

## Investigation of Spearfish Wal-mart incident:

Date: February 10, 2012

Time: 5:00 AM

Location: 2825 – 1<sup>st</sup> Ave., Spearfish, SD 57783 (Wal-mart store)

Description: A log trailer disconnected from a truck traveling west on I-90 near exit 14. The trailer loaded with logs traveled through the ditch, through a ROW fence, across a parking lot, and struck the Wal-mart building. It overturned dumping the logs against the building and across the parking lot. The meter set was protected by 3, 6" steel pipe bollards filled with concrete. The tongue of the over-turned trailer intruded behind the bollards and cut off the 2" plastic anode-less gas riser below the stop causing a release of gas. The store was evacuated from 5:30 to 8:30 AM. Customers were not allowed in the store until 5:30 PM. There were no injuries or fatalities. The release of gas did not ignite or cause any damage or injuries. Property damage is estimated to be greater than \$50,000 including gas loss and damage to company property.

The post incident investigation included:

1. Analysis of information: who, what, where, when and why
2. Review of Emergency plan, procedures and actions
3. Review of applicable codes and standards

Summary of results:

1. Circumstances revealed a freakish accident where an improbable object defeated protective barriers to strike a gas meter set.
2. No abnormal operating conditions preceded the incident.
3. No national or local codes were violated.
4. Barricade posts met or exceeded applicable requirements.
5. MDU responded appropriately according to our Emergency Response Plan and Gas Distribution Standards.
6. The meter barrier was not adequate for the un-anticipated vehicle collision

Conclusion:

The root cause of the incident was a large uncontrolled vehicle striking a well protected meter set. The primary focus of the investigation was the meter set protection. Although the protection met or exceeded all standards, the meter set was damaged and gas escaped into the atmosphere, including the interior of the store. The meter protection barrier was designed and installed to prevent damage in the event of an anticipated vehicle collision. The random nature of the collision defeated the barrier not because it was weak or misplaced but because of the extreme randomness of the crash.

Montana-Dakota has determined that because of the unique and isolated root cause of this incident that no change to our vehicle protection standards and practices is warranted.



Investigation completed by Ron E. Blum PE

3-14-2012





