



Lexington County Fire Service

Standard Operating Guidelines Post Incident Analysis OPS-008

EFFECTIVE: September 27, 2007 **ISSUED BY:** Russell R. Rawl, Fire Service Coordinator

RECINDS: No Previous Policy

SCOPE: These guidelines apply to all Lexington County Fire Service personnel.

PURPOSE: To establish a uniformed post incident analysis of incidents to be used as a tool for identifying strengths and weakness within the department.

PROCEDURE:

The Lexington County Fire Service shall use the Post Incident Analysis (PIA) as a tool for Incident Commanders and Command Staff to identify areas of strengths, deficiencies and needed areas of improvement. The PIA may also be used to identify other needs such as equipment needs, staffing deficiencies and areas of training. The information collected may be useful for justifying funding in future budgeting request. The Lexington County Fire Service shall use the Post Incident Analysis in conjunction with the on site incident "Hot Wash" to identify effectiveness of operations of the overall incident, starting from the initial call to the closure of the incident fire report.

Policy:

I. Responsibilities:

Incident Commanders and Command Staff shall have shared responsibility for the overall effectiveness of this guideline. The PIA is a valuable document for everyone to use and to improve the overall operations of the Fire Service. The PIA is **not** to be used to assign blame, or to point fingers. The PIA will be completed by the responsible Fire Officer or Incident Commander, and submitted to the appropriate Operations Chief.

The PIAs shall be completed within 14 days of the incident. Once reviewed, procedural functions may be evaluated and changed to better serve the department. Everyone's cooperation is encouraged and needed.

II. Post Incident Analysis

The Incident Commander or incident command team should analyze every incident informally to improve personnel, unit, and system performance. After every major incident or special event, the Incident Commander **must** develop a post incident analysis (PIA) to determine strengths, weaknesses, and lessons learned about the incident operations. The post incident analysis should be fact-based, and not include unsubstantiated opinions. The PIA is forwarded through the appropriate chain of command.

A PIA must be completed for.

1. A building fire in which three or more rooms are severely damaged by fire or where unusual extinguishing problems existed.
2. Any incident that an unusual event occurs e.g.; explosion, collapse,
3. Any fire resulting in a fatality.
4. Any fire resulting in injury to firefighters serious enough to necessitate transport to a medical facility.
5. Any close call incident where firefighter could have been injured.
6. Any hazardous materials incident that involves multi-company involvement.
7. Any mass casualty incident involving four or more victims.
8. At the Incident Commander's discretion, or at the direction of a senior officer.
9. Large scale wildland fires involving three or more units.
10. Specialty rescue operations that involves multi-company involvement.
11. Special events that require LCFS involvement, e.g, presidential visit, parades.
12. Mock incident participation.
13. Any emergency preparedness incident, e.g. natural, man-made.
14. Events that tax the departments ability, e.g. storm mode, multiple fires.

The PIA is a critical component in determining the processes used during a major incident, and an educational tool for all Lexington County Fire Service personnel. Valuable lessons are learned from observations of effective and efficient methods of mitigating a major incident. These include all strategic decisions, operational issues, built-in fire protection devices, and anything else that assisted in mitigating the incident. LCFS personnel also benefit from learning what has **not** proven to be effective or efficient.

The PIA requires the incident commander to closely evaluate all conditions, factors, and decisions made during a major incident. This detailed retrospective provides documentation that can be used as an educational tool. Each incident commander should use all available resources to completely and thoroughly describe the incident and the methods used to mitigate it.

An incident HOT WASH should be performed if practical, before the release of units as a fact finding tool. That information will be of value when completing the forms.

Hot Wash is a meeting of all involved personnel on scene to provide an informal briefing of the vents of the incident, actions taken and problems encountered.

PIA forms are attached for Structural Fires, Hazardous Materials Incidents, Rescue incidents and natural/manmade disasters/incidents. Each form lists questions specific to that type of incident. Some incidents may require the use of multiple forms. Complete only the applicable portions, and for each answer, provide a detailed explanation. The more accurate the PIA, the greater the benefit for the entire service.

The attached Incident Fact Sheet is to be provided to on scene officers, or in rare circumstances, to all personnel, to assist the incident commander in completing the PIA. A supply of these forms can be retrieved on the web forms page. The final form is an Incident Management System Work Sheet, which will allow the incident commander to detail assignments under each appropriate Division/Group or Branch.

The PIA may also be used as a presentation format for a critique of any incident, for use either by the incident commander or a moderator.

**POST INCIDENT ANALYSIS
STRUCTURAL FIRE**

**Address
Incident #**

Date

I. Introduction

- a. Provide a general overview of the incident including an area diagram of the building, exposures, water supply, time of day, weather conditions, etc.

- b. Indicate unique circumstances/problems, etc.

II. Building Structure/Site Layout Use separate paper if room is not available

- a. Review type of structure

- b. What construction or design features contributed to the fire spread, or prevented fire spread, i.e. sprinklers, fire doors, etc.?

- c. Did the topography and/or type of fuel affect fire control efforts?

- d. Did fire alarm and/or suppression devices work properly?

- e. Did personnel or apparatus encounter any problems in gaining access?

- f. What is needed to correct these problems?

III. Fire Code History

- a. Review relevant Fire Code requirements and history.

IV. Communications

a. Did dispatcher verbally provide all information available at the time of dispatch?

b. Was the incident adequate? What channels were used? Problems?

c. Were proper communications procedures followed?

d. Were there problems communicating with Mutual Aid companies?

e. Was the communication network controlled to reduce confusion?

f. Did units, divisions/groups/branches communicate effectively?

g. Was radio discipline effective?

h. Did Incident Commander provide timely updates to Communications?

V. Pre-emergency Planning

a. Were pre-fire or other plans needed on the scene?

1. Were they available? _____

2. Should they be updated? _____

VI. On Scene Operations

a. What was the structural integrity of the building based on fire conditions on arrival, at 10 minutes, 20 minutes, 30 minutes, etc.

b. Was Command identified and maintained throughout the incident?

c. Was a Command Post established and readily identifiable?

d. Size up decisions by command

e. Was additional apparatus requested in a timely manner?

f. Strategy/action plan

g. Did personnel, units, and teams execute tactics effectively?

h. Were any training needs identified? provide examples.

i. Were Standard Operating Procedures used? Were they adequate? Do they need to be updated? If not used, why?

j. What offensive/defensive decisions were made by command?

k. How was risk analysis applied to the incident?

l. Were the divisions/groups used appropriate to the incident's type and complexity?

m. Was apparatus properly positioned? If not, why?

n. Attack line selection and positioning

o. Ventilation operations

p. Salvage operations

q. Night time and interior lighting operations

r. Were Mutual Aid companies effective in operation?

s. Was water supply adequate? Specify Water source, Hydrant Location

t. Was RIT in place and ready for deployment?

q. Second means of egress established and communicated

VII. Staging

a. Location adequacy

b. Site Access

VIII. Support Functions

a. Was a Rehab group established?

b. Were fire/rescue personnel provided with food and drinks?

c. Was adequate shelter provided for fire/rescue personnel?

d. Were crews relieved by fresh crews regularly and frequently?

e. Were there any equipment or apparatus failures? Did these failures have a detrimental effect on the incident outcome?

f. Were functions with outside agencies properly coordinated? (i.e. Red Cross, power company, gas company)

IX. Safety Group

a. Was a standby team established? if not, why?

b. Were any fire/rescue personnel injured? Reasons Why

c. Were all safety SOPs and regulations enforced?

d. If there was a Safety Dispatch, were they used for Safety, Accountability or RIC? If not, why?

e. What actions are necessary to change or update current safety and health programs to improve the welfare of members?

f. Was EMS on standby? Setup?

X Accountability

a. Were actions taken to ensure accurate personnel accountability?

b. Was the status of units, Divisions/Groups/Branches and support personnel maintained?

c. Did personnel provide adequate feedback?

d. Was the incident continuously controlled and monitored?

XI. Investigations

a. Was the fire's origin and cause determined?

b. What factors contributed to the fire's spread?

XII. Lessons Learned

a. Were specific training needs identified?

b. Recommended improvements

c. Was hot wash performed on site?

XIII. Overall Analysis of Incident

-Good? Bad? Why?

Critique

If post incident analysis indicates that a positive learning experience would result, or where it may be necessary to complete the analysis of an incident, a critique may be held at the discretion of the Incident Commander or their superior.

Use separate paper if room is not available

POST INCIDENT ANALYSIS

Address

HAZARDOUS MATERIALS

Incident#

Date

I. Introduction

a. General overview of incident

b. Unique circumstances/problem, etc.

II. Site Review

a. Type of structure and post incident structure analysis as appropriate, or site layout review (either diagram site, or attach aerial photographs if available).

b. Storage/Interior-Exterior

c. Type of container/transport involved

d. Roadway location, access, drainage

e. Storm drains, and sewer systems

f. Weather conditions

III. Fire Code History

a. Review code, laws, regulations and deficiencies

b. Review file history on building alternatives, inspections, citations, etc.

c. Review file on spill history

IV. Communications

a. Did the dispatcher provide all information available at the time of dispatch?

b. Was the incident channel adequate?

c. Were the proper communications procedures followed?

d. Were there problems communicating with Mutual Aid companies?

e. Was the communication network controlled to reduce confusion?

f. Did units, Divisions/groups/branches communicate effectively?

g. Was radio discipline effective?

h. Did Incident Commander provide timely updates to Communications?

V. On Scene Operation

a. Structural/container integrity, based on arrival conditions, at 10 minutes, 20 minutes, 30 minutes, etc.

b. Spill/release conditions at 10 minutes, 20 minutes, 30 minutes, etc.

c. Size-up decisions by command

d. Strategy/plan-Action Plan; Site Safety plan

e. Offensive/defensive decisions by command

f. Risk Analysis

g. Sector operations

h. Apparatus positioning

i. Ventilation operations

j. Initial actions by first responder

k. Initial action by Haz-Mat units

l. Did Haz-Mat establish all necessary sub-sectors?

m. Evacuation process

n. Mutual Aid/ Agency

VI. Staging Operations

a. Location Adequacy

b. Site Access

c. Additional resources staged and available?

VII. Haz-Mat Operations (Use separate paper if room is not available)

a. Product Identified/when? Name of product

b. Product hazards identified-fire, explosive and health

c. Entry and Hazard Zone operations

d. Clean-up process

e. Weather monitoring

f. Decontamination measures/process

g. Research Data used?

h. Instrumentation measures/practice

i. Cameo Use

VIII. Agency Coordination (Use separate paper if room is not available)

a. List and review outside agency response and their legal and/or operational responsibilities

b. Review agency coordination and use during incident

IX. Support Functions

a. Was a Rehab group established?

b. Were fire/rescue personnel provided with food and drinks?

c. Was adequate shelter provided for fire/rescue personnel?

d. Were crews relieved by fresh crews regularly and frequently?

e. Were there any equipment or apparatus failures?

f. Were functions with outside agencies properly coordinated? (i.e. Red Cross, Power company, Gas Company)

X. Safety Group

a. Was a standby team established? if not, why?

b. Were any fire/rescue personnel injured?

c. Were all safety SOPs and regulations enforced?

d. If there was a Safety Dispatch, were they used for Safety, Accountability or RIC?

e. What actions are necessary to change or update current safety and health programs to improve the welfare of members?

XI. Accountability

a. Were actions taken to ensure accurate personnel accountability?

b. Was the status of units, Divisions/Groups/Branches, and support personnel maintained?

c. Did personnel provide adequate feedback?

d. Was the incident continuously controlled and monitored?

XII Investigations

a. What was the origin and cause of fire/hazard spread?

b. What factors contributed to fire spread?

XIII Lessons Learned

a. What specific training needs were identified?

b. What improvements are recommended?

XIV Overall Analysis of Incident

-Good? Bad? Why?

Critique

If post incident analysis indicates that a positive learning experience would result, or where it may be necessary to complete the analysis of an incident, a critique may be held at the discretion of the Incident Commander or their superior.

Use separate paper if room is not available

POST INCIDENT ANALYSIS
Rescue Operations

Address
Incident #

Date

I. Introduction

a. General overview of incident

b. Unique circumstances/problem, etc.

II. Site Review

a. Type of post incident analysis as appropriate, or site layout review (either diagram site, or attach aerial photographs if available).

b. Roadway location, access, drainage

c. Storm drains, and sewer systems

d. Weather conditions

III. Fire Code History

a. Review code, laws, regulations and deficiencies

b. Review file history on building alternatives, inspections, citations, etc.

c. Review file on lock out tag out history

IV. Communications

a. Did the dispatcher provide all information available at the time of dispatch?

b. Was the incident channel adequate?

c. Were the proper communications procedures followed?

d. Were there problems communicating with Mutual Aid companies?

e. Was the communication network controlled to reduce confusion?

f. Did units, Divisions/groups/branches communicate effectively?

g. Was radio discipline effective?

h. Did Incident Commander provide timely updates to Communications?

V. On Scene Operation

a. Size-up decisions by command

b. Strategy/plan-Action Plan; Site Safety plan

c. Offensive/defensive decisions by command

d. Risk Analysis

e. Sector operations

f. Apparatus positioning

g. Ventilation operations

h. Initial actions by first responder

i. Initial action by First in units

j. Did Rescue establish all necessary sub-sectors?

m. Mutual Aid

VI. Staging Operations

a. Location Adequacy

b. Site Access

c. Additional resources staged and available?

VIII. Agency Coordination

a. List and review outside agency response and their legal and/or operational responsibilities

b. Review agency coordination and use during incident

IX. Support Functions

a. Was a Rehab group established?

b. Were fire/rescue personnel provided with food and drinks?

c. Was adequate shelter provided for fire/rescue personnel?

d. Were crews relieved by fresh crews regularly and frequently?

e. Were there any equipment or apparatus failures?

f. Were functions with outside agencies properly coordinated? (i.e. Red Cross, Power company, Gas Company)

X. Safety Group

a. Was a standby team established? if not, why?

b. Were any fire/rescue personnel injured?

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d. If there was a Safety Dispatch, were they used for Safety, Accountability or RIC?

e. What actions are necessary to change or update current safety and health programs to improve the welfare of members?

XI. Accountability

a. Were actions taken to ensure accurate personnel accountability?

b. Was the status of units, Divisions/Groups/Branches, and support personnel maintained?

c. Did personnel provide adequate feedback?

d. Was the incident continuously controlled and monitored?

XII. Investigations

a. What was the origin and cause of incident?

b. What factors contributed to incident?

XIII. Lessons Learned

a. What specific training needs were identified?

b. What improvements are recommended?

c. What equipment or tooling is needed ?

XIV. Overall Analysis of Incident

-Good? Bad? Why?

Critique

If post incident analysis indicates that a positive learning experience would result, or where it may be necessary to complete the analysis of an incident, a critique may be held at the discretion of the Incident Commander or their superior.

Use separate paper if room is not available

**POST INCIDENT ANALYSIS
INCIDENT FACT SHEET**

Officer In Charge: _____

Incident Address: _____ Time of Arrival: _____

Nature of Incident:

Describe the situation upon arrival: Smoke conditions, involvement, exposures

Describe Water Supply

Obstacles Encountered: Provide explanation

Safety Staff Functions

Support Other (Please Specify)

- a. Duty officer
- b. County dispatch staffed
- c. Notification

Lessons learned

Recommendations for improving operations.

Training needs

Diagram of incident:

Use separate sheet as needed: