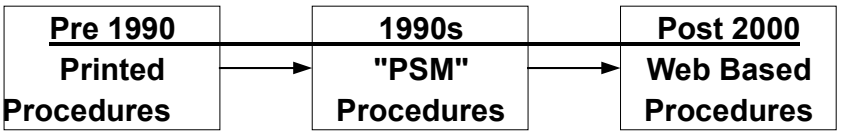
"SECOND GENERATION" OPERATING MANUALS

As already noted, the initial driving force for writing procedures for many companies in the process industries, particularly in the United States, was the need to comply with process safety regulations. For many facilities, the timeline for their manuals was on the lines of what is shown in Figure 1-1.

Figure 1-1 Operating Procedures Timeline



Prior to the 1990s, procedures were virtually always printed on paper (and usually distributed in a three-ring binder). The quality and integrity of such procedures were patchy, at best, and the operators rarely used them. In the 1990s, PSM regulations forced a major upgrade to the content of operating manuals, such that by the end of the decade, there had been a dramatic improvement in the quality of the procedures. Also, companies generally wrote their procedures using a word processor and made them available to the operators through a local area network (LAN).

Most companies are now in good shape concerning this requirement. Generally, they "survive audits" without any major problems. However, the fact that an operating manual meets the requirements of OSHA or some other agency does not necessarily mean that that manual helps the operators do their work, nor does compliance mean that writing and updating it is as efficient as possible. Hence

because they will need to address situations that they have not seen before.

Increasingly, the senior operators will function as human supervisors over computer control systems such as DCS
(Distributed Control Systems) or SCADA (Supervisory Control and Data Acquisition System). These operators need procedures that help them work with the electronic interface, generally as troubleshooters for when operations go awry.

Less Experienced Operators

Operators new to the facility need basic training in the form of detailed, step-by-step procedures. Although such procedures will be part of the operating manual, they are within the training department's province.

Management / Engineering

The technical staff uses the procedures as a framework to conduct plant tests and assist with troubleshooting. Management may also use the procedures when planning large projects such as a turnaround or revamp. In such situations, many temporary procedures will likely be needed.

Translators

Many manuals are written by an engineering company for clients in a different country. This means that the manual's first “user” or “customer” will be a translator. Should this be the case, avoiding very technical terms, jargon, ambiguity, and convoluted sentence structures is particularly important. All material must be explicit; there is no room for “reader interpretation,” inference, or reading between the lines.

A web-based approach is particularly valuable in three regards:

Organizing different levels of detail for the task instructions.
The sequence of the procedures and
Structuring troubleshooting guidance

Additional benefits from the use of web-based procedures include:

The organization of links to safe limit values,
Interactivity with the users of the procedures,
Usability and appeal,
Links to other elements of process safety management,
and
Ease of updating

JUSTIFICATION FOR AN OPERATING MANUAL

Although most managers recognize that writing a high-quality manual is inherently worthwhile, they also realize that the development of procedures is expensive and will tie up the time of many key people. It is, therefore, essential to develop a justification for a procedures-writing project and clearly define the project’s objectives, i.e., to define measurable success.

It is suggested that the following reasons (in addition to meeting regulatory requirements) will usually explain why procedures are being written or upgraded.