

An Integrated 3-Level Approach to Environmental Compliance Audits:

From Shop Self-Assessment to External Audits

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ISO 14001 Requires:

Commitment to Regulatory Compliance

4.3.1: Identify environmental aspects +

4.3.2: Identify legal requirements related to aspects +

4.5.2: Evaluate compliance with legal requirements =

Comprehensive Environmental Assessments

EMS Does Not *Replace* Compliance,

EMS *Assumes* It!



Problem?

External compliance audits = \$\$\$\$\$

Using in-house staff = \$\$\$\$

Needed: A robust internal assessment program that assures compliance of daily operations, and ties into a comprehensive program management assessment.



Background

External assessors routinely use TEAM Guide and Supplements:

- Audit protocols based on Federal/State regs
- Used by Federal agencies, private industry
- Intended for use by persons with regulatory expertise
- Provide comprehensive, trackable, comparable results

How do we make this information and audit system useful to – and usable by – shop staff?



Forest Service Case Study (1)

~~FS uses TEAM Guide for external assessments: YES NO~~

~~All Code/Requirement Reviewer Checklist Items
 FS regions develop simple yes/no checklists to track compliance of daily operations: 2 3 pages~~

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WO AMENDMENT EFFECTIVE DATE: DURATION: This amendment is effective until superseded or removed	2109.12_40 PAGE 12 OF 19
FSH 2109.14 – PESTICIDE-USE MANAGEMENT AND COORDINATION HANDBOOK CHAPTER 40 – STORAGE, TRANSPORTATION AND DISPOSAL	

41 - Exhibit 01

Pesticide Storage Facility Inspection Checklist

FOREST _____ DISTRICT _____ DATE _____
 LOCATION of FACILITY _____ INSPECTOR _____

YES NO

All Pesticide Storage Facilities (Permanent and Temporary)

1. Provide adequate protection to containers and contents from direct sunlight, wet weather, or freezing temperatures.
[Storage Areas: Operations](#) [PM.45.24.FS](#)
2. Maintain temperature and humidity within pesticide manufacturer's recommendations for the chemical being store.
[Storage Areas: Operations](#) [PM.45.24.FS](#)
3. One or more ABC-type (all purpose) portable fire extinguishers are installed at the facility in a visible, readily accessible location.
[Storage Areas: General](#) [PM.45.7.FS](#)

consists of floor curbs, spill containment devices such as spill pallets, approved pesticide or flammable materials storage cabinets.

provide by a sump (not recommended), it meets the capacity of an automatic pumping system, and is purged as needed.

material is treated as waste material and is disposed of as excess material as appropriate.

inspected annually to insure that they are watertight.

Verify that sumps are inspected annually to insure that they are watertight.



Forest Service Case Study (2)

FS Shop Checklist: Pesticide Storage

All Pesticide Storage Facilities (Permanent and Temporary)

All Pesticide Storage Facilities (Permanent and Temporary)

1. Provide adequate protection to containers and contents from direct sunlight, wet weather, or freezing temperatures.
2. Maintain temperature and humidity within pesticide manufacturer's recommendations for the chemical being store.
3. One or more ABC-type (all purpose) portable fire extinguishers are installed at the facility in a visible, readily accessible location.

Storage Areas: Operations

PM.45.24.FS

Storage Areas: Operations

PM.45.24.FS

Storage Areas: General

PM.45.7.FS

ers and contents from direct
peratures.

Operations

PM.45.24.FS

within pesticide manufacturer's
ing store.

Operations

PM.45.24.FS

portable fire extinguishers are

installed at the facility in a visible, readily accessible location.

Storage Areas: General

PM.45.7.FS



PM.45.13.FS. Permanent storage facilities must be constructed with continuous and impervious flooring (FSH 2109.14, para 41.2(4)).

Assessor Guidance:

- 1). Inspect the floor itself: Make sure there are no drains, cracks, or any other avenues for a spill to escape from the room. Have the facility manager describe how they are covered with nonskid epoxy sealant or are otherwise made impermeable.
- 2). The facility has to be constructed or designed so that any spills are contained. Look for either secondary containment structures, or slopes to the floor that guide any spills to a collection area. If the floors are not sloped, make sure that any joints from the floor to the walls are also impervious.

Things To Watch Out For:

- * Floors in pesticide storage area are cracked (i.e., not impermeable).
- * Joints between floor and walls in pesticide storage area are not sealed (i.e., not impermeable), and there are no structures in place to keep spills from reaching the walls.
- * There are no secondary containment structures or otherwise to control the flow of potential spills.



Forest Service Case Study (4)

Table of Contents

[Introduction](#)

[Applicability: Housekeeping vs Storage Facilities](#)

[We THE PESTICIDE LABEL](#)

[The Pes](#)

[State La](#)

The following table shows what types of information may be found on a pesticide label:

Checklist I

[Plans an](#)

[Records](#)

[Training](#)

[Handlin](#)

[Storage](#)

[General](#)

Pesticide Name	
<p>DIRECTIONS FOR USE</p> <p>It is a violation of Federal law to use this product in a manner inconsistent with its labeling.</p> <p><i>This section tells you what the product controls; where, how and when to use it. There may also be an 800 number for additional information.</i></p>	<p>KEEP OUT OF REACH OF CHILDREN</p> <p>DANGER</p> <p><i>On the label you will find a signal word: CAUTION, WARNING, DANGER, or DANGER-POISON. The signal word indicates the pesticide's potential hazard level to humans, with CAUTION being the least harmful and DANGER-POISON the most harmful.</i></p>
<p>PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS</p> <p><i>This section describes potential hazards to people or pets and actions that you can take to avoid these hazards. The statement may also provide information on first aid.</i></p>	<p>FIRST AID (STATEMENT OF PRACTICAL TREATMENT)</p> <p><i>This section tells you what to do first if someone swallows or</i></p>

APPLICABILITY: HOUSEKEEPING VS STORAGE FACILITIES

Is your facility subject to these requirements? Which ones? Just how much pesticides does a facility have to store to be subject to these requirements? Is it based on the types of pesticides, or the types of applications?

For Forest Service facilities, the key distinction is between "housekeeping" uses of pesticides, and pesticide uses that require pesticide storage facilities. "Housekeeping" pesticides may be kept in simple storage (e.g., a cabinet, or supply closet) that is not subject to Forest Service regulations, as those regulations apply to the storage facility, not to the pesticide or its application *per se*. The definition currently used for housekeeping-type pesticide is:

Any pesticide used for the purposes of general maintenance or human and pet health and comfort in a

Checklist items grouped logically

Additional reference material

Links to related sections



Forest Service Case Study (5)

Users Guide Link to TEAM Guide

STORAGE FACILITIES: CONSTRUCTION/DESIGN, CONT'D

 **PM.45.13.FS.** Permanent storage facilities must be constructed with continuous and impervious flooring (FSH 2109.14, para 41.2(4)).

Assessor Guidance:

- 1). Inspect the floor itself: Make sure there are no drains, cracks, or any other avenues for a spill to escape from the room. Have the facility manager describe how they are covered with nonskid epoxy sealant or are otherwise made impemeable.
- 2). The facility has to be constructed or designed so that any spills are contained. Look for either secondary containment structures, or slopes to the floor that guide any spills to a collection area. If the floors are not sloped, make sure that any joints from the floor to the walls are also impervious.

Things To Watch Out For:

- * Floors in pesticide storage area are cracked (i.e., not impermeable).





FS Checklist Item Search: PM.45.13.FS

FS Checklist Item Search: PM.45.13.FS

Code/Requirement	Reviewer Checklist Items
<p>PM.45.13.FS</p> <p>Permanent storage facilities must be constructed with continuous and impervious flooring. (FSH 2109.14, para 41.2(4)).</p>	<p>Verify that pesticide permanent storage facilities are constructed with flooring that is continuous and impervious to pesticides.</p> <p>Verify that, if spill containment devices are not utilized, the flow is slowed to one or more liquid-tight collection points that allows spilled or deposited materials to be easily removed.</p> <p>Verify that floors are constructed of materials that:</p> <ul style="list-style-type: none"> have sufficient thickness and chemical resistance to contain a release until it is recovered are chemically compatible with the materials being stored are properly sealed to prevent leakage.

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TEAM/Federal

FS Supplement

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Air Force/Postal Service Case Study (1)

Facility Save Profile

AB (3)	AD (0)	AD (0)	AW (0)	BC (0)	CD (0)	CF (0)	CL (0)	CM (0)	CP (4)	CR (0)	IN (0)	CM (0)	CP (4)	CR (0)	CT (0)	CW (0)	DE (0)	DP (0)
EE (0)	EL (0)	EQ (0)	ER (0)	ET (0)	EV (0)	FP (0)	FU (0)	HJ (0)	HM (2)	HV (0)	IN (0)	HJ (0)	HM (2)	HV (0)	IN (0)	LA (0)	LO (0)	LS (0)
MD (0)	MF (0)	MI (0)	MM (0)	MO (0)	MT (0)	ND (0)	PC (0)	PF (0)	PH (0)	PL (0)	W (0)	PF (0)	PH (0)	PL (0)	PP (0)	PR (0)	PS (0)	PT (0)
RG (0)	RS (0)	SH (0)	SP (0)	ST (2)	SX (0)	TR (0)	TS (0)	UT (0)	VM (3)	VS (0)	W (0)	UT (0)	VM (3)	VS (0)	WD (0)	WP (0)	WW (0)	XR (0)

CP. Coating/Painting Operations

Set all within Coating/Painting Operations to N/A

Task	Subtask	Links to:
<input type="checkbox"/> N/A CP. 1175 Coating, powder	CP. 1175 Coating, powder	
<input type="checkbox"/> Regulated CP. 1176 Coating, wipe	CP. 1176 Coating, wipe	
<input type="checkbox"/> Regulated CP. 1177 Coating/paint mixing/pouring	CP. 1177 Coating/paint mixing/pouring	
<input type="checkbox"/> N/A CP. 1190 Coating/painting, airbrushing	CP. 1190 Coating/painting, airbrushing	Coating, powder ?
<input type="checkbox"/> N/A CP. 1191 Coating/painting, airless spraying	CP. 1191 Coating/painting, airless spraying	Coating, wipe ?
<input type="checkbox"/> Regulated CP. 1192 Coating/painting, brush/roller	CP. 1192 Coating/painting, brush/roller	Coating/paint mixing/pouring ?
<input type="checkbox"/> Regulated CP. 1193 Coating/painting, cleaning equipment	CP. 1193 Coating/painting, cleaning equipment	Coating/painting, airbrushing ?
<input type="checkbox"/> N/A CP. 1194 Coating/painting, dip	CP. 1194 Coating/painting, dip	Coating/painting, airless spraying ?
<input type="checkbox"/> N/A CP. 1195 Coating/painting, electrophoretic	CP. 1195 Coating/painting, electrophoretic	Coating/painting, brush/roller ?
<input type="checkbox"/> N/A CP. 1196 Coating/painting, multiple operations	CP. 1196 Coating/painting, multiple operations	Coating/painting, cleaning equipment ?
<input type="checkbox"/> N/A CP. 1198 Coating/painting, spray - electrostatic automatic	CP. 1198 Coating/painting, spray - electrostatic automatic	Coating/painting, dip ?
<input type="checkbox"/> N/A CP. 1199 Coating/painting, spray - electrostatic manual	CP. 1199 Coating/painting, spray - electrostatic manual	Coating/painting, spray - standard gun ?
<input type="checkbox"/> N/A CP. 1200 Coating/painting, spray - HVLP gun	CP. 1200 Coating/painting, spray - HVLP gun	
<input type="checkbox"/> N/A CP. 1201 Coating/painting, spray - standard gun	CP. 1201 Coating/painting, spray - standard gun	
<input type="checkbox"/> N/A CP. 1195 Coating/painting, electrophoretic	CP. 1195 Coating/painting, electrophoretic	Shop level checklists
<input type="checkbox"/> N/A CP. 1196 Coating/painting, multiple operations	CP. 1196 Coating/painting, multiple operations	Regulatory checklists
<input type="checkbox"/> N/A CP. 1198 Coating/painting, spray - electrostatic automatic	CP. 1198 Coating/painting, spray - electrostatic automatic	"How-To" Guidance
<input type="checkbox"/> N/A CP. 1199 Coating/painting, spray - electrostatic manual	CP. 1199 Coating/painting, spray - electrostatic manual	Audit Program
<input type="checkbox"/> N/A CP. 1200 Coating/painting, spray - HVLP gun	CP. 1200 Coating/painting, spray - HVLP gun	
<input type="checkbox"/> N/A CP. 1201 Coating/painting, spray - standard gun	CP. 1201 Coating/painting, spray - standard gun	

Index of operations with compliance requirements

- Links to:
- Shop level checklists
 - Regulatory checklists
 - "How-To" Guidance
 - Audit Program

Air Force/Postal Service Case Study (2)

Activity	Status of Activity	Activity in Compliance	
		Yes	No
B. Maintenance functions			
B01. Used oil management	01. Does the used oil recycler/transporter have a USEPA/State ID number?	<input type="checkbox"/>	<input type="checkbox"/>
	02. Are containers storing used oil labeled with the words "Used Oil"?	<input type="checkbox"/>	<input type="checkbox"/>
	03. Is used oil being used for dust suppression?	<input type="checkbox"/>	<input type="checkbox"/>
	04. Does the facility manage used oil and oil filters according to federal and state regulations?	<input type="checkbox"/>	<input type="checkbox"/>
	05. Does the facility manage used oil and oil filters according to state regulations?	<input type="checkbox"/>	<input type="checkbox"/>
	06. Is there evidence of oil spills in storage areas or equipment leaks (using lubricating oil) entering the environment?	<input type="checkbox"/>	<input type="checkbox"/>
	07. Was the spill or release cleaned up properly?	<input type="checkbox"/>	<input type="checkbox"/>
	08. Is used oil mixed with other wastes or products?	<input type="checkbox"/>	<input type="checkbox"/>
	09. Are the containers free from leaks, in good condition, and kept closed?	<input type="checkbox"/>	<input type="checkbox"/>
	10. Is secondary containment provided for used oil containers?	<input type="checkbox"/>	<input type="checkbox"/>
	11. Does the facility comply with state regulations for "used oil" storage tanks?	<input type="checkbox"/>	<input type="checkbox"/>
	12. Does the facility complete shipping documents for used oil with the required information?	<input type="checkbox"/>	<input type="checkbox"/>
	13. Does the facility maintain copies of shipping documents for a period of three years?	<input type="checkbox"/>	<input type="checkbox"/>
	14. Does the facility use a used oil collection center for recycling of its used oil?	<input type="checkbox"/>	<input type="checkbox"/>
	15. If so, is the used oil collection center licensed/permitted?	<input type="checkbox"/>	<input type="checkbox"/>
	16. Does the facility heat with a oil-fired heater?	<input type="checkbox"/>	<input type="checkbox"/>
	17. Does the oil-fired heater meet all of the requirements for used oil specification, permitting, size, and venting?	<input type="checkbox"/>	<input type="checkbox"/>
Description of non-compliant activity(ies):			
1.			
2.			
3.			

Charlie VMF : Checklist Items Report

HW.10 - All Sizes of Generators

Activities

G. Waste Management

Scope

This topic covers waste characterization and any requirement that applies to all sizes of hazardous waste generators.

Applicability

Select this activity if the facility generates solid waste that may be hazardous waste or is a known hazardous waste. Generators of solid waste that have determined that a waste stream is hazardous waste must manage the waste as hazardous waste unless the waste stream is exempt, excluded, or recycled as scrap metal or universal waste. Possible USPS hazardous waste streams include: 1. Aerosol cans and drippings 2. Antifreeze/coolant 3. Solvent-based brake cleaner 4. Waste fuel and filters 5. Used oil and filters, petroleum products 6. Lead tire weights 7. Outdated, unusable chemicals 8. Paint booth filters 9. Paint gun cleaner/solvent 10. Latex and enamel paints 11. Parts cleaner filters and solutions 12. Shop towels and rags 13. Sludges from acid neutralization pits, oil/water separator, and trench drains 14. Spill clean-up material 15. Cancellation ink 16. Other materials that may be hazardous wastes

Select this activity if the facility generates solid waste that may be hazardous waste or is a known hazardous waste. Generators of solid waste must determine if wastes are hazardous wastes and retain documentation of that determination. Facilities should make a determination for the streams as follows: 1. Aerosol cans and drippings 2. Antifreeze/coolant 3. Solvent-based brake cleaner 4. Waste fuel and filters 5. Used oil and filters, petroleum products 6. Lead tire weights 7. Outdated, unusable chemicals 8. Paint booth filters 9. Paint gun cleaner/solvent 10. Latex and enamel paints 11. Parts cleaner filters and solutions 12. Shop towels and rags 13. Sludges from acid neutralization pits, oil/water separator, and trench drains 14. Spill clean-up material 15. Cancellation ink 16. Other materials that may be hazardous wastes

HW.10.1.US

Generators of solid waste must determine if the wastes are hazardous wastes. (40 CFR 261.3, 261.4(b), 261.21 through 261.24, and 262.11)

[Revised January 2000, Revised October 2001, Revised January 2002, Revised January 2003]

(NOTE: See Appendix 4-0 for a list of items which are not considered solid waste and therefore do not have to go through the determination process under Federal regulations.)

(NOTE: Determination of whether or not a waste is a hazardous waste can be done through one of the following: knowledge of all the constituents of the waste (MSDSs) and whether it is listed in 40 CFR 261 laboratory analysis knowledge of processes and/or materials used.)

(NOTE: Unidentified waste materials and spilled hazardous materials may have to be disposed of as hazardous waste depending on their constituents or characteristics.)

(NOTE: Some batteries, pesticides, thermostats, and mercury lamps may be considered universal wastes instead of hazardous wastes and need to be handled according to the requirements in 40 CFR 273 (see the appropriate definitions for clarification.))

Discuss with staff how wastes generated are identified and classified.

Determine if USEPA criteria were followed for identifying the characteristics of hazardous waste and USEPA's listed wastes in 40 CFR 261 (see Appendices 4-1, 4-2, 4-3, and 4-5).

Determine whether the facility generates, transports, treats, stores, or disposes of any hazardous waste (see Appendices 4-1, 4-2, 4-3, and 4-5 for guidance, note that the listings reflected in these appendices are frequently revised in the Federal Register) and the quantity.

(NOTE: When making quantity determinations, all hazardous waste generated must be included except hazardous waste that is:

Benefits of Using 3-Tiered System

- Involves shop level staff in PDCA cycle:
 - Takes advantage of local expertise
 - Provides compliance awareness/training
 - Directs shop staff to critical issues
- Streamlines compliance assessment program:
 - Shop focuses on daily operations
 - Managers focus on program issues
- Improved information quality for managers:
 - More perspectives, increased enculturation
 - Consistent and comparable data



Direct Benefits to EMS Program

Helps ensure conformance with ‘shalls’ in:

4.3.1: Identifying aspects and impacts

4.3.2: Identifying legal requirements and relating laws to aspects and impacts

4.4.2: Provides training and awareness

4.4.3: Increases internal communication

4.5.2: Procedure for evaluation of compliance



Prerequisites for Use

- TEAM Guide Partner (mandatory)
 - Access to assessment protocol manuals
- ListBuilder™ Support (mandatory)
 - Access to on-line database of protocols
- Agency regulations/guidelines (optional)
 - Develop Agency Supplement
 - Develop Shop Checklists
- Agency Policy for Implementation
 - Management commitment and support



Questions?

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