


# INCIDENT INVESTIGATION

## BSB 0101-05

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BOILER SAFETY BUREAU  
STANDARD OPERATING PROCEDURE MANUAL

## 1.0 PURPOSE AND SCOPE

To aid the Boiler Safety Bureau (Bureau or BSB) in the investigation of boiler and pressure vessel incidents, which cause damage to property and/or personal injury. This **procedure** will help in establishing the incident cause.

This procedure covers all investigations of **non-exempt** boiler and pressure vessel incidents within the boundaries of North Carolina.

## 2.0 PERSONNEL RESPONSIBILITIES

- 2.1 The Bureau Chief – BSB has the overall responsibility for implementation of the instruction.
- 2.2 The Assistant Bureau Chief will be responsible to act in the absence of the Bureau Chief.
- 2.3 Boiler Safety Bureau Inspector Supervisors and Deputy Inspectors are responsible for assigned investigations in accordance with this instruction.

NOTE: In no case will an inspector investigate an incident if he/she **was the last person to inspect the equipment**. If this is the case, the Bureau Chief or Assistant Bureau Chief will appoint an inspector to investigate the incident.

## 3.0 HEALTH and SAFETY ISSUES

Inspectors should not enter the site of an incident until the site has been deemed safe. Use of personal protective equipment is vital as some incident sites may be hazardous and contain unforeseen dangers.

## 4.0 PROCEDURE

### **4.1 Upon being notified by the Bureau, or after becoming aware of an incident and notifying the Bureau, the inspector will:**

- 4.1.1 **Proceed to the incident site.** If any emergency responders are on site, report to the official in charge before proceeding with the investigation.
- 4.1.2 Contact the owner/user or senior company official present, identify him or herself, show credentials and state the purpose of his/her visit.

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- 4.1.3 Request whatever assistance or information may be required.
  - 4.1.4 Gather appropriate information (including sketches and/or photographs) so that the Incident Investigation Report (Attachment 1) can be completed with as much detail as possible.
  - 4.1.5 If the area has not been secured, secure it, *when necessary*, (with the assistance of the fire marshal, police, etc.) to prevent movement or removal of any item or part of the affected equipment.
- 4.2 Investigation of Incidents
- 4.2.1 At the scene of any incident involving a boiler or pressure vessel, the inspector may be acting in concert with one or more of the following investigation organizations
    - a) Police
    - b) Fire Department**
    - c) Fire Marshal
    - d) OSH
  - 4.2.2 Periodically, the question of jurisdiction will arise. Although several organizations may be involved, cooperation will be the rule. An investigating inspector will normally take possession of pressure components, accessories, piping, fittings, etc., but this may not apply in a criminal case where the police may take possession of the exhibits for evidence.
- 4.3 Facts, Conclusions, Hearsay and Opinion
- Several points that must be clearly understood are the difference between Facts, Conclusions, Hearsay and Opinions.
- 4.3.1 A Fact is an observable reality. It will exist independently of the investigator. In short, a fact proves itself. It can be verified, confirmed and repeated. A fact is derived by one or more of the investigators five senses, i.e., sight, smell, taste, hearing, and touch.
  - 4.3.2 A Conclusion is a reasoned mental construction. A conclusion exists only in the mind of the investigator. It therefore requires corroboration and must be based on details in the report.

4.3.3 Hearsay is something that is secondhand. Statements from an eyewitness are hearsay unless a **written statement** is taken. If no **written statement** is taken, this can lead to confusion, between the fact of a statement, and the reliability and validity of a statement.

4.3.4 An Opinion is something a person thinks or believes about something or someone. It is a personal judgement. Opinions must not be included in the body of the report. If an opinion is expressed, it should be kept separate from the report proper under the heading “Opinions,” and prefaced by “It is my opinion,” or a similar phrase. Care must be exercised not to mix opinions, conclusions and evidence in a report.

#### 4.4 Initial Approach at the Scene

4.4.1 When approaching the scene of an incident, pause and make a mental observation of the site, surroundings and other points of interest. Start with the big picture and then focus on the central area of the incident.

4.4.2 At this stage the approach should be cautious, noting who is on the scene; what, if anything, is taking place; how it is being done and by whom; what, if anything, has been removed and by whom; where the removed items are now located, and under what circumstances they were removed.

4.4.3 The manner of the approach will include asking questions pertinent to the circumstances and deriving the information that will produce a clear overall picture for the investigator.

NOTE: A bossy, overbearing attitude exhibited by an inspector closes more doors than it opens; therefore, assure that questions are put in a neutral and inquiring manner. Never argue with the persons supplying the facts. Only ask questions; do not supply answers or reasons to witnesses or others.

#### 4.5 Establish Basic Facts

In the initial stages of an investigation, an imperative is to derive the basic facts. For instance, if a call is received about an explosion and fire, ask if there was a fire and then an explosion, or was there an explosion with a fire afterwards?

#### 4.6 Exploiting Facts

As each fact becomes available, document it and everything about it completely, noting times, dates, sequences of events. Get originals and copies of documents required for the case.

4.7 Conducting Equipment Tests

If possible, have the owner of the equipment or his representative supply competent personnel and equipment when conducting tests on suspect equipment. Tests should be conducted in the order specified by the inspector, and results noted as they become known. Before beginning any tests of this nature, explain exactly what is intended and expected, and the manner in which the work is to progress. Briefly, this means if an oil burner is to be started, all that is to be done is to start it, no more. After starting, make observations and notes. The inspector should know exactly what he or she is doing and have a clear understanding of the equipment and controls. By having someone else do the physical work; the inspector is then free to concentrate on every aspect of the investigation and leaving less chance of missing any points.

4.8 Examining and Listing Equipment

When examining and listing equipment, copy down every pertinent item of identification; be very sure all numbers and names written are exactly as they appear on the nameplate.

4.9 Test Reports

If tests are conducted on any equipment, use a separate sheet and identify it as a test report with date, time, personnel present and step-by-step procedure and results.

4.10 Taking Items into Custody

When taking an item into your possession as evidence, each item must be labeled with a date, name and address, identification of the object and the inspector's name. All items of evidence must be listed on a separate page by item number, details of the tag, disposition, location and date.

4.11 Tagged Evidence

Items of evidence must be kept in the inspector's possession or secured under lock and key. Any time a tagged piece of evidence leaves the inspector's possession, the person receiving it must sign and date the tag. When it is returned, the inspector must do the same to show continuity and maintenance of the chain of custody.

4.12 Interviewing Witnesses

Interviewing witnesses and taking statements can be tricky. The interviewing of witnesses has been described as an art all its own, even under ideal conditions. Treating the witness with courtesy and respect is always obligatory. However, that should be no barrier to obtaining the information required. Interviews should be conducted in private and not before a group of people, whenever possible.

The inspector should have a clear understanding of the questions to be asked, with the more important ones reserved for the end. During questioning, more information than requested may be received. Follow up on every facet of each statement.

Do not anticipate a witness's answer or endeavor to rush a reply. Patience may be a virtue, but it is absolutely vital during an interview. If an answer is not believed, do not argue or contradict the witness. The inspector should ask the question, get an answer and later in the interview or another time, repeat the question using different words and a different approach and see what results.

4.13 Photographs

Photographs, when properly taken and in sequence, support or dispel theories and statements. Assure that photographs are taken to clearly show both the overall and the close-up of important items. As well, keep a log of what photographs are taken at the time they are taken so that errors do not arise later. Taking pictures before, during and after, in stages, when dismantling important items is advisable.

4.14 Incident Report

The incident investigation report form (Attachment 1) must be filled out and sent to the Bureau Chief immediately after an initial visit to an incident site. Remember, reports and other materials may become essential elements in any kind of lawsuit and may be considered public records.

4.15 A no fee “Accident Inspection” **report** will be made in ***the Bureau’s inspection database*** for any object assigned a North Carolina registration number. The Bureau does not charge fees for incident investigations.

5.0 CUSTOMER SERVICE REQUIREMENTS

The purpose of following this procedure is to provide the customer, be it the public, employees of the Bureau, or other state agencies, with the most efficient service, information, training and assistance possible.

6.0 ***DATA and RECORD MANAGEMENT***

***Records shall be maintained in accordance with the Functional Schedule for North Carolina State Agencies as adopted by State Archives, a Division of the North Carolina Department of Natural and Cultural Resources.***