CHAPTER 14
AFTER ACTION REVIEWS

TABLE OF CONTENTS

1.0. PURPOSE

This document describes the procedures for completing an effective After Action Report and Improvement Plan (AAR/IP). This process will assess and evaluate actions taken during an event/incident/special investigation, etc., with input from all involved parties, to allow for continuous improvements to be implemented in future responses/events.

2.0. SCOPE

This applies to any agency response activity, whether to an emergency event, human or animal food related incident, special investigation, or other activity, such as an exercise, as a method to assess response performance and suggest improvements for future responses with all involved entities.

3.0. RESPONSIBILITY

3.1. Agency/Organization Leadership

Leadership of federal, state, and local agencies involved in responses to human and animal food incidents will work jointly to make any customizations needed to this template to develop and adopt an After Action Review (AAR) process/Standard Operating Procedures (SOP) that is appropriate for their jurisdictions.

3.2. RRT Leadership (or investigatory team leadership, in states without an RRT)

RRT leadership is responsible for ensuring that the personnel assigned to respond to human or animal food incident have been provided with the Incident Command System (ICS) and investigation related training necessary for them to successfully complete the tasks they are assigned.

3.3. RRT Members (or investigatory team, in states without an RRT)

RRT members are each responsible for playing an active role in maintaining both their subject matter expertise and ability to work effectively in multi-disciplinary and multi-agency response teams.

4.0. DEFINITIONS

- **After Action Report (AAR) –** The purpose of an AAR is to analyze results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions. The report includes a summary of the incident, review of the response process, timeline of the events, strengths and areas for improvement observed during the response, and an improvement plan (IP). The IP should include a clear description of recommendations for improvement, who the responsible part(ies) will be for implementing each recommendation or each corrective action, and a timeframe for completion. If the AAR includes recommendations related to improving communications, it may be beneficial to include a flowchart or method of communications between the participating agencies that occurred during the incident (e.g. the communication process such as communicating to the correct persons, information communicated clearly and in a timely manner, etc.).

- **After Action Review –** A no-fault process or meeting whereby everyone involved in the response/event collectively evaluates the response. The emphasis should be on identifying strengths and weaknesses of the jurisdictions or multi-agencies plans, protocols, procedures, etc., and the tactics utilized to achieve the strategic goals.
- **Improvement Plan (IP) –** A formal document that lists responsible entities to be accountable for agreed upon improvements to a response process within a designated time frame.

5.0. BACKGROUND

Outbreak and other special investigations typically require coordination among multiple regulatory agencies and/or programs. Effective communication and coordination are required for successful investigations of foodborne disease outbreaks, special investigations, and significant incidents. A review of the response to the incident provides the opportunity to identify areas for improvement. Continuous improvement is a vital part of sustaining an integrated local, state, and federal food safety system. Over time, trends can also be identified by evaluating multiple AARs to determine the effectiveness of changes to the response network as well as the applicable regulatory programs.

Due to the demand on resources and frequency of incident/events (which will vary for each agency), many agencies will find it resource efficient/effective to prioritize resources for post response activities (such as after action reviews and reports) based on the significance of a given incident/event. As a rule, a significant incident will warrant a review and report to detail successes, lessons learned, and develop a list of what actions are required to address specific needs and improve future responses. Suggested criteria for determining if an incident is 'significant' include: 1) complexity (multiple jurisdictions, multiple products); 2) impact (public health, industry, infrastructure); and 3) available resources (personnel, current workload/other demands).

While the actual determination of 'significant' may vary from agency to agency, it should be clearly defined in agency SOPs to allow for consistent implementation of AARs. Agencies may also determine that a more rigorous AAR is appropriate for different levels of incident significance. For instance, incidents of low significance might warrant only a brief incident summary (addressing size, scope, and distribution) and a 'lessons learned' summary (addressing challenges, recommendations, and action items). This should also be clearly defined in agency SOPs. Any action items resulting from incidents, regardless of significance, should be tracked to ensure follow up action. Use of Homeland Security Exercise and Evaluation Program (HSEEP) compliant AAR/IP templates is encouraged for high profile or high significance incidents.

Because AARs include the review of how policies and procedures were implemented, involving representatives from agencies' legal counsel in the review process can be helpful if clarification or interpretation of law is needed.

6.0. SAFETY

N/A

7.0. EQUIPMENT/MATERIALS

N/A

8.0. PROCESS DESCRIPTION

The following sections were developed with the intention of taking recommendations for improvement from rapid response incidents, both those identified as issues within specific products, facilities or systems and those identified as coordination/collaboration issues and applying them to improve the rapid response system and the regulatory programs.

8.1. Roles & Responsibilities

Responsibilities will vary depending on the management structure established for the response. Frequently used roles and responsibilities are identified below for your convenience.

- **Administrators/Management –** should participate in all AARs in relation to their involvement in the response.
- **Planning Section Chief –** The Planning Section Chief will draft the Summary of the Incident to be included in the AAR. If the Planning Section Chief position was not created for a response, this responsibility would default to the Incident Commander (IC).
- **Facilitator –** It is often helpful to use a facilitator to conduct an AAR survey or meeting to gather feedback about strengths and areas for improvement; a person to lead the process. It is recommended that the facilitator be a person who was not involved in the day-to-day management of the response but was familiar with the event. It is recommended that the facilitator be familiar with ICS and the protocols/procedures of participating agencies. The facilitator often begins with the objectives of the response as a starting point. Were the objectives met? What actions/responses caused them to be met or not met? The facilitator is responsible for ensuring completion and distribution of the AAR but may not be responsible for creating the report; just ensuring its completion.
- **Participants –** Ideally, everyone involved in the day-to-day management of the response, including command staff, general staff, and field staff will participate in the AAR. Any participant, internal or external to the jurisdiction, at any level, can and should contribute to the AAR; this could include inspectors, epidemiologist, subject matter experts, liaisons, public information officers, laboratorians, etc.

8.2. AAR Preparation

The preparation for the AAR should be addressed at the beginning of the response whenever possible. All participants are to be reminded that they will be asked to provide feedback at the end of the response regarding significant strengths and areas for improvement for possible inclusion in an AAR. It is suggested that the AAR be completed within 45 days of the response.

The following information should be prepared in advance of the AAR:

- **Establish Points of Contacts –** Solicit input and/or participation in the AAR from contributing agency leads that are available and others as needed.
- **Summary of the Incident –** This written summary should begin with the first notification and finish with the outcome or current status of the incident. The major response concerns should be identified along with the commodity and suspected/confirmed agent. The summary will identify the findings and/or outcome of the incident. Include what agencies participated in the response, what type of ICS was used to facilitate interagency work, key tasks involved and state what the objectives were. Describe possible root cause and possible mitigation steps; why/how did the situation occur. This summary should be clear and concise.
- **Timeline of the Events –** This can be developed in multiple formats depending on the complexity of the incident and should help others to understand the sequence of events/actions.
- **Legal Issues –** Determine if any information listed in the AAR/IP is considered sensitive for any agency. Consider this issue before public distribution of the report or limit its distribution. Consulting with legal counsel may be appropriate. AARs that are posted on the FoodSHIELD After Action Exchange (AAX) application may be visible to those that are not covered under an FDA 20.88 information sharing agreement.

8.3. After Action Review

- Whenever possible, at the beginning of the event, inform response participants that there will be an after action review and recommend they record daily, for later compilation, the strengths and areas for improvement that they observe along with recommended ways to improve. Agree on how the AAR process will work. The review can be conducted through a written survey, an in-person interview, or through a group meeting/conference call. For example, each supervisor could inform their staff to be on the lookout for issues that arise, to make note of them, and to offer possible solutions/remedies. The supervisor in turn reports these items up the chain to be included in the AAR. If possible, identify one person (or one from each participating agency) who will be responsible for collecting the information that will be used in the AAR.
- **Recommendations for Improvement/Corrective Actions –** Create an IP on what can be done to improve policies, procedures, and resources for future responses. Focus on items that can be improved and suggest solutions to

identified problems. Limit areas of improvement to 3-4 items unless it was a large, complex incident. List the top three strengths as well to ensure those are repeated during future responses. Assign a specific person responsible for implementing the suggested recommendation or corrective action with a designated timeline for completion.

- **Facilitator** – It is imperative to allow the participants to be able to speak freely or anonymously in writing through a survey or some other form of written feedback. Emphasize that the overall goal is to improve future responses. A "field meeting" with ground staff may be warranted in addition to the AAR with management. Remind participants that the discussion is to be focused on activities/actions (system problems) and not on people. The facilitator will follow-up with the designated agencies/individuals responsible for implementing the suggested improvements within the time frame specified and report back to the participating agencies of the AAR/IP the status and outcome regarding the recommendations.
- **NOTE:** The length of an AAR/IP is scalable, based on the event and number and types of agencies involved. The AAR/IP for a simple incident could be one page in length.

8.4. Flowchart of Communication Among the Various Agencies

If communications between the response agencies is identified in the AAR as a strength or an area for improvement, a chart showing how communication flowed during the response could help in describing what worked well or what should be improved upon for future responses. (Please see Appendix A, Listeria Contamination by MN for an example of a Flowchart of Communication.)

8.5. Full Summary AAR/IP

- This is comprised of the incident summary, process review, timeline, flowchart, and improvement plan and should be presented in a concise manner whenever possible. The report should be distributed to all involved parties, (e.g. Participant Agencies, Inspectors, Local Health Department personnel, Epidemiologists, Sanitarians, or anyone else who contributed information or had a need to know during the incident). It is important to conduct the after action review as soon as possible and to generate your AAR/IP while the incident and issue is fresh in everyone's mind. It is recommended that an AAR/IP be completed within 45 days of the event/exercise.
- Keep in mind that a thorough AAR/IP may also require modifications of existing protocols/procedures/training. Ensure your IP will capture this and identify who is responsible for these revisions and are completed within a specified timeframe. A process for final approval is recommended such as a committee that reviews the final AAR/IP for management sign off for agency commitment.
- Before making an AAR/IP public (e.g. posting on a public website), legal counsel for each affected agency should be given the opportunity to review the report and provide concurrence before releasing/posting.

8.6. Records to be Maintained

- **After Action Report (AAR)**
- **Improvement Plan – (IP)**
- **Follow-up** - The facilitator will provide a follow-up report detailing the status and outcome regarding the recommendations listed in the IP.

9.0. DESIRED OUTCOMES (ACHIEVEMENT LEVELS)

Full achievement of this best practice requires implementation of sufficient infrastructure to complete an AAR with state, local, and federal partners (as appropriate) that participated in a multi-agency response within 45 days of completion of the response. The outcome of the review would be an AAR/IP that is implemented by the participating agencies to improve future responses. This may include revisions to procedures, policy, training, etc.

Level	Description
1	Single Agency Basic – The agency* identifies criteria to determine for which responses an AAR will be completed and evaluates their own response to those incidents. Discussions focus on items/procedures they wish to change internally to improve their processes. Informal documentation may be generated.
2	Multi-Agency Basic – Principal response agencies agree on criteria to determine which multi-agency responses warrant an AAR. The principal agencies involved in these responses meet as needed to collectively discuss strengths and weaknesses identified during these responses. Recommendations and/or action items to improve multi-agency processes and coordination are identified. Informal documentation may be generated.
3	Single Agency Comprehensive – The agency implements a SOP based on the AAR Chapter, or other national guidance, which is reviewed on a yearly basis. For multi-agency responses, resulting AARs seek input from all participating agencies. In the absence of actual incidents, at least one exercise is conducted per year and an AAR is generated and recommended action items are tracked as part of the agency's continuous program improvement process.
4	Multi-Agency Comprehensive – Principal response agencies have agreed to and implemented a single SOP based on the After Action Review Chapter, or other national guidance, which is reviewed on a yearly basis. As a result, a joint AAR is generated for the response and recommended action items are tracked within each agency's continuous program improvement process. In the absence of actual incidents, at least one exercise is conducted per year and an AAR/IP is generated.

*Agency is defined as any Agency participating in the Rapid Response Team

10.0. RELATED DOCUMENTS

Examples of AARs from events of varying size and complexity are included as attachments in this chapter.

11.0. REFERENCES AND OTHER RESOURCES

- Homeland Security Exercise and Evaluation Program Templates (https://preptoolkit.fema.gov/web/hseep-resources)
- FDA After Action Procedures – Final Draft 3

12.0. ATTACHMENTS/TEMPLATES

- Attachment A – Examples of After Action Reports (Simple)
- Attachment B – Examples of After Action Reports (Medium)
- Attachment C – Examples of After Action Reports (Complex)
- Attachment D – After Action Report Template
- Attachment E – After Action Report Template Homeland Security Exercise and Evaluation Program (HSEEP)
- Attachment F – Lessons Learned/Recommendations Report Template

13.0. DOCUMENT HISTORY

Version #	Status*	Date	Author
1.0	I	10/30/2012	RRT AAR WG (FL**, MI, MN, WA) Other Contributors: FDA CORE
1.1	R	6/5/2013	FDA ORA/OP
1.2	R	5/26/2017	ORA/OP
1.3	R	1/15/23	PA RRT, ORA/OP
2.0	R	6/1/2023	ORA/OP-AFDO Compiled Revisions
3.0	R	12/1/2024	ODP-AFDO Compiled Revisions

*Status Options: Draft (D), Initial (I), Revision (R), or Cancel (C)
**Workgroup Lead

Change History
1.1 – Editorial revision by ORA to support document concurrence.
1.2 – Minor editorial revisions to formatting to align with overall 2024 RRT Manual Edition revision effort.
2.0 - AFDO compilation for 2023 Edition of RRT Manual
3.0 – AFDO compilation for 2025 Edition of RRT manual. Updated FDA program names resulting from the 10/2024 FDA reorganization.

Attachment A – Examples of After Action Reports (Simple)

- Attachment A-1: North Carolina Department of Agriculture and Consumer Services ESF 11 Hurricane Irene Response and Recovery After Action Report (AAR) Input Form
- Attachment A-2: Mad Minute AAR Template
- Attachment A-3: Minnesota RRT After Action Review Example: *Listeria* Contamination in Facility
- Attachment A-4: Texas RRT Example: *Salmonella* Agona Outbreak 2011 – After Action Report
- Attachment A-5: Missouri Severe Storms, Tornadoes & Flooding (2011), ESF 11 After Action Report (AAR)

After Action Reviews
Attachment A-1

NCDA&CS ESF 11
Hurricane Irene 08222011 Response and Recovery
After Action Report (AAR) Input Form

AAR Observation: *Briefly Describe the general area of activity whether a strength or an area for improvement concerning the NCDA&CS ESF 11 Hurricane Irene response and recovery efforts.*	1. Coordination between the supervisors/field and Raleigh Office	☒ Noted Strength ☐ Area for Improvement	☐ Equipment ☒ Organization ☐ Personnel ☐ Planning ☐ Process ☐ Training
	2. Lack of directions as to how to fill out NCFDEM database	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☐ Process ☒ Training
	3. Refinement of input page in NCFDEM database	☐ Noted Strength ☒ Area for Improvement	☒ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	4. During phone calls – some firms refused to provide information unless NCDA personnel showed up in person with credentials	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
Recommendations- *Please make any recommendations to address identified areas for improvement, based on judgment and experience here as applicable.*	1. Process already in place		
	2. Provide "how-to" training or web instructions		
	3. Make an event-specific option, rather than utilize the "recall" response option		
	4. Case-by-case situation; information via phone calls utilized to reduce response time in the field. Corporate companies need to be made aware of reasons.		

NCDA&CS ESF 11
Hurricane Irene 08222011 Response and Recovery
After Action Report (AAR) Input Form

After Action Reviews
Attachment A-1

AAR Observation: *Briefly Describe the general area of activity whether a strength or an area for improvement concerning the NCDA&CS ESF 11 Hurricane Irene response and recovery efforts.*	5. Slow response to questions regarding assistance related to computer/database problems	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☒ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	6. Computer issues: entries showed up twice on daily log	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	7. Duplicate information entry in both Food Firm database and NCFDEM	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	8. Unable to change the lead inspector for cross region inspection	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☒ Planning ☐ Process ☐ Training
Recommendations- *Please make any recommendations to address identified areas for improvement, based on judgment and experience here as applicable.*	5. Administrative personnel and backups with access to databases needed available during event		
	6. At the time, was the only way to have entries logged; will find a way around duplication.		
	7. Porting information between the two programs is on Daniel's work list		
	8. After communicating with Daniel, changing the name of lead inspector should not be a problem. That should only be an individual event.		

NCDA&CS ESF 11

Hurricane Irene 08222011 Response and Recovery
After Action Report (AAR) Input Form

After Action Reviews
Attachment A-1

AAR Observation: *Briefly Describe the general area of activity whether a strength or an area for improvement concerning the NCDA&CS ESF 11 Hurricane Irene response and recovery efforts.*	9. Firm information on the database is incorrect	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	10. Having a firm list every evening for next day's planning	☒ Noted Strength ☐ Area for Improvement	☐ Equipment ☒ Organization ☐ Personnel ☒ Planning ☐ Process ☐ Training
	11. Having backup/ buddy system when needed and for daily findings	☒ Noted Strength ☐ Area for Improvement	☐ Equipment ☒ Organization ☐ Personnel ☒ Planning ☒ Process ☐ Training
	12. Calling (instead of visiting) the firm when a generator is present (when power outage occurs)	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☐ Process ☒ Training
Recommendations- *Please make any recommendations to address identified areas for improvement, based on judgment and experience here as applicable.*	9. Attention to detail. Correct or flag any mistakes or questionable firms for further processing. Issue that needs to be owned and corrected by specialists in their territories during routine inspections, not during an event (if correctly input, no issues).		
	10.		
	11.		
	12. During routine inspections, make notes when a firm has a backup power source		

NCDA&CS ESF 11

After Action Reviews
Attachment A-1

Hurricane Irene 08222011 Response and Recovery
After Action Report (AAR) Input Form

AAR Observation: *Briefly Describe the general area of activity whether a strength or an area for improvement concerning the NCDA&CS ESF 11 Hurricane Irene response and recovery efforts.*	13. Duplication in the NOI and Hurricane Irene 2011 Field Response was unnecessary	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	14. Having more freedom to conduct visits based on the inspector's understanding to the area (instead of following the list only)	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	15. Personnel should visit the stores and verify the information provided by the cooperate office	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☐ Planning ☒ Process ☐ Training
	16. Focus attention on severely damaged firms	☐ Noted Strength ☒ Area for Improvement	☐ Equipment ☐ Organization ☐ Personnel ☒ Planning ☐ Process ☐ Training
Recommendations- *Please make any recommendations to address identified areas for improvement, based on judgment and experience here as applicable.*	13. Completion of the short form at the time of the visit and attach it to the NOI; the observation sheet was only required if regulatory action taken. Short form was an attempt to prevent duplication with observation sheet		
	14. Utilize field experience and knowledge of assigned territories.		
	15. That should not be necessary; goal was to gain effective information without creation of more field work		
	Attempted to identify severely affected areas via the electrical companies and NCDA EP prior to sending field on "fishing" expeditions. For the future, categorize assignments if possible into the NCFDEM system according to the seriousness of damage		

Discussion Draft: April 13, 2011

After Action Report Template

Incident Title: _____
Incident Date(s):_____
Report Date: _____
Participants: _____

Ground Rules (Review as needed)
The facilitator reviews ground rules at the onset of an AAR

- All participants have equal status
- Plain speaking is essential
- Tact and civility are required
- This is a "No-Fault" evaluation. Focus on "what" and not "who". Avoid finding fault or assigning blame. During the discussion, mistakes are not held against those who admit them. However, this does not grant immunity outside of the AAR for malfeasance or gross negligence.
- Discussion details stay "in house". Relevant information from lessons learned will be incorporated into the after action report.

Executive Summary Key Points - Address what was planned vs. what actually happened

-

Incident Timeline of key dates and events (if available)

-

Areas That Worked Well

-

Suggestions For Further Improvements

-

Other comments

-

xxxxxxxx – *Listeria* contamination in xxxx facility
After Action Review
xx/xx/xxxx

Attendance:
Minnesota Department of Agriculture:
Jan Kelly, Ben Miller, Jim Topie, Erin Ryan, Holly Blais, Carrie Rigdon

FDA MPLS District Office:
Darlene Krieger, Amy McIntyre

Facilitator/Note Taker:
Jan Kelly/Carrie Rigdon

Reason/Purpose for HOT WASH:
- To discuss value of MDA and FDA staff experiences regarding the Rapid Response Team (RRT) involved with a just concluded response activity
- What Worked, what didn't work
- What can be changed/improved upon

Specific areas discussed:

1) Communication/Information sharing
   a. Went well:
      i. Sharing of information went well between field staff and rest of ICS response team.
      ii. Firm had a white board where the field team wrote down what they would be doing in the firm that day, along with other significant dates like lab result reporting. That really helped in communication with employees/management at the firm that everyone could see the plan for that day. Overall, communication with the firm was very good (but see Tennessen Warning note below).
   b. Needs improvement:
      i. The agency lead for the investigation and lead for the field team (particularly in the shift from sampling team to GMP inspection team) were not well defined or there was some confusion.
         - Set advance definition of what 'lead agency' responsibility roles are; likewise for the supporting agency
         - Future initial planning calls:
           - Explicitly discuss management of event and define lead and other roles (by filling out ICS org chart, for example)
           - Clearly define field team lead and for what duration or aspect of the response (will that change with different team duties?)
           - Explicitly discuss and determine if this response will include a contract inspection and/or contract sampling (part of initial notification form?) and what the implications of this is for actions and management of the response

xxxxxxxx – *Listeria* contamination in xxxx facility
After Action Review
xx/xx/xxxx

ii. Even though the field team explained the joint FDA-MDA investigation to the firm and that some actions were being taken on MDA authority vs. FDA authority (like issuing orders or discussing Corrective Action Plan) and there we no difficult conflicts of authority in this instance, it did raise the question of what we do if there are conflicts. For example, if MDA issues corrective actions and they feel they have been complied with, but later FDA compliance still feels there are problems, that could be very confusing to the firm.

iii. After issuing the MDA Tennessen Warnings, there was a noticeable communication difference with the firm.

- Replace with Notice of Inspection (NOI)?

2) Use of ICS structure during an investigation

a. Needs Improvement:

i. There were conflicting assumptions on using ICS in the instance: MDA assumed that ICS encompassed responders from both agencies; FDA assumed that ICS was only being used internally by MDA.

ii. As stated above, there needs to be explicit discussion on how the response will be managed. It is MDA's belief that all joint responses to incidents should operate under an ICS structure.

iii. Not all FDA staff have had ICS training – don't have clear understanding of use/meaning. MDA staff have had the training, but not clear about use during a food related incident.

3) Field Investigation

a. General issues

i. Safety concerns: Is there a health risk or safety concern for pregnant women when sampling in a firm where Listeria (or Salmonella) are present? Both agencies would allow personnel to opt out of being part of the field team (FDA requires documentation).

- Draw up document that explains the risks to personnel
- Response management team should assess whether this may limit availability for creating a field team

b. Records review

i. Went well: a representative from each agency reviewed all records – split by date

- Create list of types of records to include in review as reference for future responses

c. GMP inspection

i. Agency differences: FDA included the warehouse in their inspection but MDA did not (because inspector assigned to firm was part of team and easily go back after investigation)

xxxxxxxx – *Listeria* contamination in xxxx facility
After Action Review
xx/xx/xxxx

- Document rules or guidance for investigation focus (highlight any differences between FDA and MDA)
- Scheduling for after hours or overnight staffing: an MDA inspector was staying near the firm and was available to be on site during late evening/early morning cleaning and sanitation. This was agreed upon by the team, but in retrospect it would have been better to plan for more members of the team to be there to witness it or have a different team cover this because of the longer hours/scheduling it takes. All agreed on the value that after hours observation can bring to an investigation.
- Include overnight coverage as part of the planning meeting.

4) Sample Collection and Submission
   a. Needs improvement:
      i. Differences in protocol: the field team was acting under DFID sampling protocol that was based on an FDA protocol that had since been updated without DFID being aware of the changes.
         - Update DFID protocol (consider applying it for all manufacturing samples – investigation and routine)
         - Ensure updates are disseminated in a timely manner
         - Recommendation for team to practice in advance
      ii. Sampling equipment:
         - Need disposable lab coats so inspectors can have a fresh garment every day (concerns with safety, cross-contamination, and logistics of laundering the current coats)
         - Need to pare down existing sampling tote to just include necessary items and make it lighter and use smaller empty tote to take necessary items into the facility.
5) Laboratory Analysis/Reporting
   a. Worked well: quick turn-around time

Outcomes:

- ❖ Lessons Learned – Knowledge and experience, positive or negative, derived from actual incidents as well as from observations and historical study of operations, training and exercises
- ❖ Best Practices Identified – Exemplary, peer-validated techniques, procedures, good ideas, or solutions that work and are solidly grounded in actual operations, training, and exercise experience.

xxxxxxxx – *Listeria* contamination in xxxx facility
After Action Review
xx/xx/xxxx

Improvement Plan

This improvement plan has been developed specifically for the MN RRT as a result of the Roma/Vistar Listeria Investigation from 11/8 – 11/29/2010.

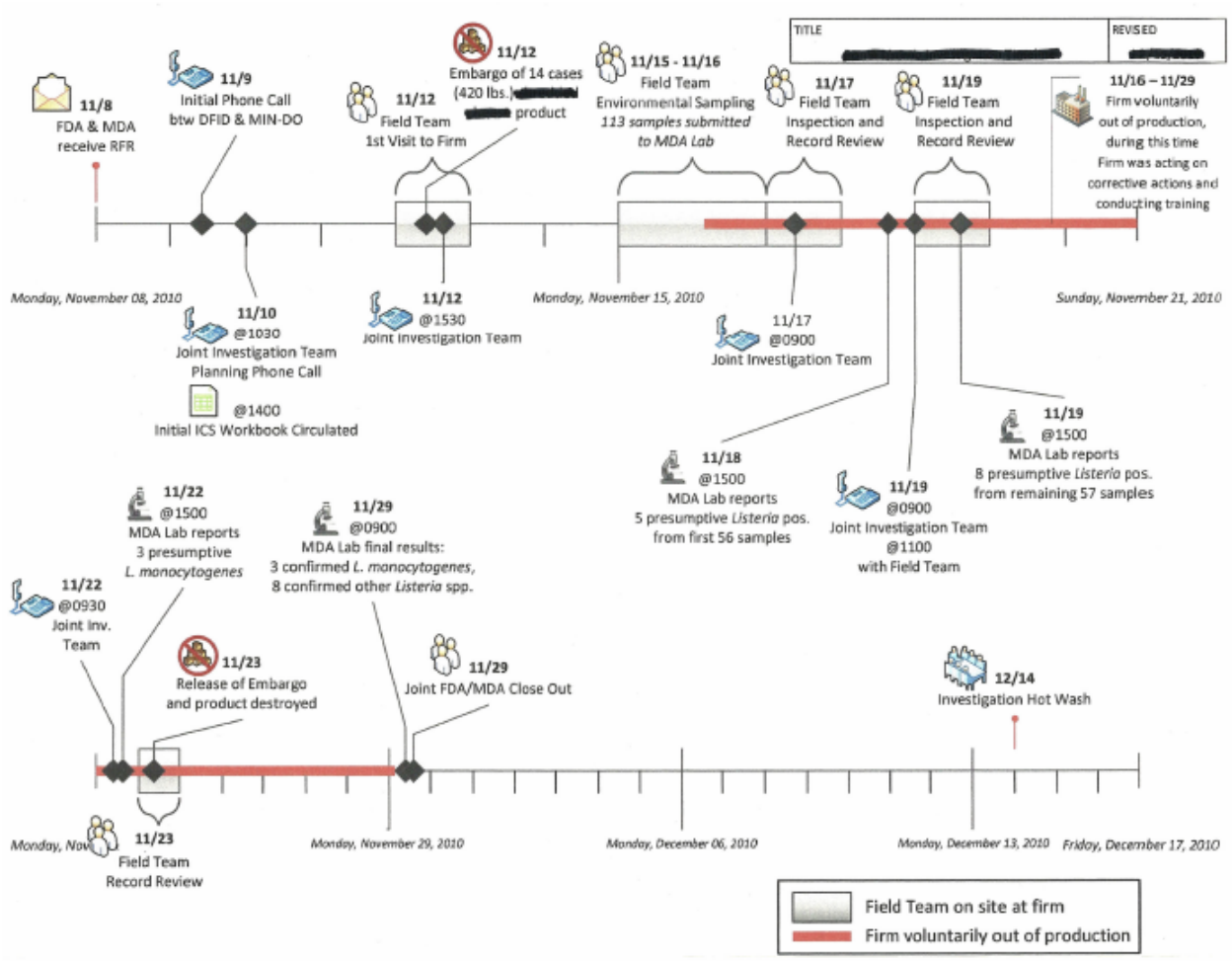
Tasks	Improvement Recommendations	Responsible Party/Agency	Completion Date
Update Environmental sampling SOP (MDA)	Adopt current guidance in DFI Bulletin	MDA: Jan Kelly, Sarah Schabert, Jim Topic	1/3/2011
Retraining of field staff on environmental sampling (MDA)	Dependent on updated SOP (above)	MDA: Kristin Viger	2/1/2011
Communications SOP – draft for joint response	(a) Better clarifications during initial planning (b) Deciding on Contract vs. Not Contract (c) Define roles and responsibilities of "lead" agency.	**1st Draft:** MDA: Jan Kelly and Carrie Rigdon FDA: Darlene Krieger and ?	**1st Draft:** Prior to Quarterly Meeting **2nd Draft:** 3/1/2011 **Final approval:** 4/1/2011
Initial Planning: Checklist and Discussion as part of Communications SOP	(a) Use of ICS structure in joint response (b) Will joint response include contract inspection or contract sampling? And implications of this. (c) Who is lead agency? And implications of this. (d) Coverage for after hours inspections (e) Designing Initial Notification form	**1st Draft:** MDA: Jan Kelly and Carrie Rigdon FDA: Darlene Krieger and ?	**1st Draft:** Prior to Quarterly Meeting **2nd Draft:** 3/1/2011 **Final approval:** 4/1/2011

xxxxxxxx – *Listeria* contamination in xxxx facility
After Action Review
xx/xx/xxxx

Tasks	Improvement Recommendations	Responsible Party/Agency	Completion Date
ICS training	Formal ICS training	FDA: ?	[to be filled in by FDA]
	Training with inspectors on ICS during incident response	MDA: Jan Kelly, Kristin Viger	6/1/2011
Communication to **firm** on what Joint Response means and roles of each agency during investigation	Create document or hand-out for firm	MDA: Jim Topie, Heidi Kassenborg FDA: ??	**1st Draft:** 4/1/2011 **Final Approval:** 6/1/2011

Tracking progress of Improvement Plan:

- MDA will use SharePoint for tracking progress


TITLE
REVISED
11/8
FDA & MDA receive RFR
11/9
Initial Phone Call btw DFID & MIN-DO
11/12
Embargo of 14 cases (420 lbs.) [redacted] product
11/12
Field Team
1st Visit to Firm
11/15 - 11/16
Field Team
Environmental Sampling
113 samples submitted to MDA Lab
11/17
Field Team
Inspection and Record Review
11/19
Field Team
Inspection and Record Review
11/16 – 11/29
Firm voluntarily out of production, during this time Firm was acting on corrective actions and conducting training
Monday, November 08, 2010
Monday, November 15, 2010
Sunday, November 21, 2010
11/10
@1030
Joint Investigation Team Planning Phone Call
@1400
Initial ICS Workbook Circulated
11/12
@1530
Joint Investigation Team
11/17
@0900
Joint Investigation Team
11/18
@1500
MDA Lab reports 5 presumptive Listeria pos. from first 56 samples
11/19
@0900
Joint Investigation Team
@1100
with Field Team
11/19
@1500
MDA Lab reports 8 presumptive Listeria pos. from remaining 57 samples
11/22
@1500
MDA Lab reports 3 presumptive L. monocytogenes
11/22
@0930
Joint Inv. Team
11/29
@0900
MDA Lab final results: 3 confirmed L. monocytogenes, 8 confirmed other Listeria spp.
11/23
Release of Embargo and product destroyed
11/29
Joint FDA/MDA Close Out
12/14
Investigation Hot Wash
11/23
Field Team
Record Review
Monday, November 29, 2010
Monday, December 06, 2010
Monday, December 13, 2010
Friday, December 17, 2010
Field Team on site at firm
Firm voluntarily out of production

Salmonella Agona Outbreak 2011 – After Action Report – First Draft – 9-28-2011

After Action Reviews
Attachment A-4

Meeting: Thursday, September 8, 2011
Location: Exchange Bldg., - N-218
Time: 2:00 PM to 4:00 PM

Attendees:	Jeff Taylor	RRT – Incident Commander
	L. B. Booty	Incident Commander
	Tyson Chapman	Incident Commander
	Julie Loera	Planning Chief
	Claire Perkins	Planning Chief
	Susan Tennyson	Other Agency Representative
	Frank Borden	Operations Chief
	Jane Broussard	Operations Chief
	Davonna Koebrick	Operations Chief
	David Sueltenfuss	Operations Chief
	Debbra Callan	Liaison Officer
	Dr. Linda Gaul	Epidemiology
	Liz Delamater	Laboratory
	Lewis Ressler	Records Documentation
	Catherine Thibodaux	Records Documentation
	Kevin Veal	Other Agency Representative
	Susan Tennyson	Other Agency Representative
	Ricky Rodriquez	Other Agency Representative
	Charlotte Dokes	Other Agency Representative
	Tyson Chapman	Other Agency Representative
	Ricky Rodriguez	Other Agency Representative
	Shari Shambaugh	Other Agency Representative
	Susan Turcovski	Other Agency Representative
	Ben Jones	Other Agency Representative/Operations Field Team
	Homero Garza	Operations Field Team
	Alberto Cornezo	Operations Field Team
	Manuel Lopez	Operations Field Team
	Jose Martinez	Operations Field Team
	Tamara Hurt	Operations Field Team
	Stacey Belore	Operations Field Team
	Tricia Martinez	Operations Field Team
	Ryan Pope	Operations Field Team
	Julio Salozar	Operations Field Team
	Emilio Escobar	Operations Field Team
	David Pitman	Operations Field Team
	Silina Mata	Operations Field Team
	Rene Ramirez	Operations Field Team
	Alvaro Dominguez	Operations Field Team
	Connie Lucero	Operations Field Team
	Sandra Jacquez	Operations Field Team
	Francisco Mendoza	Operations Field Team

Note: We are uncertain that all on call are listed. If you see anyone missing, please advise.

Agenda: Distribution and review of the timeline as presented by and Julie Lorea
AAR:

- Section I - What went well
- Section II - What needs improvement
- Section III - Lessons Learned - what steps do we take to make the improvements

Section I - What went well?

1. Early activation of relatively small outbreak:

- Early activation of the Texas Rapid Response Team (TRRT), using the Scope and Trigger document instructions, had a great deal to do with getting a jump on this situation for both DSHS and DALDO, which led to a very early determination of source of contamination;
- The first call for the TRRT Steering Committee happened in less than 24 hours;
- The laboratories were also engaged early on;
- Communication maintained among all agencies throughout the event.

2. Records analysis:

- A new program was developed in one day and coordinated the records throughout the activation;
- The collection, data entry, and all coordination of records led to the success of this activation.

See Section III - #7 and #8

3. Use of Traction website:

- Experts on the Traction system provided valuable assistance by posting instructions, making assignments, etc., on the new Traction website;
- The Traction website was set up and running with one day of activation;
- Once learned, Traction was easy to use. It was found that it was easy to share information and documents for both DSHS and FDA.

See Section III - #6

4. EPI involvement:

- The Epidemiology notification to Regulatory partners was timely;
- The food history work done at Epi showed a lot of work done during the initial stages and behind the scenes to capture where the products were purchased; the detail in the food history on cases that helped limit the focus of the investigation. This excellent Epi work is critical to assisting the regulatory traceback process.

See Section III, #3.

5. DSHS and FDA Field Teams:

- The field teams did an excellent job of using Traction, accepting assignments and instructions under ICS structure, and working well together. This was the first event where the field RRT teams have been staffed with both DSHS and FDA employees;
- Further, the FDA Rockville offices were able to share some analysis of import data. There was great coordination between agencies, i.e., DSHS, SWID, and Dallas District.

6. Time:

- All staff, from all agencies, were willing to put in the long hours of work needed to solve this outbreak.

See Section III - #4

Section II – What Needs Improvement:

1. Depth of resources:

- There is a lack of depth of resources; not enough back-up for employees and equipment;
- This led to the record keeping duties being somewhat overwhelmed with the records flowing in;
- Only two employees could do the flow charting due to Visio program being available only on one desktop computer and one laptop. The laptop happened to be out of order with a virus during the mist of the activation;
- Need more resources available during activation and more IT assistance both for Traction and to enable better sharing of programs/records between DSHS and DALDO. More Visio software is needed;

See Section III - #9-b, 9-d, 9-e and #10-d

2. Stakeholders:

- RRT did not involve all stakeholders; TDA was not notified of activation and ensuing activities.

See Section III - #1.

3. Communication:

- At the beginning of the activation there was a bleeding over of roles. This may have been exacerbated by the fact that Command and General staff were scattered across state. Further, there was no notification of changes in Command staff when they occurred. However, as this will always be the case, the problem must be addressed in further ICS training;
- It was noted that the field investigators were not always kept informed of details of the situations which led to some confusion, i.e., picking up traceforward rather than traceback information. Notification was either poor and/or slow.

See Section III - #2, #8, and #9-a, 9-c and 9-g

4. Identification of lab resources:

- It was noted that the labs should, in the future, give special instructions for RRT samples rather than going through regular channels to ensure that the RRT samples get handled and results distributed on the most timely basis as possible.

5. Transition process

- It was determined that there is a need to improve the transition process; hand-offs to new, or second team, i.e, better communications between the current Command Staff and the transitioning staff.

See Section III - #10-a, 10-b, 10-c and 10-e

6. Epi concerns:

- Concerns were expressed from EPI about further contamination and continuing surveillance and the potential impact this should have on consideration to demobilize at this time.

7. Activities Outside of RRT:

- Comments were made about an emergency created due to lack of communication and coordination by parties outside of the control of the RRT;
- It was difficult to scramble to initiate a domestic recall based on import sample results;
- There is a need to establish sampling processes parameters for communication of possible samples results.

Section III – Lesson Learned - What steps do we take to make the improvements:

1. Develop list of stakeholders and put at ready for notifications of any future situations in which they may be involved. It was felt that communicating with industry should be on an ongoing basis. This would be almost like a mini after action with industry.

2. It was also suggested that DSHS needs to develop a communication system to include DALDO earlier on in CDC calls, as these can be the precursor to an outbreak situation.

3. Need to ensure the Epi food history is the RRT activation process is captured in the time line. This information also needs to be captured in an SOP to ensure that if staff changes they have this great source of information provided every time an incident occurs.

4. Due to the lack of depth in personnel, it is most important that a dedicated room for the Command and General staff be used in order to have all members physically present and working together and away from their normal day-to-day activities to enable them to concentrate on the activation only and not be interrupted by co-workers on usual daily activities.

After Action Reviews
Attachment A-4

5. It was suggested that the TRRT observe other activations to see how they handle some of the "need to improve" areas; DSHS radiation group was one suggestion.

6. There should be basic instructions for use of Traction; SOP or Procedures Manual. Furthermore, the Traction website did not capture operational oversight, such as a resource request. Also, a few assignments were lost. A system is needed to keep people outside of the actual operation up-to-date on the event.

7. Continue training efforts on traceback and traceforward for all staff.

8. Order test scanners for field staff to enable them to scan documents while at facilities directly to the Traction website. During this activation there was only one scanner available in one area.

9. The following comments all relate to field staff and their supervisors:

    a) DSHS must establish policies for notification to supervisors when staff have been activated on the RRT. This is extremely important for two reasons; a) when a staff member is activated in the field, they are relieved of their every-day duties until demobilization of their team/group so the supervisor must be aware of this and ready to either fill their vacancy on the every-day work or construct delays as necessary, and b) a staff member must realize that they no longer have to respond or check in with their day-to-day supervisor when working on an RRT activation due to the ICS structure guidelines. Accordingly, the activation process needs to be reviewed.

    b) It would be helpful to identify team members that might be needed down the road in an activation who may be pulled into an investigation up-to-date on activities so they are aware of what is going on and they may potentially be needed to do. Also, there needs to be a procedure in making assignments within the teams in order that roles are established, as it was not always clear who was going to perform each activity needed.

    c) Notification went to field teams that additional firms had been identified but there was a lag in when the firm names arrived. The timeline was set the previous week but the names of the firms where they needed to go to collect records did not arrive until a few days later. The timeline was not adjusted and staff had to work very hard to make the timeline. Field teams felt the notification was poor and slow. Furthermore, the sheer number of records coming in to process was overwhelming and they felt that getting assignments on a timelier manner would have helped this situation.

    d) The tight time-frame for sampling made it difficult to ensure supplies were appropriate for task. The supply issues should be addressed in SOP's/Procedure Manual so that everyone is prepared in the event of an activation/incident.

e) When sampling teams are assembled, they should be briefed on the potential for action such as a recall on the sample results, i.e., what evidence is needed and how paper work needs to be filled out properly. Also, instruction should be provided as to how the collection of labels for any products produced during the inspection can be used as part of documentation.

After Action Reviews
Attachment A-4

f) Response to request for additional resources was slow in coming. This should be included in an SOP or Procedures Manual.

g) There should be better definitions provided of records be collected during the activation process.

h) Wireless equipment, laptops with wireless capabilities are needed in field to upload and access Traction.

10. The following comments pertained to the ICS structure and it's proper usage during an event:

a) Planning P – At the beginning of the operation period there was not a lot of structure to the operational calls. Learning more about the Plan P would help overcome this problem as the operations, planning and incident command calls were being combined.

b) Transitional periods went badly and there was no transitional time between members. There was no rotation of staff on and off activation. As stated above, this problem must be addressed in further ICS training.

c) More people should be included in the initial meeting for operations, i.e., SWID, State, IB.

d) Resource issues must be discussed and solutions undertaken to alleviate this problem and provide a continuity of operations during an activation. This applies both for members of the RRT while activated and their unit to cover the individual's day-to-day work. Command staff should have other duties re-assigned in order to dedicate full time on the incident. Duties for Command staff are very time consuming.

e) Procedures should be established as to how we transition from an outbreak investigation to a regulatory action with regard to documentation collection and evidence collection. This should provide clarification on what was collected during the outbreak investigation and what was still needed. Again, how do we communicate to a larger group and keep them informed of what is going on with the team investigation?

NOTE:
Upon review of all attendees and amendments/suggested provided to Debbra Callan and a final draft approved, the corrective action plan will developed from the last section of this report.

After Action Reviews
Attachment A-5

1980DR-Missouri
Severe Storms, Tornadoes & Flooding
May 24 - June 28 2011
ESF 11 After Action Report (AAR)

Incident Summary

On 25 May, FEMA Region VII mission assigned ESF11 to support FEMA and the State of Missouri for Severe Storms, Tornadoes and Flooding along the Missouri and Mississippi River. ESF11 was activated and requested to deploy Desk Officers to cover the RRCC in Kansas City, MO and other locations as requested, under the Federal Operations Support Mission Assignment. The ESF11 Coordinator advised partner agencies, state, and federal stakeholders of the activation and requested information related to the disaster response efforts. USDA FSIS reported impacted facilities, but none that required additional assistance. Department of Interior (DOI) was put in contact with the FEMA Environment and Historic Preservation Officer, in case assessments revealed a need for further DOI assistance. USDA FNS provided USDA Foods data to ESF11 and ESF6, and assisted Missouri with the Disaster Supplemental Nutrition Assistance Program (D-SNAP). ESF11 held daily coordination calls with USDA APHIS, FSIS, and FNS, DOI, representatives from Iowa, Kansas, Missouri, and Nebraska, and non governmental agencies.

Assessment of the 5 focus areas of ESF 11 discovered Emerald Ash Borer (a plant pest) quarantine was active in an impacted county. ESF 11 notified the State Plant Health Director (Missouri) and hosted a conference call to allow information sharing and guidance from PPQ to be shared with FEMA, other federal ESFs and multiple state stakeholders. Site assessments were conducted by PPQ and measures to reduce spread of the pest were taken. A desk officer was deployed to the IOF in Joplin, MO to conduct an assessment of the safety and well being of household pets. The assessment was shared with FEMA and on 28 May FEMA issued a Mission Assignment Task Order to "provide one APHIS ESF11 representative to the Joplin Division Office in Joplin Missouri to support FEMA in the coordination of Pet Sheltering Mission." The ESF11 Desk Officer (DO) held the position of ESF11 Liaison Officer (LNO) on the FEMA Incident Management Assistance Team in Joplin. The desk officer provided technical assistance in several areas to include: trapping displaced pets so they would not become feral and pose a future public health and safety risk, resource ordering, and monitoring heat concerns at shelters. Information from the media that an elephant was being utilized to move debris was relayed to APHIS Animal Care. Pet calls were held to address needs and ensure communication with all relevant parties. Over 1300 pets received assistance by the Joplin sheltering process. After a month of sheltering, 745 displaced pets still needed homes. A pet adoption event was hosted by the Joplin community and the remaining pets were successfully adopted. ESF 11 mission was completed 28 June.

Lessons Learned

Things that worked well:

1. Support from APHIS Western Region (programs and dispatch) and headquarters (national coordinator and mission assignment manager) regarding questions and concerns related to ESF11 support to Missouri for Severe Storms, Tornadoes, deployment of employees, and obtaining APHIS accounting codes to track reimbursable expenses.
2. Successful coordination between Missouri and FEMA of Emerald Ash Borer Quarantine in a county approved for FEMA Public Assistance. Plant Protection and Quarantine (PPQ) provided guidance for handling infected wood/tree material to reduce spread of plant pest in a timely manner.
3. Staff Integrated into the FEMA Incident Management Assistance Team (IMAT). Unique situation, but one well suited for ESF11 desk officer with veterinary expertise. The ESF11 DO was able to provide communication linkage and situational awareness between USDA and

FEMA and the various state and local government and nongovernmental entities assisting in the Joplin Pet Sheltering operations. The Animal Welfare Act expertise was beneficial in identifying an item of concern that was raised about an animal being used to assist in debris removal. That information was quickly relayed to appropriate entities to address or investigate.

4. Open communication and situational awareness exchange between the State Emergency Boards (SEBs) and ESF11 within Iowa, Kansas, Missouri, and Nebraska.

Things that could use improvement:

1. It is critical for APHIS employees to have IT support after-hours and on weekends.
2. Resource Management: Support is needed from region and headquarters regarding the role of the ESF 11 coordinator as the responsible party for mission assignments and the resources assigned to them. Without this clarity, resources may have conflicting input from FEMA, APHIS programs, and ESF 11. The goal of integrating resources into an ESF 11 team culture is challenged when home agencies provide guidance independent of the ESF 11 coordinator. It is recommended that during ESF 11 activations and deployments, employees put home-program discussions on-hold to the extent possible. The following resource management questions are recommended for discussion with programs: Who determines how long a resource is deployed? Who leads communication with FEMA or state IMTs regarding resource needs and decisions?
3. Resource Request Workbooks: requesting resources by position (rather than name-requests) provides APHIS programs flexibility and latitude as they decide which program and employees will be dispatched. Specifying under the "Special Needs" column any critical IT or skill needs (e.g. Blackberry, laptop with wireless capability, proficient with ICS-215's, etc) and specifying desired length of deployment are also helpful to identify appropriate resources and ensuring they arrive prepared.
4. ESF 11 Daily Report: guidance may be needed on the acquiring and reporting of pet numbers.

Attachment B – Examples of After Action Reports (Medium)

- Attachment B-1: Shell-Shocked AAR – FLIRRT

After Action Report

Exercise "Shell Shocked"

August 5, 2011

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Handling Instructions

1. The title of this document is the "2011 Exercise Shell Shocked After Action Report" (AAR).
2. Information gathered in this AAR is designated as For Official Use Only (FOUO) and should be handled as sensitive information that is not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from the Florida Department of Agriculture and Consumer Services is prohibited.
3. At a minimum, the attached materials will be disseminated strictly on a need-to-know basis and, when unattended, will be stored in a locked container or area that offers sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.
4. For more information about the exercise, please consult the following point of contact (POC):

   Denise Imbler
   Apalachee Regional Planning Council
   20776 Central Avenue East
   Blountstown, FL 32424
   (850) 488-6211 (office)
   Denise.Imbler@thearpc.com

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Contents

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Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Reviews
Attachment B-1

After Action Report **2011 Exercise Shell Shocked**

Executive Summary

The Florida Integrated Rapid Response Team (FLIRRT) was formed to support Florida's capability to respond immediately following a disaster incident. The team includes members from the Florida Department of Agriculture and Consumer Services, Florida Department of Health, Florida Department of Business and Professional Regulation, U.S. Food and Drug Administration and U.S. Department of Agriculture. All agencies were involved in the design of the exercise and Pasco County Emergency Management and the Florida Department of Law Enforcement also collaborated, bringing both local government and intelligence gathering components to the design of the scenario.

The purpose of this exercise was to practice a multi-jurisdictional and multi-agency response to a catastrophic food/feed incident and to examine the Incident Command System (ICS) and communication capabilities of the FLIRRT in anticipation of and preparation for such a response. The exercise was designed to emphasize information sharing, coordination, collaboration, integration of capabilities and resolution in a condensed timeline format. All of the exercise participants had completed ICS training prior to the exercise and were familiar with basic concepts of the communication tools available for use during an emergency incident.

This tabletop exercise allowed for the design team and players alike, to discuss their ICS roles and communication protocols in a stress free environment. It provided an opportunity for review and enhancement of activation and notification procedures. It also proved invaluable as a place for the Steering Committee members to come together to discuss and resolve specific issues within the context of a real world scenario.

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Section 1: Exercise Overview

Exercise Details

Exercise Name:	Exercise "Shell Shocked"
Type of Exercise:	Tabletop Exercise
Exercise Start Date:	June 2, 2011, 8:300 a.m.
Exercise End Date:	June 2, 2011, 3:30 p.m.
Duration:	One Day
Location:	Tallahassee, Florida
Sponsor:	Florida Department of Agriculture and Consumer Services
Mission:	Respond
Capabilities:	Animal Disease Emergency Support
	Food and Agriculture Safety and Defense
Scenario Type:	Table-top Exercise

Exercise Planning Team

Rita Johnson, Florida Department of Agriculture and Consumer Services

Michael Turner, Florida Department of Agriculture and Consumer Services

John Burkette, Florida Department of Agriculture and Consumer Services

Art Johnstone, Florida Department of Agriculture and Consumer Services

George Hayslip, Florida Department of Agriculture and Consumer Services

Mike Whitehead, Florida Department of Business and Professional Regulations

Michael Wydotis, Florida Department of Health

Hilary Rios, Florida Department of Law Enforcement

Annette Doying, Pasco County Emergency Management

Kimberly Livsey, U.S. Food and Drug Administration

Kendra Stauffer, U.S. Department of Agriculture

Denise Imbler, Apalachee Regional Planning Council

Chris Rietow, Apalachee Regional Planning Counil

Participating Organizations

Florida Department of Agriculture and Consumer Services

Florida Department of Business and Professional Regulations

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Reviews
Attachment B-1

After Action Report **2011 Exercise Shell Shocked**

Florida Department of Health

Florida Department of Law Enforcement

Pasco County Emergency Management

U.S. Food and Drug Administration

U.S. Department of Agriculture

Apalachee Regional Planning Council

Number of Participants

- Players - 42
- Controllers/Facilitators - 2
- Evaluators - 5

Section 2: Exercise Design Summary

Exercise Purpose and Design

The Florida Integrated Rapid Response Team (FLIRRT) was formed to support Florida's capability to respond immediately following a disaster incident. The team includes members from FDACS, FDOH, FDBPR, FDA and USDA and can be mobilized within hours to respond to agriculture emergencies anywhere in the state. The purpose of this exercise is to practice a multi-jurisdictional and multi-agency response to a catastrophic food/feed incident and to examine the Incident Command System (ICS) and communication capabilities of the FLIRRT in anticipation of and preparation for such a response.

This table-top exercise was a single-state, multi-agency, full-day exercise that focused on the use of ICS, communications and information sharing between State and Federal agencies. The exercise was designed to emphasize information sharing, coordination, collaboration, integration of capabilities and resolution in a condensed timeline format.

Exercise Objectives, Capabilities and Activities

The National Planning Scenarios and establishment of the National Preparedness Priorities have steered the focus of homeland security toward a capabilities-based planning approach. Capabilities-based planning focuses on planning under uncertainty because the next danger or disaster can never be forecast with complete accuracy. The capabilities listed here were selected by the Exercise Planning Team and provide the foundation for development of the exercise design objectives and scenario. The purpose of this exercise was to measure and validate performance of these capabilities and their associated critical tasks. The selected target capabilities were:

- Animal Disease Emergency Support
- Food and Agriculture Safety and Defense

Exercise design objectives focus on improving the participants' understanding of the response concept and identifying opportunities or problems. The exercise focused on the following objectives selected by the Exercise Planning Team:

Objective 1:

Exercise and develop procedures for the FLIRRT including communication plans between responding state agencies (FDACS ,FDOH, FDBPR) and federal agencies (FDA, USDA) that insure all concerned parties are kept informed in a timely manner.

Objective 2:

Exercise ICS roles and responsibilities of the FLIRRT.

Scenario Summary

The scenario developed by the Exercise Planning Team involved contamination of a feed source for egg laying chickens which caused a widespread bacterial infection in the human population. The scenario included seven activities which occurred over a several month period and gradually escalated resulting in the activation of the FLIRRT. Due to time constraints, only five activities were completed. The entire scenario is available in the Situation Manual. The five

activities which were completed during the exercise, along with the findings of the participants, are listed in Section 3. The exercise participants were divided into five groups and addressed the activities as a unit. Scribes for each group provided notes of the group discussion. For the purposes of the AAR, the notes provided by each group have been condensed into the "Findings" listed beneath the "Activity" in Section 3.

Section 3: Analysis of Capabilities

Activity 1

March – May 18, 2011

Scenario
Over the last few months, increasing incidents of salmonella have been reported from hospitals and county health departments statewide.

Activity
Discuss the actions that would have already taken place, including all notifications to various local, state and federal agencies and the methodologies of these communications.
What communications notifications would you make at this time?

Findings
All groups agreed that FDOH would be the lead agency for the scenario at this point. Other agencies which may have been contacted include FDACS and U.S. FDA. It was agreed by all groups that the State Fusion Center would not have been notified at this point. FDOH uses a communication tool called "Epi-Com" for alerts which is embedded within the Florida Department of Health's Emergency Notification System (FDENS). This is an information system used by FDOH to notify the public health emergency response system of any events which may have a public health consequence. This system will be used to issue daily updates on the progress of the outbreak. However, if there is nothing suspicious about the incidents, it was stated that an alert would probably not be issued at this point. Also, there is not a designated threshold (number of cases) that would trigger a FDENS alert. However, there are a number of variables that can trigger an alert and response leaders will make the decision based on the incident, on when to issue a FDENS alert.

Activity 2

Thursday, May 19, 2011

Scenario
Seventy-five Jacksonville Elementary School students have become sick from gastrointestinal illness. Additionally, thirty-five senior citizens with similar symptoms throughout the central and northern parts of the state are hospitalized and several are in critical condition. Thirteen of these senior citizens reside in nursing homes.

Activity
Discuss the actions that are now taking place, including all notifications to various local, state and federal agencies and the methodologies of these communications.

Findings
All groups agreed that FDOH would remain the lead agency, but now other agencies would be notified and start to stand-up their response process. Agencies notified included FDACS, Center for Disease Control, U.S. FDA, USDA, FDBPR, Agency for Healthcare Administration and

Department of Children and Families. FDENS, Epi-Com and EpiX were communication systems that were discussed by the groups as being used to notify local, state and federal agencies. EpiX is a robust CDC managed communications tool with a thorough screening process to utilize. It was noted that FDBPR does not use FDENS and would not have been notified through this system, but may be notified via regular email.

Activity
Would the FLIRRT be activated at this point? If so, what would they be doing? Would ICS be stood up? If not, discuss what level of emergency the FLIRRT would be stood up. What would trigger the initiation of ICS?

Findings
There was disagreement amongst the groups as to whether or not the FLIRRT would activate, some groups said yes, while others stated no. The groups which stated that the FLIRRT would be activated also said that the Steering Committee would be notified and start to initiate ICS during the planning stage. The groups that stated that the FLIRRT would not be activated said that there would need to be an identified source for the salmonella before the FLIRRT would activate.

Activity
What Epi activities are taking place throughout the state?

Findings
All groups stating that Epi teams, under authority of FDOH, would be conducting interviews and investigations at this point in the scenario.

Activity
Is the State Fusion Center involved? And if so how were they notified?

Findings
All groups agreed that the Fusion Center would not be involved at this point.

General Notes:
Two of the groups mentioned the role of the media at this point in the scenario and that they may play an integral role in ramping up the response and public awareness of the incidents.

Activity 3

Sunday, May 22, 2011

Scenario
Ten of the Jacksonville cases have been confirmed to be salmonella related. One hundred and twenty (120) additional salmonella-related illnesses have been reported throughout central and northern Florida. Two nursing home residents have died from salmonella related complications and an additional 15 senior citizens are in intensive care in critical condition. Of the 120 cases, 40 of them are elementary school children from different North Florida schools and 20 are preschool-aged children in central Florida counties. The remaining cases are adults.

Homeland Security Exercise and Evaluation Program (HSEEP) After Action Reviews Attachment B-1

After Action Report **2011 Exercise Shell Shocked**

Activity
Discuss the actions that are now taking place, including all notifications to various local, state and federal agencies and the methodologies of these communications. What agencies (federal, state, local) are involved in the response and who is leading the response?

Findings
FDOH remains the lead agency and Epi investigations continue. It was determined that FDOH would still have available resources and not yet need outside assistance. CDC and FDACS could provide laboratory assistance to speed up the investigation process if needed. FDOH would also be coordinating all communications with the media. Epi-Com would be the main communication tool across agencies for the investigation process and would be continuously updated.

Recommendation:
It was recommended that a daily update be provided through Epi-Com even if no new developments have occurred.

Activity
Would the FLIRRT be activated at this point? If so, what would they be doing? Who activated the FLIRRT? Would ICS be stood up? Who is in charge?

Findings
There remained disagreement on this point, some groups thought that FLIRRT would be activated. Others groups believed that the FLIRRT Steering Committee would now be coordinating with FDOH, but that the full FLIRRT would not yet be activated. It was commented that only a large-scale, multi-jurisdictional incident would initiate the need for the FLIRRT. There remains uncertainty about when and who activates the FLIRRT.

Activity
What Epi activities are taking place throughout the state? What information would be reported and to whom? How does the FLIRRT interact with the Epi investigation? Who manages this information?

Findings
FDOH continues to coordinate all Epi investigations; however ICS is used by some but not all local health departments. FDOH does not routinely use ICS to manage Epi investigations, but if the situation escalates, ICS may be implemented. Both CDC and FDACS are on standby. This remains a situation that is still within the response capabilities of FDOH.

Recommendation
It was discussed by several groups that there needs to be a set protocol on how the information from the investigation is shared with other agencies.

Activity
What is the role of the State Fusion Center at this stage in the incident?

Findings

All groups agreed that the State Fusion Center would not be involved at this stage of the incident.

Activity 4

Tuesday, May 24, 2011

Scenario
751 salmonella type cases to date have now been reported ranging from Orlando to Jacksonville to Chipley. Lab tests indicate that the same strain of salmonella is present in the majority of the samples collected. Epi interviews have implicated eggs as the likely source of the outbreak.

Activity
Discuss the actions that are now taking place, including all notifications to various local, state and federal agencies and the methodologies of these communications. What additional agencies have been contacted now that eggs are implicated as the source of the salmonella?

Findings
Most groups agreed that FDACS would now be the lead agency coordinating the investigation efforts, although one group maintained that FDOH would remain the lead agency for the duration of the exercise. It was suggested by one group that the Steering Committee would now decide which agency was the lead. All groups identified that U.S. FDA and USDA would now be involved in the response and that U.S. FDA may have jurisdiction because the source of the infection is eggs. There were some differences of opinion on how communications would be managed at this point. One group identified that communications would be by telephone rather than email and that communications would now be managed by the FLIRRT. Several groups mentioned the formation of a JIC by FDOH to manage the press inquiries and public notifications.

Activity
Would the FLIRRT be activated at this point? If so, what would they be doing? Who activated the FLIRRT? Who is in charge? List the FLIRRT members for this incident. Would ICS be used?

Findings
Only one group did not activate the FLIRRT at this point, but all groups stated that the FLIRRT would be using ICS to set up either their own operations or to work within the multi-agency response. There was definite confusion as to exactly when to activate the FLIRRT, what it meant to activate the FLIRRT and the precise definition of a FLIRRT and who had responsibilities for logistics. It was stated by several groups that the Steering Committee or any member of the Steering Committee could activate the FLIRRT.

Notes:

The more the outbreak increased in severity and geographic area, the more uncertain the group became about when and how FLIRRT response would occur.

Activity
What Epi activities are taking place throughout the state? What information would be reported and to whom? How does the FLIRRT interact with FDOH and the Epi investigation? Who manages this information?

Findings
All groups agreed that traceback investigations by FDACS and or FLIRRT would now start to take place. It was also stated that communications would take place through a designated person within the FLIRRT ICS structure, however that position/person was not specifically identified. It was suggested that communications should be by phone rather than email due to the sensitivity of the information and the potential economic impact on the industry if mis-information was released.

Activity
What is the role of the State Fusion center at this stage in the incident?

Findings
It was the general consensus that the State Fusion Center would be asked to focus intelligence gathering on any information regarding intentional or unintentional food related outbreak activity.

Summary
During this activity there was a comprehensive discussion by several groups about ICS structure in the field and the role of the Steering Committee as a Multi-Agency Coordination (MAC) Group; but, there remained confusion in roles as Incident Commander versus Operations Section Chief and what role the Agency Administrator serves. It was evident by this point in the exercise that agencies were comfortable with their job in the field but unclear on how coordination and communication through the FLIRRT would take place, especially when involving agencies such as the Department of Education, who are not members of the Steering Committee or the FLIRRT. It was also evident that specific triggers for the activation of the FLIRRT need to be identified and written down in a set or procedures.

Activity 5

Wednesday, May 25, 2011

Scenario
There are approximately 13 layer facilities in this region and over 50 layer facilities statewide, none of which have been investigated yet.

Activity
Based on this information what is the next step and which agency(ies) are involved? Which agency leads the investigation? Identify each agency's Incident Commander. Are these Commanders working in a Unified Command? If so, which IC will act as the IC Spokesperson?

Findings
The groups had different approaches at this point in the exercise. One group formed unified command with FDACS as the lead agency, but then listed a person from each agency to act as

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Reviews
Attachment B-1

After Action Report **2011 Exercise Shell Shocked**

IC. Two other groups formed a MAC, but did not list an IC or Unified Commander. While there was general knowledge amongst the groups of ICS, actual practical application of the system was not fully understood. FDENS is listed as the primary tool for communication, although concerns remain over the security of information and there was uncertainty over the communications plan. Some groups have all of the information going back to the Steering Committee while others do not.

Activity
Describe how Public Information Officers from all agencies involved work together to develop one public message. Have the PIOs from the agencies write a Press Release with a Public Safety component.

Findings
All groups agreed that having a unified message was essential and that a JIC would be used for that purpose.

Activity
What is the role of the State Fusion Center at this stage in the incident?

Findings
The consensus was that the State Fusion Center would be notified and be in a monitoring and information gathering mode.

Section 4: Conclusion

The purpose of Exercise "Shell Shocked" was to practice a multi-jurisdictional and multi-agency response to a catastrophic food/feed incident and to examine the Incident Command System (ICS) and communication capabilities of the FLIRRT in anticipation of and preparation for such a response. It allowed for the design team and players alike, to discuss their ICS roles and communication protocols in a stress free environment. It also provided an opportunity for review and enhancement of activation and notification procedures. In addition, It proved invaluable as a place for the Steering Committee members to come together to discuss and resolve specific issues within the context of a real world scenario.

The exercise was a success in identifying planning and training needs for the FLIRRT and the agencies that comprise the FLIRRT network. The recommendations listed in the Improvement Plan are a summary of the exercise participant's findings captured during the exercise. They are meant to serve as an opportunity to improve the coordination, communication and response capabilities of the FLIRRT.

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After Action Report
Shocked

2011 Exercise Shell

Appendix A: Improvement Plan

Objective	Observation Title	Recommendation	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Objective 1: Exercise FLIRRT Communications Plans	Observation 1 – Participants understood some communication methodologies, but need further understanding of communication tools and protocols.	1.1 Develop specific Communications Procedures for the FLIRRT listing all communications tools and roles responsibilities. Work with FDOH about using EpiCom as the primary communications system for the FLIRRT throughout an incident	Planning	FDACS	FLIRRT Coordinator & Steering Committee	7/28/2011	
		1.2 Conduct a TTX and drills on these procedures once complete	Training/Exercise	FDACS	FLIRRT Coordinator & Steering Committee	7/28/2011	
Objective 2: Exercise ICS Roles &	2. Observation 1 – Participants	2.1 Develop a SOG for the FLIRRT, listing	Planning	FDACS	FLIRRT Coordinator & Steering	7/28/2011	

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Report
Shocked

2011 Exercise Shell

Responsibilities	had a general knowledge of ICS, but did not fully understand how it would be practically applied.	Org Charts, Activation Protocols etc 2.2 Once complete, conduct drills and exercise of the SOG			Committee		
			Training/Exercise	FDACS	FLIRRT Coordinator & Steering Committee	7/28/2011	
		The FERP needs to address command designation during multi-agency response incidents.		FERP Work Group	John Burkette	7/28/2011	

Appendix B: Acronyms

Acronym	Term
DHS	Department of Homeland Security
FDOH	Florida Department of Health
FDBPR	Florida Department of Business and Professional Regulation
U.S. FDA	Food and Drug Administration
FDACS	Florida Department of Agriculture and Consumer Service
FDLE	Florida Department of Law Enforcement
FLIRRT	Florida Integrated Rapid Response Team
HSEEP	Homeland Security Exercise and Evaluation Program
IC	Incident Commander
ICS	Incident Command System
NIMS	National Incident Management System
TTX	Tabletop Exercise
USDA	United States Department of Agriculture

Attachment C – Examples of After Action Report (Complex)

- Attachment C-1: Florida Biological Chemical Agent Full Scale Exercise AAR

AFTER ACTION REPORT

IMPROVEMENT PLAN

MARCH 15, 2012

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HANDLING INSTRUCTIONS

1. The title of this document is *2012 Florida Biological Chemical Agent Full Scale Exercise After Action Report/Improvement Plan*.

2. The information gathered in this AAR/IP is classified as **Controlled with Specified Dissemination** and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from the *Florida Department of Health, Bureau of Laboratories* is prohibited.

3. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, will be stored in a locked container or area offering sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.

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CONTENTS

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EXECUTIVE SUMMARY

Homeland security preparedness involves a cycle of outreach, planning, capability development, training, exercising, evaluation, and improvement. Successful exercises lead to an ongoing program of process improvements. This After-Action Report/Improvement Plan (AAR/IP) is intended to assist agencies striving for preparedness excellence by analyzing exercise results and achieving the following:

- Identifying strengths to be maintained and built upon
- Identifying potential areas for further improvement
- Recommending exercise follow up actions

The suggested actions in this AAR/IP should be viewed as recommendations only. In some cases, agencies may determine that the benefits of implementation are insufficient to outweigh the costs. In other cases, agencies may identify alternative solutions that are more effective. Each agency should review the recommendations and determine the most appropriate action and time needed for implementation.

The Florida Department of Health, Bureau of Laboratories is a part of the Laboratory Response Network (LRN). In an All Hazards approach to public health preparedness, the LRN's role is to collaborate with local, state and federal agencies and to provide a response to address potential biological or chemical exposure. The LRN laboratories are prepared to analyze samples for biological agents or patient clinical specimens for a number of chemical agents. The LRN laboratories routinely prepare for actual incidents with proficiency testing and surge capacity exercises.

The *2012 Florida Biological Chemical Agent Full Scale Exercise* was conducted from February 13-17, 2012, throughout the state of Florida. The scenario was based on intentional food poisoning with exposure to a biological toxin, ricin, which was also considered a chemical agent. The Exercise Planning Team selected objectives that focused on evaluating the combined biological and chemical exposure response procedures including Information Sharing; Public Health Laboratory Testing; Public Health Surveillance and Epidemiological Investigation and achieving a collaborative attitude with participating agencies. This Full Scale Exercise allowed participating local, state and federal agencies to determine how effectively intra and inter agency communications succeeded and how their current standard operating procedures (SOPs) addressed responding to a biological or chemical exposure event.

Overall this Full Scale Exercise proved to be very successful. All partner agencies were able to work together to provide an effective response to the biological-chemical exposure event. Moreover, this Exercise presented a practical learning environment for agencies to become familiar with the issues and concepts that may arise during a separate or combined biological chemical exposure incident. Participating agencies and staff were able to partner and respond to meet the Exercise objectives. As a result of this Exercise, not only are local, state and federal agencies more aware of the scope of response involved in a biological or chemical exposure event, but they also were able to determine where gaps existed in planning, procedures and inter/intra agency communication.

MAJOR STRENGTHS

The major strengths identified during this exercise include the following:

- The Exercise was able to bring together multiple local, state and federal agencies that would respond to a biological or chemical public health emergency. The Exercise Planning Conferences allowed everyone to participate and to learn how a multi agency response to a biological or chemical agent incident would be coordinated.
- The State of Florida Comprehensive Laboratory Response Plan for Chemical, Biological and Radiological Incidents (CLRP) describes how the use of Florida's laboratory resources will be coordinated to respond to public health emergencies of all types.
- Transporting either the patient specimens from the hospital laboratories or the pseudo food samples from the county health departments to the Bureau of Laboratories in a timely fashion was successfully demonstrated.
- Coordination for public health investigation between the epidemiologists, the Florida Poison Information Center Network, the hospital laboratories and the Bureau of Laboratories was very good.

PRIMARY AREAS FOR IMPROVEMENT

Throughout the exercise opportunities for improvement were identified. The primary areas for improvement, including recommendations, are as follows:

AREA FOR IMPROVEMENT

The Exercise needs to include additional participation from partner agencies. At the hospitals this would include Emergency Department personnel and Infection Control Practitioners (ICPs) and at the County Health Department level this would include Preparedness Planners and Public Information Officers.

KEY RECOMMENDATION: The Exercise Planning Team needs to include additional participation from partner agencies. It was stated that the CHD Epidemiologists can provide contact information for the hospital ICPs who, in turn, can encourage participation from the Emergency Department staff. It was also noted that the Bureau of Preparedness and Response would be a good source for contact information at the CHD level for Preparedness Planners and PIOs.

SECTION 1: EXERCISE OVERVIEW

Exercise Name

2012 Florida Biological Chemical Agent Full Scale Exercise

Exercise Start Date

February 13, 2012

Exercise End Date

February 17, 2012

Type of Exercise

Full Scale Exercise

Duration

5 days

Location

Florida

Sponsor and Program

Public Health Emergency Preparedness (PHEP) Cooperative Agreement

Funding Recipient

Florida Department of Health, Bureau of Laboratories

Mission

Response

Capabilities

- Capability 6: Information Sharing
- Capability 12: Public Health Laboratory Testing
- Capability 13: Public Health Surveillance and Epidemiological Investigation

Classification

Controlled with Specified Dissemination

Scenario

Intentional food contamination with a combined biological and chemical agent - ricin

Exercise Planning Team

All of the Exercise Players (listed below) were an integral part of the Exercise Planning Team. Their participation in the Exercise Planning Conferences was instrumental in coordinating the large number of agencies that were part of the Exercise. Each agency was involved in planning for the details of both the inter- and intra-agency actions and events that was specific for their response. Their input was a valuable part of the learning process.

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Exercise Players

Federal
Centers for Disease Control and Prevention (CDC)
Federal Bureau of Investigation (FBI)

State
Bureau of Emergency Preparedness and Response
Bureau of Epidemiology
Bureau of Food Laboratories
Bureau of Laboratories
Division of Disease Control
Division of Emergency Medical Operations
Division of Environmental Health
Florida Department of Law Enforcement
Florida Poison Information Center
Food and Waterborne Disease Program
FDOH Office of Communications

Local
(**County Health Departments**)
Broward County Health Department
Clay County Health Department
Duval County Health Department
Flagler County Health Department
Hillsborough County Health Department
Manatee County Health Department
Martin County Health Department
Miami-Dade County Health Department
Polk County Health Department
Seminole County Health Department
Volusia County Health Department

(**Hospitals**)
All Children's Hospital
Bayfront Medical Center
Cape Canaveral Hospital
Delray Medical Center
Florida Hospital Laboratory
Holmes Regional Medical Center
Indian River Medical Center
Metropolitan Hospital of Miami
Miami VA Health Care System
Mount Sinai Medical Center
Munroe Regional Medical Center
Orange Park Medical Center Inc
Putnam Community Medical Center City
South Miami Hospital
St. Cloud Regional Medical Center

Number of Participants

Players/Observers: 157

Evaluators: 38

Controllers: 38

SECTION 2: EXERCISE DESIGN SUMMARY

The *2012 Florida Biological Chemical Agent Full Scale Exercise* was crafted as a five day exercise to involve local, state and federal agencies who would be part of a response to a biological or chemical exposure incident. The exercise was designed to evaluate communication and coordination between the local, state and federal agencies and the state laboratory and to evaluate public health laboratory testing capabilities.

This exercise was also able to fulfill the Public Health Emergency Preparedness (PHEP) Cooperative Agreement requirements for the Bureau of Laboratories as an annual exercise.

Exercise Objectives and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items. The capabilities for this exercise were derived from the Centers for Disease Control and Prevention (CDC) *Public Health Preparedness Capabilities: National Standards for State and Local Planning*. The capabilities listed below and stated in the ExPlan have been selected by the 2012 Florida Biological Chemical Agent Full Scale Exercise Planning Team and form the foundation for the organization of all activities and tasks in this exercise. The purpose of this exercise is to measure and validate performance of these capabilities and their associated critical tasks.

Capability 6: Information Sharing

Objective 1.
Identify stakeholders to be incorporated into information flow. (Function 1)

Prior to and as necessary during an incident, identify inter-jurisdictional public health stakeholders to determine information sharing needs. (Task 2)

Objective 2.
Identify and develop rules and data elements for sharing. (Function 2)

Prior to and as necessary during an incident, identify, through public health agency legal counsel (and counsel to other agencies and jurisdictions as appropriate), current jurisdictional and federal regulatory, statutory, privacy-related and other provisions, laws, and policies that authorize and limit sharing of information relevant to emergency situational awareness. Such laws and policies may include Health Insurance Portability and Accountability Act (HIPAA), Office of the National Coordinator Health IT Information Technology Policy, HHS Information Management Policy, and specific requirements of current memoranda of understanding and memoranda of agreements; these laws may address privacy, civil liberties, intellectual property, and other substantive issues. (Task 1)

Prior to and as necessary during an incident, identify routine or incident-specific data requirements for each stakeholder. (Task 2)

Prior to and as necessary during an incident, identify public health events and incidents that, when observed, will necessitate information exchange. (Task 3)

Prior to, during, and after an incident, utilize continuous quality improvement or have a processes and a corrective action system to identify and correct unintended legal and policy barriers to sharing of situational awareness information that are within the jurisdictional public health agency's control (e.g., legal and policy barriers, opportunities to shorten the amount of time to share data). (Task 4)

Objective 3.
Exchange information to determine a common operating picture. (Function 3)

Prior to and during an incident, collaborate with and participate in jurisdictional health information exchange. (Task 1)

Capability 12: Public Health Laboratory Testing

Objective 4.
Manage laboratory activities. (Function 1)

Exchange information and data with laboratories and laboratory networks within the jurisdiction. (Task 1)

Objective 5.
Perform sample management. (Function 2)

Handle, package, and transport samples following established IATA/DOT and laboratory-specific protocols. (Task 1)

Maintain forensic chain-of-custody throughout the sample-management process. (Task 2)

Objective 6.
Conduct testing and analysis for routine and surge capacity. (Function 3)

Conduct chemical laboratory testing following LRN-C testing methods. (Task 2)

Objective 7.
Support public health investigations (Function 4)

Establish and maintain the ability to provide analytical support for investigations with first responders and other health investigation community partners. (Task 1)

Objective 8.
Report Results (Function 5)

Notify appropriate public health, public safety, and law enforcement officials (24/7) of presumptive and/or confirmed laboratory results from clinical, food, or environmental samples that involve a chemical, radiological, or biological threat agent. (Task 1)

Send presumptive and confirmed chemical, radiological, or biological laboratory results to CDC and all submitters. (Task 2)

Capability 13: Public Health Surveillance and Epidemiological Investigation

Objective 9.
Conduct public health surveillance and detection. (Function 1)

Engage and retain stakeholders, which are defined by the jurisdiction, who can provide health data to support routine surveillance, including daily activities outside of an incident, and to support response to an identified public health threat or incident. (Task 1)

Maintain surveillance systems that can identify health problems, threats, and environmental hazards and receive and respond to (or investigate) reports 24/7. (Task 4)

Objective 10.
Conduct public health and epidemiological investigations. (Function 2)

Conduct investigations of disease, injury or exposure in response to natural or man-made threats or incidents and ensure coordination of investigation with jurisdictional partner agencies. Partners include law enforcement, environmental health practitioners, public health nurses, maternal and child health, and other regulatory agencies if illegal activity is suspected. (Task 1)

Provide epidemiological and environmental public health consultation, technical assistance, and information to local health departments regarding disease, injury, or exposure and methods of surveillance, investigation, and response. (Task 2)

Objective 11.
Improve public health surveillance and epidemiological investigation systems. (Function 4)

Identify issues and outcomes during and after the incident. (Task 1)

Conduct post-incident/post-exercise agency evaluation meeting(s) including all active participants (e.g., law enforcement, volunteer agencies, clinical partners or environmental regulatory agency) to identify internal protocols and deficiencies that require corrective actions in areas such as programs, personnel, training, equipment, and organizational structure. (Task 2)

Develop an After Action Report/Improvement Plan. (Task 3)

Communicate recommended After Action Report Improvement Plan corrective actions to public health leadership. (Task 4)

SCENARIO SUMMARY

This scenario was designed to specifically involve the local, state and federal agencies, all of which would be part of a response to a biological or chemical exposure incident. The purpose of the scenario was to "paint the picture" for players. Only a limited number of activities were planned for this exercise and some of the events described in the scenario were simulated.

The Big Moose Lodge hosted their annual Fund Drive and Fair the weekend before the Exercise. This was a large carnival event with games and food provided by vendors. During the weekend, a number of patients began presenting to local hospitals with symptoms of nausea, vomiting, diarrhea (some bloody), with weakness and abdominal pain (1). One of the hospitals consulted with the Florida Poison Information Center on the patient symptoms.

An ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics) Alert was triggered. This informed the Epidemiologists of a food related outbreak. This prompted the surveillance Epidemiologists to carry out their notification procedures which varied by region, county and specific epidemiology assignments. A query was also performed on the event and indicated that various patients were also having additional complaints of dehydration and hypotension.

A foodborne outbreak investigation by Epidemiology revealed that some of the patients had eaten similar foods at the Big Moose Lodge Fund Drive and Fair. The Big Moose Lodge did not prepare their own food on site but purchased from a vendor (2). The patients reported that the symptoms appeared about 1-3 hours after eating. Additionally, some patients had reported a burning sensation of the mouth and throat. The Epidemiologists contacted the Florida Poison Information Center or the Food and Waterborne Disease Program with the updated information since this indicated that the outbreak could be related to a chemical exposure.

On Day 3 of the exercise, the Daily Grind Newspaper had received a letter from the anti-government group Concerned Citizens for the Constitution (3). The rambling manifesto stated that there is too much government regulation and emphasized that they will get a "taste of their own medicine". They indicated that they had poisoned the food supply to show they meant business. The letter was signed by Castor Bean. This brought the FBI and Florida Fusion Center into the picture.

A conference call was conducted with all of the stakeholders and the possible link between the foodborne outbreak and the credible threat was made. It was decided that food samples would be collected and then transported to the Bureau of Laboratories to be tested for ricin. Similarly, patient clinical specimens would be collected and then transported to the Bureau of Laboratories to be tested for ricinine, a biomarker for ricin exposure. The laboratory results were then reported to the county epidemiologists, hospitals, Poison Information Center, law enforcement and other need to know partners.

Reference:

1. These symptoms are related to ricin but could also be the result of campylobacter, Shigella or E. coli infection.

2. By using a fraternal organization to host the fair, which was specifically catered by an outside vendor, the Exercise was able to have the Bureau of Laboratories as the primary public health laboratory to respond.

   Generally, the Department of Health regulates food service establishments located in institutional settings (such as schools, assisted living facilities, adult day cares, and detention facilities), civic and fraternal organizations, bars and lounges that don't prepare foods, and theaters that limit their food service to items customarily served at theaters (such as beverages, pop corn, hot dogs and nachos). The codes and standards for food service establishments are found in Chapter 64E-11, Florida Administrative Code. For more information about the food hygiene program, please visit their websites at, http://www.doh.state.fl.us/environment/community/food/index.html or http://www.doh.state.fl.us/Environment/community/food/FoodFAQ.html

3. Concerned Citizens for the Constitution (CCC) - The CCC is a loosely organized group of individuals who have adopted a right-wing anarchist ideology. They believe that virtually all existing government in the United States is illegitimate and they seek to "restore" an idealized, minimalist government. To this end, the CCC plots against the government and other forms of authority and uses harassment and intimidation tactics, and occasionally resorts to violence.

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. The capabilities linked to the exercise objectives of the *2012 Florida Biological Chemical Agent Full Scale Exercise* are listed below. Each activity is followed by related observations, which includes an analysis, and recommendations.

CAPABILITY 6: INFORMATION SHARING

Objective 1: Identify stakeholders to be incorporated into information flow. (Function 1)

Activity 1: Prior to and as necessary during an incident, identify inter-jurisdictional public health stakeholders to determine information sharing needs. (Task 2)

Observation: During the planning conferences, the public health stakeholders were identified and the information for the primary contacts from the participating agencies were obtained, organized and distributed before the exercise was conducted.

Additionally, the hospital laboratory, county health department, and the Bureau of Laboratories (BOL) contacts were organized into a separate list for the agencies that would be participating in packaging and shipping activities.

Prior to the start of the exercise, the hospital laboratory and county health department players were directed to contact their regional BOL as needed for instructions on packaging and shipping of patient specimens or other pertinent information.

The participant feedback indicated that hospital laboratories and county health departments participating in packaging and shipping activities were able to contact the BOL to consult on procedures and notify of shipment of samples and specimens.

After completing the pseudo food sample testing or patient clinical specimen analysis the BOL was able to report the results back to the respective county health department contacts or submitting hospital laboratories. However, it was mentioned in the feedback that one of the county health departments was not contacted by the BOL regarding the results of the pseudo food sample testing.

In the Hot Wash, the Florida Poison Information Center (Tampa) mentioned that they didn't get the clinical patient specimen testing results back directly from the BOL. This was probably due to the oversight of the Exercise Planning Team and the way the Florida Poison Information Centers phone communication works. The patient results were reported from the Jacksonville BOL.

Therefore, the call would have been routed to the Jacksonville Poison Information Center.

During the planning conferences, the Office of Communications indicated that they would be able to provide information to the county health department Public Information Officers (PIOs). Prior to the Exercise, the Office of Communication drafted ricin messaging products which were provide to the CHD PIO representatives through the Crisis and Emergency Risk Communication (CERC) Portal for their use during the Exercise.

Analysis: Strength. It was indicated as a strength on the Participant Feedback form that the communication between the regional epidemiologist, the CHD epidemiologist, and the lab was very good.

The hospital laboratories and county health departments participating in packaging and shipping activities indicated that they were able to contact the BOL to consult on procedures and notify of shipment of samples and specimens.

Analysis: Area for Improvement. It was mentioned in the feedback that one of the county health departments was not contacted by the BOL regarding the results of the pseudo food sample testing.

The Florida Poison Information Center (Tampa) mentioned in the feedback that they didn't get the clinical patient testing results back directly from the BOL.

Both of these will be discussed below under Capability 12: Public Health Laboratory Testing; Objective 8: Report Results.

Recommendation: The Exercise Planning Team needs to consider the best way for information to be relayed to all participants including those who have specific routing procedures such as the Florida Poison Information Center.

It was suggested in the participant feedback that agencies have a Communication Plan.

Objective 2: Identify and develop rules and data elements for sharing. (Function 2)

Activity 1: Prior to and as necessary during an incident, identify, through public health agency legal counsel (and counsel to other agencies and jurisdictions as appropriate), current jurisdictional and federal regulatory, statutory, privacy-related and other provisions, laws, and policies that authorize and limit sharing of information relevant to emergency situational awareness. Such laws and policies may include Health Insurance Portability and Accountability Act (HIPAA), Office of the National Coordinator Health IT Information Technology Policy, HHS

Information Management Policy, and specific requirements of current memoranda of understanding and memoranda of agreements; these laws may address privacy, civil liberties, intellectual property, and other substantive issues. (Task 1)

Observation: The Florida Department of Health is required by law to maintain the privacy of protected health information. Protected health information contains specific information that identifies a person or can be used to identify a person. Protected health information includes demographic and medical information that concerns the past, present, or future physical or mental health of an individual. Demographic information could include name, address, telephone number, social security number and any other means of identifying a specific person. Protected health information may be used or disclosed by the Department of Health for purposes of treatment, payment, and health care operations.

The Florida Poison Information Centers were established as health care providers authorized to share protected patient information with health care providers providing direct patient care in HIPAA regulations in 45CFR parts 160 and 164 as published in the Federal Register on Dec 28, 2000. In addition, the CDC has provided the American Association of Poison Control Centers (AAPCC) with a grant of authority to conduct surveillance activity and function as a public health authority to which covered entities may disclose protected health information.

In addition, the Florida Poison Information Centers are a State of Florida, Department of Health program performing public health functions. As such they are exempt from HIPAA privacy regulations.

Analysis: Strength. The Florida Department of Health and the Florida Poison Information Center Network have provisions, laws, and policies that authorize and limit sharing of information relevant to emergency situational awareness.

Analysis: Area for Improvement. NONE

Recommendation: NONE

Activity 2: Prior to and as necessary during an incident, identify routine or incident-specific data requirements for each stakeholder. (Task 2)

Observation: The State of Florida Comprehensive Laboratory Response Plan for Chemical, Biological and Radiological Incidents (CLRP) establishes the framework to ensure that the State of Florida will be able to mount a laboratory response to these hazards. The CLRP outlines the roles and responsibilities of

the participating laboratories (government and non-government). The CLRP coordinates response and recovery activities across the full spectrum of responding entities. The CLRP unifies the efforts of these groups for a comprehensive approach to reducing the effects of an emergency and/or disaster. It is intended for use by emergency responders and government officials responsible for Public Health, Food Safety, Animal Health, Environmental Health, Law Enforcement, HazMat, Fire Rescue, and Emergency Medical Services.

The CLRP addresses the four phases of emergency management (preparedness, response, recovery, and mitigation), parallels the State of Florida Comprehensive Emergency Management Plan (SCEMP), as well as Federal activities set forth in the National Response Plan (NRP), and describes how the use of Florida's laboratory resources (government and non-government, including commercial laboratories) will be coordinated to respond to public health emergencies of all types. Laboratory capabilities reflected in this Plan are current as of the date of distribution. The CLRP is reviewed annually and updated whenever capabilities change.

During the Hot Wash, one of the County Health Departments (CHD) stated that their Epidemiology Program was able to keep everyone updated on the progress of the Exercise with their Monday "Surveillance" Meeting.

Additionally, one of the hospital laboratories indicated that they would like to see involvement from Emergency Department (ED) staff particularly in being able to recognize symptoms, especially if it was a chemical agent, and how they would process the information in treating patients.

Also regarding hospital participation, one of the Epidemiologists commented that, in general, the Exercise Planning Team needs to give more thought in who should be invited to participate to make sure these important partner agency stakeholders are not left out. As an example, the hospital Infection Control Practitioner (ICP) is the main communication medium for the County Health Department epidemiology. It was stated that "They are like the ambassadors to the hospital. They are the best, best contact at the hospital. They are critical for the public health hospital interaction. "

Additionally, it was mentioned that others were left off the Exercise invitation list in the CHD who would be very important stakeholders. This includes the Preparedness Planners and Public Information Officers (PIO). It was pointed out that "Since this scenario involved a response to a public health emergency, these people would be leading the response at the CHD level."

Analysis: Strength. The State of Florida Comprehensive Laboratory Response Plan for Chemical, Biological and Radiological Incidents (CLRP) describes how the use of Florida's laboratory resources (government and non-government, including commercial laboratories) will be coordinated to respond to public health emergencies of all types. Laboratory capabilities reflected in this CLRP are current as of the date of distribution. The CLRP is reviewed annually and updated whenever capabilities change.

It appears that at least one CHD Epidemiology Program has regular meetings with staff where current situations regarding public health are discussed.

One of the hospitals stated that they would encourage additional hospital staff to participate in future exercises.

Analysis: Area for Improvement. The Exercise Planning Team needs to reach out to include additional participation from partner agencies. At the hospitals this would include Emergency Department personnel and Infection Control Practitioners (ICPs) and at the County Health Department level this would include Preparedness Planners and Public Information Officers.

Recommendation: The Exercise Planning Team needs to include additional participation from partner agencies. It was stated that the CHD Epidemiologists can provide contact information for the hospital ICPs who, in turn, can encourage participation from the Emergency Department staff. It was also noted that the Bureau of Preparedness and Response would be a good source for contact information at the CHD level for Preparedness Planners and PIOs.

Although the initial email distribution list for the Exercise invitation was extensive, the list was pared to only those who responded back after the Mid Term Planning Conference Call. This was to avoid nuisance emailing. The strategy for contacting stakeholders should be reviewed for the next exercise.

Activity 3: Prior to and as necessary during an incident, identify public health events and incidents that, when observed, will necessitate information exchange. (Task 3)

Observation: The Exercise Planning Conferences (Concepts and Objectives, Initial Planning, Mid Term Planning and Final Planning) gave the participating agencies the opportunity to identify public health events and incidents in the Exercise that would necessitate information exchange. Based upon these discussions, the Exercise included an ESSENCE Alert; an EpiCom message; a SIMCELL Inject to stimulate Law

Enforcement Intelligence Sharing; and a Health Alert Message. All of which relied upon information exchange.

The participant feedback indicated that there could have been more opportunities for interaction between agencies in providing information exchange.

Analysis: Strength. The Exercise Planning Conferences provided the partner agencies to discuss and identify public health events and incidents would necessitate information exchange.

Analysis: Area for Improvement. Provide more opportunities for interaction between agencies in providing information exchange in the Exercise Design.

Recommendation: Expand the Exercise to provide more opportunities for interaction between agencies in providing information exchange. One recommendation was to have more than one hospital laboratory in each region call into the Poison Centers for practice. Similarly, more than one county health department epidemiologist could also interact with the regional Poison Centers.

Activity 4: Prior to, during, and after an incident, utilize continuous quality improvement or have a processes and a corrective action system to identify and correct unintended legal and policy barriers to sharing of situational awareness information that are within the jurisdictional public health agency's control (e.g., legal and policy barriers, opportunities to shorten the amount of time to share data). (Task 4)

Observation: The Exercise Planning Conferences (Concepts and Objectives, Initial Planning, Mid Term Planning and Final Planning) gave the participating agencies the opportunity to identify potential legal and policy barriers to sharing of situational awareness information.

During the Question and Answer (Q&A) Conference call the participants discussed the issue of law enforcement agencies sharing intelligence information with the public health partners. Specifically, it was asked that if there was a credible threat of intentional food poisoning, who would the Florida Fusion Center share the information with?

A participant from the FBI stated that they would be in touch with the FBI WMD at Headquarters and the Florida Fusion Center to see if they had supplementary information regarding the incident.

It was further stated that the FBI has a good working relationship with DOH in Tallahassee (Leon County Public Health Hospital and

EMS Preparedness Planner) whom they work with when investigating white powder incidents.

Also, the FBI would be in touch with local CHD (MOU's are in place for all CHDs) for awareness and to gather more information if available.

During the Q&A Conference call the Food and Waterborne Disease Program (FWDP) stated that they are working to get Secret level clearance to join Florida Fusion Center so that environmental epidemiology will be part of the fusion center.

Analysis: Strength. The Exercise provided partner agencies the opportunity to discuss and identify legal and policy barriers to sharing of situational awareness information.

The Food and Waterborne Disease Program (FWDP) is working to get Secret level clearance to join Florida Fusion Center so that environmental epidemiology will be part of the fusion center and provide a direct access for public health awareness.

Analysis: Area for Improvement. NONE

Recommendation: NONE

Objective 3: Exchange information to determine a common operating picture. (Function 3)

Activity 1: Prior to and during an incident, collaborate with and participate in jurisdictional health information exchange. (Task 1)

Observation: One of the comments from the Participant Feedback form indicated that communication between the regional epidemiologist, the CHD epidemiologist, and the Bureau of Laboratories was very good.

Also, one of the Epidemiologists commented that hospital participation was very committed. They had called to consult on the Exercise and had a good discussion of the hospital status, policies and procedures that would occur if the outlined scenario was a real event.

During the Hot Wash it was stated that only the Tampa Poison Information Center was notified by the hospital and CHD Epidemiology participants and that the Jacksonville and Miami Poison Information Centers were not. It was added that faxing or providing the same information to the other Centers would have been useful. It was suggested that a dual notification system might have helped.

Analysis: Strength. Communication between the regional epidemiologist, the CHD epidemiologist, the hospitals and the Bureau of Laboratories was very good.

It was commented that the players were committed to the Exercise.

Analysis: Area for Improvement. The Exercise Planning Team should be aware that some agencies, such as the Florida Poison Information Center, are networked and the Exercise should strive to provide a means to include the entire network in Exercise play.

Recommendation: The Exercise Planning Team should be aware that some agencies are networked and the Exercise should strive to provide a means to include the entire network in Exercise play. This may be accomplished by using faxing or providing the same information to the other parts of the network in other ways. It was suggested that a dual notification system might help.

CAPABILITY 12: PUBLIC HEALTH LABORATORY TESTING

Objective 4: Manage laboratory activities. (Function 1)

Activity 1: Exchange information and data with laboratories and laboratory networks within the jurisdiction. (Task 1)

Observation: The Exercise Packaging and Shipping Planning Conference Call allowed for the explanation of the specific requirements for the packaging and shipping of patient clinical specimens from the hospital laboratory to the regional Bureau of Laboratories for the Exercise. Also discussed were the specific instructions for the packaging and shipping the pseudo food samples from the county health departments to the regional Bureau of Laboratories for the Exercise. The procedures followed in the Exercise would be similar to those for a real event.

The clinical patient specimens are classified as Biological Substance, Category B based on IATA and DOT requirements for shipping. As part of the outreach to the health and medical community, the Bureau of Laboratories Chemical Threat Program had previously trained a number of the hospital laboratories that participated in the exercise on the CDC protocols for shipping urine specimens after a chemical exposure incident.

Additionally, the Bureau of Laboratories offers *Infectious Substances Packaging and Shipping Training* to the Hospital laboratories through the CDC Cooperative Agreement Grant for Public Health Emergency Preparedness.

A comment from a BT laboratorian was that they did not feel that the BT lab was adequately provided with the scope of what was going on. It was stated that "I think it is critical to let the BT labs know what is going on as soon as possible during an event. In other words, the first contact with the lab shouldn't be when samples are being prepared to be shipped to us."

It was further stated that this information could be critical in helping to analyze data and/or troubleshoot assays. This information would also help to prepare equipment, reagents, personnel, etc. for an above average period of testing. The information might also be pivotal in analysis decisions and therefore providing additional necessary information to the stakeholders.

Analysis: Strength. The Participant Feedback indicated that the Instructions for packaging and shipping both food samples and patient specimens were very helpful.

Analysis: Area for Improvement. Communication with the laboratorians could be improved. They should be included in the information exchange to better provide collaboration in obtaining a common operating picture.

Recommendation: Prior to and during an incident include the laboratorians to better obtain a common operating picture.

Objective 2: Perform sample management. (Function 2)

Activity 1: Handle, package, and transport samples following established IATA/DOT and laboratory-specific protocols. (Task 1)

Observation: About a week before the start of the Exercise, the Bureau of Laboratories sent the hospital laboratories the materials they needed for packaging and shipping. Overall, the Participant Feedback indicated that Instructions were complete and the provision of the return shipping materials was very helpful. However, one of the hospitals stated that they did not receive supplies by shipper. Instead they were physically delivered on the Friday before the start of the Exercise just making it in time.

Also, a week before the exercise the hospital laboratories had received spiked patient specimens from the CDC. On the first day of the exercise, the hospital laboratories sent the spiked

specimens to the regional LRN-C laboratory by either commercial shipper or local courier, using either dry ice or cold packs to maintain temperature. Eight participating hospital laboratories were able to have the specimens transported to the regional LRN-C laboratory by commercial shipper and seven by local courier. Of the 15 hospital laboratories participating in the exercise, seven shipped using dry ice while eight shipped using cold packs. A summary is shown in Table 1.

Table 1. Summary of Shipping Methods

	Cold Packs	Dry Ice	Total
Commercial Shipper	3	5	8
Local Courier	5	2	7

The hospital laboratories notified the Bureau of Laboratories when the specimens were shipped and the Bureau of Laboratories notified the hospital laboratories when the specimens were received. One participant indicated on the feedback that they hadn't received the notification of receipt. This might have been because only the primary contacts were notified upon receipt.

Upon arrival at the regional LRN-C laboratory the temperature of the specimens varied from -20°C to 16°C for those u sing dry ice and from -13°C to 10°C for those using cold packs. Of the eight specimen sets sent from the hospital laboratories on cold packs, one (12.5%) arrived frozen while seven (87.5%) arrived thawed and either cool or up to ambient temperature. Of the seven specimen sets sent from the hospital laboratories on dry ice, five (71%) arrived frozen while two (29%) arrived thawed and either cool or up to ambient temperature. The thawed specimen sets were due to not using enough dry ice for the time required to transport.

When the clinical specimens arrived, the packaging was evaluated based upon the Exercise Criteria for Packaging and Shipping (Table 2) to assess the strengths and areas for improvement in the packaging and shipping of specimens.

Table 2. 2011 Exercise Criteria for Packaging and Shipping

√	Advance notification of delivery
√	Sample Submission form included
√	Chain of Custody form included
√	Dry Ice with UN1845 Misc 9 Dry Ice Label or Cold Packs
√	UN3373 Biological Substance, Category B Label
√	Gridded Box For Urine Samples
√	Gridded Box placed in large 95kPa Bio-Pouch Bag
√	Absorbent sheets for packing
√	Two levels of Evidence Tape
√	Evidence Tape properly initialed

The Exercise also had pseudo food samples packaged and shipped to the regional Bureau of Laboratories by the county health department Epidemiologist or Environmental Health Scientist. The specific instructions for the packaging and shipping these samples from the county health departments to the regional Bureau of Laboratories for the Exercise were also discussed on the Packaging and Shipping Exercise Planning Conference Calls as mentioned above. The county health departments were provided with Biological Food Sample P&S Guidelines to follow and the Environmental Sample Submission Form and Chain of Custody Form to complete and send along with the samples. The county health departments used supplies that they had on hand for packaging.

On the day the pseudo food samples were to be transported the regional Bureau of Laboratories, the county health department Epidemiologist or Environmental Health Scientist consulted with the Biological Defense Coordinator to determine how best to transport the samples to the laboratory.

Through the feedback, it was noted that not all of the county health departments have someone who was IATA/DOT certified to package and ship.

Analysis: Strength. Transporting either the patient specimens from the hospital laboratories or the pseudo food samples from the county health departments to the Bureau of Laboratories in a timely fashion was successfully demonstrated.

The Participant Feedback indicated that the Instructions for packaging and shipping for the hospital laboratories were complete and the provision of the return shipping materials was very helpful.

Based upon the evaluation of the packaging of the patient clinical

specimens using the Exercise Criteria for Packaging and Shipping (Table 2), it is evident that the participating hospital laboratories were able to package and ship patient clinical specimens to the regional Bureau Laboratories following the CDC protocols and the IATA/DOT regulations for Biological Substances, Category B. Fourteen of the fifteen hospital laboratories were able to follow the packaging and shipping guidelines provided without any deficiencies whereas one did not use the labels as required.

The successful packaging and shipping we observed in this exercise for the patient clinical specimens may be the result of the fact that we sent the required packaging and shipping materials to the hospitals a week before the exercise. This would be similar to the way the Florida LRN-C laboratories would respond in an actual event.

One comment in the Participant Feedback was that each hospital should have packaging and shipping supplies on stock to ship patient specimens in the event of a real emergency. The Bureau of Laboratories had reviewed this issue thoroughly and decided against pre-staging of packaging and shipping materials at the hospitals or the assuming that the hospitals would have these materials on hand. This is based upon two disadvantages of pre-staging materials at the hospitals. First is that hospitals have a limited storage capacity and second; since these are items that are not used everyday, they could easily be misplaced and therefore would not be available when needed. Also, a strong advantage to delivering the supplies "just in time" or when needed is that this will allow accommodation for any changes in the packaging and shipping protocol by the CDC.

The county health departments also were successful in packaging and shipping the pseudo food samples to the Bureau of Laboratories. As one commented in the Participant Feedback "The CHD's were great in transporting samples to us: two transported and one sent photos of their packaging and shipping step by step via email since they could not fed ex (sic) properly due to lack of training."

The Participant Feedback indicated that the notification to the Bureau of Laboratories to expect the shipment was received for both the patient clinical specimens and the pseudo food samples.

Although only six of the 15 sets of specimens from the hospital laboratories arrived at the LRN-C regional laboratories frozen as required, based upon the specimen analysis, having the specimens arrive thawed and cool or up to ambient temperature did not affect the chemical testing and provided satisfactory analytical results (discussed below, Objective 6, Activity 1).

Although, as shown here, it appears that shipping on dry ice is not required for the consistent and reproducible detection of ricinine, hospital laboratories may want to consider using a dry ice vendor or local grocery store for obtaining dry ice for shipping patient specimens by commercial shipper.

Analysis: Area for Improvement. Not all of the participating hospital laboratories received the packaging and shipping supplies needed in a timely manner. Also, it was pointed out that the instructions for the packaging called using fiber strapping tape which was not included in the supplies and at least one hospital did not have in stock.

Regarding the pseudo food samples, it was noted in the feedback that the correct size coolers were not available at the CHD Epidemiology office for transporting larger samples. Similarly, it was noted that the CHD Epidemiologist had not had previous training or experience with packaging food samples.

This brings up an important issue in the Exercise design. There was an artificiality that was introduced into the Exercise which wasn't realistic. The Exercise called for the CHD Epidemiology involvement with the pseudo food sample collection and subsequent packaging and shipping. It was pointed out that it would have to be an overwhelming event (e.g. BT incident) for CHD Epidemiology to get involved with specimen/sample management. In a real foodborne outbreak, it is the Environmental Health people who would have the responsibility for collecting the food samples and then assuring that they are transported correctly to the state laboratory.

Along these same lines though, the feedback indicated that at least one county health departments has an Epidemiology Response Team composed of volunteers from the CHD who have training in epidemiology procedures. It was stated by the CHD Epidemiologist that this team was used during the 2009 H1N1 epidemic.

Regarding the transportation of the pseudo food samples, one commenter stated in their feedback that there are potential issues with relying on one specific agency, such as the RERAs (Regional Emergency Response Advisors), for transport if there is a large influx of samples in a short period of time. It was thought that it might be better to have the sample collectors bring the samples directly instead of waiting for law enforcement, a RERA, or overnight shipping them. It was added that this would depend upon the scale, scope, and other issues related to the event but that this might be able to free up key personnel to perform other tasks.

There was also feedback regarding the number of county health departments that were able to participate in the Exercise packaging and shipping of the pseudo food samples. One commenter stated that it "Would have been nice to have more than three counties participate" for their region.

Similarly, it was suggested that in the future it would be beneficial to simulate what it would be like to receive many samples all at once and spread out over the day to better assess surge capacity in an event like this. It was noted that "An event of that nature would require a completely different approach than the one we normally employ when responding to a white powder event."

There was a communication breakdown between one of the regional Bureau of Laboratories and the county health department. The feedback indicated this to be a result of mitigating issues not related to the exercise but prompted the comment stating that "…there should probably be a process for ensuring that samples do not get lost or overlooked during a real emergency."

As indicated above, of the 15 patient specimen sets sent from the hospital laboratories to the regional Bureau of Laboratories, nine of the specimen sets (60%) arrived thawed. Fortunately, based upon the specimen analysis, having the specimens arrive thawed and cool or up to ambient temperature didn't affect the chemical testing and provided satisfactory analytical results.

Recommendation: Not all of the participating hospital laboratories received the packaging and shipping supplies needed in a timely manner. In future exercises where there is a need to supply partner agencies with materials they may need for the exercise, the supplies should be received in a timely manner.

Also, it was pointed out that the instructions for the packaging called using fiber strapping tape which was not included in the supplies and at least hospital did not have in stock. In the future the fiber strapping tape should be included with the packaging and shipping supplies provided to the hospital laboratories for the shipping patient clinical specimens.

Although, as shown here, it appears that shipping on dry ice is not required for the consistent and reproducible detection of ricinine, hospital laboratories may want to consider using a dry ice vendor or local grocery store for obtaining dry ice for shipping patient specimens by commercial shipper.

It was suggested that it might be beneficial if the county health

departments (Environmental Health and maybe Epidemiology) have training in packaging and shipping of laboratory samples just in case a similar event really does happen. It also might be advantageous for the county health departments to keep the appropriate size shipping containers on hand for transporting the samples to the Bureau of Laboratories.

It is recommended that in future exercises the need to simulate what it would be like for the Bureau of Laboratories to receive many food samples "…all at once and spread out over the day" to truly assess the surge capacity in an event like this.

And finally, it is recommended that the notification of receipt of specimens and samples needs to go to more than one contact at the submitting facility if possible.

Activity 2: Maintain forensic chain-of-custody throughout the sample-management process. (Task 2)

Observation: Since, in a biological or chemical exposure incident, the sample/specimen analysis may be considered as admissible in court, we evaluated the Chain of Custody and evidence preservation procedures as part of the Exercise.

For the Exercise, the Bureau of Laboratories Chain of Custody forms were provided for transporting the samples/specimens to the regional laboratories. The chain of custody protocol requires that each person who has custody of the samples/specimen print and sign their name and enter the time and date of the change of custody on the Chain of Custody form that accompanies either the pseudo food samples or the patient clinical specimens.

The county health departments were able to maintain the Chain of Custody for transporting the pseudo food samples to the Bureau of Laboratories.

For the patient clinical specimens, the Chain of Custody was initiated at the hospital laboratory when the spiked specimens were received from the CDC. A copy of the hospital laboratory Chain of Custody then accompanied the packaged specimens when they were shipped or transported to the regional Bureau of Laboratories. Fourteen of the fifteen hospital laboratories were able to follow the guidelines provided without any deficiencies whereas one did not use evidence tape, which was the same hospital which did not use labels, as mentioned above.

Analysis: Strength. The Chain of Custody procedures were able to be maintained for both the pseudo food samples and the patient clinical specimens.

Analysis: Area for Improvement. NONE

Recommendation: As mentioned above, as part of the outreach to the health and medical community, the Bureau of Laboratories Chemical Threat Program had previously trained a number of the hospital laboratories that participated in the exercise on the CDC protocols for shipping urine specimens after a chemical exposure incident. This training includes evidentiary procedures. This outreach and training should be continued.

Objective 6: Conduct testing and analysis for routine and surge capacity. (Function 3)

Activity 1: Conduct chemical laboratory testing following LRN-C testing methods. (Task 2)

Observation: To evaluate chemical laboratory testing following LRN-C testing methods and how the temperature control of patient specimens affected the results of the chemical analysis, the Bureau of Laboratories, LRN-C Surge Capacity Laboratory analyzed spiked patient specimens under control and realistic conditions. The Hospital laboratories received spiked patient specimens from the CDC a week before the Exercise and then arranged to have the specimens transported to the Bureau of Laboratories for analysis. The specimens were provided by the CDC's National Center for Environmental Health (NCEH) and consisted of pooled, sets of ten patient urine specimens in cryovials. The specimen sets contained a mixture of low, medium, and high concentration spikes as well as an unspiked specimen.

A set of spiked specimens with low, medium and high concentrations of ricinine also was sent to the LRN-C surge capacity laboratory in Jacksonville, FL. The Jacksonville specimens were used as controls since they had been treated under the same conditions as the ones that the hospitals received (aliquoted, frozen, and air shipped) and "measured" under the same set of laboratory conditions (calibration curve, chemist, instruments, reagents, etc.). The low, medium, and high concentration controls were 17.1 ± 0.1, 103.3 ± 3.1, and 161 ± 1.0 ppb, respectively. This is comparable to the CDC concentrations of 15.8, 89.6, and 131 ppb calculated before sending the specimens out to the laboratories. The averaged mean error for all transportation methods were less than 7.9 % of the expected results of the corresponding control specimen values. When comparing each method, using a commercial shipper and cold packs ranged from 92.4% to 97.8%; using a commercial shipper and dry ice ranged from 90.6% to 94.3%; using a local courier and cold packs ranged from 92.4% to 97.7%; and using a local courier and dry ice ranged from 97.4% to 98.6% of the expected value.

The data represents the analysis of specimen sets from 14 hospital laboratories, since one hospital laboratory was unable to have the specimens transported to the regional LRN-C laboratory in time for analysis. The results are shown in Table 3, Table 4 and Chart 1.

Table 3. Average Ricinine Concentrations by Transportation

	Low Conc. ppb	Medium Conc. ppb	High Conc. ppb
Control	17.1 ± 0.1	103 ± 3.1	161 ± 1.0
CS-CP (n=2)	15.8 ± 0.7	101	149 ± 5.7
CS-DI (n=7)	15.5 ± 0.6	94.5 ± 6.4	152 ± 5.7
LC-CP (n=5)	16.3 ± 0.8	95.5 ± 3.8	157 ± 6.3
LC-DI (n=2)	16.8 ± 0.3	101 ± 2.7	159 ± 9.2

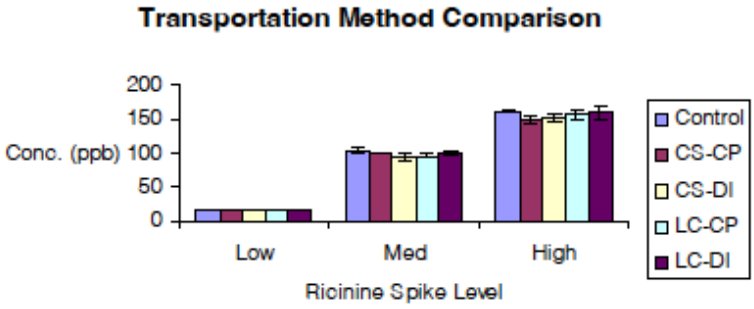
* CS-CP – Commercial Shipper with Cold Packs; CS-DI – Commercial Shipper with Dry Ice; LC-CP – Local Courier with Cold Packs; LC-DI – Local Courier with Dry Ice

Table 4. Range of Ricinine Concentrations by Transportation

	Low Conc. ppb	Medium Conc. ppb	High Conc. ppb
Control	17.0 - 17.1	100 – 106	160 - 162
CS-CP (n=2)	15.0 – 16.5	101	145 - 153
CS-DI (n=7)	15.0 – 17.1	83.9 - 106	146 - 162
LC-CP (n=5)	15.1 – 17.3	87.2 – 99.6	145 - 170
LC-DI (n=2)	16.6 – 17.3	97.2 - 103	150 - 169

* CS-CP – Commercial Shipper with Cold Packs; CS-DI – Commercial Shipper with Dry Ice; LC-CP – Local Courier with Cold Packs; LC-DI – Local Courier with Dry Ice

Chart 1. Effect of Transportation Method on Results



* CS-CP – Commercial Shipper with Cold Packs; CS-DI – Commercial Shipper with Dry Ice; LC-CP – Local Courier with Cold Packs; LC-DI – Local Courier with Dry Ice

When comparing how the specimens arrived at the regional LRN-C laboratory, those that arrived frozen were within ± 6.9% of the expected value; and those that arrived thawed and either cool or up to ambient temperature were within ± 4.8% of the expected value. The data is shown in Table 5, Table 6, and Chart 2.

Table 5. Average Ricinine Concentrations by Arrival Condition

	Low Conc. ppb	Medium Conc. ppb	High Conc. ppb
Control	17.1 ± 0.1	103 ± 3.1	161 ± 1.0
Frozen n=6	15.7 ± 0.8	96.1 ± 5.6	152 ± 5.2
*Thawed n=9	16.2 ± 0.7	96.4 ± 5.0	157 ± 7.3

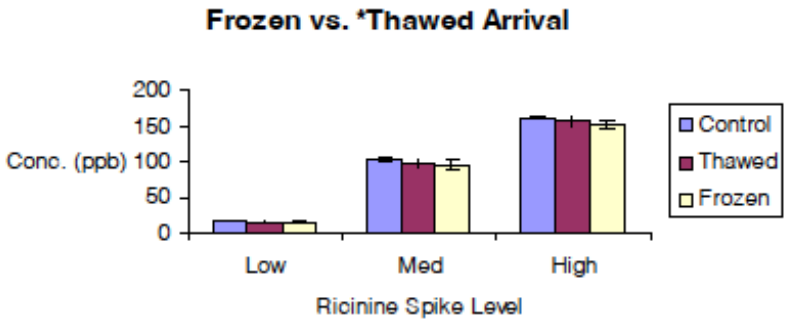
*Either cool or up to ambient temperature

Table 6. Range of Ricinine Concentrations by Arrival Condition

	Low Conc. ppb	Medium Conc. ppb	High Conc. ppb
Control	17.0 - 17.1	100 – 106	160 - 162
Frozen n=6	15.0 – 17.3	83.9 - 106	146 - 162
*Thawed n=9	15.0 – 17.3	87.2 - 103	145 - 170

*Either cool or up to ambient temperature

Chart 2. Comparison of Frozen vs. *Thawed Specimen Arrival



*Either cool or up to ambient temperature

Analysis: Strength. The Bureau of Laboratories LRN-C Surge Capacity laboratory was able to follow the CDC methods for the analysis of ricinine, a biomarker for ricin. Based upon the specimen analysis, having the specimens arrive thawed and cool or up to ambient temperature provided satisfactory analytical results. Although, as shown here, it appears that shipping on dry ice is not required for the consistent and reproducible detection of ricinine. Hospital laboratories may want to consider using a dry ice vendor or local grocery store for obtaining dry ice for shipping patient specimens by commercial shipper.

Analysis: Area for Improvement. One Hospital laboratory had the specimens received at the Hospital facility but due to a miscommunication they remained in the hospital laboratory for three days into the Exercise before they were shipped to the Bureau of Laboratories. Unfortunately, they arrived too late to be included in the chemical analysis.

Recommendation: The Bureau of Laboratories LRN-C Chemical Threat Program laboratory participation in the CDC Proficiency Testing; Surge Capacity Exercises; and Simulation Exercises, such as this, have prepared the analytical chemists well for the response to a chemical exposure event. Participation in these activities should continue to be funded by the Public Health Emergency Preparedness Grant.

Objective 7: Support public health investigations (Function 4)

Activity 1: Establish and maintain the ability to provide analytical support for investigations with first responders and other health investigation community partners. (Task 1)

Observation: Although not demonstrated in this Exercise, the Bureau of Laboratories Biological Defense Coordinators do have LRN methods in place to be able to analyze food samples for ricin.

The Bureau of Laboratories Chemical Threat program was able to demonstrate support for public health investigations for patients potentially exposed to ricin by providing the chemical analysis for the biomarker ricinine.

The results for the patient clinical specimens and the pseudo food samples results were reported back to the health investigation community partners including the submitting hospital laboratories, the FBI, the Florida Poison Information Center, and the submitting county health departments (See Objective 8: Results Reporting below).

Analysis: Strength. The Bureau of Laboratories has the capability to provide analytical support for a multitude of biological and chemical threat agents.

The results for both the patient clinical specimens and the pseudo food samples were reported back to other health investigation community partners during the exercise (See Objective 8: Results Reporting below).

Analysis: Area for Improvement. NONE

Recommendation: NONE

Objective 8: Report Results (Function 5)

Activity 1: Notify appropriate public health, public safety, and law enforcement officials (24/7) of presumptive and/or confirmed laboratory results from clinical, food, or environmental samples that involve a chemical, radiological, or biological threat agent. (Task 1)

Observation: The Bureau of Laboratories Biological Defense Coordinators notified most of the partner agencies of the results of the pseudo food sample testing. However, one county health department Epidemiologist stated that they were not notified.

The results from the patient clinical specimens were reported back to the hospital laboratories as well as the partner agencies. One of the commenter's feedback stated that they had received verbal results for the specimens their Lab had sent out but asked if written results could also be received via fax or email.

As mentioned above (Capability 6: Information Sharing, Obj. 1, Activity 1), only the Jacksonville Poison Information Center was notified of the chemical testing results. This was probably due to the oversight of the Exercise Planning Team and the way the Florida Poison Information Centers Network call routing works. The information was phoned in from the Jacksonville BOL and they were, therefore, connected with the Jacksonville Poison Information Center. Although the Florida Poison Information Centers in Tampa didn't get a call from Jacksonville they indicated during the Hot Wash that they had been emailing each other. Also, the Tampa Center reported that they did receive the SIMCELL inject of the results.

During the Hot Wash conference call the discussion turned to the contact lists between the agencies. It was stated by one of the CHD Epidemiologists that they had the Bureau of Laboratories contact information which included multiple Biological Defense

Coordinators and at least one Chemical Threat Laboratory Coordinator on hand.

Also in this discussion, one of the hospital Laboratory Directors mentioned that it would be beneficial to have a general contact (and a backup) for the hospital laboratory in case the primary contact was not available. This would make sure that there is someone available to receive emails and/or phone calls at all times.

Analysis: Strength. The Bureau of Laboratories was able to report results for both the patient clinical specimens and the pseudo food samples back to the other health investigation community partners.

Partner agencies who need to contact the Bureau of Laboratories Biological Defense Coordinators and Chemical Threat Laboratory Coordinator have the needed information on hand.

Analysis: Area for Improvement. Not all partner agencies received the results reports for the pseudo food samples submitted. This might have been due to "real world" events that interrupted Exercise play.

The Florida Poison Information Center (Tampa) mentioned in the feedback that they didn't get the clinical patient testing results back directly from the BOL.

Recommendation: The Exercise Planning Team needs to consider the best way for information to be relayed to all participants including those who have specific routing procedures such as the Florida Poison Information Center.

It was suggested in the feedback that agencies have a Communication Plan.

In addition to verbal results reporting, the next Exercise should include sending the laboratory results by fax or email back to the submitting hospital laboratories or agencies.

Activity 2: Send presumptive and confirmed chemical, radiological, or biological laboratory results to CDC and all submitters. (Task 2)

Observation: This activity was included in the ExPlan, however for the exercise, special arrangements are required to send chemical testing results to the CDC through the LRN Messenger web application and these preparations were not completed.

Analysis: Strength. NA

Analysis: Area for Improvement. NA

Recommendation: The Bureau of Laboratories regularly sends presumptive and confirmed chemical or biological laboratory results to CDC during regular LRN testing and proficiency testing. The necessity to include this activity in future exercises will be reviewed.

CAPABILITY 13: PUBLIC HEALTH SURVEILLANCE AND EPIDEMIOLOGICAL INVESTIGATION

Objective 9: Conduct public health surveillance and detection. (Function 1)

Activity 1: Engage and retain stakeholders, which are defined by the jurisdiction, who can provide health data to support routine surveillance, including daily activities outside of an incident, and to support response to an identified public health threat or incident. (Task 1)

Observation: Providing health data to support routine surveillance would be a responsibility of the state laboratories. As described previously, the State Comprehensive Laboratory Response Plan (CLRP) establishes the framework to ensure that the State of Florida will be able to mount a laboratory response to public health hazards. The CLRP outlines the roles and responsibilities of the participating laboratories (government and nongovernment) and coordinates response and recovery activities across the full spectrum of responding entities. The CLRP unifies the efforts of these groups for a comprehensive approach to reducing the effects of an emergency and/or disaster.

To support the laboratory response are partners who would provide the samples and clinical specimens to be tested. In this exercise, the support partners included 15 hospital laboratories representing 12 counties in five of the seven regional areas throughout Florida. The hospitals varied in patient capacity from 84 beds to 1,067 beds, including four Level II trauma centers and two Pediatric trauma centers. These hospital laboratories were able to provide the patient clinical specimens to be tested to the Bureau of Laboratories.

Additionally, eleven county health departments (Epidemiology and Environmental Health) participated in the simulated food sample collection and the transportation to the Bureau of Laboratories.

As mentioned above, there was an artificiality in the Exercise design which wasn't realistic. The Exercise called for the CHD

Epidemiology involvement with the pseudo food sample collection and subsequent packaging and shipping. It was pointed out that it would have to be an overwhelming event (e.g. BT incident) for CHD Epidemiology to get involved with specimen/sample management. In a real foodborne outbreak, it is the Environmental Health people who would have the responsibility for collecting the food samples and then assuring that they are transported to the correct state laboratory.

Analysis: Strength. The State Comprehensive Laboratory Response Plan (CLRP) establishes the framework to ensure that the State of Florida will be able to mount a laboratory response to public health hazards.

Support partners including the county health departments and the hospital laboratories were able to provide samples and patient clinical specimens for laboratory analysis.

Analysis: Area for Improvement. NONE

Recommendation: Continue to update the State of Florida Comprehensive Laboratory Response Plan (CLRP) and distribute to all of the partner agencies. Continue to maintain an up to date, contact information database for the partner agencies.

Continue outreach and training for the health and medical community on the packaging and shipping of laboratory samples and specimens.

Activity 2: Maintain surveillance systems that can identify health problems, threats, and environmental hazards and receive and respond to (or investigate) reports 24/7. (Task 4)

Observation: The Exercise included an ESSENCE Alert as a SIMCELL Inject to simulate the patients presenting to the hospitals with nausea, vomiting and diarrhea and indicate the start of the food borne outbreak.

The feedback from one of the Surveillance Epidemiologists was that in a real event of this size they would need to provide the regional Epidemiologists (both from the Bureau of Epidemiology and the Division of Environmental Health) with their updates. Additionally, it was stated that some counties might continue to need further assistance to interpret the updates even if Environmental Health is in the lead (and possibly overwhelmed). It was suggested that EpiCom would serve this function in a real incident.

During the Exercise Planning Conferences it was noted that the ESSENCE application is also monitored by the Florida Poison

Information Center Network. During the Hot Wash call they indicated that they are regularly in contact with the epidemiologists when they detect evidence of an outbreak. During the Exercise, the Florida Poison Information Center contacted the Food and Waterborne Disease Program after consulting with the hospital regarding the patient symptoms.

During the Exercise, the designated county health department epidemiologist was able to give updated information to the Florida Poison Information Center as planned. However, when they called the Poison Information Center, the initial response was that they had already been notified with this information. The Epidemiologist had to ask her to go over what had been reported and then was able to provide the new, updated information. In the Participant Feedback the Epidemiologist stated that the "…poison center also contacted the [X] CHD which I think confused them greatly since they weren't participating in the exercise."

One of the comments in the feedback stated that there seemed to be some confusion on the first day. They were getting SIMCEL notices providing information before the regional player was able to provide the information. "About 3pm on the first day I got a call from two surveillance epi's to see if they should be concerned with their ESSENCE data b/c they saw the 6 cases related to the exercise." This could have been due to either the Exercise Design or player inaction.

Analysis: Strength. The simulated ESSENCE Alert allowed the epidemiologists to evaluate communications between regional and local levels.

The Florida Poison Information Center also monitors the ESSENCE application.

The county health department epidemiologists regularly are in contact with the Florida Poison Information Center and were able to give updated information on the patients.

Analysis: Area for Improvement. There appears to have been some confusion in the planned Exercise activities regarding the simulated ESSENCE alert which caused some confusion on the first day. This might have led to a slight misunderstanding between Florida Poison Information Center and county health department epidemiologist when updating with new information.

Recommendation: The Exercise Planning Team will need to work further with the players who would be involved with the response to an ESSENCE alert for the next exercise design.

Objective 10: Conduct public health and epidemiological investigations. (Function 2)

Activity 1: Conduct investigations of disease, injury or exposure in response to natural or man-made threats or incidents and ensure coordination of investigation with jurisdictional partner agencies. Partners include law enforcement, environmental health practitioners, public health nurses, maternal and child health, and other regulatory agencies if illegal activity is suspected. (Task 1)

Observation: Although an actual epidemiological investigation was not included in the Exercise, there were several related activities.

The Florida Poison Information Center contacted the Food and Waterborne Disease Program after being consulting with the hospital regarding the patient symptoms. This was to inform them of a possible foodborne outbreak.

To simulate an epidemiological investigation, the county health department Epidemiologists contacted the participating hospital laboratory in there county, if there was one. This was an artificiality for the Exercise. It was pointed out that the Epidemiologists would normally contact the Infection Control Practitioner at the hospital for inquiries.

During the Hot Wash it was stated by one of the Epidemiologists that the Infection Control Practitioner (ICP) are the main communication point for the County Department of Health Epidemiology. It was added that the ICPs "…are like the ambassadors to the hospital. They are the best, best contact at the hospital. They are critical for the public health hospital interaction." It was mentioned that the county Epidemiologists can provide a list of ICPs for contacting to invite to the next exercise.

As mentioned before, the feedback indicated that some people were left off the invitation list in the CHD who would be very important public health and epidemiological investigations. This includes the Preparedness Planners and Public Information Officers (PIO). It was thought that the Bureau of Preparedness and Response could be a good source for encouraging these individuals to participate in the next exercise.

During the exercise the county health department Epidemiologists or Environmental Health Scientists consulted with the Biological Defense Coordinator at the regional Bureau of Laboratories to determine how best to transport the samples and specimens to the laboratory. The laboratory analysis would be essential in conducting investigations of disease, injury or exposure in response to natural or man-made threats or incidents.

One of the comments in the Participant Feedback mentioned that

it might be beneficial to assess if the Epidemiologist at the CHD may be called upon to collect and transport food specimens. If so, appropriate training on collecting the samples and having on hand the appropriate size shipping containers for transporting the sample to the state laboratories would be important in epidemiological investigations.

Analysis: Strength. The Florida Poison Centers and the Epidemiologists have an excellent working relationship. It was also stated in the Participant Feedback that the "…communication between the regional epidemiologist, the CHD epidemiologist, and the lab was very good."

Analysis: Area for Improvement. It may be beneficial to assess if the Epidemiologist at the CHD may be called upon to collect and transport food specimens. If so, appropriate training on collecting the samples and having on hand the appropriate size shipping containers for transporting the sample to the state laboratories would be important epidemiological investigations.

The Exercise Planning Team needs to be sure to include as many partner agencies as possible who would be involved with investigations of disease, injury or exposure in response to natural or man-made threats or incidents.

Recommendation: It may be beneficial for the county epidemiologists to consider having training on collecting the samples and having on hand the appropriate size shipping containers for transporting the sample to the state laboratories would be important epidemiological investigations.

The Exercise Planning Team needs to be sure to include as many partner agencies as possible who would be involved with investigations of disease, injury or exposure in response to natural or man-made threats or incidents.

Activity 2: Provide epidemiological and environmental public health consultation, technical assistance, and information to local health departments regarding disease, injury, or exposure and methods of surveillance, investigation, and response. (Task 2)

Observation: During the Exercise Planning conferences, the Office of Communications indicated that they would be able to provide information to the county health department Public Information Officers (PIOs) regarding risk communication in response to the incident. During the Exercise they were able to provide ricin messaging products to the CHD PIO representatives through the Crisis and Emergency Risk Communication (CERC) Portal for their use.

The Florida Poison Information Center stated on the Question and Answer conference call that they would be able to provide information to medical providers on the treatment of the patients. They would begin preparing this information as soon as they realized that this was a public health emergency, although they would not release the information until there was confirmation.

Analysis: Strength. The Office of Communications would be able to provide information to the county health department Public Information Officers (PIOs) on risk communication in an event like this. Additionally, the Florida Poison Information Center would be able to provide information to medical providers on the treatment of the patients and would begin preparing this information as soon as they realized that this was a public health emergency, although they would not release the information until there was confirmation.

Analysis: Area for Improvement. NONE

Recommendation: NONE

Objective 11: Improve public health surveillance and epidemiological investigation systems. (Function 4)

Activity 1: Identify issues and outcomes during and after the incident. (Task 1)

Observation: One of the Epidemiologist participant feedback comments mentioned that in the setting of a large epidemiology outbreak, it is probably important to include both the Bureau of Epidemiology and Environmental Health regional epidemiologists when disseminating updates. It was thought that some counties will likely continue to need assistance to interpret the updates. It was suggested that EpiCom would serve this function in a real incident.

Analysis: Strength. The Exercise included an ESSENCE Alert; an EpiCom message; and a Health Alert Message to provide an opportunity to identify issues in public health surveillance and epidemiological investigation.

Analysis: Area for Improvement. NONE

Recommendation: Partner agencies should review their activities during the Exercise to identify strengths and areas for improvement regarding public health surveillance and epidemiological investigation systems.

Activity 2: Conduct post-incident/post-exercise agency evaluation meeting(s) including all active participants (e.g., law enforcement, volunteer agencies, clinical partners or environmental regulatory agency) to identify internal protocols and deficiencies that require corrective actions in areas such as programs, personnel, training, equipment, and organizational structure. (Task 2)

Observation: The Exercise Planning Team provided for three Hot Wash conference calls for the participating agencies to provide feedback and observations on the Exercise.

Analysis: Strength. The Hot Wash conference calls were well attended an the players gave valuable input on both the Exercise activities and the Exercise design.

Analysis: Area for Improvement. NONE

Recommendation: Continue to provide multiple Hot Wash conference calls on different days and times for the convenience of the participating agencies. The input received is invaluable in constructing a meaningful After Action Report.

Activity 3: Develop an After Action Report/Improvement Plan. (Task 3)

Observation: This activity was included in the ExPlan. However, the Exercise Planning Team did not incorporate a means to evaluate the activity specifically for improving public health surveillance and epidemiological investigation systems. It is preserved here as a place holder.

However, the Hot Wash conference calls were well attended an the players gave valuable input on both the Exercise activities and the Exercise design. Additionally, the Participant Feedback forms provided a wealth of information.

Analysis: Strength. The Hot Wash conference calls were well attended an the players gave valuable input on both the Exercise activities and the Exercise design. Additionally, the Participant Feedback forms provided a wealth of information

Analysis: Area for Improvement. NA

Recommendation: NA

Activity 4: Communicate recommended After Action Report Improvement Plan corrective actions to public health leadership. (Task 4)

Observation: This activity was included in the ExPlan. However, the Exercise Planning Team did not incorporate a means to evaluate

the activity specifically for improving public health surveillance and epidemiological investigation systems. It is preserved here as a place holder.

However, the Hot Wash conference calls were well attended an the players gave valuable input on both the Exercise activities and the Exercise design. Additionally, the Participant Feedback forms provided a wealth of information.

Analysis: Strength. The Hot Wash conference calls were well attended an the players gave valuable input on both the Exercise activities and the Exercise design. Additionally, the Participant Feedback forms provided a wealth of information

Analysis: Area for Improvement. NA

Recommendation: NA

SECTION 4: CONCLUSION

The *2012 Florida Biological Chemical Agent Full Scale Exercise* was a state-wide exercise to evaluate the response to a biological or chemical exposure incident scenario. The exercise incorporated many local, state and federal agencies that would respond to this type of incident. Overall this Full Scale Exercise proved to be very successful. All partner agencies were able to work together to provide an effective response to the biological-chemical exposure event. Moreover, this Exercise presented a practical learning environment for agencies to become familiar with the issues and concepts that may arise during a separate or combined biological chemical exposure incident. Participating agencies and staff were able to partner and respond to meet the Exercise objectives. As a result of this Exercise, not only are local, state and federal agencies more aware of the scope of response involved in a biological or chemical exposure event, but they also were able to determine where gaps existed in planning, procedures and inter/intra agency communication.

MAJOR STRENGTHS

The major strengths identified during this exercise include the following:

- The Exercise was able to bring together multiple local, state and federal agencies that would respond to a biological or chemical public health emergency. The Exercise Planning Conferences allowed everyone to participate and to learn how a multi agency response to a biological or chemical agent incident would be coordinated.
- The State of Florida Comprehensive Laboratory Response Plan for Chemical, Biological and Radiological Incidents (CLRP) describes how the use of Florida's laboratory resources will be coordinated to respond to public health emergencies of all types.
- Transporting either the patient specimens from the hospital laboratories or the pseudo food samples from the county health departments to the Bureau of Laboratories in a timely fashion was successfully demonstrated.
- Coordination for public health investigation between the epidemiologists, the Florida Poison Information Center Network, the hospital laboratories and the Bureau of Laboratories was very good.

PRIMARY AREAS FOR IMPROVEMENT

Throughout the exercise opportunities for improvement were identified. The primary areas for improvement, including recommendations, are as follows:

AREA FOR IMPROVEMENT

The Exercise needs to include additional participation from partner agencies. At the hospitals this would include Emergency Department personnel and Infection Control Practitioners (ICPs) and at the County Health Department level this would include Preparedness Planners and Public Information Officers.

KEY RECOMMENDATION: The Exercise Planning Team needs to include additional participation from partner agencies. It was stated that the CHD Epidemiologists can provide contact information for the hospital ICPs who, in turn, can encourage participation from the Emergency Department staff. It was also noted that the Bureau of Preparedness and Response would be a good source for contact information at the CHD level for Preparedness Planners and PIOs.

APPENDIX A: IMPROVEMENT PLAN

This Improvement Plan (IP) has been developed specifically for the participating agencies as a result of the *2012 Florida Biological Chemical Agent Full Scale Exercise* conducted on June 13-17, 2011. These recommendations draw on both the After Action Report and the Participant Feedback.

Table A.1 *Improvement Plan Matrix*

Capability	Observation Title	Recommendation	Corrective Action Description	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Information Sharing	Review Communication Plan	Each individual agency should review their communications plan.	Each individual agency should make updates as required to their communications plans.	Each individual agency	Agency Leadership	TBD	12/2012
Information Sharing	Include more partner agencies	Expand the outreach during the Exercise planning to include additional partner agencies.	Work with CHD Epidemiology and Bureau of Preparedness and Response to obtain hospital and CHD contact information.	Exercise Planning Team	Exercise Director	TBD	12/2012
Information Sharing	Increase interaction for information sharing	Expand the exercise to provide for more opportunities to exchange information.	Work with the Exercise Planning Team to provide for more opportunities to exchange information.	Exercise Planning Team	Exercise Director	TBD	12/2012
Information Sharing	Include entire networks in information sharing	The Exercise Planning Team needs to be aware of agencies that have networked information sharing.	Work with the Exercise Planning Team to provide for more opportunities for networked information sharing.	Exercise Planning Team	Exercise Director	TBD	12/2012
Public Health Laboratory Testing	Situational awareness	Include laboratorians early when it becomes apparent that there might be a public health emergency which will require their involvement.	Work laboratorians to discuss what needs they might have when responding to a public health emergency which will require their involvement.	Bureau of Laboratories	Agency Leadership	TBD	12/2012

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Report/Improvement Plan (AAR/IP)
2012 Florida Biological Chemical Agent Full Scale Exercise

Capability	Observation Title	Recommendation	Corrective Action Description	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Public Health Surveillance and Epidemiological Investigation	Packaging and shipping training	It may be beneficial for the county epidemiologists to consider having training on collecting the samples and having on hand the appropriate size shipping containers for transporting the sample to the state laboratories would be important epidemiological investigations.	1. Obtain training on packaging and shipping if the agency believes it will be needed. 2. Have packaging and shipping containers available.	County Health Department Environmental Health and Epidemiology Programs.	County Health Department Environmental Health and Epidemiology Program Leadership.	TBD	12/2012

APPENDIX B: MINUTES FROM QUESTION AND ANSWER CONFERENCE CALL

On Day 3 of the Exercise we had a general Question and Answer conference call. Since we had a large number of agencies involved in the Exercise, this gave us the opportunity to discuss the "what if's…" Agencies asked questions during the call regarding PPE for biological or chemical exposure, information sharing, and other issues they had.

Some of the questions were sent to the SIMCELL which was the facilitator for the conference call.

1. Would the Hospital Staff need to wear specific PPE (Personal Protective Equipment) for suspected ricin cases?

   The Florida Poison Information Center answered this question and they recommended that universal precautions be used. They further stated that there is no specific PPE used for ricin.

2. In a real Chemical event our hospital wouldn't have the shipping containers needed on hand. What is the best alternative method of shipping samples?

   The Bureau of Laboratories would work with the hospitals to be sure they had the necessary packaging and shipping supplies. These would be sent to the hospitals as they were during the Exercise.

3. This morning a SIMCELL Inject was sent indicating that there was a credible threat of intentional food poisoning. Who would the Florida Fusion Center share the information with about a credible threat of food poisoning or does this meet a criteria level yet? If so with who in the Department of Health?

   A participant from the FBI stated that they would be in touch with the Florida Fusion Center and FBI WMD at Headquarters to see if they have further information.

   It was further stated that the FBI has a good working relationship with DOH in Tallahassee (Leon County Public Health Hospital and EMS Preparedness Planner) whom they work with when investigating white powder incidents.

   Also, the FBI would be in touch with local CHD (MOU's in place all CHDs) for awareness and gather more information if available.

   The Food and Waterborne Disease Program (FWDP) is working to get Secret level clearance to join Florida Fusion Center so that environmental epidemiology will be part of the fusion center.

4. How long would it take for Florida Fusion Center, DOH, Epidemiology, Poison Information, etc. to put the pieces of the puzzle together to make the connection with the manifesto and

the food borne outbreak?

The Poison Information Center (Tampa) had narrowed down to the patient symptoms to be related to either ricin or arsenic by Tuesday (1 day post patient symptoms called in). It was stated that they would not release information at this time because there is not laboratory confirmation but would begin discussions with physicians who would call in for treatment advice.

Additionally, the Poison Information Center (Tampa) would possibly consult with BOL about laboratory tests or would direct physicians to contact the BOL.

Within minutes after receiving patient symptoms the Poison Information Center (Tampa) called the FWDP to let them know that there was a public health problem going on.

The FBI stated that they would be in consultation with FBI – WMD headquarters, CDC, and other partners on conference call to determine if it is a credible threat - do they have the behavioral resolve, is it technically feasible and operational practicability (in this case it is since they have already done it). If these criteria were met then they would start rolling assets to where the samples were and would use their hazmat unit to begin collecting samples, and working with RERAs (FDOH Regional Emergency Response Advisors) to transport to the LRN (Laboratory Response Network) for analysis and then ultimately to the FBI laboratory as well.

At this point the Florida Poison Information Center would be preparing information needed to respond to the incident (on both ricin and arsenic) so they could answer questions they might be asked but they wouldn't release any information until confirmation. Also, they would be identifying what laboratory testing should be done.

It was stated by the FWDP that if this wasn't a contamination with an exotic, such as ricin, but a more natural enteric, it would take a complete epidemiological investigation which could take a much longer time and might even be missed that it was an intentional event.

5. Would this incident benefit from setting up an Incident Command System (ICS) for the Department of Health (DOH)? If so, who would initiate the process for DOH?

The FWDP stated that they would begin to set up ICS. The members would include the entire Division of Disease Control, Bureau of Epidemiology, Division of Environmental Health, and the Bureau of Laboratories. The FWDP would rely on the Bureau of Preparedness and Response to organize and maybe take the lead on setting up the ICS.

6. What other chemical agents can the Bureau of Laboratories test for?

The Chemical Threat Program can analyze for ricin and arsenic as well as 10 to 12 other chemical agents including chemical warfare agents. What the Bureau of Laboratories would do would be to consult with the CDC. They would also get samples up to the CDC where they can use the Rapid Toxic Screen to screen for 150 possible chemicals.

Miscellaneous Questions

One of the participants at the County Health Department asked if shipping to the BT lab required special shipping labels that are needed and if so, what would they be.

It was stated that for the CT specimens they would need the UN3373 Category B, Biological Substance and if dry ice used Miscellaneous 9 Label.

For the biological food samples, we will be evaluating the consultation between the BT Coordinators and the CHDs so at this time we will not go into more detail on this call.

APPENDIX C: PARTICIPANT FEEDBACK SUMMARY

PART I: RECOMMENDATIONS AND CORRECTIVE ACTIONS

1. Based on the exercise events and the tasks identified, list the top 3 strengths and/or areas that need improvement that you identified after participating in the exercise.

[Agency X] representative did not seem to be very familiar with the exercise and specimens.
Good timeliness of specimen delivery
Clear instruction on packaging and shipping

STRENGTHS
a. Well thought out exercise with very broad group of participants
b. Great communication throughout the exercise by the core group – great documentation
c. Integrated laboratory focused plan (CDC to DOH to DOH Labs to hospital labs)

IMPROVEMENT OPPORTUNITIES
a. Too many people on conference calls – maybe next time, divide areas of focus (hospital separate from agencies) or limit to one person from each agency or facility
b. No notice to hospital when samples rec'd by local DOH lab

Strength- Communication between the regional epidemiologist, the CHD epidemiologist, and the lab was very good.
Weakness- the CHD epidemiologist had not had previous training or experience with packaging food samples. The correct size coolers were not available at the CHD Epi office for transporting a larger non clinical specimen.

Lab shipping part went very well.
Instructions were complete and the provision of the return shipping materials was very helpful.

Strengths: Sample analysis, P&S notification.
Area for Improvement: Communications across BOL lab regions.

1. Shipping materials were helpful and adequate.
2. The instructions for packing called for fiber strapping tape which our hospital did not have.
3. Would like to have bench technologists involved in the exercise if time permits.

[Partner agencies] need to have training in packaging and shipping just in case this ever does really happen

The CHD's were great in transporting samples to us: two transported and one sent photos of their packaging and shipping step by step via email since they could not fed ex properly due to lack of training

Strengths:
1. all 3 counties that sent packages to Tampa lab did it correctly
2. all 3 counties contacted us before they sent the samples

Needs Improvement:
1. Would have been nice to have more than 3 counties participate
2. [X] county didn't have anyone who was certified to package/ship

Make sure there is someone available to receive emails and/or phone calls.
Email or fax Lab results

Analysis was the strongest area.
Hospital/Health Department awareness of the exercise needs to be improved.
Packaging and shipping needs to be improved.

I thought this was a strong exercise.

Laboratory Analysis
Results Reporting

Sample transport
Communication amongst samplers
Communication amongst CT/BT stakeholders

CDC sent along with samples a chain of custody form.
[Our hospital laboratory] conducted the exercise in an expeditious manner.

a) Did not receive supplies by mail, instead they were physically delivered on the Friday before the start of the Exercise just making it.
b) Exercise Log was not used this year.
c) Additional hospital staff did not participate.

2. Identify the corrective actions that should be taken to address the issues identified above. For each corrective action, indicate if it is a high, medium, or low priority.

Determine who at the CHD may be called upon to collect and transport food specimens. If needed provide the appropriate training on collecting the samples and need to keep the appropriate size shipping containers for transporting the sample to the lab. - MEDIUM

High: We should find out the preferred method of communication and delegate a communications officer in each BOL lab region.

a. We will need to order tape (low).
b. Assign a tech to be involved in next exercise (medium).

The biggest thing that needs to be done is that the [agencies] have at least one person onsite that is trained to package and ship otherwise there could be a big problem in a real event

High---to have certified shippers on staff. We gave them the info to take the class.

a. Include an email "reply requested" to make sure emails are received and not missed or sent to Spam
b. Email or fax Lab results

Awareness – A reminder e-mail can be sent out Monday of the exercise to remind everyone to send out their samples. (This is probably low priority because most of the hospitals remembered.)
P&S – More training needs to be provided. (This is probably a high priority item because if the samples aren't packaged and shipped properly then the data can become skewed.)

I think there are potential issues with relying on the [one agency] for transport if there is a large influx of samples in a short period of time. I think public health officials that take samples should be able to bring us their samples directly instead of waiting for a RERA, law enforcement, or overnighting them. Depending, of course, on scale, scope, and other issues, this might be able to free up key personnel to perform other tasks (medium).

Obviously, there was a communication breakdown between our lab and the [X] CHD which was probably also hampered my mitigating issues not related to the exercise. However, there should probably be a process for ensuring that samples do not get lost or overlooked during a real emergency. There is also a question of when/how do positive results get reported to the requesting agency (high).

Assuming the only information received was through the SIMCELLs, I do not feel we (the BT lab) were adequately provided with the scope of what was going on. This information could be critical to us providing necessary information to our stakeholders and also helping us analyze our data and/or troubleshoot our assays. Some of this was probably lost between the samplers and the lab simply because it was an exercise and everyone "knew" what was going on, however, I think it is critical to let the BT labs know what is going on as soon as possible during an event. In other words, the first contact with the lab shouldn't be when samples are being prepared to be shipped to us. This information would also help us prepare equipment, reagents, personnel, etc. for an above average period of testing (medium).

As per Exercise guidance, a copy of the chain of custody form was sent with the specimens to the regional Bureau of Laboratories.

a) Supplies should be received in a more timely manner.
b) As per the Exercise guidance, the log was not necessary this year.
c) Additional hospital staff will be encouraged to participate in future exercises.

3. Who should be assigned responsibility for each corrective action in your agency?

   It may be a combination of the public health preparedness director, EH director, and environmental epidemiologist.

   CT Coordinator

   Microbiology department manager

   Since packaging and shipping is coming up, that should be part of the BT Trainer's responsibility to reach out to the CHD's

   Each laboratory should have one person that sends out a reminder e-mail. This can be the same person that receives and evaluates sample packaging.

   Each laboratory should already have someone responsible for training.

   Regarding transport, that would have to be a collaborative effort with all stakeholders based on the premise that getting the sample to the lab as fast as practical and with an intact chain of custody is paramount.

   For incoming samples, the BT coordinators are largely responsible for this. The RERAs should also be involved, especially for environmental samples or known BT events.

   For collaboration, I think this is largely a law enforcement function.

4. Is there anything you saw in the exercise that you might not have expected or anticipated in your current plans or SOP's?

   No, it was mostly the size of the shipping container that would be an issue for us. Everything else went as expected.

   No

   What to do if proper shipping materials aren't available

   No

   What to do if a CHD can't package and ship a sample because of lack of training

   n/a

   No

   Packaging and shipping of samples

   Again, I think transportation of the samples is one of the most important parts of an event. If samples are suspected for a BT event, those samples should be sent to the lab as soon as possible. I don't think that FedEx should be used for that unless there's

simply no other option. Even an overnight shipment could delay results for 12+ hours.

5. List the applicable equipment, training, policies, plans, and procedures that should be reviewed, revised, or developed for your agency. Indicate the priority level for each.

Hospital - Need process to store specimens being held in the freezer for shipment while maintaining a chain of custody.

Food sample collection, packaging, and shipping and related supplies

NA

Communication Flow Chart (for BOL CT and others?)

None

None

n/a

Each hospital or health department should have packaging and shipping supplies on stock in the event of a real emergency. Therefore, we should not have to send out supplies for an exercise.

I think in the future we need to simulate what it would be like to receive many samples all at once and spread out over the day to truly assess our surge capacity in an event like this. An event of that nature would require a completely different approach than the one we normally employ when responding to a white powder event (high).

PART II – EXERCISE DESIGN AND CONDUCT: ASSESSMENT

Please rate, on a scale of 1 to 5, your overall assessment of the exercise relative to the statements provided below, with **1** indicating **strong disagreement** with the statement and **5** indicating **strong agreement.**

Participant Assessment (N=15)

	Assessment Factor	Strongly Disagree (1) / Strongly Agree (5)
a.	The exercise was well structured and organized.	4.6
b.	The exercise scenario was plausible and realistic.	4.5
c.	The facilitator/controller(s) was knowledgeable about the area of play and kept the exercise on target.	4.9
d.	The exercise documentation provided to assist in preparing for and participating in the exercise was useful.	4.8
e.	Participation in the exercise was appropriate for someone in my position/agency.	4.8
f.	The participants included the right people in terms of level and mix of disciplines.	4.3
g.	This exercise allowed my laboratory to practice and improve priority capabilities.	4.4
h.	After this exercise, I believe my laboratory is better prepared to deal successfully with the scenario that was exercised.	4.4

PART III – PARTICIPANT FEEDBACK

Please provide any recommendations on how this exercise or future exercises could be improved or enhanced.

Clarification on when chain of custody on urine specimen starts in a real event. At the time of collection or upon receipt of labeled specimen by the laboratory.

Consider targeting conference calls to the needed audience for future exercises as the scope has broadened in terms of agencies, health departments and law enforcement.

I thought that it was very well laid out for what was mostly a simulation. I think that it would be more useful as a full scale on-site exercise, but this way allowed many more people to participate.

I think that the exercise was very helpful to us as a review of how to handle such an event. The materials provided will definitely be held a resource documents.

Make sure all participants understand and commit to their level of involvement.

More participation for the BT side (ie the RERAs, more CHD's)

Provide the Labs with written\electronic or faxed Lab results of Ricin content in patient specimens.

Each hospital or health department should have packaging and shipping supplies on stock in the event of a real emergency. Therefore, we should not have to send out supplies for an exercise.

Powerpoint slides to aid conference calls.

Next time, I would like to see a full-scale exercise in terms of samples and processing. We, as the BT labs, should use this time to simulate (by doing) a large influx of samples. Again, this would help us determine what needs we will need to quickly employ to respond to a large-scale event (versus a small-scale white powder incident).

HOT WASH CALL

Monday, 2/20/12, 10 AM

1. What were some of the issues you ran into?

   No Comments

2. What went as well or better than expected?

   No Comments

3. What did the other players at your agency/facility think of the exercise?

   No Comments

4. Who else at your agency/facility would you like to bring in as a participant in an exercise (Administration, Supervisors, etc.)?

   No Comments

5. What would you do different next time?

   I received verbal results for the specimens our Lab sent out. Will written results also be received via fax or email?

   Only the Tampa Poison Information Center was notified by hospital and CHD Epi. The other Poison Information Centers weren't. Faxing or providing the same information to the others would have been useful. Maybe next time have a dual notification system. Also, the Tampa Poison Information Center didn't receive the patients' laboratory results from the lab.

   [Moderator] – The mix up might have been due to the results reporting coming from the Jacksonville BOL. The call would have been routed to the Jacksonville Poison Information Center.

   The Tampa Poison Information Center didn't get a call from Jacksonville but did receive the SIMCELL inject of the results. The Tampa and Jacksonville Centers had been emailing each other. Also, having multiple hospitals and multiple CHDs for each region call into the Poison Centers would be a more realistic simulation.

   [Moderator] – Perhaps in the next exercise we can increase the number of patients for the patient symptom cards to get more hospitals to call the Poison Centers or perhaps have just a "contact call" from the regional hospitals or CHDs to the FPICs.

6. What activities would you like to see added to the exercise (e.g. ICS, more partner agencies, etc.)?

No Comments

Tuesday, 2/21/12, 2 PM

1. What were some of the issues you ran into?

No Comments

2. What went as well or better than expected?

The P&S Supplies we received at the hospital laboratory were well packaged and adequate.

[Moderator] – This would be the way the Bureau of Laboratories would provide the supplies a real event – "Just in Time". In discussions with other LRN-C laboratories we have found this to work better than having the hospitals store supplies which could expire or get lost.

3. What did the other players at your agency/facility think of the exercise?

It would be good to have a general contact (and a backup) for the hospital laboratory in case the primary contact is not available.

Did the hospital labs and CHDs use the contacts that the [Exercise Planning team] sent out or did they use there other contact lists?

Our CHD was able to use the provided sheet which was the same as the normal contact list we have on hand.

Was there more than one contact provided in case the primary was out.

Yes. On our list there were multiple BT and one CT contact.

4. Who else at your agency/facility would you like to bring in as a participant in an exercise (Administration, Supervisors, etc.)?

No Comments

5. What would you do different next time?

No Comments

6. What activities would you like to see added to the exercise (e.g. ICS, more partner agencies, etc.)?

We would like to see involvement from ED Department. Particularly in being able to recognize symptoms. Especially if it was a chemical agent. And also, how would they process them and treat them.

Wednesday, 2/22/12, 2 PM

1. What were some of the issues you ran into?

No Comments

2. What went as well or better than expected?

No Comments

3. What did the other players at your agency/facility think of the exercise?

In general we need to give more thought as to who we should invite to make sure we don't leave important groups out. The Infection Control Practitioners (ICP) are the main communication for public health department and epidemiology. The County Epi can provide a list of ICPs for contacting to invite to the next exercise. They are like the ambassadors to the hospital. They are the best, best contact at the hospital. They are critical for the public health hospital interaction.

4. Who else at your agency/facility would you like to bring in as a participant in an exercise (Administration, Supervisors, etc.)?

Some people were left off the invitation list in the CHD who would be very important. This includes the Preparedness people, and PIOs. Since this is a response to a public health emergency these people should be leading the response at the CHD level.

[Moderator] - The Bureau of Preparedness and Response (BPR) could be a good source of getting these people involved at the beginning of the exercise.

In the Exercise, we had the CHD Epi involvement with food sample collection, P&S, etc. Actually, the Environmental Health people would have this responsibility. It would have to be an overwhelming event, such as a BT incident, for the CHD Epi to get involved with specimen/sample management. At our CHD we do have an Epidemiology Response Team which is virtual and composed of volunteers from the CHD who have Epi training. We used this team during the 2009 H1N1 epidemic.

5. What would you do different next time?

No Comments

6. What activities would you like to see added to the exercise (e.g. ICS, more partner agencies, etc.)?

No Comments

(General comments for Hot Wash)

The Exercise was a good chance to show what the Epi role would be. We were able to keep our group updated on the progress of the Exercise on our Monday "Surveillance" Meeting.

As a positive remark, the hospital participation was very committed. Our Epi called to consult during the Exercise and we had a good discussion of status, etc.

Our CHD Epi did not receive report on BT samples but did receive the CT report.

[Moderator] – This might have been due to an extenuating circumstance for your region. One of the regional BOL had a "real world event" which temporarily took them out of play.

[Sent in by email]
I wanted to thank you for the opportunity to participate. I am happy to participate in future events as well. It was good to see the steps involved and what role we may or may not play in this situation.

I will say, that there seemed to be some confusion on the first day. I was getting your SIMCEL notices before what would have been the original notifications from the regional epi. When I called the poison center, their response was that they had already been notified. I had to ask her to go over what had been reported and gave her new information from me. The poison center also contacted the [non-participating] CHD which I think confused them greatly since they weren't participating in the exercise. About 3pm on the first day I got a call from two surveillance epi's to see if they should be concerned with their ESSENCE data because they saw the 6 cases related to the exercise. I know [hospital X] wanted to participate, but it may have been helpful to have tweaked that part a little bit. All in all, I thought it was good experience.

APPENDIX D: EXERCISE EVENTS SUMMARY TABLE

Table D.1: Exercise Major Events Summary

Date	Time	Simulated Inject or Player Action	Event/Action
2/6/2012	10:00 AM	Player Action	Patient spiked specimens are staged at the hospital laboratories for the Exercise.
2/12/2012	8:00 AM	Simulated Inject	The Big Moose Lodge holds their annual Fund Drive and Fair over the weekend.
2/12/2012	8:00 PM	Simulated Inject	Patients have been presenting to local hospitals with symptoms of of nausea, vomiting, diarrhea, and weakness with bloody diarrhea and abdominal pain.
2/13/2012	8:00 AM	Simulated Inject	**Exercise Play Begins**
2/13/2012	8:00 AM	Player Action	ESSENCE NVD alert triggered within 24 hours
2/13/2012	8:10 AM	Player Action	The Hospital calls the Poison Information Center regarding unusual outbreak with multiple patients.
2/13/2012	8:20 AM	Player Action	The Food and Waterborne Disease Program Epidemiology is notified by the Poison Information Center of an unusual foodborne outbreak with multiple patients.
2/13/2012	8:40 AM	Simulated Inject	Simulated epidemiology investigation.
2/13/2012	9:30 AM	Simulated Inject	The SIMCELL will mimic an EpiCom message for external partners who are not part of FDENS.
2/13/2012	10:00 AM	Player Action	Hospitals package and ship patient specimens to regional BOL.
2/13/2012	12:00 PM	Player Action	BOL begins receiving Patient spiked specimens received from hospital laboratories.
2/14/2012	8:00 AM	Simulated Inject	**Exercise Day 2**
2/14/2012	10:00 AM	Player Action	Patient spiked specimens are sent to the Jacksonville BOL by commercial carrier (FedEx). The Jacksonville BOL is notified to expect the delivery of patient specimens.
2/15/2012	8:00 AM	Simulated Inject	**Exercise Day 3**

Date	Time	Simulated Inject or Player Action	Event/Action
2/15/2012	8:15 AM	Simulated Inject	The newspaper receives a manifesto letter from the Concerned Citizens for the Constitution.
2/15/2012	8:15 AM	Simulated Inject	Law Enforcement contacts the FBI regarding the manifesto letter from the CCC.
2/15/2012	8:15 AM	Player Action	FBI contacts the Florida Fusion Center regarding the manifesto letter.
2/15/2012	9:30 AM	Simulated Inject	Epidemiological investigation traces foodborne outbreak back to Big Moose Lodge.
2/15/2012	10:00 AM	Player Action	Consultation Call with all agencies.
2/15/2012	11:00 AM	Simulated Inject	Health Alert Network (HAN) Message is coordinated with the JIC.
2/15/2012	11:30 PM	Player Action	CHDs package and ship psuedo suspected food samples to the BOL.
2/16/2012	8:00 AM	Simulated Inject	**Exercise Day 4**
2/16/2012	9:00 AM	Player Action	BOL BT reports results for ricin in suspected food samples.
2/17/2012	8:00 AM	Simulated Inject	**Exercise Day 5**
2/17/2012	10:00 AM	Player Action	BOL CT Level 1 laboratory reports results of CT analysis.
2/17/2012	3:00 PM	Simulated Inject	**Exercise Ends**

APPENDIX E: ACRONYMS

Acronym	Meaning
AAR/IP	After Action Report/Improvement Plan
CDC	Centers for Disease Prevention and Control
CDC EOC	CDC Emergency Operation Center
CERT	Chemical Emergency Response Team
CT	Chemical Threat
CTLC	Chemical Threat Laboratory Coordinator
DBX	Discussion Based Exercise
DHS	U.S. Department of Homeland Security
DMAT	Disaster Medical Assistance Team
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EOC	Emergency Operation Center
EPA	Environmental Protection Agency
ESSENCE	Electronic Surveillance System for the Early Notification of Community Based Epidemics
ExPlan	Exercise Plan
FBI	Federal Bureau of Investigation
FDA	Food and Drug Administration
FDENS	Florida Department of Health Emergency Notification System
FERN	Food Emergency Response Network
FSE	Full Scale Exercise
FE	Full Scale Exercise
HazMat	Hazardous Materials
HSEEP	Homeland Security Exercise and Evaluation Program
ICS	Incident Command System
JIC	Joint Information Center
LRN	Laboratory Response Network
LRN-C	Laboratory Response Network Chemical laboratory
MOU	Memorandum of Understanding
MSEL	Master Scenario Events List
NIMS	National Incident Management System
PIC	Poison Information Center
PIO	Public Information Officer
SitMan	Situation Manual
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SPHL	State Public Health Laboratory
TCL	Target Capabilities List

Attachment D – After Action Report Template

- Attachment D-1: Guidelines for a Formal After Action Review
- Attachment D-2: After Action Review Process Steps, S. Agona Outline
- Attachment D-3: Mad Minute AAR Template
- Attachment D-4: MN RRT Hotwash Template
- Attachment D-5: USAID After-Action Review Technical Guidance

After Action Reviews
Attachment D-1

GUIDELINES FOR A FORMAL AFTER ACTION REVIEW

Purpose:
An AAR is a structured review process that allows participants to discover for themselves what happened, why it happened, and how it can improved. An AAR is not a critique; the objective is not to determine the success or failure of a response.

Session Outcome:
To document the lessons learned from the AAR so the improvements can be institutionalized.

Who should be involved in the AAR
All (or a representative group of) participants involved in the incident being discussed. All viewpoints are relevant and beneficial. It is important to consider the different perspectives that event organizers may have from the actual participants.

How to conduct the AAR

- Decide ahead of time:
  - Who will facilitate the session? The facilitator of the session should be neutral and work to ensure all viewpoints are expressed. (For the purposes of this document the term facilitator will refer to the leader of the session.)
  - What supplies will be needed?
    - flipchart, storyboard, handouts.....
- A neutral facilitator focuses the discussion and works to ensure participation. The facilitator does not critique nor judge the success or failure of the incident being discussed.
- Keep the review focused and concise. Discourage debates and excuses.
- Encourage participation from all participants.
- Let the participants identify the situation for themselves (including their mistakes and successes), the facilitator/leader does not critique.
- To encourage participation the facilitator should use leading questions such as:
  - "What were the steps involved?"
  - "In your opinion, what would have been the ideal way of doing that?"
  - "How could communication have been better"
  - "Next time what would you do differently"
  - "What are some ways we could have prevented the incident from occurring "
- Try starting the session by making a storyboard flowchart of the event. In this phase, seek to establish a common understanding of what happened and the order in which the events took place. Do not analyze the event for what should have occurred, merely document WHAT ACTUALLY OCCURRED.
  - After the flowchart is made, analyze the flowchart for improvement opportunities. Ask questions such as,
    - Were the proper individuals notified in a timely fashion?
    - Did all participants in the event have a clear understanding of their roles?
    - Is there a more effective way to communicate?
    - Are there any procedures which are unnecessarily burdensome?
    - How would the ideal flowchart differ?
    - What safeguards can be put into the system?
    - Are there any redundancies?
    - Are there any steps that could have been prevented by doing a prior step correctly?
    - Were the proper resources readily available?

After Action Reviews
Attachment D-1

Formal After Action Review Form

AAR for:

Facilitator/Leader

Date: Location:

Start Time: End Time:

Key Lessons Learned From AAR

What should be done differently? What should we continue to do? What policy changes should be made? What does the AAR group recommend?

Action Item List

Assign Action Items for the implementation of the lessons learned.

Person	Task	Deadline

GUIDELINES FOR AN INFORMAL AFTER ACTION REVIEW

After Action Reviews
Attachment D-1

Purpose:
An informal AAR is much less structured than a formal AAR. An informal AAR is simply a review of the weeks activities and a discussion of improvement ideas between you and your staff. The purposes include:

- To allow your staff input on how to improve the effectiveness of your operation.
- To help the department take meaningful actions that are ground level specific so the employees can see improvements occurring within their own area.
- To generate improvement actions that will be monitored for completion.

Time Commitment:
The time to conduct an AAR will vary week to week but, on average should take between 10-20 minutes.

Session Outcome:
The ideas gathered during the review should be captured and actions should be generated on improving your area.

Who should be involved in the AAR
Informal AARs should be conducted at every PFD level. Every manager and supervisor should hold an informal AAR with their direct reports.

Frequency of informal AARs
Ideally, each work week would conclude with an AAR. Informal AARs should be held on a regular basis. At the least, an informal AAR with your staff should be held monthly.

How to conduct an informal AAR
An AAR can done at the end of regular staff meetings. The ideas generated should be captured to enable them to be prioritized and acted upon. Some of the key questions to ask are:

- What went well this week? How can we institutionalize the success?
- What went poorly this week? How can we ensure it doesn't happen again?

Some different methods for capturing the ideas are:

- On flipcharts
  A) Use a happy face (for things that went well) and a sad face (for things that went poorly). *Refer to figure 1*
  B) Writing the ideas under appropriate titles *Refer to figure 2*
- Using storyboard cards.

Figure 1

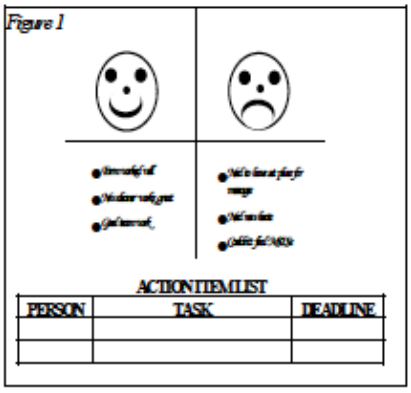
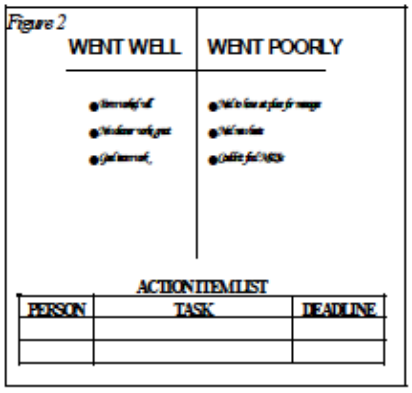


Figure 2



Some tips to make your AAR go more smoothly:

- Keep the review focused and concise. Discourage debates and excuses.
- Encourage participation from all participants.
- Let the participants identify the weeks events for themselves (including mistakes and successes), the facilitator/leader does not critique.
- To encourage participation, the session leader can use leading questions such as:
  - How could we have worked smarter this week?
  - What were some opportunities to increase communication this week?
  - How was our teamwork?
  - Are there any procedures which are unnecessarily burdensome?
  - Were the proper resources readily available?

Capturing action items

The purpose an AAR is to generate ideas for action. These actions must be identified and then monitored until completion. The following format can be effective in keeping track of assigned actions.

Action Item List

Person	Task	Deadline

After Action Review Process Steps

Use the following questions to facilitate the AAR process:

1. What did we set out to do?
   - Establish the facts
   - Determine purpose of the mission and definition of success:

This is a broad outline of the objectives of the Salmonella Agona Texas RRT

The RRT was officially stood up on 6/23/11.
There were two main goals initially:

a. ***Obtain source records from identified distribution centers.***
b. ***Contact other RRT states involved in the outbreak for additional information (WA, CA, IL).***

Based upon the findings from the distribution centers the investigation focus changed to:

c. ***Sample (environmental and product) at 3 locations in Alamo Texas. and Hidalgo Texas (Fresh Tex, Tex Star Distributors, and Agromod. This was accomplished using Two sampling teams comprised of FDA & DSHS.***
d. ***Review invoices from Mexican firms to look for any commonalities of farm supplier to U.S. distributors.***
e. ***Request recall of papayas from Agromod.***

On Wednesday 7/27/2011, the Command Staff met and officially deactivated the RRT.

   - Specify conditions under which each task may need to be performed (weather, topography, time restrictions, etc.)
   - Define acceptable standards for success (explain what "right" looks like)

2. What actually happened?
   - Continue to establish the facts.
     - Participants should come to agreement on what actually happened.
     - Pool multiple perspectives to build a shared picture of what happened

3. Why did it happen?
   - Analyze cause and effect
     - Focus on WHAT not WHO
     - Provide progressive refinement for drawing out explanations of what occurred. This will lead into developing possible solutions.

4. What are you going to do better next time?
   - Solutions will arise naturally once problems are identified and understood.
     - Focus on items you can fix, rather than external forces outside your control.
     - Identify areas where groups are performing well and that should be sustained.
       - Areas to Sustain/Maintain Strengths:

- Areas to Improve Weaknesses:

5. What are the lessons learned?
   - Identify the process for sharing lessons learned.
   - Determine and describe the most notable successes from the incident.
   - Determine and describe the most difficult challenges faced and how they were overcome.

6. What followup is needed?
   - Be specific about actions, timelines, and responsibilities.
     - What changes, additions, or deletions are recommended to SOP's, plans or training?
     - What issues were not resolved to your satisfaction and need further review?

Discussion Draft: April 13, 2011

After Action Report Template

Incident Title: _____
Incident Date(s):_____
Report Date: _____
Participants: _____

Ground Rules (Review as needed)
The facilitator reviews ground rules at the onset of an AAR

- All participants have equal status
- Plain speaking is essential
- Tact and civility are required
- This is a "No-Fault" evaluation. Focus on "what" and not "who". Avoid finding fault or assigning blame. During the discussion, mistakes are not held against those who admit them. However, this does not grant immunity outside of the AAR for malfeasance or gross negligence.
- Discussion details stay "in house". Relevant information from lessons learned will be incorporated into the after action report.

Executive Summary Key Points - Address what was planned vs. what actually happened

-

Incident Timeline of key dates and events (if available)

-

Areas That Worked Well

-

Suggestions For Further Improvements

-

Other comments

-

Name of Incident/Facility

HOT WASH
Date

Attendance:
Minnesota Department of Agriculture:

FDA MPLS District Office:

Facilitator/Note Taker:

Reason/Purpose for HOT WASH:

- To discuss value of MDA and FDA staff experiences regarding the Rapid Response Team (RRT) involved with a just concluded response activity
- What Worked, what didn't work
- What can be changed/improved upon

Specific areas to be discussed include:

1) Communication/Information sharing
2) Use of ICS structure during an investigation
3) Epidemiological Investigation
4) Traceback
5) Field Investigation (mulitiple firms?)
6) Sample Collection and Submission
7) Laboratory Analysis/Reporting
8)

Outcomes:

- Lessons Learned – Knowledge and experience, positive or negative, derived from actual incidents as well as from observations and historical study of operations, training and exercises
- Best Practices Identified – Exemplary, peer-validated techniques, procedures, good ideas, or solutions that work and are solidly grounded in actual operations, training, and exercise experience.

Name of Incident/Facility

After Action Reviews
Attachment D-4

HOT WASH
Date
Improvement Plan

This improvement plan has been developed specifically for the MN RRT as a result of the [name of incident] in [date of incident].

Tasks	Recommendations	Improvement Recommendations	Responsible Party/Agency	Completion Date

After Action Reviews
Attachment D-5

AFTER-ACTION REVIEW
TECHNICAL GUIDANCE

February 2006

PN-ADF-360

Contents

After Action Reviews
Attachment D-5

Foreword

As USAID works to achieve its development mission, learning from experience is essential. The After-Action Review (AAR) is a leadership and knowledge sharing tool that helps professionals within USAID and across the partner community to better understand important events, activities, or programs. That knowledge, gleaned from and compiled by those closest to the review, can be used by senior leadership to improve results and then can be shared with others who are planning, developing, implementing, and evaluating similar efforts. Managed and conducted by those closest to the activity, AARs identify how to correct deficiencies, sustain strengths, and focus on improved performance of specific tasks, activities, events, or programs.

It is essential that USAID understands the benefits of the AAR tool. When administered in a climate of openness, honest discussion, clarity, and commitment to identifying and recommending solutions, the AAR can yield many benefits. The participants in the review—managers, leaders, and those planning to pursue similar activities in the future—will understand better what was originally intended, what actually happened, what went well and why, and what can be improved and how. Furthermore, the AAR report makes concrete and actionable recommendations for changes and improvements that will impact future success in carrying out this task or similar activities.

This handbook—the USAID guide on how to plan, prepare, and conduct an AAR—was developed by USAID Knowledge for Development (KfD) using the United States Army's TC (Technical Circular) 25-20 as a guide. The Army developed the concept of AARs as an essential training methodology for soldiers in preparing for both combat duty and ongoing programs such as peacekeeping.

As the USAID Knowledge for Development leader, I take great pride in presenting the USAID AAR Technical Guidance. I can personally attest to the usefulness and strength of the After Action Review based on my 21 years of service in the U.S. Army. I benefited from AARs throughout my

former career and continue to benefit from its use in meeting my responsibilities within USAID.

The KfD team trusts this guidance will be helpful to you as you conduct your own AARs. We encourage your feedback on this guidance and look forward to your suggestions. Please feel free to contact the team at KfD@usaid.gov.

Susan C Wallace

Susan Camarena Wallace
Chair, Knowledge for Development Subcommittee
Business Transformation Executive Committee

After Action Reviews
Attachment D-5

CHAPTER 1

The After-Action Review

DEFINITION AND PURPOSE

An after-action review (AAR) is a professional discussion of an event, that focuses on performance standards and enables development professionals and colleagues with similar or shared interests to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses. The AAR tool affords leaders, staff, and partners an opportunity to gain maximum benefit from every program, activity, or task. It provides:

- Candid insights into specific strengths and weaknesses from various perspectives
- Feedback and insight critical to improved performance
- Details often lacking in evaluation reports alone

The AAR is the basis for learning from our successes and failures. A good manager or leader does not learn in a vacuum: the people involved in an activity—those closest to it—are the ones best poised to identify the learning it offers. No one, regardless of how skilled or experienced they are, will see as much as those who actually carry out the events, program, or activity. The AAR is the keystone of the process of learning from successes and failures.

Feedback compares the actual output of a process with the intended outcome. By focusing on the desired outcome and by describing specific observations, teams can identify strengths and weaknesses and together decide how to improve performance. This shared learning improves team proficiency and promotes bonding, collegiality, and group cohesion. Though not a cure-all for all issues or problems, the AAR provides a starting point for improvements to future activities.

Because AAR participants actively discover what happened and why, they can learn and remember more than they would from a critique or more

formal evaluation. A critique only gives one viewpoint and frequently provides little opportunity for discussion of events by participants. Other observations and comments may not be encouraged. The climate of a critique, focusing on what is wrong, often prevents candid discussion and stifles opportunities for learning and team building.

Refer to Appendix A for a slide that can be used to talk about what the AAR is, is not, and its effectiveness.

TYPES OF AARs

All AARs follow the same general format, involve the exchange of ideas and observations, and focus on improving training proficiency. AAR organizers can decide whether the review will be formal or informal. See Appendix B for a review of key features.

Formal AARs require more resources and involve more detailed planning, coordination, logistical support, supplies, and time for facilitation and report preparation. A facilitator guides the review discussion, and notes are recorded on flip charts with the help of a dedicated scribe. The meeting should follow an agenda, using the four guiding questions to set up the "meat" of the discussion. Following the AAR session itself, a formal report is presented. Recommendations and actionable items are later brought to the attention of Agency management.

Informal AARs are usually conducted on-site immediately following an event, activity, or program. They require a different level of preparation, planning, time to be carried out, facilitation, and reporting. Frequently, an informal AAR is carried out by those responsible for the activity, and if necessary, the discussion leader or facilitator can either be identified beforehand or chosen by the team itself. As with a formal AAR, the standard format and questions guide the discussion.

Team or project leaders may use informal AARs as on-the-spot coaching tools while reviewing overall group or individual performance. For example, the team could quickly

- Evaluate performance against a desired standard or established performance objective

- Identify strengths and weaknesses
- Decide how to improve performance

In addition, informal AARs provide instant feedback ideas and solutions can be immediately put to use, and the team can learn from them for future or similar application. Providing direct feedback, just in time, is a key strength of the informal AAR.

PLANNING AND CARRYING OUT THE AAR

The date and time of the AAR should be identified as part of the planning schedule for the event. It is imperative that the AAR be considered as an integral part of the entire planning process.

The AAR process has four steps:

- Step 1. Planning the AAR
- Step 2. Preparing for the AAR
- Step 3. Conducting the AAR
- Step 4. Following up (using the AAR results)

Refer to Chapters 2 through 5 for more details about these four steps. The following chart summarizes the actions leaders should follow to ensure effective AARs.

After Action Reviews
Attachment D-5

The AAR Process

Planning the AAR
- Identify an event or activity to be reviewed
- Identify the primary point of contact for the review
- Determine when the AAR will occur
- Decide who will attend the AAR
- Select when and where the AAR will take place (plan for no more than 90 minutes)
- Confirm who will support the AAR (technical lead, champion, point of contact, scribe)

Preparing for the AAR
- Select a facilitator
- Confirm the venue and agenda
- Obtain input from interested parties
- Announce the AAR and compile list of attendees
- Make logistical arrangements and set up the venue

Conducting the AAR
- Seek maximum participation
- Maintain focus on a positive and informative AAR
- Ensure honest, candid, and professional dialogue
- Record key points

Following up (using the AAR results)
- Determine actionable recommendations that will improve the process
- Identify tasks requiring senior leadership decisions
- Determine a follow up schedule and point of contact for each follow-up action
- Provide assistance and support as required

Notes:

After Action Reviews
Attachment D-5

CHAPTER 2

Planning the After-Action Review

IDENTIFY THE EVENT OR ACTIVITY TO BE REVIEWED

Leadership, or others invested in the sustainability of an event, activity, or process, decides on the topic of the review. The scope and substance of the review can be large-scale or far-reaching, or it can be relatively specific or narrow.

The review may focus on substantive issues: problems being solved, opportunities or challenges that were addressed, a concrete product, or a discrete event or activity. Or the review may focus on process: support, logistics, technology, etc. Regardless of what is decided for the AAR topic's scope, boundaries, and specific content, it is critical to be clear about those parameters so that all review participants, as well as individuals who will read and be affected by the report, understand what is covered.

IDENTIFY PRIMARY POINT OF CONTACT FOR REVIEW

It is important to identify the single Point of Contact (POC) for each review. The POC is someone with a vested interest in completing the review. In addition, the POC should have broad and sufficient access to the necessary people, resources, leadership, ideas, and additional input needed to carry out the review. The POC ensures that notes are captured from the review discussion and that the report is prepared and submitted. Finally, the POC takes responsibility for any required next steps identified in the report or as implied by its production. These could include follow-on actions, securing broader visibility for the report, and addressing any related actionable recommendations.

DETERMINE WHO WILL ATTEND

The team, project, or activity leader specifies who must attend each AAR. Normally, only key players attend. At times, however, more participants

will yield better or more complete feedback. Leaders must select as many participants as appropriate for the task and the overall conduct of the AAR. In some cases, it might be useful to identify a representative from a particular group, point of view, or interest area to provide additional input into the reviews. A separate discussion can be held beforehand, and one of the key players can "represent" the relevant AAR feedback in the actual AAR session. Or, if appropriate, one or two additional participants can attend the session.

DETERMINE WHEN THE AAR WILL OCCUR

The AAR should occur as soon as possible after an event, and when possible within the first two weeks. Participants will receive better feedback on the overall performance and remember the lessons longer if the AAR is timely and the conduct of the AAR is not rushed. The AAR should last no longer than 90 minutes.

SELECT AN AAR LOCATION

When feasible, the AAR location should be accessible to all participants, well supplied with materials for the AAR, and readily available in case of schedule changes.

CONFIRM WHO WILL SUPPORT THE AAR

The purpose of the AAR is to give management and the team closest to an event, process, or activity the best opportunity to sustain successes and introduce necessary improvements and changes. It is important to enlist key leader support early and keep participants interested, involved, and informed throughout the AAR process. This leadership presence and engagement signals that there is an organizational champion who supports the AAR process and understands its contributions to increased learning, knowledge-sharing, sustainability of success, and change.

Determine the other aspects of support. Identify the event or activity's technical lead, champion, organizational point of contact, and the scribe and/or report writer.

CHAPTER 3

Preparing for the After-Action Review

After the AAR topic has been confirmed, details regarding its conduct should be reviewed. (For a concise list of planning and preparation steps, refer to Appendix C, Checklist for Planning and Holding an After-Action Review). Arranging for facilitation and handling all logistical support should be done by the "owner" of the AAR—the organization or office being reviewed.

FACILITATION

When an outside facilitator is used (normally during the formal AAR), it is important to identify someone who is able to focus and guide the review discussion. While the AAR facilitator should maintain objectivity throughout the review, it may be useful to enlist someone who is somewhat knowledgeable about the subject or topic of the review. That would minimize the learning curve and enable technical discussions to be carried out and recorded clearly. If the team decides to conduct an AAR under its own leadership, the team leader must ensure that all background materials are considered—reports, surveys, planning documents or other input. This will yield an AAR that is complete, thorough, and appropriate.

CONFIRM THE VENUE AND AGENDA

The activity's logistical support staff should make final arrangements for the venue. This includes developing plans or instructions for room set-up, supplies, and any supporting documents and historical materials. The facilitator should finalize the agenda and copy it for distribution to the participants. If needed, flip charts can be prepared, to keep discussion moving swiftly and smoothly and to support notes being captured by the scribe and/or person responsible for the report.

OBTAIN INPUT FROM INTERESTED PARTIES

In many cases, an event, activity, or program attracts interest or engagement from others beyond those comprising the immediate or core team. For example, customers, stakeholders, or others engaged in similar or related activities or programs might be able to offer interesting ideas and recommendations that would be of value to the review process and the AAR report. The facilitator determines whether and how to represent that input for the actual AAR. Before the review session, the facilitator or a designated team member should consult with these outside representatives and then summarize the input for the AAR.

The topic leader should determine whether and how to represent that input in the AAR. It might be useful to identify a representative from a particular group, point of view, or interest area and invite that individual to attend the review session. Selected or relevant observations, ideas, and recommendations could be conveyed to a member of the core group, who would bring them into the AAR discussion when and as appropriate. Additionally, it might be more appropriate to collect this feedback during a separate session, to be carried out later.

SEND ANNOUNCEMENT AND COMPILE ATTENDEE LIST

It is important to know who will be attending the AAR session. Collecting RSVPs ensures that the commitment is being taken seriously by both leadership and those closest to the event, activity, or program. In addition, the leader or organizational point of contact for the review should confirm that a scribe/recorder will attend and that there is clear understanding of what the review notes and the report should include.

MAKE LOGISTICAL ARRANGEMENTS AND SET UP VENUE

See Appendix D for suggested checklist showing the logistical support needed prior to, during, and after an AAR.

CHAPTER 4

After Action Reviews
Attachment D-5

Conducting the After-Action Review

INTRODUCTION AND GROUND RULES

The event, activity, or program is completed, AAR preparation is complete, and the key players are at the designated AAR site. It is now time to conduct the AAR.

Each AAR can be opened in a variety of ways. One proven method is to begin the session with an "attention getter"— a joke, an appropriate anecdote, or an example that illustrates the AAR process itself.

Then, the AAR facilitator should review the purpose and sequence of the AAR to ensure that everyone understands what an AAR is and how it works. The introduction should also include some ground rules for conducting and managing the discussion and notes on the role of the facilitator. (See Appendix E for sample ground rules and the role of the facilitator.)

The substantive introduction to the AAR itself should include the following:

- An AAR is a dynamic, candid, professional discussion of the event, activity, or program itself. Everyone can, and should, participate if they have an insight, observation, or question that will help identify and correct deficiencies or maintain strengths.
- An AAR is not a critique or a complaint session. No one, regardless of rank, position, or strength of personality has all of the information or answers. AARs maximize learning by offering a venue for staff and leadership to talk frankly about a topic, produce a report, and better understand how to carry out similar events, activities, or programs in the future.
- An AAR is not a full-scale evaluation or evaluation report. That is, an AAR does not grade success or failure. There are always weaknesses

to improve, strengths to sustain, and opportunities to learn from experience.

- An AAR answers four major questions:
  - What was expected to happen?
  - What actually occurred?
  - What went well, and why?
  - What can be improved, and how?

FACILITATION OF THE AAR

The AAR facilitator should make a concerted effort to draw in and include all participants in the AAR session. A sample agenda for the AAR is included in Appendix F to help structure the discussion. The following techniques can help create an atmosphere that invites and is conducive to maximum participation. The facilitator should:

- Reinforce the fact that it is permissible to disagree
- Focus on learning
- Encourage people to give honest opinions
- Use open-ended questions to guide the discussion
- Paraphrase, re-state, and summarize key discussion points
- Invite input from an activity or program's leadership, to establish context, set discussion parameters (if any), and introduce or reinforce the way ahead

WHAT DID WE INTEND TO DO?

The facilitator can open the discussion by beginning with a big-picture question, such as "Looking broadly at this event/activity/program, how would you describe it, in one sentence?" This will help frame the introduction or background that goes into the report's opening paragraph.

Then the AAR facilitator should ask the participants to talk, in complete detail, about what was intended or envisioned. What was the purpose and objectives? Who was the audience? What was the timing? Who was involved? What outcomes and outputs were intended? What products were to be produced? What were the guidance and standards for those engaged in this event, activity, or program? What were the underlying conditions or issues of context or environment?

The facilitator and/or the recorder/scribe should take notes on all that was discussed. Flip charts are a convenient tool to make these notes visible for all participating in the review and better ensure a common understanding of and agreement to what is said.

WHAT ACTUALLY HAPPENED?

The AAR facilitator now guides the review using a logical sequence of events to describe and discuss what happened. He/she should not ask yes or no questions, but encourage participation and guide discussion by using open-ended and leading questions. An open-ended question has no specific answer and allows the participants to reply based on what they perceived as significant. Open-ended questions are less likely to put participants on the defensive. For example, it is better to ask,

"How did you think the townspeople would respond to your request?"
—rather than—
"Why did you ask the townspeople that question?"

As the discussion expands and more participants add their perspectives, what really happened will become clear. Remember, this is not a critique or lecture; the facilitator does not tell the participants what was good or bad. However, the discussion should ensure that specific issues are revealed, both positive and negative in nature. Skillful facilitation will ensure the AAR does not gloss over mistakes or weaknesses.

DISCUSSION OF KEY ISSUES

After Action Reviews
Attachment D-5

What went well and why, and what can be improved and how?

The AAR is a problem-solving process. The purpose of discussion is for participants to discover strengths and weaknesses, propose solutions, and adopt a course of action to correct problems. Leaders can guide the discussion using one of the three techniques described below.

DISCUSSION TECHNIQUES

Chronological Order of Events

This technique is logical, structured, and easy to understand. It follows the flow of the activity from start to finish. By covering actions in the order they took place, participants are better able to recall what happened.

Key Events, Themes, or Issues

A key events discussion focuses on critical events which directly support identified objectives before the event began. Keeping a tight focus on these events prevents the discussion from becoming sidetracked by issues which do not relate to the desired objectives. This technique is particularly effective when time is limited.

Optional Discussion Guide

When relevant or useful, the AAR facilitator can employ a blended discussion technique that draws from elements of a chronological or thematic review. In addition, it may be helpful to collect information by:

- Drilling further into the process or resources behind an event or set of events
- Asking participants to identify unexpected results and discuss their impact on the review topic(s)
- Collecting data through complementary or more detailed review methods (evaluations, studies, statistics, etc.)

FLEXIBILITY

One of the strengths of the AAR format is its flexibility. The facilitator can use a chronological format to structure the discussion, or the discussion can be organized around key events, themes, or issues. Process items (logistics, management, administration, and support) can be discussed separately or woven into the substantive discussion. Each technique will generate discussion and will identify strengths and successes, weaknesses and areas for improvement; and concrete, actionable recommendations. The AAR facilitator must remember to:

- Be specific; avoid generalizations
- Be thorough, covering all relevant aspects of the program or event
- Focus on issues related to the activity's purpose or objective
- Guide participants toward identifying corrective actions and solutions to address areas of weakness
- Summarize often
- Introduce the way ahead

CLOSING COMMENTS (SUMMARY)

To close the AAR session, the facilitator should review and summarize key points identified during the discussion. The session should end on a positive note, linking observations to recommendation for future improvement. The program, activity, or task leader can offer concluding remarks, reinforce plans and an outline for the AAR report, and introduce the way ahead.

PREPARING THE REPORT

Having completed the AAR, the report should be prepared by a participant in the session and structured along the lines of the session itself. For a suggested report outline, see Appendix G.

CHAPTER 5

Following Up: Using the Results of the After-Action Review

BENEFITS

The benefits of an AAR come from applying its results to future situations. AARs provide a dynamic link between carrying out a task and striving for excellent performance. They provide USAID management and leaders a critical tool to use when planning and implementing events, activities, or programs. Through a professional, candid, and complete review discussion, managers and staff can compare their performance against a standard and identify specific ways to improve future activities. By identifying actionable recommendations, the AAR defines necessary steps for improving the process for accomplishing a task or project.

OPPORTUNITIES TO REINFORCE LEARNING AND KNOWLEDGE SHARING

By applying its learning, a team can improve and perform to Agency standards. Remembering that the focus is to improve performance, by the end of an AAR, participants must clearly understand what worked well and why, what did not go well, and where improvements can take place.

The AAR is one aspect of the complete learning cycle and identifies the steps of "learn-before, learn-during, and learn-after." Each phase offers an important learning opportunity. Understanding that learning takes place ***after*** an event or activity is completed, and also ***before*** and ***during*** its conduct, USAID is well aware of the range of potential learning opportunities. "Learning during" allows room for immediately recognizing and correcting performance that is not up to standard. These on-the-spot course corrections are valuable, whether dealing at the small-scale or detailed level or addressing larger or broader issues, challenges, or opportunities.

The ***peer assist***—an opportunity to learn before or during an event—targets a specific technical or programmatic challenge; gains assistance and insight from people outside the team; identifies possible approaches and new lines of inquiry; promotes sharing of learning with each other; and develops strong networks among staff. It is important to hold a peer assist session early enough to make a difference.

As with the AAR, a peer assist is useful when:

- A team is about to respond to a crisis similar to one that another team dealt with earlier
- An individual, new to a role, is about to tackle something difficult and is aware that others have similar experience
- An individual has not done something for a while, so is not sure about how or whether processes, procedures, and other resources have progressed

REVISED PROCEDURES

An AAR may reveal problems with USAID's formal guidance and procedures. If so, leaders and managers must make revisions and ensure that they are communicated across the Agency and into the partner and inter-agency community when needed. This will assure that the changes are clearly understood and that they are able to be applied to support how USAID better accomplishes its development mission.

APPENDIX A

After Action Reviews
Attachment D-5

After-Action Review Key Points

The After-Action Review (AAR)

- Is a dynamic, candid, professional discussion
- Focuses on results of an event/task/activity
- Identifies how to sustain what was done well
- Identifies recommendations on how to improve shortfalls
- Requires everyone's participation to help identify and correct deficiencies or maintain strengths

The AAR is Not

- A critique or complaint session (everyone learns from each other)
- A full-scale evaluation (or evaluation report)
- A cure-all for all problems

The AAR is Effective When

- Leaders support it
- It is done immediately—by the team, for the team
- Participants agree to be honest

APPENDIX B

After Action Reviews
Attachment D-5

After-Action Review Key Features

Formal Reviews	Informal Reviews
• Are facilitated by an objective outsider • Take more time • Use more complex review techniques and tools • Are scheduled beforehand • Are conducted in meetings or other "formal" settings • Require a more standard and thorough report	• Are conducted by those closest to the activity • Take less time • Use simple review techniques and tools • Are conducted when needed • Are held at the event's site • Can be covered by a less comprehensive report

APPENDIX C

Checklist for Planning and Conducting an After-Action Review (AAR)

- ☐ Decide on what event or process to cover in the AAR
- ☐ Perform any research necessary
- ☐ Identify a facilitator or facilitators
- ☐ Consult with the facilitator or facilitators on the remaining steps
- ☐ Decide who should participate and set up the list
- ☐ Draft the agenda
- ☐ Identify and confirm the venue(s)
- ☐ Obtain input from interested parties
- ☐ Send announcements for the AAR, including RSVPs
- ☐ Make logistical arrangements for AAR meeting (see separate checklist)
- ☐ Confirm final attendee list
- ☐ Set up venue(s) (see separate checklist)
- ☐ Conduct AAR
- ☐ Draft AAR notes and action plan
- ☐ Circulate notes and action plan for comments
- ☐ Complete action plan
- ☐ Plan AAR wrap-up session
- ☐ Hold AAR wrap-up sesssion

APPENDIX D

Logistical Arrangements and Setup Checklist for an After-Action Review

I. Logistics Arrangements in Preparation for the AAR

☐ When your AAR has been confirmed, reserve a conference room.

☐ Send an email invitation with RSVP.

☐ Send an email reminder before the AAR one day before the event.

☐ Check with the facilitator regarding any special needs.

☐ Make adequate copies of handouts.

☐ Make a sign-in sheet.

☐ Locate supplies. Are they provided by the venue? If not, requisition/purchase supplies. (See below.)

II. Setting up the AAR

Plan to arrive at least 20 minutes early.

Bring:

☐ Sign-in sheet

☐ Handouts

Also bring supplies or ascertain that supplies are available in venue.

After Action Reviews
Attachment D-5

Necessary:

Flip chart stands

Flip chart paper

Facilitator tape

Flip chart markers (more than one color)

Pens

Pencils

Pads of paper

Laptop for taking notes

Stickies

If necessary:

Overhead projector

TV and VCR

Laptop for projector

LCD projector

Other:_____

Other:_____

Physical set up:

Check to make sure there are enough chairs for everyone.

Check lighting.

Check ventilation.

Check location of restrooms.

Check amenities.

- ☐ Set up flip charts with paper.
- ☐ Put flip chart markers and tape near flip charts.
- ☐ Put out paper, pens, pencils, and handouts as facilitator directs.
- ☐ If in an unfamiliar building, check fire escape routes.
- ☐ Set up projector and laptop (if applicable).
- ☐ Set up laptop for note taking.

Notes:

III. After the AAR:

- ☐ Remove extra paper, pack up supplies, and pack up equipment.
- ☐ Take down and bring back flip charts if facilitator wants them. Otherwise, throw them away. Leave the room as you found it.

APPENDIX E

Sample Ground Rules and Role of the After-Action Review Facilitator

GROUND RULES FOR TODAY

- Active participation
- Equal representation (of ideas and perspectives)
- Creativity
- Openness to new ideas
- Critical thinking (about the topic or idea)
- "Yes … and"
- Consensus where possible
- Commitment to carry the results forward

ROLE OF THE FACILITATOR

- Keep group on task and on time
- Encourage participation by all
- Create an environment that supports expression of new ideas, original thinking, and recommended changes or solutions
- Introduce the way ahead

APPENDIX F

Sample After-Action Review Agenda

AGENDA FOR TODAY'S REVIEW

- Welcome, introduction, and context for this review
- Ground rules and role of facilitator
- What was intended?
- What actually happened?
- What went well, and why?
- What can be improved, and how?
- The way ahead: Closing comments and preparation for the report

APPENDIX G

After Action Reviews
Attachment D-5

After-Action Review Report Outline

Questions to Address in the AAR:

1) What did we intend (or plan) to do?

2) What actually happened?

3) What went well, and why?

4) What can be improved (and why/what would we change)?

Suggested Report Outline:

[Executive Summary—background, successes, unexpected results, recommendations

or

Executive Summary—background, successes, results, recommendations, management decisions required]

I. Background

II. What did we set out to do?

III. What actually happened?

IV. What went well, and why?

V. Issues and Recommendations

- Issue
- Discussion
- Recommendation

(repeated for each finding, as needed)

VI. Unexpected Results

VII. Conclusions

Appendices (names of team members, budget/actual costs, evaluation comments management or administrative tools, products, other documents and documentation)

Additional References

After Action Reviews
Attachment D-5

The USAID After-Action Review Technical Guidance draws heavily from a comprehensive training circular developed and issued by the U.S. Army. For more details and information about their process, see:

Training Circular 25-20, A Leader's Guide to After-action Reviews, Headquarters, Department of the Army, Washington, DC, September 1993, prepared by CALL, Fort Leavenworth, KS (last update: December 1998).

For context and a good overview of knowledge management, see also:

The Complete Idiot's Guide to Knowledge Management. Melissie Clemmons Rumizen, Ph.D., John A. Woods/CWL Publishing Enterprises, 2002.

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Attachment E – After Action Report Template Homeland Security Exercise and Evaluation Program (HSEEP)

- Attachment E-1: HSEEP Template
- Attachment E-2: Iowa HSEEP AAR Exercise Reporting Form

[Note for After Action Report/Improvement Plan (AAR/IP) Template:

- Text found in this document that is highlighted and bracketed is included to provide instruction or to indicate a location to input text.
- All text that is not highlighted is to be included in the final version of the AAR/IP.]

[FULL EXERCISE NAME]

[Exercise Dates]

AFTER ACTION REPORT/IMPROVEMENT PLAN

[Publication Date]

[On the cover page, insert additional graphics such as logos, pictures, and background colors as desired. The word "Draft" should be included before the phrase "After Action Report/Improvement Plan" on the cover page and in the header/footer of all versions except the final AAR/IP.]

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ADMINISTRATIVE HANDLING INSTRUCTIONS

1. The title of this document is [complete and formal title of document].

2. The information gathered in this AAR/IP is classified as [For Official Use Only (FOUO)] and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from [agency] is prohibited.

3. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, will be stored in a locked container or area offering sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.

4. Points of Contact: [List all points of contact below.]

   [Federal POC:]

   Name
   Title
   Agency
   Street Address
   City, State ZIP
   xxx-xxx-xxxx (office)
   xxx-xxx-xxxx (cell)
   e-mail

   [Exercise Director:]

   Name
   Title
   Agency
   Street Address
   City, State ZIP
   xxx-xxx-xxxx (office)
   xxx-xxx-xxxx (cell)
   e-mail

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CONTENTS

[If an AAR contains graphics, figures, or tables, they should be numbered and listed in the Contents section (e.g. Figure 1, Table 1, etc.).

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EXECUTIVE SUMMARY

[When writing the Executive Summary, keep in mind that this section may be the only part of the AAR/IP that some people will read. Introduce this section by stating the full name of the exercise and providing a brief overview of the exercise. This brief overview should discuss why the exercise was conducted; the exercise objectives; and what Target Capabilities List (TCL) capabilities, activities, and scenario(s) were used to achieve those objectives. All of these areas will be discussed in more detail in the subsequent chapters of the AAR/IP. In addition, the Executive Summary may be used to summarize any high-level observations that cut across multiple capabilities.]

The [agency or jurisdiction] [scenario type] [exercise type] exercise [exercise name] was developed to test [agency or jurisdiction]'s [Capability 1], [Capability 2], and [Capability 3] capabilities. The exercise planning team was composed of numerous and diverse agencies, including [list of agencies participating in planning team]. The exercise planning team discussed [include a brief overview of the major issues encountered, discussed, and resolved during the exercise planning process. Topics to address in this section could include the length of the planning process, the reasoning behind the planning team's choice of objectives to exercise, etc.]

Based on the exercise planning team's deliberations, the following objectives were developed for [exercise name]:

- Objective 1: [Insert 1 sentence description of the exercise objective]
- Objective 2: [Insert 1 sentence description of the exercise objective]
- Objective 3: [Insert 1 sentence description of the exercise objective]

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

[In general, the major strengths and primary areas for improvement should be limited to three each to ensure the Executive Summary is high-level and concise.]

Major Strengths

The major strengths identified during this exercise are as follows:

- [Use complete sentences to describe each major strength.]
- [Additional major strength]
- [Additional major strength]

Primary Areas for Improvement

Throughout the exercise, several opportunities for improvement in [jurisdiction/organization name]'s ability to respond to the incident were identified. The primary areas for improvement,

including recommendations, are as follows:

- [Use complete sentences to state each primary area for improvement and its associated key recommendation(s).]
- [Additional key recommendation]
- [Additional key recommendation]

[End this section by describing the overall exercise as successful or unsuccessful, and briefly state the areas in which subsequent exercises conducted by these jurisdictions and/or organizations should focus.]

SECTION 1: EXERCISE OVERVIEW

[Information in the Exercise Overview should be "structured data"—written as a list rather than in paragraph form—in order to facilitate preparation of other parts of the AAR/IP, maintain consistency within AAR/IPs, and facilitate the analysis of AAR/IPs for program reporting.]

Exercise Details

Exercise Name

[Insert formal name of exercise, which should match the name in the header.]

Type of Exercise

[Insert the type of exercise as described in Homeland Security Exercise Evaluation Program Volume I (e.g. seminar, workshop, drill, game, tabletop, functional exercise, or full-scale exercise.]

Exercise Start Date

[Insert the month, day, and year that the exercise began.]

Exercise End Date

[Insert the month, day, and year that the exercise ended.]

Duration

[Insert the total length of the exercise, in day or hours, as appropriate.]

Location

[Insert all applicable information regarding the specific location of the exercise; including any city, State, Federal region, international country, or military installation.]

Sponsor

[Insert the name of the Federal agency or agencies that sponsored the exercise, as well as any co-sponsors if applicable. Also list any applicable points of contacts.]

Program

[Insert the name of the program (e.g. Fiscal Year 2007 State Homeland Security Grant Program) from which exercise funding originated.]

Mission

[Insert the appropriate mission areas of the exercise (e.g. Prevent, Protect, Response, and/or Recovery).]

Capabilities

[Insert a list of the target capabilities addressed within the exercise.]

Scenario Type

[Name the exercise scenario type (e.g. chemical release).]

Exercise Planning Team Leadership

[The name of each member of the planning team leadership should be listed along with their role in the exercise, organizational affiliation, job title, mailing address, phone number, and e-mail address.]

Participating Organizations

[Insert a list of the individual participating organizations or agencies, including Federal, State, Tribal, non-governmental organizations (NGOs), local and international agencies, and contract support companies as applicable.]

Number of Participants

[Insert a list of the total number of each of the following exercise participants, as applicable:

- Players: [#]
- Controllers: [#]
- Evaluators: [#]
- Facilitators: [#]
- Observers: [#]
- Victim Role Players: [#]

SECTION 2: EXERCISE DESIGN SUMMARY

[The Exercise Design Summary is intended to provide a summary of the exercise design process.]

Exercise Purpose and Design

[This section should contain a brief (one-to-two paragraph) summation of why the exercise was conducted and what the exercise participants hoped to learn. It should also include a brief history of how the exercise was organized, designed, funded, etc.]

Exercise Objectives, Capabilities, and Activities

[The purpose of this section is to list exercise objectives and align them with associated capabilities from the Target Capabilities List (TCL). For each TCL capability, there is an Exercise Evaluation Guide (EEG) which lists specific activities which must be performed to demonstrate a capability. In addition to TCL capabilities, the EEG activities relevant to each objective should also be included in this section. Begin this section with the following text.]

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

- **Objective 1:** [Insert a one sentence description of each objective].
  - [Capability Title]: [Activity 1]; [Activity 2]; and [Activity 3].
  - [Capability Title]: [Activity 1]; [Activity 2]; and [Activity 3].

Scenario Summary

[For an operations-based exercise, this section should summarize the scenario or situation initially presented to players, subsequent key events introduced into play, and the time in which these events occurred. For a discussion-based exercise, this section should outline the scenario used and/or modules presented to participants.]

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities linked to the exercise objectives of [full exercise name] are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

[The format for Chapter 3, as described above, represents the preferred order for analysis of exercise observations. However, observations that are cross-cutting and do not apply to one, specific activity within the capability should be listed first, directly under the capability summary. Below the cross-cutting observations, you may then present the complete list of activities which apply to the observation.]

Capability 1: [Capability Name]

Capability Summary: [Include a detailed overview of the capability, drawn from the TCL capability description, and a description of how the capability was performed during an operations-based exercise or addressed during a discussion-based exercise. The exact length of this summary will depend on the scope of the exercise.]

Activity 1.1: [Using the EEGs, identify the activity to which the observation(s) below pertain.]

Observation 1.1: [Begin this section with a heading indicating whether the observation is a "Strength" or an "Area for Improvement." A strength is an observed action, behavior, procedure, and/or practice that is worthy of recognition and special notice. Areas for improvement are those areas in which the evaluator observed that a necessary task was not performed or that a task was performed with notable problems. Following this heading, insert a short, complete sentence that describes the general observation.]

References: [List relevant plans, policies, procedures, laws, and/or regulations, or sections of these plans, policies, procedures, laws, and/or regulations. If no references apply to the observation, it is acceptable to simply list "N/A" or "Not Applicable."]

1. [Name of the task and the applicable plans, policies, procedures, laws, and/or regulations and 1-2 sentences describing their relation to the task]
2. [Name of the task and the applicable plans, policies, procedures, laws, and/or regulations and 1-2 sentences describing their relation to the task]
3. [Name of the task and the applicable plans, policies, procedures, laws, and/or regulations and 1-2 sentences describing their relation to the task]

Analysis: [The analysis section should be the most detailed section of Chapter 3. Include a description of the behavior or actions at the core of the observation, as well as a

brief description of what happened and the consequence(s) (positive or negative) of the action or behavior. If an action was performed successfully, include any relevant innovative approaches utilized by the exercise participants. If an action was not performed adequately, the root-causes contributing to the shortcoming must be identified.]

Recommendations: [Insert recommendations to address identified areas for improvement, based on the judgment and experience of the evaluation team. If the observation was identified as a strength, without corresponding recommendations, insert "None.]

1. [Complete description of recommendation]
2. [Complete description of recommendation]
3. [Complete description of recommendation]

[Continue to add additional observations, references, analyses, and recommendations for each capability as necessary. Maintain numbering convention to allow for easy reference.]

SECTION 4: CONCLUSION

[This section is a conclusion for the entire document. It provides an overall summary to the report. It should include the demonstrated capabilities, lessons learned, major recommendations, and a summary of what steps should be taken to ensure that the concluding results will help to further refine plans, policies, procedures, and training for this type of incident.

Subheadings are not necessary and the level of detail in this section does not need to be as comprehensive as that in the Executive Summary.]

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for [identify the State, county, jurisdiction, etc., as applicable] as a result of [full exercise name] conducted on [date of exercise]. These recommendations draw on both the After Action Report and the After Action Conference. [The IP should include the key recommendations and corrective actions identified in *Chapter 3: Analysis of Capabilities*, the After Action Conference, and the EEGs. The IP has been formatted to align with the *Corrective Action Program System*.]

Table A.1: Improvement Plan Matrix

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
[Capability 1: Capability Name]	1. Observation 1	1.1 Insert Recommendation 1	1.1.1 Insert Corrective Action 1	Planning	State X EMA	EMA Director	Dec 1, 2006	Sep 1, 2007
			1.1.2 Insert Corrective Action 2	Planning	State X EMS System	EMS System Director	Dec 1, 2006	Feb 1, 2007
		1.2 Insert Recommendation 2	1.2.1 Insert Corrective Action 1	Training	State X EMA	EMA Director	Dec 1, 2006	Jan 1, 2007
			1.2.2 Insert Corrective Action 2	Systems/ Equipment	State X EMA	EMA Director	Dec 1, 2006	Mar 15, 2007
	2. Observation 2	2.1 Insert Recommendation 1	2.1.1 Insert Corrective Action 1	Planning	State X EMS System	EMS System Director	Dec 1, 2006	Jan 15, 2007
			2.1.2 Insert Corrective Action 2	Systems/ Equipment	State X EMA	EMA Director	Dec 1, 2006	Jan 1, 2007

[Optional]

APPENDIX B: LESSONS LEARNED

While the After Action Report/Improvement Plan includes recommendations which support development of specific post-exercise corrective actions, exercises may also reveal lessons learned which can be shared with the broader homeland security audience. The Department of Homeland Security (DHS) maintains the *Lessons Learned Information Sharing* (LLIS.gov) system as a means of sharing post-exercise lessons learned with the emergency response community. This appendix provides jurisdictions and organizations with an opportunity to nominate lessons learned from exercises for sharing on *LLIS.gov*.

For reference, the following are the categories and definitions used in LLIS.gov:

- **Lesson Learned:** Knowledge and experience, positive or negative, derived from actual incidents, such as the 9/11 attacks and Hurricane Katrina, as well as those derived from observations and historical study of operations, training, and exercises.
- **Best Practices:** Exemplary, peer-validated techniques, procedures, good ideas, or solutions that work and are solidly grounded in actual operations, training, and exercise experience.
- **Good Stories:** Exemplary, but non-peer-validated, initiatives (implemented by various jurisdictions) that have shown success in their specific environments and that may provide useful information to other communities and organizations.
- **Practice Note:** A brief description of innovative practices, procedures, methods, programs, or tactics that an organization uses to adapt to changing conditions or to overcome an obstacle or challenge.

Exercise Lessons Learned

[Insert an account of any observations nominated for inclusion in the DHS LLIS.gov system. If there are not any nominations, a simple statement to that effect should be included here.]

[Optional]

APPENDIX C: PARTICIPANT FEEDBACK SUMMARY

[Appendix C of the AAR/IP should provide a summary of the feedback received through this form.]

[Optional]

APPENDIX D: EXERCISE EVENTS SUMMARY TABLE

[In formulating its analysis, the evaluation team may assemble a timeline of key exercise events. While it is not necessary to include this timeline in the main body of the AAR/IP, the evaluation team may find value in including it as an appendix. If so, this section should summarize what actually happened during the exercise in a timeline table format. Focus of this section is on what inputs were actually presented to the players and what actions the players took during the exercise. Successful development of this section is aided by the design, development, and planning actions of the exercise design team. Prior to the exercise, the exercise design team should have developed a timeline of anticipated key events.]

[An example of the format for the Exercise Events Summary Table is presented below.]

Table D.1: *Exercise Events Summary*

Date	Time	Scenario Event, Simulated Player Inject, Player Action	Event/Action
02/20/06	0900	Scenario Event	Explosion and injuries reported at subway station 13
02/20/06	0902	Player Action	Subway services stopped in accordance with protocols; notifications started
02/20/06	0915	Player Action	Evacuation ordered for planning zone 2A
02/20/06	0940	Simulated Player Inject	Traffic at a standstill on major egress route 1 reported to players (Response generated issue because personnel to staff traffic control points were not deployed)

[Optional]

APPENDIX E: PERFORMANCE RATING

[When a jurisdiction/organization elects to use performance ratings, or when initiatives require a rating within the AAR/IP, the following approach can be used. A qualitative performance rating is assigned to each activity demonstrated within its capability area. The performance rating is based on a systemic review by the lead evaluator of exercise performance based on evaluator analysis of how well the participants demonstrated the capability outcome. The results should be summarized within this appendix and should be based on the supporting narrative contained within the body of the AAR/IP.]

The performance rating categories refer to how well each activity was performed during the exercise and are detailed in the table below.

Table E.1: *Performance Ratings*

Rating	Description
Performed without Challenges	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Performed with Some Challenges, but Adequately	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
Performed with Major Challenges	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or, was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Unable to be Performed	The performance measures and tasks associated with the activity were not performed in a manner that achieved the objective(s).

APPENDIX F: ACRONYMS

[Any acronym used in the AAR should be listed alphabetically and spelled out.]

Table F.1: *Acronyms*

Acronym	Meaning

After Action Reviews
Attachment E-2

State of Iowa HSEEP Compliant Exercise Reporting Form

NOTE: HSEEP Guidance recommends that all after-action reports/improvement plans from exercise conducted with DHS funding be uploaded to the HSEEP portal. According to the DHS point of contact for Iowa, the only personnel with access to the portal are the "DHS Exercise Managers and the LLIS Team. Any information that LLIS compiles is scrubbed for location and other specifics that could help identify jurisdictions involved prior to being posted on LLIS.com. The only time the DHS Exercise Managers will share the information provided in AARs/IPs with external personnel is if Congress or the White House requests it."

Based on the federal recommendation, we will upload all AARs/IPs submitted for credit unless you request otherwise. If you would prefer that this AAR/IP not be uploaded to the HSEEP portal please select NO in the following box. This form will default to "Yes" –releasing the information– unless otherwise specified. Yes

Executive Summary

Enter below a brief overview of the exercise - Major strengths demonstrated during the exercise and *areas that require improvement.*

Chapter 1: Exercise Overview

Exercise Name: _____ **County:** _____

Exercise Date: _____ **Duration:** _____ (days or hours)

Type of Exercise: - - - -

Funding Source: _____

Program: _____

Exercise Focus:	**Preparedness** ☐	**Mitigation** ☐	**Response** ☐	**Recovery** ☐
	Prevention ☐	**Protection** ☐	**Detection** ☐	
Primary Hazard	**Natural** --------	**Technological** ------	**Terrorism** --------	**Other** _____
Secondary Hazard	**Natural** --------	**Technological** ------	**Terrorism** --------	**Other** _____
Actual Event	**Natural** --------	**Technological** ------	**Terrorism** --------	**Other** _____

Rev 2/07

Location(s): _____ (City, State or address/specific location(s) in City, State)

Participating Organizations / Agencies: (list each specific agency for NIMS Compliance)

_____

Total Number of Participants: _____
Players: _____
Victim Actors: _____
Controllers / Evaluators: _____
Observers: _____

Chapter 2: Exercise Goals and Objectives

Note: The "Exercise Goals and Objectives" section should be used to briefly list the goals and objectives for the exercise. List each Goal followed by the Objective for the respective Goal.

Goal:
Objective:
Objective:
Objective:
Objective:

Goal:
Objective:
Objective:
Objective:
Objective:

Goal:
Objective:
Objective:
Objective:
Objective:

Goal:
Objective:
Objective:
Objective:
Objective:

Chapter 3: Exercise Events Synopsis

Note: The "Exercise Events Synopsis" section should be used to provide an overview of the scenario. Paste the exercise scenario below and send the exercise timeline and/or Master Scenario Events (MSEL) List as a separate attachment.

Chapter 4: Analysis of Mission Outcomes

Note: Overall how did this exercise succeed in meeting or accomplishing the goal(s) identified?

Chapter 5: Analysis of Critical Task Performance

Note: The "Analysis of Critical Task Performance" section reviews performance of the individual tasks, as defined in the evaluation guides. Each task that was identified by the exercise planning team as a critical task to be performed to respond to the simulated attacked defined by the scenario should be discussed in this section. Below is the format that each Task should be presented in.

Task: *List the overall task and number.*
Reference: *List the reference Exercise Evaluation Guide (EEG) task and number.*
Summary of Issue: *Briefly describe the issue.*
Consequence: *Briefly state the consequence of the action.*
Analysis: *Briefly explain the issue and the consequences.*
Recommendations: *List the recommendation that would help to rectify the issue.*
Actions: *List the action steps required to ensure that the recommendation is followed.*

Task
Reference
Summary of Issue
Consequence
Analysis
Recommendations
Actions

Task
Reference
Summary of Issue
Consequence
Analysis
Recommendations
Actions

Task
Reference
Summary of Issue
Consequence
Analysis
Recommendations
Actions

Task
Reference
Summary of Issue
Consequence
Analysis
Recommendations
Actions

Chapter 6: Conclusions

Note: The "Conclusions" section of the report should be used as a summary of all the sections of the AAR. It should include the following:

- *Participants demonstrated capabilities*
- *Lessons learned for improvement and major recommendations*
- *A summary of what steps should be taken to ensure that the concluding results will help to further refine plans, procedures, training for this type of incident.*

Chapter 7: Improvement Planning

An Improvement Plan is a method by which issues and concerns brought out by the exercise are turned into measurable steps that result in improved response capabilities. The local jurisdictions take the lead in developing these steps. When complete, it specifically details what actions should be taken to address each issue or concern, who or what agency(s) is responsible for taking the action, and the timeline for completion. Any identified areas above needing improvement, shall be documented on the improvement plan.

UTL Task # (If applicable)	Issue	Improvement Actions	Responsible Person / Agency	Completion Date

Chapter 8: Annexes Exercised (if applicable)

List annexes exercised - *This information will be used to evaluate county Emergency Management Performance Grant (EMPG) compliancy. As per EMPG requirements, 100% of county emergency response plan annexes must be exercised every 5 years.*

Total number of annexes in the County Emergency Response Plan: _____

Number of annexes tested in this exercise: _____

Please list any other county, municipality, or private sector plans that this exercise tested:
-- Such as Chemical Facility Emergency Plan, School Emergency Plan, etc. --

Chapter 9: Exercise Report - Completion Information

Prepared By: _____ Title: _____ Date: _____

Address: _____ City: _____ County: _____

Email: _____

Please email this Report to: exercise@iowa.gov

---------- HLSEM Official Use Only ----------

State Approving Official **Date:** **Approved:**

Exercise Requirements Met for NIMS Requirements: ----

Comments:

Type of Credit Approved: ----

Attachment F – Lessons Learned/Recommendations Report Template

- Attachment F-1: Lessons Learned/Recommendations Report Template

RRT Name:

After Action Reviews
Attachment F-1

Recommendations from:

Date:

Participants:

Incident Response Challenges, Recommendations, and Action Items

1. ***Recommendation category***

   - Challenge:
   - Recommendations:
   - Action Items:

2. ***Recommendation category***

   - Challenge:
   - Recommendation:
   - Action Item:

3. ***Recommendation category***

   - Challenge:
   - Recommendations:
   - Action Items:

4. ***Recommendation category***

   - Challenge:
   - Recommendations:
   - Action Items:

Other Noted Information

Guide for completing the Recommendations Report:

1. **Recommendations from:**
   - This title refers to the outbreak for which the recommendations refer to.
   - Include the pathogen/food vehicle/year of the outbreak
   - Example: *Recommendations from the 2012 Salmonella Newport outbreak associated with Fresh Whole Cantaloupes*

2. **Date:**
   - Date that the call or meeting was held that discussed the recommendations

3. **Participants:**
   - List of participants in the recommendations discussion
   - Include Name and Organization/Office of participants

4. **Recommendation Category:**
   - List the category or subject area the recommendation refers to
   - Examples: *Communications, Information sharing, Epidemiology, Sampling, Traceback, etc.*

5. **Challenge:**
   - List the specific challenge that was faced during the response
   - Include background information on why this was a challenge during the outbreak
   - Example: *Ensuring that FDA, state and local partners were on the same page as far as timing and content of press releases. When states were ready to issue press, FDA was just beginning to respond to the outbreak.*

6. **Recommendations:**
   - List the recommendation(s) the discussion group has agreed on to address that specific challenge
   - Example: *In the future, it would be beneficial for FDA/Coordinated Outbreak Response and Evaluation (CORE) Communications to work with the FDA Districts to talk directly with State public affairs officers during an incident response. If the FDA District has a Public Affairs Specialist (PAS) or State Liaison, FDA/CORE Communications can work with that individual, and if not or if the District PAS isn't involved in outbreak responses, FDA/CORE Communications can act as the District's PAS by working with the State communications officers. This approach will be used on a case by case basis since each FDA District has a different relationship with their State partners.*

7. **Action item(s):**
   - List any action items to address the recommendation
   - Include any short-term or long-term follow-up to be done to address the proposed recommendation
   - Example: *FDA/CORE Communications will work through the FDA Districts and request to work directly with State communication officers during outbreak responses, as needed*

8. **Other Noted Information:**
   - List any additional information discussed during the call such as positive outcomes or other follow-up information
   - Example: *The FDA Environmental Assessment (EA) Team greatly appreciates all of the support they received from the RRT. The logistical assistance for the EA Planning Meeting and the assets made available to assist with the EA were valuable.*