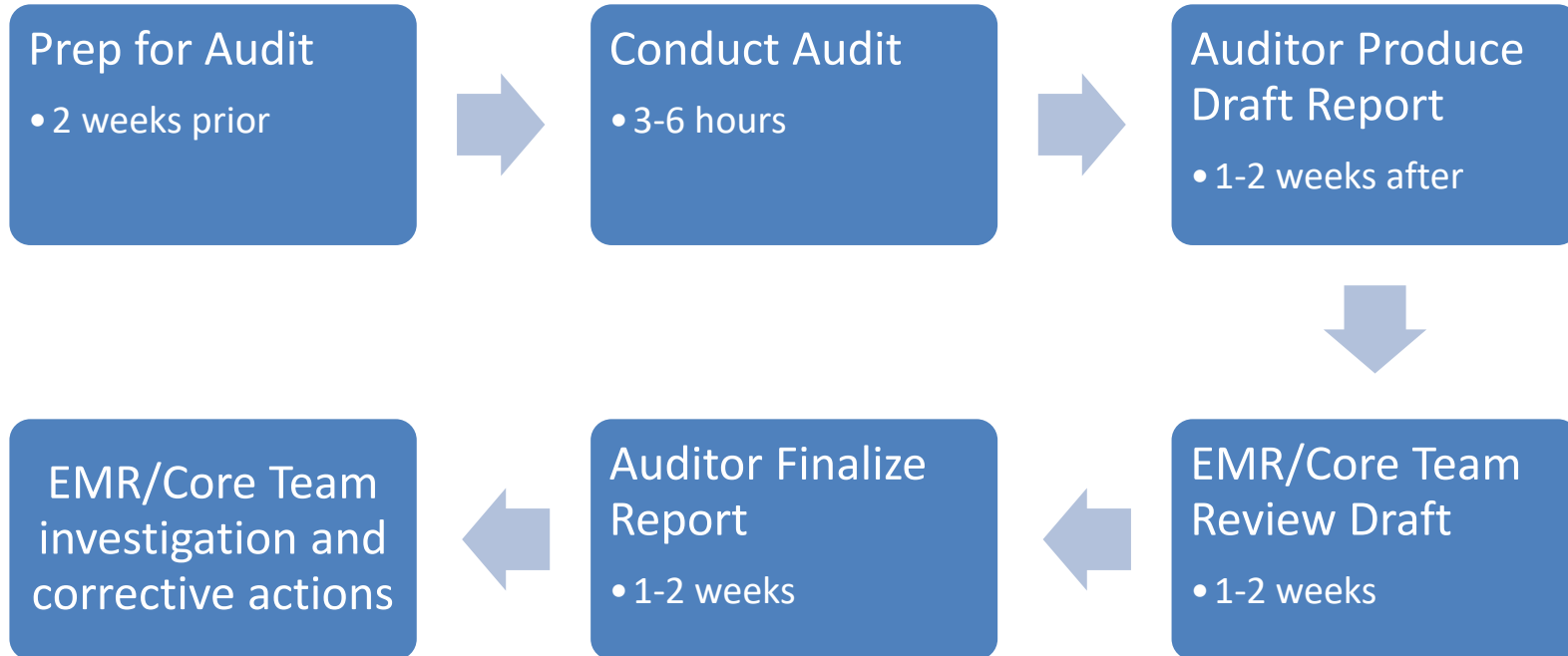
EMS Audit Difference

- ⦿ An EMS Audit is a conversation with Staff Members about the EMS and their duties
- ⦿ An EMS Audit seeks to find Weaknesses and Strengths in the System
- ⦿ An EMS Audit is not “Find and Fix” ...an EMS Audit seeks to Identify the Root Cause

**If You Develop an Effective EMS Audit Process,
It Will Drive Continual Improvement!**



EMS Audit Process



Identify and Select Auditor(s)

- ◎ Selection Must Ensure that Objectivity and Impartiality of the Audit Remains Intact!
 - Cannot Audit Your Own Work (No EMRs or EMS Core Team Members)
- ◎ Traits of a Good Auditor
 - Interest in EMS
 - Some Environmental Knowledge or Concern
 - Brave
 - Conversationalist
 - Tactful
- ◎ Collaborate with Peer EMS



Developing the EMS Audit Plan

EMS Audit Plan

- ◎ The EMS Audit Plan Serves as a Planning Tool to Facilitate the Audit Process
- ◎ The Audit Plan Should Document
 - The Scope
 - Each of the 10 EMS elements should be audited for conformance each year
 - Timing and schedule are up to you
 - The Schedule
 - Identify key people
 - The Evidence Needed to Verify the EMS is in Place and Working Effectively
 - Interviews with staff
 - Review of documents
 - Review of records

Overall Audit Schedule



⦿ Opening Meeting

- Outline Schedule
- Discuss Process and Expected Results

⦿ Conduct the Audit According to the Plan

- Interviews
- Document/Record Review
- Field Observations

⦿ Closing Meeting

- Disclose the Preliminary Findings of the Audit

The Goal of the Audit is to Collect Objective Evidence to Demonstrate the EMS is Working



Audit Plan Example

Internal EMS Audit Plan

Date: January 3, 2020

Preparer: Tom Dietrich

Facility: Great Iowa Solid Waste Agency

Facility/ Department/ Area	EMS Element	Auditor(s)	Auditee(s)	Date and Time	Special Instructions
EMS general	1 to 10	Tom Dietrich	EMR	8:30-10:00	Send documents 2 weeks prior to audit
Landfill	1 to 7	Tom Dietrich	Landfill Supervisor	10:00-11:00	Interview to be conducted during field visit
RCC	4 to 7	Tom Dietrich	HHM Supervisor	11:00-11:30	Interview to be conducted during field visit
Recycling Center	4 to 7	Tom Dietrich	Recycling Coordinator	11:30-12:00	
Top Management	1, 9, 10	Tom Dietrich	Director	15 minutes	Flexible timing to best fit Director's schedule between 8:30-10:00

Audit Planning Roles

⦿ Auditor(s)

- Finalize Audit Checklists (Template Available)
- Finalize Method of Note Taking (Template Available)

⦿ EMR/EMS Core Team

- Compile and Review EMS Related Documents and Records
- Consider Access to EMS Software
- Review Findings of Previous Audit
- Notify Staff of Upcoming Audit



Audit Checklist



3rd Party EMS Audit Checklist

Facility: _____ Date: _____

Lead Auditor: _____

* indicates a required or recommended procedure or a record of demonstration

Iowa EMS Element Description and Number	Notes	Audit Results				
		Met	Commendable	Opportunity	Partially Met	Not Met
0	Review and Discuss previous External Audit Findings/Corrective Action Work Orders IAC 567-111.6(10)a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	Environmental Policy Statement (EPS)					
	*EPS - Has management (or other relevant party) adopted an Environmental Policy Statement. When was the EPS last reviewed/revised? IAC 567-111.6(2). Who developed the EPS? Is Board or management approval required for the EPS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Does the policy demonstrate the following:					
	(1) Commitment to environmental performance? IAC 567-111.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(2) Framework for action? IAC 567-111.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(3) Framework for setting environmental objectives and targets? IAC 567-111.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(4) Statement of commitment - environmental compliance and continuous improvement? IAC 567-111.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the EPS visible and communicated externally? IAC 567-111.6(8)a. Is it posted? Is it available on the Internet? Other?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Are staff aware of the EPS? IAC 567-111.6(2), IAC 567-111.6(8)b. Is EMS information about Objectives/Goal available to staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Audit Notes

EMS Audit Notes

Date:

Facility:	Auditor:
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Iowa EMS Element Description and Number		Audit Notes		
		Interview Notes (Interviewee Name and Results of Interview)	Documentation (Indicate Files Reviewed and Results) Note: Some Common Docs Listed for Convenience. Add "Other" as Needed.	Follow-Up Actions (Task, Responsibility, Due Date)
0	External Audit Findings/ Corrective Action Work Orders		<input type="checkbox"/> External Audit Findings <input type="checkbox"/> Corrective Action Work Orders <input type="checkbox"/> Other	
1	Environmental Policy Statement		<input type="checkbox"/> Policy <input type="checkbox"/> Other	

Audit Plan - Best Practices



- ① The auditor should work with the EMR to determine the schedule and necessary interviews
- ① Remember to schedule senior management interviews in advance
- ① Allow flexibility in the schedule – you never know where the audit will take you
- ① The flow of the audit plan is up to the auditor and EMR but most auditors:
 - Start with an interview with the EMR and document review
 - The site observations and interviews confirm the statements by the EMR and commitments in the documents

Conducting the EMS Audit

Audit Scope

- ⦿ Each of the 10 EMS Elements should be audited for conformance each year.
 - Timing and schedule are up to you.
- ⦿ Audits typically include:
 - Interviews with staff
 - Review of documents
 - Review of records
 - Evaluation of environmental improvement

Auditor Objectives

- ⦿ Look for evidence to support conformance
- ⦿ Encourage continual improvement attitude
- ⦿ Document findings
 - Satisfactory Findings
 - Nonconformance Findings

Findings Terminology

Satisfactory Findings

Met

Satisfied standard fully.

Commendable

Satisfied standard fully and demonstrated innovation or exceptional effort.

Opportunity

Satisfied standard fully. Auditor has suggested improvements for consideration by EMS.

Nonconformance Findings

Partially Met

Satisfied standard partially. EMS is to implement root cause analysis and address nonconformance prior to the next audit.

Not Met

Standard not satisfied. EMS is to implement root cause analysis and address nonconformance in a manner approved by DNR.

EMS Documentation

- ⦿ Have required Procedures been developed?
- ⦿ Have documents been approved by management?
- ⦿ Is staff working from latest procedure?
- ⦿ Is there a record retention policy in place?



Auditing the 10 Elements

Environmental Policy Statement

- ⦿ Does the policy state commitments to EMS and continuous improvement?
- ⦿ Is the policy a framework for action?
- ⦿ Are staff aware of the policy statement?

Employees do not need to recite the policy.

They should understand the organization's environmental commitments and how it affects their job.



Aspects and Impacts

- ⦿ Is there a Procedure and has the organization followed it?
- ⦿ Does the Aspects and Impacts List capture relevant activities within the fenceline?
- ⦿ Have the six plan components been considered significant?
- ⦿ Are staff aware of how their job responsibilities may affect the environment?

EMR needs to understand the process of identifying and selecting aspects and impacts.



Legal and Other Requirements

- ⦿ Does the Procedure outline how requirements are identified and tracked?
- ⦿ Is the List reviewed and updated?
- ⦿ Are OSHA (health and safety) requirements on the List?
- ⦿ How does the compliance manager keep track of requirements, maintain records, and train staff?
- ⦿ Are staff aware of environmental and safety requirements affecting their job?

Verify there is a process in place.

Audit conformance with EMS, not legal requirements.



Objectives and Targets



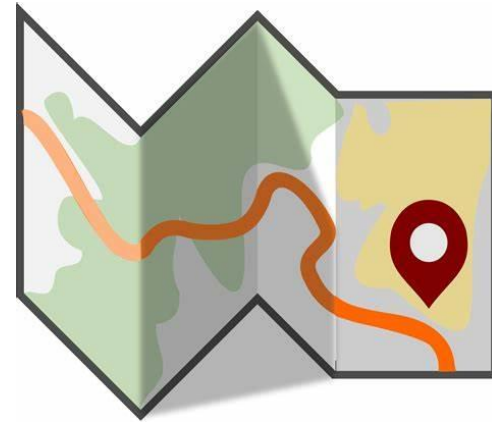
- ① How are objectives and targets developed, reviewed and updated?
- ① Are there objectives for significant aspects and all six plan components?
- ① Are targets quantifiable and include due dates?
- ① Are environmental impacts being reduced?

Speak with at least one person managing an objective and target. Discuss process of carrying out this task.

Refer to Objectives and Targets Guide for more specifics.



Action Plan



- ⦿ Is each Action Plan achievable and realistic for each Objective and Target?
- ⦿ If changes have been made, is the organization still on track to meet the Objective?
- ⦿ Are due dates being met?
- ⦿ Are assigned staff aware and keeping track of progress?

An action plan should be developed into a step-by-step-process that rolls up to achieve the objective and target.

A procedure is strongly recommended.



Identify Roles and Responsibilities

- ⦿ Can the EMR explain how the Roles and Responsibilities Matrix was developed?
- ⦿ Is the matrix updated and communicated to staff?
- ⦿ Does the matrix accurately reflect any changes in roles or responsibilities?
- ⦿ Are staff aware of their EMS related roles and responsibilities?

Roles and responsibilities can be communicated to staff through a variety of ways (e.g., job training, posters, email, handouts).



Communication/Training/Awareness

- ⦿ Does the Procedure outline internal, external communication and training?
- ⦿ What types of communication are in place?
- ⦿ Have requests, comments, and questions been responded to and addressed?
- ⦿ Have employees had the required training?
- ⦿ Are employees competent and aware of the EMS?
- ⦿ Is the training effective for the organization?

Tracking training can be difficult. Ensure an effective process is in place.

Lack of awareness is an indicator of an ineffective training program.



Monitoring and Measurement

- ⦿ Does the procedure indicate how metrics are identified?
- ⦿ Are metrics tracked and recorded for objectives, targets, and action plans?
- ⦿ Are there any gaps in the metrics?
- ⦿ Do metrics align with targets' environmental performance?
- ⦿ Is monitoring equipment functioning properly?



The “gold star” of monitoring and measuring is when charts, graphs, tables, etc. are developed and show progress is being measured and tracked

Audit

- ⦿ Is the Audit Procedure followed?
- ⦿ Does the Audit process appear to be in place and functioning?
- ⦿ Have all Audit reports been reviewed and finalized by the EMR/EMS Core Team?

Review past audit reports.

Ask the EMR about the process and whether they think it is providing value.



Reevaluation and Modification

- ⦿ Can the EMR explain the process to follow up on the Audit Report?
- ⦿ Have all previous Audit Report findings been addressed and completed through an adequate root cause analysis?
- ⦿ Is corrective action in place and effective?
- ⦿ Has a management review meeting been conducted?

Review documentation from the last management review.

Procedure is strongly recommended.



Auditing Best Practices



- ⦿ Use your EMS checklist!
- ⦿ Follow “audit trails”
- ⦿ Look for objective evidence and record results
- ⦿ Be friendly and patient
- ⦿ Avoid jargon and adjust terminology / approach with each interview
- ⦿ Generally explain the process to staff
- ⦿ Remember people can be nervous
- ⦿ Communicate to the EMR during the audit

**Remember, the EMS is About
Continual Improvement and So
is the EMS Audit**

Exercise

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Non-conformance Findings

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Audit Exercise #1

- ① An objective and target was set to improve water quality by removing 800 pounds of litter from a nearby stream in 2022.
- ① The EMS planned two stream clean up days. They implemented a media campaign to advertise the events and recruit new volunteers. They also sent mailers to past volunteers.
- ① The results were documented as 650 pounds from two stream clean up days.

Auditor, what is your finding?



Audit Exercise #2

- ⦿ The environmental policy was posted in the office and on the EMS agency's website.
- ⦿ The copy of the digital file provided to the auditor was missing the approval signature and date.

Auditor, what is your finding?



Audit Exercise #3

- ⦿ An objective and target was set to reduce greenhouse gas emissions by 10 tons of CO₂e from 2021 to 2022.
- ⦿ The action plan had several tasks describing steps to be taken to achieve the target. No comments or progress notes were included in the action plan.
- ⦿ When asked, the EMR stated that they had trouble getting the contractor to respond to their inquiries.

Auditor, what is your finding?



Audit Exercise #4

- ① An objective and target was set to reduce greenhouse gas emissions by 10 tons of CO₂e from 2021 to 2022.
- ① The action plan had several tasks describing steps to be taken to achieve the target. Progress notes were included in the action plan to indicate which tasks were complete and which were delayed.
- ① The results at the end of 2022 were a reduction of 2 tons of CO₂ e. Other O/Ts were completed and had documentation.

Auditor, what is your finding?



Audit Reporting

Audit Reporting

- ① The Lead Auditor will prepare an Audit Report documenting the findings of the EMS
 - The results should also be discussed in the closing meeting
 - Each finding should be tied to one EMS element
- ① The Audit Report should document:
 - Audit process
 - Evidence collected
 - Findings of the EMS audit
- ① Recommend using a tabular format
- ① The Report should be issued as Draft to the EMR to allow for comments



Example Audit Report

Internal EMS Audit Results Summary Form



Date: January 3, 2020

Lead Auditor: Tom Dietrich

Scope/Facility: Great Iowa Solid Waste Agency

Iowa EMS Element Description and Number		Audit Results/Findings	
		Evidence	Finding
1	Environmental Policy Statement	Policy document provided. Policy posted on website. Posters onsite to communicate to staff. All staff interviewed were aware.	Commendable
2	Environmental Impacts, including Significance	Aspects list provided. Procedure provided. EMR interview confirmed process.	Met Requirements
3	Legal and Other Requirements	Legal list provided. Procedure provided. List was not updated in past year.	Partly Met
4	Objectives and Targets	Objectives and targets documents provided. One objective appears to have been used for several years without change or improvement.	Opportunity for Improvement

Example Audit Report

Iowa EMS Element Number and Description		Audit Results/Findings from Internal Audit		
Number	Description	Evidence	Finding(s)	Iowa EMS Reference
8	Monitoring and Measurement	Reviewed Provided Documentation and Procedure. Interviewed EMR.	<p>Opportunity for Improvement</p> <p>Well defined, quantitative metrics that elicit progress are needed to effectively measure continuous improvement. Metrics must align directly with identified Objectives and Targets and performance indicators must be identified prior to program/project initiation. In reviewing Objectives and Targets during the Audit, this was not always the case.</p> <p>An example includes the Objectives:</p> <p><i>Protect surface water and storm water, as well as surrounding waterways and tributaries from contamination due to loose litter.</i></p> <p>and</p> <p><i>Reduce the amount of HHM's coming to the landfill as part of the regular waste stream.</i></p> <p>While the audit team realizes environmental benefits are being experienced through these projects, baselines have not</p>	Does the organization have a documented process (procedure) for monitoring key activities and, at a minimum, measuring performance related to each Objective and Target? IAC 567-111.6(5)d.

Results of the EMS Audit

Are the EMS Elements Implemented as
Designed and Providing Benefit to the
Organization?

Reevaluation and Modification

- ① The Reevaluation of the EMS is conducted to address the findings from the Audit identified in the final report
 - Identification of Which Element of the EMS Meets, Partially Meets, Failed to Meet, or Exceeded Expectations
- ① EMR Responsibilities
 - Identify the Root Cause of Each of These Outcomes
 - Implement Corrective Action to Prevent Reoccurrence

NOTE: Information of Root Cause and Corrective Action provided so the Auditor understands how the EMR will use the Audit for continual improvement



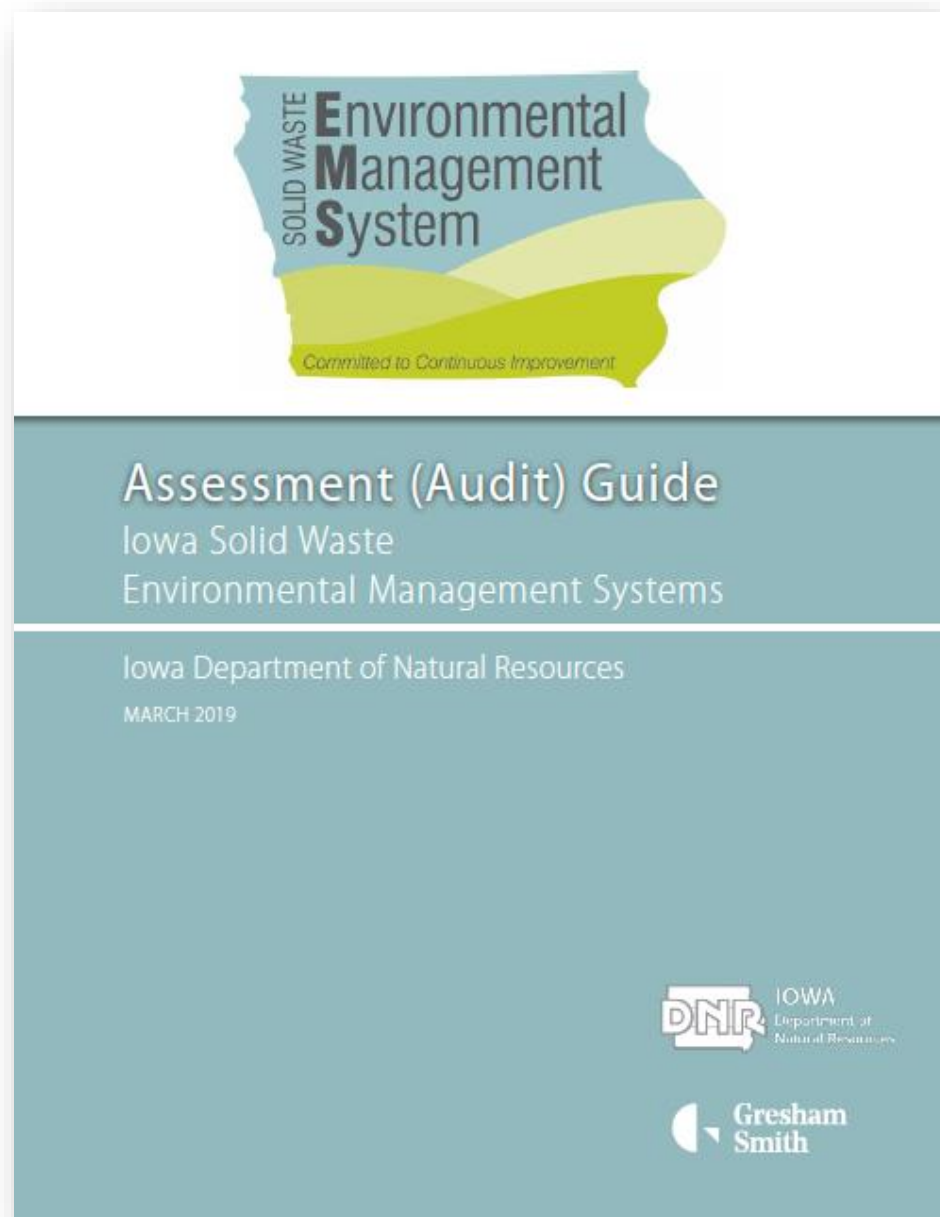
Root Cause Analysis/Corrective Action

- ① Usually Conducted by the EMR and/or Facility Manager
 - Five Why's is a Popular Tool for Identification of the Root Cause in an EMS
- ① Receive Input on the Root Cause from Staff Knowledgeable About the Finding
- ① Corrective Action Should be Identified Immediately Following the Root Cause
 - Assign Responsibilities and Due Dates
 - Follow Up!



Audit Guide

- ① Use as a Resource



Questions?

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