

Example #1

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Key Competency 1.1: Regulations, Codes, & Standards - Demonstrate knowledge of regulations, codes, standards, and safety – this includes local engineering procedures and practices as applicable.

Situation: Our customer, involved in the logging business, submitted a request to develop a new bundling cable to handle a 20% additional load, while maintaining the cost within +/- 3%. My role was to review the request, assess the feasibility according to the latest ASTM A475 standard, and design the product.

Action:

- I reviewed the current product in use according to ASTM A475.
- I studied the samples submitted to XYZ Corporation and evaluated the actual breaking loads on the cable and single wires.
- I designed a new single wire size suggested by the ASTM A475 using a new feedstock with higher carbon grade and a new coating method.
- I issued the new process design sheet to the planning and production team for a trial run of the new product.

Outcome: The trial run satisfied the requirements of ASTM A475 and the customer. The cost of manufacturing was found to be within +/- 2%. The trial product was shipped to the customer for their review and final approval. A positive response from the customer was received about a month after first shipment.

Example #2

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Key Competency 1.6: Safety awareness - Be aware of safety risks inherent in the design and demonstrate safety awareness – on-site and possibly safety authorization/certificate as appropriate.

Situation: Dough Making Inc. reported 12 lost time accidents (LTA) in 2012. The company planned to address the high number of incidents occurring on the manufacturing shop floor. As part of the production management team, I was assigned to collect data on the safety incidents and implement the appropriate actions to prevent them.

Action: In cooperation with the safety coordinator and the safety committee, I introduced a new logbook in the first aid room and started collecting injury data on a daily basis.

- I conducted the Pareto analysis of the incidents on a monthly basis and found that hand cuts and eye injuries were the most frequent type of incident.
- I helped the safety committee conduct a Root Cause Analysis (RCA) and discovered the following:
 - A high incidence of eye injuries were reported from areas in manufacturing where goggles are not mandatory.
 - The current type of protective glove issued to operators is preventing the operators from performing their fine motor skill tasks effectively. As a result, the operators have been removing their gloves during this work, creating a greater probability of hand cuts.

Outcome:

A safety policy change on using Personal Protective Equipment was mandated. I was responsible for enforcing the policy at the baking line.

- A new type of protective gloves was acquired.
- The number of LTAs was reduced to three cases after the first year, and to zero after the second year.

Example #3

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Key Competency 4.2: Work to resolve differences.

Situation: The Quality Engineer had to put a hold on the shipment because she was concerned about the integrity of the ball bearings in all 10 machines. The delay did not sit well with the Production Manager and a conflict escalated to higher managers. The plant manager asked me to resolve the issue as quickly as possible.

Action:

- I called a meeting between the affected parties including the Quality Engineer, the Production Manager, the Design Engineer, the Director of Supply Chain, and the Director of Customer Services.
- I asked the Quality Engineer to provide her reason for putting the last machine on hold, as well as any evidence to support her decision.
- I presented the evidence to all the parties involved and obtained their feedback.
- We agreed upon a few actions that satisfied all the parties involved, but still met the customer's requirements.
- I made sure to keep the discussion based on the facts, not emotion.

Outcome:

- The last machine was shipped with a repair kit to address the non-conforming parts.
- The Director of Customer Services appointed a team to perform the necessary repairs on-site.
- The Quality Department & Director of Supply Chain were tasked with implementing a corrective action with the supplier.