Configuration Management as a Risk Assessment Tool for Pipeline Integrity

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ABSTRACT

A significant release resulting from a pipeline containment failure (e.g., leaks and ruptures) of a gas or liquid pipeline can cause hazards to the facilities, company personnel, members of the general public, and/or the environment. While many government regulations are aimed at reducing the probability of failure and consequences of failure, several government regulations also require that pipelines operators have in place another layer of protection for the public and the environment in the form of a risk management plan. This paper discusses one of the key elements of any risk management program, Management of Change (sometimes also called configuration management or process change control).

The policies and procedures which insure that changes within pipeline facilities do not result in operations outside established safety parameters are designated as Management of Change. Recent process safety initiatives have identified Management of Change as a key element in controlling the potential hazards of any process operation. Since Management of Change requires a significant increase in maintenance of detailed documentation, many well-intentioned loss prevention programs are at risk of reduced safety levels due to a paperwork nightmare. This paper analyzes the range of existing Management of Change programs and associated documentation management techniques to provide insight into lessons learned in implementing an effective Management of Change program. A system for developing a Management of Change program is also presented.