**Wrong kitty litter the culprit for WIPP release**

27 March 2015

**The contents of a failed waste barrel at the WIPP underground disposal site were "chemically incompatible", said the Department of Energy's (DOE's) technical report today, with a certain brand of cat litter playing a major role in the incident.**

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| SwheatScoop 250x250 |
| *SwheatScoop cat litter. The DOE did not specify its preferred brand* |

Without saying how the situation came about, the report explained how a mixture of nitrate salts in the waste reacted with SwheatScoop cat litter to produce heat and gases that eventually caused the barrel seal to fail. The announcement confirms rumours that circulated shortly after the release that an incorrect choice of cat litter had led to the issue.

In many industries cat litter is used as a convenient absorbant, and each barrel of waste disposed of at the Waste Isolation Pilot Plant (WIPP) contains around 26 kg of cat litter to stabilise liquids and nitrate salts. However, SwheatScoop happens to be made from wheat and therefore contains carbohydrates which provided fuel for a chemical reaction with the metal nitrate salts being disposed of. The reaction is exothermic, which means it produces heat. The increase in temperature then accelerated the reaction, leading to a runaway effect which eventually produced enough heat and gas to overcome the barrel's vent and seal to cause a release of some radioactive material.

Although this conclusion cannot be confirmed without examining the barrel, the report said that samples of material ejected from the barrel contained sodium carbonate which was likely present as a result of the reaction described above. A truck had caught fire in WIPP only one week before the incident, but the technical report ruled this out as a factor.

WIPP is owned by the DOE and operated by Nuclear Waste Partnership and is the country's facility for the disposal of transuranic, or TRU, nuclear waste from the US military program. The waste - clothing, tools, rags, residues, debris, soil and items contaminated with small amounts of plutonium and other man-made radioactive elements - is sealed in containers and placed in panels carved out of the underground rock salt formation. The surrounding salt ensures a dry environment while natural geologic processes cause the salt to compact around the packages. Detecting the rupture via air ventilation and monitoring systems on 14 February 2014, WIPP managers evacuated the site, shut down its operation and began an investigation. No significant radioactivity reached the surface.

The plant is expected to restart operation in 2016.

*Researched and written
by World Nuclear News*