

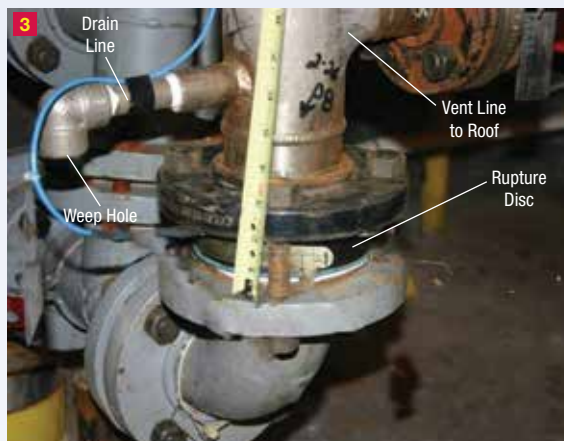
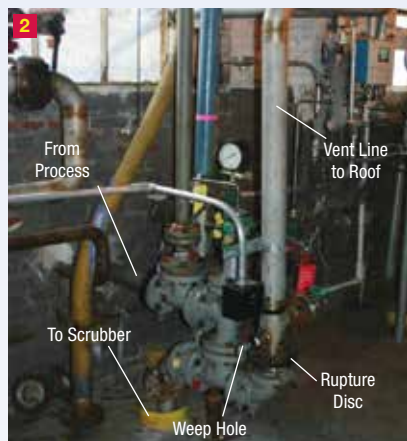
Do Your Alarms Cry Wolf?

Aesop's Fable *The Boy Who Cried Wolf* tells the story of a shepherd boy who repeatedly tricks villagers into thinking a wolf is attacking his sheep. The villagers grew wise to the trick and began ignoring the boy's cries for help. When a wolf did actually appear and the boy called for help, everyone assumed it was another false alarm. With no help to save the sheep, the wolf enjoyed a sheep dinner (Image 1). In some versions of the fable, the wolf also ate the boy, which is an appropriate analogy for the potential consequences of ignoring alarms in the process industries.

Alarms that actuate because of faulty sensors or because the alarm limit is set too close to normal operating conditions frequently provide false alarms. It is difficult to tell when these unreliable alarms are warning of a real deviation that requires action. Nuisance alarms indicate minor process deviations that do not require a response. If a display is crowded with many nuisance alarms, operators may fail to notice a real alarm that requires action.

The U.S. Chemical Safety Board (CSB) investigated a 2010 chemical release at a plant in West Virginia that involved an ignored alarm (Images 2 and 3). A rupture disc on a reactor containing methyl chloride — a toxic and flammable gas — burst, releasing methyl chloride to a vent line. The rupture disc was designed to trigger an alarm if it burst. The alarm had a history of faulty operation, often signaling a burst disk when it should not have. Operators, however, were not aware that the device had been upgraded, and assumed the signal was yet another false alarm.

Methyl chloride was released through a drain line with a weep hole on the vent into an area of the process building where personnel were not often present. The release continued for five days before a gas detector designed for a different chemical was triggered. About 2,000 lb (900 kg) of methyl chloride was released.



What can you do?

- Never ignore safety alarms. Safety alarms should have specific response procedures that must always be followed. Ensure personnel understand the response procedures and have received the proper training.

- If your plant has nuisance alarms, especially safety alarms, that chatter or remain in the alarm condition, report the problem and ensure it is fixed.

- If your plant has alarms that do not require a response,

evaluate the need for the alarms and consider eliminating them. However, never eliminate alarms or change alarm setpoints unless authorized.

- Ensure any changes to alarm design and equipment, alarm setpoints, or alarm response procedures are thoroughly reviewed using management of change (MOC) procedures. Inform the affected parties of the change and provide training on any modified procedures.

Don't ignore safety alarms — there might really be a wolf!

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