

Incident Investigation Terms of Reference (TOR) Sample Human Factors Language

Incident investigations require Terms of Reference (TOR) agreed between investigation lead and stakeholders before they can begin.

The TOR, at a minimum, provides clear scope, areas of focus, defines the team and resources, time requirements, conduct methods, and reporting. The TOR also establishes accountability for conducting the investigation and closing out recommendations.

In addition to the basic minimum sections, the TOR should also include HF language integrated into the sections describing the conduct of the investigation (methodology, analysis, etc.) and in the expected reporting.

A human factors analysis should be done anytime there is human error(s) or a behavior(s) within the sequence of events of the incident. That analysis will identify underlying conditions and systems that allowed for or encouraged that behavior to occur.

This is essential when drafting effective recommendations for influencing behavior post-incident. The Human Performance review should be done as part of the investigation and not conducted as a follow-up action after the investigation has been completed and report issued.

The investigation report should include a Human Performance section written in plain language that identifies behavior(s) and/or human error(s) that contributed to the incident, a discussion of those underlying conditions (performance shaping factors) that led to the behaviors and/or human error(s), and the results of Human Factors analysis, as (applicable).

It may not be clear at the onset of the investigation that human error(s), undesired behavior(s) and/or non-conformances are contributing factors in the incident cause.

However, as soon as it is determinable, additional inquiry should be conducted because undesired behaviors and/or non-conformance cannot be considered a “root cause.”

See overleaf for Recommended TOR Inclusions

Recommended TOR Inclusions:

The following language should be included in all Incident Investigation Terms of References within the “Conducting the Investigation” section:

For all severity levels of investigations, human factors considerations and analysis (as appropriate) shall be incorporated. If during the investigation, human error(s), undesired behavior(s) and/or non-conformances are identified as contributing factors, a line of inquiry will be conducted to understand what underlying performance shaping factors may have influenced the human error, undesired behavior(s) and/or non-conformance.

For each performance shaping factor, further inquiry should continue to identify organisational processes and contributions that allow this PSF to influence behaviour. “Human error”, “undesired behavior” and/or “non-conformance” itself should not be considered a “root cause,” but rather something to be further investigated to discover what contributed to it in terms of existing conditions that allowed it to occur.

Once performance-shaping factors/error traps are identified, the “Hierarchy of Controls” methodology shall be applied to address those underlying conditions that were present to ideally eliminate the opportunity in the future or engineer out the condition before relying on more administrative controls.

If administrative controls are selected in response to these factors, a long-term self-verification and oversight strategy shall be implemented to continuously verify that the conditions and factors which occurred to prompt the incident do not reoccur.

The following language should be included in all Terms of References within the “Reporting” section:

The investigation report shall include a Human Performance section written in plain language that identifies behavior(s) that contributed to the incident, a discussion of those underlying conditions (performance shaping factors) that led to the behaviors, and the results of Human Factors analysis, as (applicable).

For more information on integrating Human Performance into Investigations, see the following links:

Recommended practice for integrating HP into investigations at increasing levels of maturity

<https://www.hpog.org/hp-in-your-management-system/hp-in-investigations/>

The Human Factors Investigation Toolkit including HF Analysis Tool

<https://www.hpog.org/assets/documents/Investigation-Toolkit-EI.pdf>