Communications Lessons Learned from the 2014 Radiological Release Event at the Waste Isolation Pilot Plant

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WIPP Communications Lessons Learned

• Effective risk communications
• Chronology of early communication efforts
• Town Hall meetings and Public Outreach Efforts
• Website focused on events and recovery
• Examples of social media responses
• University of Oklahoma analysis of social media narrative
• Lessons Learned
• Positive steps and outcomes
• Before another event
Effective Risk Communications

Purpose of Emergency Public Information –

• To keep the public informed about the extent of the emergency, impact to stakeholders and any protective actions that are being taken during an actual emergency

What members of the public need to know in an emergency –

• What happened, what are the impacts and what is being done?
• When did it happen, will I be affected and when will it be over?
• How did it happen, how much risk is there, and how can I protect myself?
• Who is in charge and who is responsible for managing the event?
Chronology of Early Communications Efforts

02/14/2014 - 2313
“HI RAD” alarm received in Central Monitoring Room from Continuous Air Monitor at Panel 7 exhaust drift

02/15/2014 – 0715 (+8 hours)
Rad Con reports elevated effluent samples at Station A and Station B

02/15/2014 - 0934 (+10 hours)
Initial on-site public address announcement was made to shelter-in-place due to high activity at Stations A and B

02/15/2014 – 0938 (+10 hours)
Joint Information Center (JIC) is activated but not yet operational

02/15/2014 – 1300 (+13.5 hours)
Radiological Event announcement was made on site
Chronology of Early Communications Efforts

02/15/2014 – 1330 (+14 hours)
Announcement that Joint Information Center is operational (JIC)

02/15/2014 – 1449 (+15.5 hours)
Press release announcing possible radiological event at WIPP – first public release of information

02/15/2014 – 2117 (+23 hours)
Press release announcing operations is responding to actual radiological release event – second public release 7.5 hour later

02/16/2014 – 2117 (+34 hours)
Press release indicating operations personnel are still responding to actual radiological release event – no threat to human health – JIC deactivated – third public release of information 11 hours later – 34 hours after initial event
02/19/2014 – (+ 5 days) Carlsbad Environmental Monitoring and Research Center (CEMERC) issues press release announcing they have detected trace amounts of Americium and Plutonium in air samples collected 0.6 miles NW of the WIPP fence line –

02/19/2014 – (+ 5 days) DOE press release later that same day – also announces CEMERC results for off site samplers –

02/19/2014 – (+5 days) DOE holds teleconference with New Mexico Environment Department Secretary Ryan Flynn –

2/20/2014 – (+6 days) DOE holds first town hall meeting to discuss the radiological event – over 200 people attend the first meeting –
Town Hall Meetings and Public Outreach Efforts

Weekly town hall meetings co-sponsored by City of Carlsbad began on March 6 -

- Live streamed on web
- Provided current information on re-entry and recovery activities
- Included guest experts on radiation safety
- Provided an avenue for the public to ask questions and express concerns
- Have ramped down over the past year
Town Hall Meetings and Public Outreach Efforts

- WIPP updates on recovery status were published weekly
- Weekly calls were held with Regulators on technical and permit issues
- Weekly briefings for the Carlsbad Mayor’s Nuclear Task Force - continue
- Stakeholder workshops to communicate on issues related to recovery project planning and management
CARLSBAD, N.M. (KRQE) – A lot questions remain about the WIPP radiation leak.

On Thursday at a town hall meeting in Carlsbad, residents and many WIPP supporters told officials they’re frustrated.

They say they’re not getting enough answers and the rumor mill is running wild. Some residents say they’re flat out concerned for their safety, while others just want more information faster.

On Thursday, Carlsbad area residents, many of whom strongly support WIPP, pleaded for more information about the Feb. 14 underground radiation leak that seeped outside.

“We think that we should be the number one partner and know everything that’s going on from A to Z,” said resident John Hearton.

The Department of Energy worked to reassure people they are safe, even though the underground storage areas remained sealed off.

“There are no health impacts to you, to your family, the members of your community from the event,” said WIPP technical advisor Fran Williams.

WIPP officials say the radiation levels around the WIPP site have now tested normal and there is no threat to the Carlsbad community.

The DOE says a second and third round of biological tests of the 13 contaminated WIPP workers show levels were extremely low and not likely to cause any serious health problems.

Some residents remain concerned.

“I want to believe what they’re saying that the levels are practically non-existent, but truthfully, I don’t really believe that,” said Karen Armondaruz.
Recovery website launched on March 21 -

- Event descriptions
- Protective actions taken for workers, the public, and the environment
- Fact sheets on radiation exposure and risk
- Environmental sampling results
- Frequently asked questions
Examples of Social Media Responses

By February 24 misinformation and conspiracy theories about the WIPP radiological incident were spreading over the internet and social media – with no way to dispel rumors.
A month after the incident conspiracy theories continued and the WIPP events were getting international attention.

WIPP established its own TWITTER account on March 6 and directed followers to the WIPP website for more information –
Examples of Social Media Response (FACEBOOK)

**Eddy County Sheriff's Office**

 sscanf (90 ratings)
2,295 likes · 158 talking about this · 11 were here

The conspiracy theories abound. Don’t believe it. No evacuations are in the works nor are the needed.

The federal government knew this on the day it took place but did not tell the public the true extent of the radiation release.
Tracking the nuclear narrative

OU researchers -

• Looked at content of twitter feeds that included the word WIPP
• Narratives immediately following the Feb. 14th incident focused on facts -
• Within weeks these changed to analysis or interpretation with a sense of frustration over lack of new information –
• Within 2 months the narrative changed to the cause of the event and the impacts on future nuclear waste disposal
Oklahoma University Center for Energy Security and Society Social Media Analysis

Week: Feb 2 - Feb 8, 2014
Mean Sentiment: -0.47
Influential Tweets:
- WIPP Carlsbad NM: underground fire is out after it led to evacuation of nuclear repository in NM.
- WIPP says truck caught fire underground; nuclear waste not affected. People taken to hospital for smoke inhalation.
- Can you say nuclear apocalypse? There was an underground fire at WIPP.

Week: Feb 9 - Feb 15, 2014
Mean Sentiment: -1.09
Influential Tweets:
- Send waste to WIPP, reprocess it, bury remainder. Salt beds offer solution to nuclear waste disposition.
- Recent US attempt at safe storage resulted in last week’s fire at WIPP – state sponsored terrorism.
- New attention turning to WIPP as a possible replacement for Yucca Mountain as high level nuke waste site.

Week: Feb 16 - Feb 22, 2014
Mean Sentiment: -1.17
Influential Tweets:
- Very concerning radiation report out of NM #doe #wipp
- Radioactive contamination now reported in city 20+ miles from US nuclear site.
- Nuclear engineers scare me now more than ever.

Week: Feb 23 - Mar 1, 2014
Mean Sentiment: -1.16
Influential Tweets:
- WIPP nuclear site leaks to the environment.
- WIPP plutonium leak may have been from ceiling collapse.

Week: Mar 2 - Mar 8, 2014
Mean Sentiment: -0.82
Influential Tweets:
- South Central US poisoned by NM garbage dump.
- WIPP is still the best and only choice for nuclear waste.
Social media

- Identify social media outlets that fit your demographic
- Build audience followers through regular posting of useful information or interesting content – or wild animals
- Form relationships with the community – local and online
- Establish trust before an incident – during the incident is too late
- News media always an important strategic partner during/after an emergency
Lessons Learned

• Provide information early and often
• Manage expectations and conjecture through frequent updates at predetermined times
• Ensure regulators are notified and kept fully informed – they are likely to understand technical issues, will be expected to respond and can be an ally.
• Address critical issues up front – don’t wait to be asked
• Use multiple avenues for distribution of emergency messages – hold press conferences often
• Monitor reactions to information and adjust accordingly
Lessons Learned

When communicating information on radiological releases:

• Use comparisons to regulatory standards – i.e. less than 1% of the USEPA allowable effluent limit

• Make analogies that members of the public can relate to – eating banana’s doesn’t correlate well with inhalation of Am or PU – *comparison to EPA radon standards or airborne effluent from coal fired power plants may work better*

• Use other non-radiological comparative risks

• Don’t underestimate the level of understanding of the audience – the internet and social media open avenues for both bad and good information - allow people to do their own research - provide links to credible web sites
Positive Steps and Outcomes

Communication strategies undertaken in the weeks and months that following February 2014, helped to begin rebuilding public trust and confidence:

• DOE and the City of Carlsbad sponsored weekly town hall meetings with subject matter experts to answer questions recovery updates
• CBFO and NWP developed a WIPP Recovery Website where event and recovery data can be accessed
• CBFO and NWP produce weekly WIPP updates that inform the public on recovery progress
• CBFO and NWP have held special workshops for community leaders and other stakeholders to help them understand the cost and schedules necessary for recovery
Questions & Answers