[This is a very small portion of a company manual Joen Kinnan wrote for a small gauge manufacturer. The name of the company has been blocked for privacy reasons.]

4. Employee Training and Motivation

4.1 Scope

The aim of [redacted]. is to assure a sound quality system at all levels and to provide recognition for outstanding performance. The company will provide employee training and motivation for every employee.

4.2 Skills and Training

It is the responsibility of the department supervisor to verify that new hires have obtained the skills or credentials required for the job. For unskilled jobs, Supervision will take the necessary steps to train workers in the basic skills required.

It is the policy to encourage continuous training for selected skills through seminars, continuing education, and other resources.

4.3 Motivation

The company encourages motivational programs, with the intent to develop teamwork, resolve problems, and recognize achievements of teams or individuals.

5. Quality Planning

5.1 Scope

Every new product and/or change to an existing design must have a plan to assure that the product will conform fully to quality requirements. The company does not perform design engineering; however, we encourage involvement with the customer during the design cycle because we believe it is critical to successful manufacture. This section outlines responsibilities of quality planning at [redacted]

5.2. Design Review and Control

Manufacturing and Quality Control will review new design and/or change to an existing design for manufacturing feasibility, specific customer requirements, designed-in quality problems, and processing difficulties. Designated personnel will coordinate with the customer to resolve potential problems before an order is accepted or manufacturing is begun.

5.3 Prototype Samples

In some cases, prototype samples may be necessary to assure conformance with customer requirements. Quality Control will inspect all prototype samples before they are submitted to the customer for feedback. In addition, any expected processing problems will be resolved and corrected before the start of any manufacture.

5.4 Inspection Plan

The inspection plan for each job will describe and detail the dimensions to be controlled, procedure for setup checks, frequency of inspection, and measurement tools. If appropriate, the plan will indicate where SPC is necessary. The form labeled *Quality Plan* will be used for this planning (see Form 01, Appendix).

5.5 Release to Production

Before release to production, all documentation such as specifications, inspection plans, materials, etc., must be approved by Manufacturing and Quality Control. It is the responsibility of Manufacturing and Quality Control to assure that every operation is statistically capable and fully documented for quality before production begins. All persons involved must be trained and proficient in judging acceptable quality.

6. Costs Related to Quality

6.1 Scope

Quality costs are measures of a successful quality system. Losses attributable to poor quality require that successful corrective action be taken. It is the goal of [ ] to reduce quality losses to a minimum in order to be able to deliver cost-effective products to each customer.

6.2 Responsibility

It is the responsibility of Manufacturing and Quality Control to track the scrap and rework costs associated with each job. It is the responsibility of Quality Control to analyze these costs, to initiate corrective action, to follow up, and to assist in the implementation of measures to reduce these costs. The Tri Part form labeled *Quality Costs* (see Form 14, Appendix) will be used to track these costs, which will be reported monthly to management.

7. Calibration of Gauges and Equipment

7.1 Scope

All mechanical and electronic gauges, equipment, and testers used to manufacture, test, inspect, or verify products, will be calibrated for accuracy at prescheduled intervals. All calibrations will be performed according to National Bureau of Standards standards of accuracy.

7.2 Responsibility

It is the responsibility of Quality Control to:

- Conduct all calibrations and /or schedule calibrations to be performed by outside agencies.
- Establish the frequency of the calibrations.
- Establish and maintain a recall system to assure that all gauges and
- equipment are recalled for calibration at the scheduled date.
- Maintain accurate records of the results and dates of calibrations.
- Mark each device calibrated with a unique number. The number of the device calibrated, the date that the device was calibrated, the due date of the next calibration, and the initials of the person performing the calibration will be recorded and maintained in a card file.
- Assure that all standards used for calibration are in accordance with the standards of the National Bureau of Standards and that certificates of accuracy from the Bureau are available.
- Assure that any gauge or equipment that is impossible to calibrate, or is in disrepair, is removed from use and properly identified as "non-serviceable" until it is destroyed or repaired.

It is the responsibility of all employees to be certain that the equipment and gauges used are calibrated and that any discrepancies in accuracy or suspected problems are brought to the immediate attention of Quality Control.

7.3 Schedule

All instruments, whether operator-owned or company-owned, will be calibrated the first week of every third month.

7.4 Procedure

Instruments will be checked and returned to their operators if found satisfactory. If any gauge is not in calibration, it will be removed from service until it is repaired. Calibration records will be maintained on the calibration form labeled *Gauge Inspection Card* (see Form 13, Appendix).

7.5 Applicable Documents

- Gauge Inspection Card (Form 13)
- Recall Procedure
- Gauge Calibration Procedure

8. Corrective Action

8.1 Scope

Corrective action is required in the event of product discrepancies originating from any source, including design, processing, vendors, documentation, materials, control, and/or customers. Corrective action is also required as a preventive measure to avoid production of discrepant materials/products. Such action is required in the event that deliveries, service to customers, yields, productivity, lead time, costs, safety, or other critical parameters are jeopardized due to quality issues.

8.2 Responsibility

It is the responsibility of the Quality Control Department to manage formal corrective action and to assure the effectiveness of the corrective action. The corrective action may be assigned to an individual or to a team depending on the magnitude and specifics of the problem.

8.3 Documentation

8.3.1 Vendors

Vendor Corrective Action Requests (VCARs) are generated by incoming inspection on each lot of discrepant material received. The VCAR gives all pertinent information regarding the lot and requests written proof of corrective action from the vendor. Copies of the VCAR are retained by incoming inspection. It is the responsibility of Quality Control to verify that a written response has been received and that effective corrective action has been taken.