

## CLIENT CASE STUDY

### “LOPA ACTION ITEM REVIEW”

- ∴ **Facility Type:** Bulk Storage Facility
- ∴ **Services Provided:** Risk Assessment / Engineering Review

### The Opportunity:

- ∴ A recent Layers of Protection Analysis (LOPA) of a cavern storage facility identified several equipment installations requiring safety system upgrades. While the facility management wanted to follow proper review procedures, these proposed mitigation options seemed excessive. As a result, the site hired Smith & Burgess to review the safety systems upgrades to ensure the installations were needed and met regulatory requirements.

### Our Solution:

- ∴ Smith & Burgess immediately mobilized a team with expertise in instrumentation, PSM, and operations experience. This team was able to review the action items from a multi-disciplinary point of view and followed the procedures outlined in the action item requirements white paper. The appropriate engineering standards and regulations were reviewed to ensure any upgrades would meet minimum requirements. The team followed regulatory guidelines when addressing and dismissing previous safety systems upgrades made by an outside contracting firm.

### The Results:

- ∴ The Smith & Burgess engineering review identified many areas where the existing installation was acceptable per engineering standards (e.g. NFPA 86), as well as areas where the proposed modifications may have reduced the facility's overall safety. For the mitigations that were required, the engineering team identified minor changes in the review, ensuring that the final installation met appropriate engineering standards and regulations. Only one in four of the original action items were deemed necessary, and as a result the site's capital investment focused only on true safety concerns and potential regulatory deficiencies.

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