

Recent Events at WIPP and Lessons and Questions for the Deep Geologic Repository

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Review of Ontario Power Generation's Proposed Deep Geologic
Repository for Low and Intermediate Level Nuclear Wastes

Basic facts confirmed

“The basic fact is that there is not yet one example of a DGR that successfully operated to fulfill its mission of safely isolating the wastes from people and the environment for the thousands of years that they are hazardous.”

Underground fire - February 5



Location operator saw
orange glow.

Fire results:

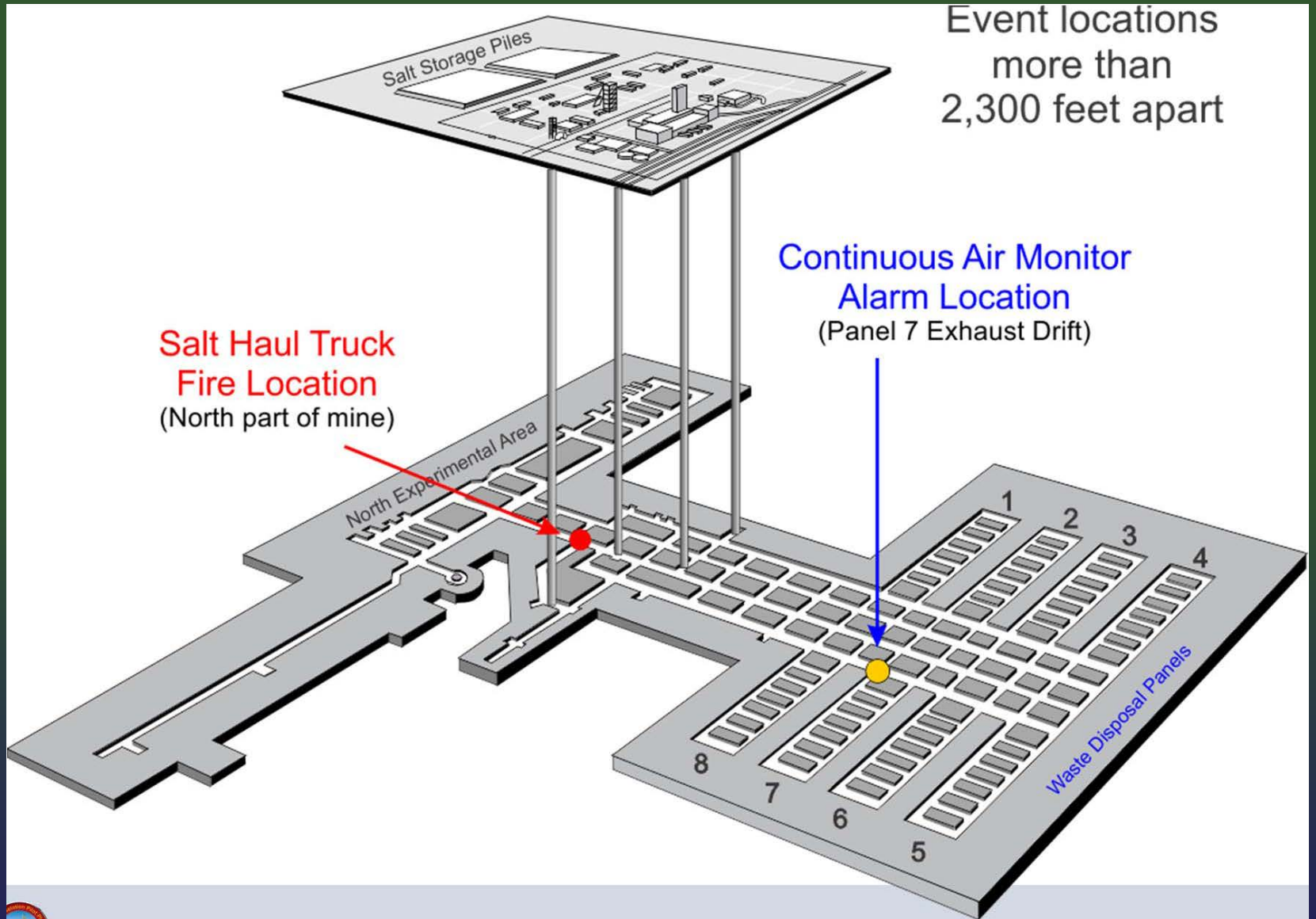
- All 86 workers underground at the time of the fire had to be evacuated
- 13 workers were treated for smoke inhalation
- One of the workers is still being treated, and is disabled. Lawsuit filed against present and former contractors
- Underground air monitors inoperable for six days.
- Neither OPG, nor CNSC, accurately state those facts.



Waste Hoist:

- Smoke and soot put out of service for more than 6 months
- Prevents some recovery activities that require more workers and 86 workers and equipment





Event locations
more than
2,300 feet apart

Salt Haul Truck
Fire Location
(North part of mine)

Continuous Air Monitor
Alarm Location
(Panel 7 Exhaust Drift)



The release was never supposed to happen - WIPP failed its “start clean, stay clean mission”

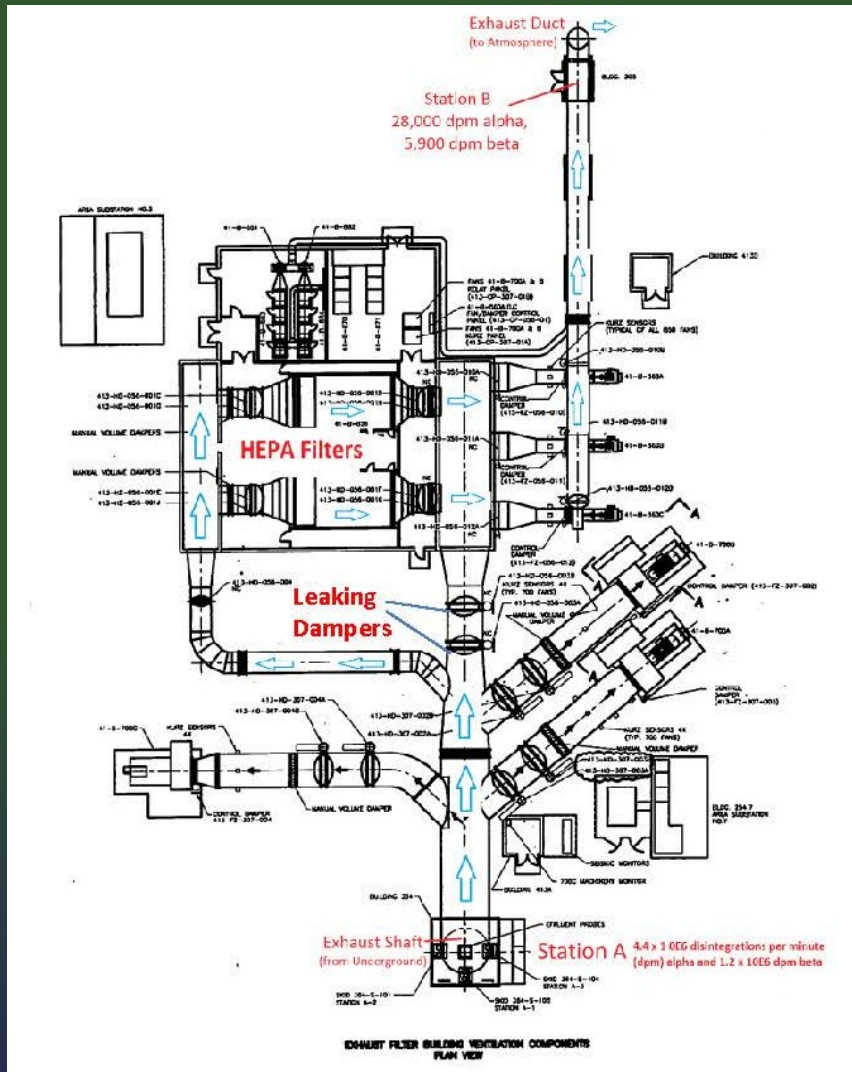
The cause(s) are unknown six months after the event.

It is not known whether future events can be prevented



Control System Failure:

- Ventilation dampers not designed to fully seal



Worker Radiation Control Failed

- 22 Workers with internal contamination
- 12 days was fastest notification
- 4 workers told not contaminated, then confirmed contamination
- Almost three months for one worker exposure notification to be made

Public Radiation Control failed

- DOE reiterated: “No contamination” “No risk”
- Public not informed about release until February 19 (by CEMRC)
- Additional offsite air monitors added in March and subsequently

Radiation Detection Public Notification

- CEMRC detects radioactivity on numerous occasions that DOE does not
- CEMRC provides data on its website; public forums

No Decontamination Plan

Complete decontamination will not occur, so limited options:

- (1) Decommission the site
- (2) Reopen contaminated mine; workers would have chronic exposures
- (3) Reopen site with part contaminated; part “clean”



New Exhaust Shaft New Ventilation System

- Cost unknown
- Timeframe to construct unknown
- Whether they will work unknown
- Additional changes needed are unknown

Initial Lessons Learned

- “Below Criteria” events can disable a repository
- Repository operations are more complex than surface storage
- Promoting expanded missions results in declining safety culture

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