Developing Food Defense Plans

Presented by

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For FSIS “How To Workshops”

Spring 2009

Objectives

- By the end of this workshop, you will be able to
  - Define food defense
  - Understand why food defense is important
  - Develop your own food defense plan

What Is Food Defense?

- Food defense is not food safety.
- Food safety addresses predictable and unintentional risks. Food safety is best addressed through HACCP.
- Food defense addresses intentional attacks on the safety or quality of food. It is not well suited to HACCP.

Why Be Concerned?

- Intentional contamination *has* happened and *can* happen again.
  - Oranges with mercury – Israel, 1978
  - Salad bars with *Salmonella* – Oregon, 1984
  - Cookies with needles, St. Louis, 1984
  - Fast food with rat poison, China, 2002
  - Ground beef with nicotine – Michigan, 2003

Why Be Concerned?

- 1994: A tanker was accidentally contaminated resulting in an estimated 224,000 illnesses.
- 2009: What if it wasn’t accidental? What if it was a tanker of oil for frying meat/poultry?

Who Would Do This?

- Terrorists or Activists
- Competitors
- Disgruntled employees

Why?

- Anger over national, business, or personal differences
- Seeking changes in culture
- Seeking economic disruption
- Seeking public fear
- Seeking harm to others

Why Me?

Factors that increase risk:

- Making large batches of food
- Foods with short shelf lives
- Uniformly mixed products
- Products that reach key populations
- Ease of access

Imagine—What If?

- People are ill, injured, or even dying.
- Your company name and product are involved.
- A recall is initiated.
- Production is halted—jobs lost.
- Financial losses occur locally and even nationally.

You are asked, “What did you do to prevent this?”

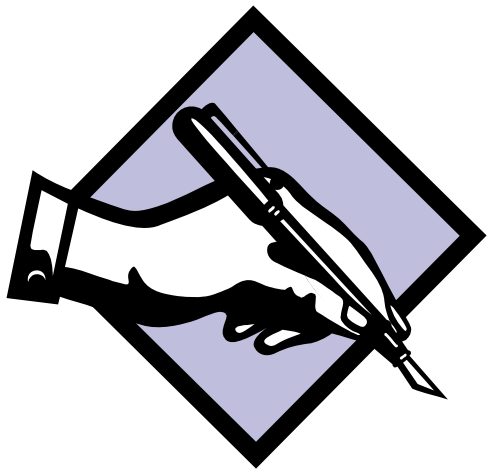
FSIS Survey Findings: Percentage of Plants with Food Defense Plans

- August 2006: 27% of establishments have plan
- November 2007: 31% of establishments have plan
- August 2008: 41% of establishments have plan

FSIS goal: 90% of establishments have food defense plan

Why Write a Plan?

- Writing it down will improve it.
- Insurance companies and audits request a plan.



Objectives Review

- Defining Food Defense
- Understanding why it matters
- Develop a Plan

How to Develop a Plan?

1. Conduct a self assessment. Know where you are today.
2. Plan to stay as good or become better.
3. Compare to where you could/should be tomorrow or next year. Find vulnerabilities.
4. Plan and prioritize a way to improve.
5. Implement and update the plan.

Discussion Question

- What obstacles have you encountered when creating or improving your food defense plan?

Conduct an Assessment

- Developing a Food Defense Plan for Meat and Poultry Slaughter and Processing Plants (June 2008) http://www.fsis.usda.gov/PDF/Food_Defense_Plan.pdf
- FSIS check list (Dec. 2007) http://www.fsis.usda.gov/PDF/Slaughter_Plant_Checklist.pdf
- FDA Food Defense Self Assessment Tool for Food Producers, Processors, and Transporters http://www.cfsan.fda.gov/~acrobat/secgui14.pdf

Conduct an Assessment *(con't)*

- Choose one or more checklists.
- Consider any other areas of potential risks and vulnerabilities.
- Record what is already being done or partially done.

Areas to Consider: Food Defense Management

- Do you have a food defense plan?
- Is someone responsible?
- Do you have related necessary plans, such as product withdraw or recall and personnel emergency or evacuation procedures?

Areas to Consider: Outside Defense Measures

- Do you keep doors closed?
- Do you have a fence?
- Is there adequate lighting?
- Do you control access by people and vehicles?

Areas to Consider: Inside Defense Measures

- Do you use surveillance?
- Do you have alert systems?
- Do you control access?
- Do you take inventory?

Areas to Consider: Slaughter/Processing Measures

- Are animals or batches or product exposed to tampering?
- Are areas or equipment left unobserved?
- Will employees report unusual situations?

Areas to Consider: Storage

- Is access limited?
- Is inventory maintained?
- Can the impact of an attack be minimized?

Areas to Consider: Shipping and Receiving

- Are trailers sealed?
- Are drivers identified and deliveries scheduled?
- Are all vendors selected thoughtfully?
- Are returned goods examined closely?

Areas to Consider: Water, Ice, and Ingredients

- Are water lines secure?
- Is ice-making equipment protected?
- Are all bulk ingredients protected when not in use?

Areas to Consider: Mail

- Is mail opened away from other areas?
- Are procedures understood for handling suspect mail?

Areas to Consider: Personnel

- Are background checks completed?
- Are personnel supervised?
- Are employees trained?
- Are lockers inspected?
- Are cameras allowed?

Plan

- Now that you know where you are, plan to remain at least as good as you are today.
- If you don’t follow up, the plan may not be happening as you expect.
- Document what you have learned.

Compare

- Compare where you are to where you could or should be. Review what you have not done.
- Any NO answer on the checklist may be a vulnerability.
- Consider any other vulnerabilities not addressed.
- Document what is not as good as it could be.

Plan Again

- With over 120 suggested measures and a list of potential vulnerabilities—where do you start?
- Decisions should be supportable.
- Actions must be based on a risk analysis.
- A method is needed to know—which measures might matter most?

Discussion Question

- Of the areas discussed, which one is most important?
  - Management
  - Outside Security
  - Inside Security
  - Slaughter/Processing
  - Storage
  - Shipping/Receiving
  - Water, Ice, Ingredients
  - Mail
  - Personnel

Factors of an Attractive Target

The CARVER + Shock method—an assessment tool to identify areas of high risk.

CARVER + SHOCK METHOD

- A series of questions addresses each area and leads to calculated risk factors.
- This can lead to a functional food defense plan by combining the checklist (a “to-do” list) and the risk factors (a way to prioritize the list).
- Simple—right?

CARVER + SHOCK METHOD *(con't)*

C—Criticality

A—Accessibility

R—Recuperability

V—Vulnerability

E—Effect

R—Recognizability

+

SHOCK

C—Criticality

How serious are the public health and economic impacts of an attack at this point?

- Number of lives lost
- Number of dollars lost or spent

A—Accessibility

How easily can an attacker learn about and reach the target?

- Information availability
- Physical or human barriers

R—Recuperability

How long would it take to overcome the damage?

- Physical and economic damage
- Psychological damage

V—Vulnerability

How easily could an attack achieve the desired effect?

E—Effect

What percentage of your productivity would be damaged?

- One line or one plant
- One product or all products
- One customer or a group of customers

R—Recognizability

How easily can a target be found and attacked?

SHOCK

How deeply would an attack impact people?

- Employees/community/nation
  - Symbolism/history

Discussion Question

- What advantages and disadvantages do you see with the CARVER method?

CARVER + SHOCK Guidance

The CARVER + Shock Primer

http://www.fsis.usda.gov/PDF/CARVER.pdf

Using the CARVER + SHOCK Software

- Step 1: Download FREE software: http://www.cfsan.fda.gov/~dms/carverdl.html
- Step 2: Insert your process flow chart.
- Step 3: Answer about 50 questions per step.

Too Many Questions!

- Answer 120 checklist questions?
- Answer 50 questions per step in your process flow?
- Document and respond to all this?
- There’s an easier way …

Combine Methods and Prioritize Risk

- Not all CARVER questions are applicable to you.
- Use the questions best suited to your process.
- Prioritize with a simple, logical format.
- Write your plan.
- Ready?

Blank Sample Plan—Individual Exercise

- Review and complete as much as possible of the introduction and prevention sections of the Blank Sample Plan. (pages 1–13)
- The left-hand columns in the tables indicate the status of suggested food defense measures:

  X indicates an item is not applicable to your facility.

  ✓ indicates a measure is implemented at your facility.

  I indicates either incomplete or not implemented. These items will be further considered in a risk analysis worksheet.

Food Defense Risk Worksheet—Group Exercise

- Select one or two defense areas per group
- Discuss those defense measures and rate the potential impact on improving prevention
- On the worksheet, list the items you marked with an ‘I’ in your Blank Sample Plan
- Determine the score for each item based on impact and status

Food Defense Risk Worksheet—Group Exercise

- Determine the score for each item based on impact and status
- Is the potential impact minor (1), significant (5), or major (10)? Enter: 1, 5,or 10
- Is this complete (1), partially complete (5), or not started (10)? Enter: 1 , 5, or 10
- Score: Multiply the 2 scores and enter the result.

Food Defense Plan Prevention
Group Discussion

Each group will summarize their findings.

What were the most common items not yet implemented?

Of these, which were determined to be most important?

Agency Response—FSIS Directive Series 5420.1–5420.8

- During elevated threat levels (yellow, orange, red), defense verification procedures must be followed.
- Results are documented:
  - A—acceptable, or
  - S—indicating a concern but no evidence of adulteration, or
  - T—there is evidence of adulteration and issue an NR
- Plant should respond to the memorandum of interview (MOI).

Agency Response—FSIS Directive 5500.2–5500.4

- Defines how communication is ensured for non-routine incident
- Defines how to secure intentionally adulterated product and how to oversee disposal/decontamination activities
- Establishes how Incident Investigation Teams can be formed and used

Agency Response—FSIS Directive 8080.1

- Provides instruction for recalling meat and poultry products

Company Response

- Communication is the key to all crisis management programs. Update contact lists and keep them with you.
- Ensure safety of personnel and consumers.
- Stop all activity that might increase damage.
- Prepare for external communication to dispel fear and increase confidence for recovery.

Blank Sample Plan—Individual Exercise

- Review and complete as much as possible of the incident response sections of the Blank Sample Plan. (pages 14–17)
- The left-hand columns in the tables indicate the status of suggested food defense measures:

  X indicates an item is not applicable to your facility.

  ✓ indicates a measure is implemented at your facility.

  I indicates either incomplete or not implemented. These items will be further considered in a risk analysis worksheet.

The Food Defense Risk Worksheet—Group Exercise

- Select one or two incident response areas per group
- Discuss those defense measures and rate the potential impact on improving prevention
- On the worksheet, list the items you marked with an ‘I’ in your Blank Sample Plan
- Determine the score for each item based on impact and status

Food Defense Plan Prevention
Group Discussion

Each group will summarize their findings.

What were the most common items not yet implemented?

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Recommendations

Finish the Plan

Implement the Plan

Reassess Annually

Tampering Laws

FEDERAL ANTI-TAMPERING ACT
U.S.C. TITLE 18 - CRIMES AND CRIMINAL PROCEDURE
PART I - CRIMES
CHAPTER 65 - MALICIOUS MISCHIEF

Resources

- **FSIS checklist (December 2007):**
  http://www.fsis.usda.gov/PDF/Slaughter_Plant_Checklist.pdf
- **FSIS primer:**
  http://www.fsis.usda.gov/PDF/CARVER.pdf
- **Federal anti-tampering law:**
  http://www.fda.gov/opacom/laws/fedatact.htm
- **USDA Guidance:**
  http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/Guidance_Materials/index.asp#Industry

Resources *(con't)*

- **Podcasts:**
  http://www.fsis.usda.gov/News_&_Events/Food_Safety_Inspection_Podcasts/index.asp

- **Food Defense Plan worksheet:**
  http://www.fsis.usda.gov/PDF/Slaughter_Plant_Plan.pdf

- **Free online course hosted by FDA:**
  http://www.fda.gov/ora/training/orau/FoodSecurity/default.htm
  http://www.fsis.usda.gov/Science/Resources_&_Information/index.asp