8

Documenting the Revalidation Study

A clear, concise, thorough PHA revalidation report is essential to the retention and communication of the PHA results. Experience shows that one of the most difficult obstacles for a revalidation team results from inadequate documentation of the prior PHA. It is likely that most PHA revalidation teams will gain, during the course of the PHA revalidation, a greater appreciation of the importance of clear, accurate documentation and respond accordingly.

Much of the documentation for a PHA revalidation will parallel that for an initial PHA. However, some approaches to revalidation, as suggested in this book, use a number of screening forms and checklists. Those choosing to use such forms and checklists should consider including them in the revalidation documentation so that the basis for key decisions (e.g., the basis for the particular revalidation option chosen) can be clearly communicated to the next revalidation team, five years hence.

The PHA revalidation report format and content will often be prescribed by company requirements. This chapter provides suggested documentation practices for the PHA revalidation and associated records that could be used in lieu of more specific company requirements.

8.1. Documentation Approaches

The two basic approaches to documenting the PHA are revalidation “evergreen” documentation and “basic” documentation.

With “evergreen” documentation, a new PHA report, similar in format and content to the prior PHA report, is prepared. This single document would:
1. Identify the process unit examined;
2. List meeting participants;
3. List documents examined (e.g., previous PHA report, P&IDs, incidents since the previous PHA);
4. Describe the revalidation approach and the rationale for its selection; and
5. Document the analysis results and findings.

Appendices to the report could contain the PHA technique worksheets (e.g., HAZOP worksheets) and other supporting documentation such as the Change Summary Worksheet or any appropriate checklists used by the revalidation team.

This documentation style is more commonly used when the PHA worksheets are revised during the revalidation. “Evergreen” documentation should result in a report that:

- Integrates and presents the requisite information in a format that looks familiar to users;
- Simplifies revalidation in the future;
- Demonstrates that all analysis issues were addressed;
- Can be used to support other PSM activities (e.g., mechanical integrity, training); and
- Accurately represents the process configuration, hazards, and applicable controls in one document.

The more “basic” form of documentation involves compiling the requisite individual documents such as the prior PHA, completed MOC forms, incident investigation reports, etc., along with any worksheets or checklists completed during the revalidation. These documents are then linked together by a summary cover report that summarizes the results of the revalidation.

This simplified approach may make it more difficult for some to use the report, since it does not provide the information in an integrated format. Consequently, the “basic” form of documentation is commonly limited to those situations for which relatively little Update has been required in the Update and Revalidate (e.g., where there have been few significant changes or incidents to reflect within the revalidation).

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From the Workshop...

Revalidation Workshop participants noted that one common problem with documenting PHA revalidations occurred when changing the software used to document the PHA. Lack of “backwards compatibility” often resulted in the need to retype the prior PHA worksheets for the revalidation effort. This can have a significant impact on the time required to prepare for, or complete the documentation of, the revalidation.
8.2. Report and Its Content

The following is a suggested table of contents for the revalidation report.

- Summary Report
  - Purpose and introduction
  - Description of process unit/section
  - Study dates and member attendance
  - List of team members indicating their job function (e.g., operator, engineer)
  - Description and substantiation of revalidation method
  - Summary of recommendations
- Reference Information
  - List of P&IDs, including revision number or date of last revision
  - Copy of P&IDs
  - List of study sections (if applicable)
  - List of PSI referenced in study
- Study Worksheets
  - Worksheets for each drawing reviewed (if applicable)
  - Worksheets for each section reviewed (if applicable)
- Other Completed Exhibits (if used)
  - Essential Criteria Checklist (see Appendix B)
  - PHA Quality and Completeness Checklist (see Appendix C)
  - Change Summary Worksheet (see Appendix D)
  - Facility and Process Modification Checklist (see Appendix E)
  - Facility and Stationary Source Siting Checklist (see Appendix F)
  - Human Factors Checklist (see Appendix G)
  - Wrap-up Discussion Checklist (see Section 7.3.4)

Additional information on documentation for various hazard evaluation techniques is provided in the CCPS *HEP Guidelines* and in the CCPS *Guidelines for Process Safety Documentation* (CCPS G-27).

8.3. Recommendation Follow-Up

As with any PHA recommendation, the recommendations coming out of the revalidation study should be resolved in a timely manner. Experience indicates that explicit, clear documentation of responsibilities is essential to the resolution of recommendations. In general, organizations should consider documenting the following with respect to recommendation follow-up:
8.4. Records Retention and Distribution

The PHA report and any PHA revalidation reports are valuable sources of information for those having a responsible role in controlling the hazards of the process. Furthermore, these documents can be valuable training tools. Companies should consider implementing effective ways of ensuring that this information is conveniently accessible.

Additionally, it is important that this valuable information be protected. Company policies or procedures often establish retention practices for the PHA-related records. Specific requirements are imposed upon those facilities covered by the OSHA PSM or EPA RMP regulations; the PHA and PHA revalidation reports, as well as documentation of the resolution of recommendations from these reports, must be maintained for the life of the process. Covered facilities should ensure that archival copies of all versions of the PHA documentation are maintained, even when the “evergreen” documentation option is used to update the prior PHA report.