

Root Cause Analysis Template

[For Use by the Industry]

7/12/2010

Created by the Industry

Root Cause Analysis Template

The user should address these questions during the RCA

DRAFT

Introduction

This template will help the Root Cause Analysis (RCA) team collect information, perform analyses and determine the cause of the events. This document also provides guidance for analyzing problems by addressing the policies, procedures and processes; utility system operation and equipment failure; and human performance. Note the majority of human performance failures are attributed to the lack of policies, procedures and training.

When the event cause is determined the team should discuss corrective actions to take so that the event will not happen again.

It may be valuable for the team to share the lesson with the industry.

Action Plan

As the team conducts its RCA ask the questions that are described in the template. Attach reference documentation as necessary.

Root Cause: A root cause is an initiating cause of a causal chain which leads to an outcome or effect of interest. Commonly, root cause is used to describe the depth in the causal chain where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome.

en.wikipedia.org/wiki/Root_cause. The root cause is the event or combination of events that initiate a failure.

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<u>Performance Category</u>	<u>Description</u>	<u>Sub-category</u>	<u>Evaluation</u>	<u>Comment</u>
			<p><i>Ask these questions for all categories</i></p> <p><i>(1) Does it exist?</i></p> <p><i>(2) Did this cause the event?</i></p> <p><i>(3) Is something missing?</i></p> <p><i>(4) Is there an opportunity to correct?</i></p> <p><i>(5) Other thoughts to consider?</i></p>	
Policies and procedures	This category deals with the corporate policies and procedures.			
		System policies and procedures	<p>(1) Does the organization have a policy or procedure that applies?</p> <p>(2) Does the policy or procedure work?</p> <p>(3) If not what changes are needed?</p>	
		Work direction	<p>(1) What was the work direction?</p> <p>(2) How was the work direction given? Verbally? In writing?</p> <p>(3) Did the employee confirm?</p>	

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			expectations?	
		Communications	<p>(1) <i>How did the parties communicate? Verbally? In writing?</i></p> <p>(2) <i>Was “third part” communication followed?</i></p>	
		Training	<p>(1) Does a training procedure exist? If no why not?</p> <p>(2) Was the employee trained? If no why not?</p>	
		Quality Control	<p>(1) Does a QC program exist?</p> <p>(2) If no why not?</p>	
		Barriers	<p>(1) Are there any barriers that caused negative results?</p> <p>(2) Do policies or procedures exist that are causing the problem?</p> <p>(3) Does money exist that can fix the problem?</p>	
		Human performance	<p>(1) Do policies and procedures exist?</p> <p>(2) If not will relevant policies and procedures be developed and implemented?</p>	

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			<ul style="list-style-type: none"> (3) If they exist will they be improved? (4) Did the person fail to follow training, policies, and procedures? (5) Are there logical reasons for the human performance failure? 	
		Repeat failure	<ul style="list-style-type: none"> (1) Has this event happened before? (2) Why? (3) Why not? (4) What can be done to keep the same event from happening again? 	
System operation and equipment	This section applies to how the system is performing or not performing. The same set of questions applies to the pieces of equipment.			
		Operation, maintenance	<ul style="list-style-type: none"> (1) Do policies and procedures exist? 	

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		system policies and procedures	<p>(2) If not will relevant policies and procedures be developed and implemented?</p> <p>(3) If they exist will they be improved?</p>	
		Design	<p>(1) Does a design problem exist?</p> <p>(2) Did the entity contact the equipment supplier or manufacturer?</p> <p>(3) Did this cause the event?</p> <p>(4) Is something missing?</p> <p>(5) Is there an opportunity to correct?</p> <p>(6) Any other thoughts to consider?</p>	
		Management systems	<p>(1) Do policies and procedures exist?</p> <p>(2) If not will relevant policies and procedures be developed and implemented?</p>	

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			(3) If they exist will they be improved?	
		Defective parts	(1) Did parts fail? Why? (2) What improvements can be made? (3) Has the entity contacted the manufacturer? Why not?	
		Quality Control	(1) Was the process inspected for flaws? (2) Was the work area inspected for problems? (3) Why not?	
		Training	(1) Was staff trained? (2) If no then why not? (3) Any improvements needed? (4) Should the entity propose changes to the equipment supplier or manufacturer?	
		Repeat failure	(1) Why are the same mistakes occurring? (2) Any improvements needed? (3) Should the entity propose	

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			changes to the equipment supplier or manufacturer?	
Human Performance	This area deals with the human element.			
		Individual	<ul style="list-style-type: none"> (1) Was the employee adequately prepared to perform the tasks? (2) If no then why not? (3) What improvements can be made? 	
		Team	<ul style="list-style-type: none"> (1) Was the team adequately prepared to perform its work? (2) If no then why not? (3) What improvements can be made? 	
		Management System policies and procedures	<ul style="list-style-type: none"> (1) Do policies and procedures exist? (2) If not will relevant policies and procedures be developed and implemented? (3) If they exist will they be improved? 	

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		Training	<ul style="list-style-type: none"> (1) Does a training procedure exist? If no why not? (2) Was the employee trained? If no why not? 	
		Communications	<ul style="list-style-type: none"> (1) How did the parties communicate? Verbally? In writing? (2) Was “third part” communication followed? 	
		Quality Control	<ul style="list-style-type: none"> (1) Was the process inspected for flaws? (2) Was the work area inspected for problems? (3) Why not? 	
		Work Direction	<ul style="list-style-type: none"> (1) What was the work direction? (2) How was the work direction given? Verbally? In writing? (3) Did the employee confirm expectations? 	
		Environment	(1) Was the work	

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			<ul style="list-style-type: none"> environment bearable? (2) Safe? (3) Work load balanced? (4) Staff overworked? (5) Proper safeguards in place? (6) Other factors exist that made it difficult to perform tasks? 	
		Barriers	<ul style="list-style-type: none"> (1) Are there any barriers that caused negative results? (2) Do policies or procedures exist that are causing the problem? (3) Does money exist that can fix the problem? 	
		Repeat failure	<ul style="list-style-type: none"> (1) Why are the same mistakes occurring? (2) Any improvements needed? (3) Should the entity propose changes to the equipment supplier or manufacturer? 	
Corrective Action Plan				

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		Repeat failure		
		Cost to correct		
Lesson Learned opportunity			Should this event be shared with the industry?	

For more details see the Events Analysis process documentation

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