

OPG DGR JRP (CNSC/CEAA)
Kincardine, Ontario, Canada
Sept. 18, 2014

Kevin Kamps

Radioactive Waste Specialist, Beyond Nuclear
Board Member, Don't Waste Michigan

WIPP radioactive release to environment: lasted 15.5 hours, traveled 1.5 mi. (2.4 km)

“In its modeling analysis of the release, DOE states: “The event took place starting at 2/14/14 at 23:14 and continued to 2/15/14 14:45.”

<http://www.wipp.energy.gov/Special/Modeling%20Results.pdf>).

Thus, the release lasted for 15.5 hours. The same DOE document states that the peak time of the release was from 10-15 hours after it started (from approximately 10 am to 3 pm on February 15).”

“The release spread contaminants through more than 3,000 feet of tunnels, up the exhaust shaft (2,150 feet), into the environment, and to the air monitoring Station #107, approximately 3,000 feet northwest of the exhaust shaft. Thus, **the release covered a distance of at least a mile and a half** from the area of release to the Station #107.” (emphases added)

Source: Don Hancock, SRIC, “WIPP RADIATION RELEASE,” July 25, 2014, Page 1 of 9

http://www.sric.org/nuclear/docs/WIPP_Leak_07252014.pdf

“Cause of New Mexico nuclear waste accident remains a mystery”

Ralph Vartabedian,
Los Angeles Times
August 23, 2014

Robert Alvarez, former senior advisor to the U.S. Energy Secretary: the risk of a radioactive release at WIPP was supposed to be one event every 200,000 years, not one in 15 years. "This was a cardinal violation," he said.



(6 months on...240,000 years to go?!)

“The accident was a horrific comedy of errors. This was the flagship of the Energy Department, the most successful program it had. The ramifications of this are going to be huge. Heads will roll.”

---James Conca, form director of the New Mexico State University Carlsbad Environmental Monitoring and Research Center, the independent and academic monitoring facility for the Department of Energy's WIPP site



“There is no official estimate of the cost of the accident,”

“...but outside experts and a *Times* analysis indicate it could approach **\$1 billion**, based on the WIPP's annual budget; the need to decontaminate the facility; upgrades to safety that officials already have identified; and delays over the next decade in the nuclear weapons cleanup program.”

---Vartabedian, *LA Times*, Aug. 23

Don Hancock, SRIC

Questions to Energy
Secretary Moniz at Aug.
11 Carlsbad, NM town hall
meeting:

“To what level are you
decontaminating the
underground?”

To what level of exposure
for workers will you
allow?”

\$129 million requested for
FY2015 (\$102-120 to be
appropriated by U.S.
Senate and House of
Representatives) is
woefully inadequate to
accomplish stated goals of
“Recovery Plan”

Institutional control?

“MSHA issues 52 citations at WIPP,” Zack Ponce, *Current Argus*, July 30;

“...Days before the contamination at WIPP, a 29-year-old truck caught fire underground at the site...,”
“Why small towns want nuclear waste dumps,” Ryan Weber, *Washington Post*, Aug. 13;

“Air testing lapse at N.M. nuclear waste dump blamed on staff vacancy,”

Laura Zuckerman, *Reuters*, Aug. 22;

“...A preliminary Energy Department investigation found more than 30 safety lapses at the plant, including technical shortcomings and failures in the overall approach to safety...,” Vartabedian, *LA Times*, Aug. 23.

Inhaled alpha-emitters

Bruce NGS, Nov., 2009



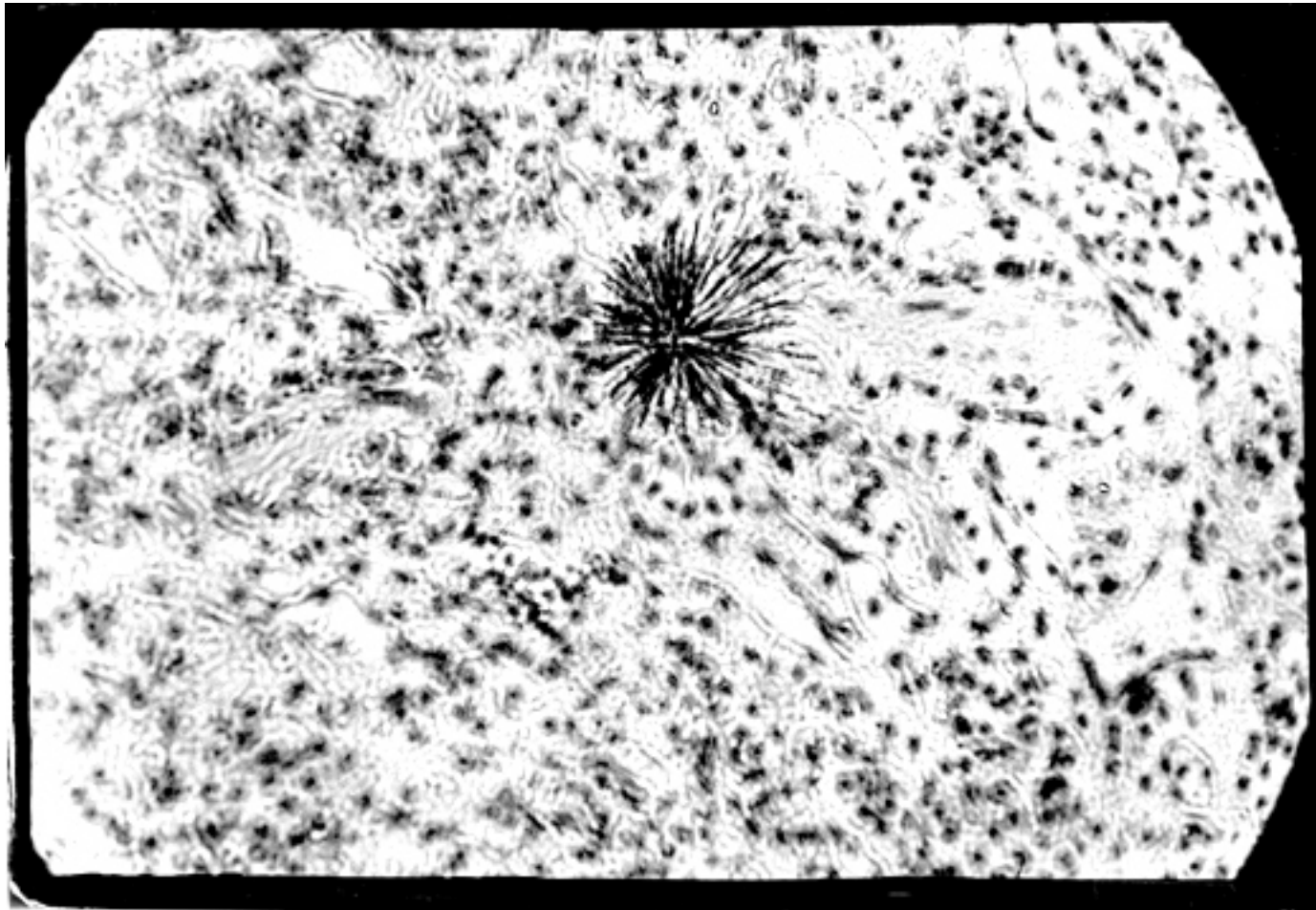
WIPP, Feb. 14-15, 2014



Particle of Plutonium in lung tissue of an ape.

Alpha radiation.

Photo by Robert Del Tredichi,
Atomic Photographers Guild



Injuries at WIPP

Respiratory injuries from Feb. 5 underground fire

- 13 workers taken to Carlsbad Medical Center to be treated for smoke inhalation
- “WIPP waste handler sues operators for negligence,” Zack Ponce, *Current Argus*, Aug. 19
- William Utter: "I get tired. I start coughing real hard. I start vomiting. ... It's just like this all the time," “WIPP employee sues over respiratory issues,” Lauren Villagran, *Albuquerque Journal*, Aug. 14

Radiological injuries from Feb. 14-15 radioactive release

- A total of 21 WIPP workers tested positive for internal alpha particle contamination, including a number of workers who came on shift many hours after the beginning of the 15.5-hour-long radioactivity release
- Environmental and public health impacts downwind, up the food chain, down the generations

Exploding radioactive waste?!

WIPP/Los Alamos/WCS

Exploding Los Alamos nitrate wastes – 110 containers rushed to Waste Control Specialists (WCS) radioactive waste dump in Andrews County, TX (100 degree F/38 degree C summer sun) in immediate aftermath of WIPP's Feb. 14-15 radioactive release

(source: Don Hancock, SRIC)

57 suspect drums remain in temporary storage at Los Alamos National Lab itself, and 368 more are emplaced underground at WIPP

(source: "Nuclear-waste facility on high alert over risk of new explosions: US repository scrambles to seal off barrels containing cat-litter buffer thought to be responsible for February accident," Declan Butler, 27 May 2014

<http://www.nature.com/news/nuclear-waste-facility-on-high-alert-over-risk-of-new-explosions-1.15290>)

OPG nuclear power plants/WWMF/DGR

'In a submission to a federal review panel, **nuclear chemist Frank Greening said OPG's contractors seriously underestimated the potential impacts of a bombing in the vicinity of pressure tubes** that have been removed from reactors and stored as waste. In contrast to OPG assurances, **Dr. Greening said the zirconium in the tubes would burn fiercely, setting off chain reactions similar to those in cluster bombs.**

"I think this is quite alarming, what I'm suggesting could happen and what they seem to have entirely missed," he said in an interview Monday. **"This absolutely affects the safety case ... This is the design of a cluster bomb, this is an incendiary weapon waiting to happen. In fact, I think this is absolutely reckless on their part."**

---"Nuclear waste plan unsafe, panel hears," Shawn McCarthy, *The Globe and Mail*, July 14

Zirc fire



Next steps?

- Accident Investigation Report, late Nov. 2014 at the earliest
- Recovery Plan (what they will do, how much it will cost), end of Sept. 2014 at the latest (required for U.S. Senate FY2015 funding approval)

When will operations resume? Energy Secretary Moniz: not schedule-driven, but wants to re-open WIPP during his term of office (which presumably ends in Jan. 2017).

It's already clear that the impending Recovery Plan will be insufficient, as well current funding levels.

What are the options?

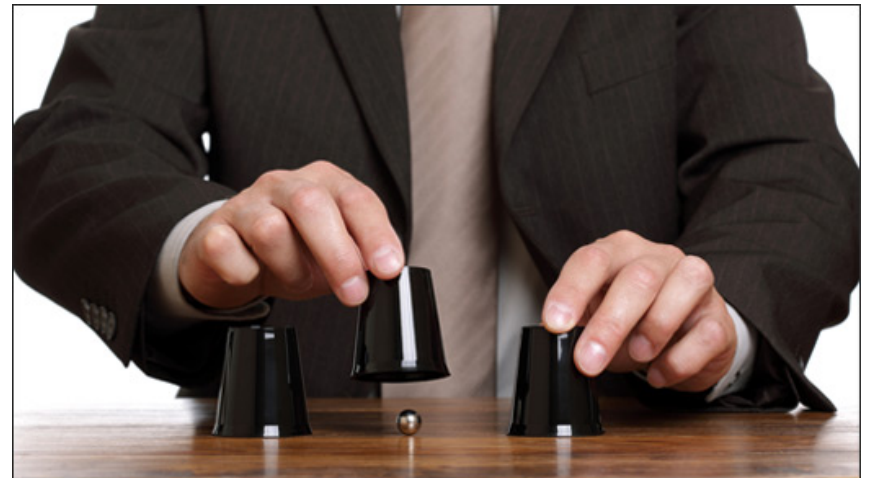
What to do, given the decades, and several billion dollars, already invested in WIPP? What's to be done with WIPP's several empty burial rooms, and 3,000 feet of underground tunnels, too contaminated to safely, affordably decontaminate?

There are but few options:

- 1) Undertake some cleanup, declare it "safe enough," and resume operations (even though workers will suffer chronic, elevated doses);
- 2) Simply declare some of the contaminated underground permanently off limits (not to be cleaned up) and use only the "clean" areas;
- 3) Permanently shutdown and decommission the entire facility.

OPG's obscure, ever-expanding proposed DGR waste inventory

- DGR1 (L&ILRWs from operations and refurbishments across ON)
- DGR2 (HLRWs from across Canada, given NWMO's & Bruce region's involvement in both proceedings)?
- DGR3 (L&ILRWs from decommissioning across ON)?



What's at stake?

