

**LEADERSHIP THROUGH QUALITY -- TOTAL QUALITY MANAGEMENT INITIATIVE
AT THE UNITED STATES DEPARTMENT OF ENERGY'S
ALBUQUERQUE OPERATIONS OFFICE**

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ABSTRACT

The United States Department of Energy, Albuquerque Operations Office (AL) has always considered its customers' expectations, relative to AL's primary mission of development, production and transportation of nuclear weapons, to be highly important. The AL management committed to a total quality management (TQM) initiative in June 1990 to further enhance its operations.

The AL TQM initiative is entitled "Leadership Through Quality." The first phase of the initiative required training of all AL employees. A seven-step methodology based on the AT&T Process Quality Management and Improvement Guidelines was adopted after review of several available processes.

Six AL Managers were detailed for six months beginning July 1, 1990 to become quality consultants and facilitators as well as instructors of the seven-step methodology. In September 1990, an aggressive all employee training program began. By the end of December 1990, over seventy two-day workshops were conducted and over 1,600 people were trained. Process Management Teams (PMTs), a product of the seven-step methodology, began forming in September 1990 and currently there are over forty active teams.

Although the Leadership Through Quality initiative at AL is still in its infancy, some successes have already been attained. A quality council at AL has been formed consisting of the Manager and several members of the executive staff.

Dr. W. Edwards Deming, one of the outstanding quality leaders, has continually emphasized there is "no instant pudding" in TQM. As in almost all organizations, a cultural change is required. AL is beginning to see process improvements occurring at Albuquerque Operations Office thanks to the Leadership Through Quality process.

INTRODUCTION

The United States Department of Energy, Albuquerque Operations Office (AL) has always considered its customers' expectations relative to AL's primary mission of development, production and transportation of nuclear weapons to be highly important. The successful history of the nuclear weapons stockpile attests to this premise. The AL management committed to a total quality management (TQM) initiative in June 1990 to further enhance its operations. That commitment is documented in the following statement signed by the AL Manager, Deputy Manager and executive staff:

"We are committed to a quality ethic which empowers all employees to continually improve processes they own to meet customer expectations. We pledge to sustain this effort through support at every level throughout the organization."

The AL TQM initiative is entitled "Leadership Through Quality." The first phase of the initiative required training of all AL employees. A seven-step methodology based on the AT&T Process Quality Management and Improvement Guidelines was adopted after review of several available processes. The Process Quality Management

and Improvement (PQMI) methodology is used to evaluate work processes for better understanding and to seek ways of improving them. Application of this methodology is based on the premise that "all work is part of a process." Therefore, all employees are part of and responsible for a process.

Step 1 of the methodology involves establishing process management responsibilities. It concentrates on who owns the process and who is involved in it. Profound knowledge, accountability and empowerment are the three concepts stressed in determining the process owner.

Step 2 defines the process and identifies customer requirements. Flow charting is introduced as an effective tool for defining processes. When identifying the customer requirements, a customer/supplier model is introduced and feedback is stressed.

Measures are evaluated in Step 3 to determine if customer requirements are being met. Internal and external measures of the defined process are evaluated.

In Step 4 assessments are made of the conformance to customer requirements. Data gathered from measurements defined in Step 3 are evaluated using tools such as control charts.

Based on assessments made in Step 4, opportunities for process improvement are evaluated in Step 5. Micro flowcharting and Pareto charts are some of the tools introduced in this step.

In Step 6 potential improvement opportunities are ranked and objectives for the improvements are set. The decision matrix tool is introduced.

The final step, Step 7, is focused on an action plan, which outlines in detail the actions that will lead to improvements in the process. In applying the methodology, no changes are made to the process until Step 7, thus stressing the importance of careful planning and evaluation before implementing changes.

Six AL managers were detailed for six months beginning July 1, 1990 to become AL's Leadership Through Quality Facilitators. In this role, the six managers act as quality consultants and are responsible for conducting the PQMI workshops. They attended various quality courses including Deming, Juran, Crosby and went through intensive training by an AT&T quality expert on the seven-step methodology.

In September 1990 an aggressive all employee training program began. Workshops were scheduled so employees within a functional work group could attend together. Prior to the actual two-day workshop, the facilitator met with the manager of the work group to be trained to discuss issues relative to the group's processes. Class size was limited to about twenty-five people and included "customers" and "suppliers" who were invited by the group's manager. To enhance the learning process and reduce interruptions from work, classes were held off site. During the two-day session, attendees were presented the background to the TQM movement as well as the specifics of the chosen methodology. A strong point of the workshop was the use of four break out sessions during which designated teams of attendees applied the seven step methodology to their own work processes. A specific process and associated issue were offered to each team for evaluation during the break out sessions. The facilitator always stressed that each team should pick a process it wanted; the one offered was only a suggestion for the team to consider. Experience showed that about half of the teams evaluated the offered process. Processes such as processing a procurement request, processing of travel vouchers, scheduling/planning audits, publication of a report, and training of part-time employees are examples of suggested processes.

Management was responsible for opening and closing each workshop with a short presentation. This further stressed the AL management commitment to the TQM initiative. It also gave managers the opportunity to review the results of the group's first efforts in applying the methodology to a specific work process of the organization.

Utilizing six AL managers as facilitators for the PQMI workshop was well received by the employees. The workshops offered an opportunity for the employees to informally interact with top management. The facilitators were open and candid as they presented corporate as well as personal views on the subjects raised. This helped the "bonding process" that occurred between the facilitators and class members. Anxieties, concerns and issues were continuously raised during the workshops. Some common issues follow:

- Empowerment of employees generated a lot of discussion. Many employees were skeptical that their managers would ever fully empower them. They felt that a change in the current culture would be difficult. Management needs to practice what they preach.
- Employees are in the "wait and see" mode and are looking for visible changes in management behavior and style. If managers are committed to the quality effort, they need to demonstrate their involvement.
- Top management's long-term vision needs to be well understood by employees. Uncertainty causes frustration. Senior managers need to clarify to their employees their short and long term goals.
- Employees feel they have too much to do. They fear that this effort will be added to everything else they are expected to do.
- Employees wonder if this quality movement is a management ploy to get them to do more with less.
- A key principle is, "Quality Happens Through People". Employees need to see top managers in the work place taking an interest in their daily work.
- Employees question how to deal with the inconsistency between the need to foster teamwork to improve quality and the current individual performance appraisal and recognition system. The current system focuses entirely on individual rather than team performance and rewards accordingly.
- There is a concern about improvements being driven from above. Improvement team formation should be voluntary and by consensus, not dictated by management.
- Employees question how can AL change its work processes when it is so constrained by external orders, direction and guidance.
- Crisis management leaves little time for long-term system optimization and improvement. Operating in a crisis mode does not promote quality work.
- There was and continues to be a high level of enthusiasm after the training. Employees hope the PQMI methodology is applicable to their processes. They

express a desire to work closer with managers in improving quality. This enthusiasm needs to be sustained through interest and involvement by managers after the training is complete.

By the end of December 1990, over seventy two-day workshops were conducted and over 1600 people were trained. Process Management Teams (PMTs), a product of the seven-step methodology, began forming in September 1990 and currently over forty teams are active.

The AL Leadership Through Quality initiative is now in its next phase. A quality council has been formed consisting of the Manager and several members of the executive staff. This council is overseeing the initiative and providing policy and support. It meets at least monthly to review progress and provide guidance.

The six managers continue to serve as facilitators for the PMTs. Although they have returned to their former positions, facilitators continue to support the TQM initiative by advising the various PMTs that formed following the employee training.

Further quality training is being offered and encouraged by AL management. Areas such as facilitator training, measurement techniques and small group dynamics are being stressed.

Although the Leadership Through Quality initiative at AL is still in its infancy, some successes have already been attained. Some examples of these successes are:

- An Acquisition Planning and Tracking System is being investigated to improve the process, reduce rework and increase attainment of acquisition goals in a timely manner. It should improve compliance with legal and regulatory requirements and result in better communications. The computerized tracking system is expected to be on line by early March 1991.
- A contracting system was studied to reduce the number of contracting protests and reduce the time spent in reacting to those protests. Reduction in the number of protests, required time and resources are benefits of the study. Improved processes for communication, response to inquiries, source selection techniques, file documentation and debriefing of unsuccessful offers are other expected results of this endeavor.
- A system is being developed to streamline the environmental checklist process and develop a parallel

process for safety documentation for construction projects.

- Flow charting of the performance review process resulted in an improved process during the last review. The consensus of participants was that the meetings were more effective.
- An improved process for granting clearances is needed. By moving approval authority to process owners lower in the organization the time required to grant clearances should be reduced.
- A study was undertaken to select equipment for security forces. The validation of an accurate and realistic threat assessment scenario resulted in selection of equipment that better met the customer requirements for operations. Accurate assessment of equipment reliability and proposal of corrective actions also occurred. A side benefit was enhanced communications within the organization.
- Streamlining the legal review process for major issues is a matter of interest and investigation for several groups.
- Many organizational units studied their mail and concurrence systems to see if improvements could be made. Several upgrades of the timeliness and accuracy of mail systems were made. A greater sensitivity on the part of management to the value added of each person on the concurrence list was accomplished. Several groups are investigating parallel concurrence processes.
- AL's senior managers also are involved. The AL Manager is serving on a Process Management Team with his executive officer, secretary and others. Their task is to review the management issues tracking process to collect, use and manage information for timely decision making. A process to improve communication of information from management meetings to employees is being investigated with the goal of better communication and understanding of management's perceptions and priorities. The Deputy Manager serves on this Process Management Team.

CONCLUSION

Dr. W. Edwards Deming, one of the outstanding quality leaders, has continually emphasized there is "no instant pudding" in TQM. As in almost all organizations, a cultural change is required. We are beginning to see process improvements occurring at Albuquerque Operations Office thanks to the Leadership Through Quality process.