



Allen, Pam, NMENV

From: Maestas, Ricardo, NMENV
Sent: Wednesday, November 02, 2016 4:09 PM
To: Allen, Pam, NMENV
Cc: Biswell, David, NMENV
Subject: FW: WIPP October 13, 2016 Town Hall Meeting Timeline and Summary
Attachments: 10-14-2016 Town Hall Summary.pdf

From: Teeter, William, NMENV
Sent: Friday, October 14, 2016 3:54 PM
To: LucasKamat, Susan, NMENV; Roberts, Kathryn, NMENV; Maestas, Ricardo, NMENV; Majure, Allison, NMENV
Cc: Hart, Jennifer, NMENV; Smith, Coleman, NMENV; Kieling, John, NMENV
Subject: WIPP October 13, 2016 Town Hall Meeting Timeline and Summary

Good afternoon all,

I have compiled a detailed summary of the events, presentations and questions from last night's WIPP Town Hall meeting in Carlsbad (October 13th, 2016).
Attached you will find my summary of the meeting.

Thanks and have a great weekend!

Will Teeter
Environmental Scientist
DOE Oversight Bureau
New Mexico Environment Department
406 N. Guadalupe St.
Carlsbad, NM 88220
(P): 575-885-9023





Attendance: 22

NMED – Will Teeter

CBFO – Todd Shrader

NWP – Phil Breidenbach; John VanderKraats (Sr. Technical Advisor)

Carlsbad – Mayor Dale Janway; Kyle Marksteiner

Representatives of Senator Udall, Senator Heinrich and Congressman Pearce

Media – Maddie Hayden (Current Argus)

Red Rocket – 3

Public – Approximately 9

Below is a summary and timeline of the WIPP Town Hall Summary from October 13th, 2016. The meeting took place at City Hall in Carlsbad, NM and ran from 5:29 pm – 7:00 pm. Attendance was relatively low, with only 9 audience members belonging to the public. A link to the live stream is provided within and **time stamps** have been added in **green (hh:mm:ss)** to section headers relative to their corresponding time in the video.

Live Stream Link: <http://livestream.com/rrv/events/6492954/videos/138763574>

Additionally, during the Q&A section below an answer was given by Todd Shrader (CBFO) that is of particular interest to NMED. I have highlighted this response in red.

00:18:35 Mayor Dale Janway (Carlsbad)

- Introductions
- Set Agenda for Meeting

00:20:25 Todd Shrader (CBFO)

- 00:20:25 Meeting Agenda & Overview

00:26:38 Phil Breidenbach (NWP)

- 00:22:00 Interim Ventilation System (IVS)
 - IVS Operational as of Mid-September
 - Currently providing 43,600 cfm at the waste face vs required 42,000 cfm
 - IVS is currently running well
- 00:23:34 Management Self-Assessment (MSA)
 - 2 week assessment completed between August 15-26 2016.
 - 5 already identified pre-start findings during assessment
 - 58 noted items that could use improvement
 - 8 noteworthy practices
- 00:26:39 Contractor Operational Readiness Review (CORR)
 - Started October 3rd, ends 10/14/2016
 - Out-brief on 10/14/2016
- 00:27:27 WIPP Fire Department



- WIPP Fire Department competed at event in Carlsbad and improved their former best time.
- **00:28:40** New Exhaust Shaft
 - Site prep finished
 - Core sampling from surface to mine level to begin in 2 weeks.
 - Expected to take around 2 months.
 - Design of new system at 60% completion and under formal review process.
- **00:29:55** Ground Control
 - Rockfall is highest hazard to workers and WIPP mission.
 - Ground Control is highest priority.
 - Recent falls all occurred in prohibited areas where no ground control was occurring.
 - If ground is unsafe, access is restricted.

00:32:50 John VanderKraats (NWP, Sr. Technical Advisor)

- **00:33:29** Introduction to WIPP geology and Salt Tectonics
 - Salt Creep closes around 2-5" per year until pressure is equalized in open areas
- **00:40:00** Ground Control
 - Continual effort to maintain openings underground
 - Fractures begin to form near open areas
 - These must be monitored and controlled (via bolting/scaling/milling)
- **00:43:14** Worker Inspections
 - Workers perform visual and physical inspections at the beginning of each shift or if conditions change during the shift.
 - Workers also perform weekly inspections
 - Problems are generally small and localized
 - These areas are bolted as soon as they are recognized
- **00:45:55** Geotechnical Inspections
 - Weekly inspections performed on all non-restricted and non-contaminated areas.
 - Bi-monthly/Monthly inspections are performed to collect data in restricted/prohibited areas.
 - Accessible areas are graded on a bi-annual or annual basis depending on current ground conditions.
 - Random inspections performed if requested by Mine Operations
 - Or based on worker observations
- **00:48:14** Instrumentation
 - Various types of instrumentation installed throughout the underground.
 - Types of Measurements
 - Convergence Points measure the closure of an opening
 - Installed approximately every 75 ft and in every drift intersection
 - Measurements taken monthly, bi-monthly or as required
 - Extensometer Points measure expansion or sag of a roof beam



- Typically installed in all panel rooms and access drifts
 - Measurements taken weekly
 - Crack Meters measure the expansion rate of cracks
 - Measurements taken bi-monthly
- **00:59:23** Reporting
 - Weekly
 - Geomechanical Mine Stability Surveillance Report
 - Reports to Mine Operations on ground quality
 - Annual
 - Ground Control Annual Plan
 - Geotechnical Analysis Report (GAR)
 - Data dump of all geotechnical data to NMED on annual basis
- **01:01:55** Results
 - Based on Ground Control Result, following actions may be taken
 - Remediation
 - Installing bolts/mesh
 - Scaling ribs/roof
 - Milling or mining the floor
 - Control the area
 - Restrict access
 - Generally via barrier/signage
 - Prohibit access
 - Fenced off and closed to workers
- **01:11:23** Ground Control Priorities
 - These include: high, medium, low and are determined by:
 - Evaluation of direct observations
 - Analysis of geotechnical data
 - Performance of installed ground support systems
 - Where people are routinely gathered
 - Areas that do not meet standards are restricted or prohibited
- **01:16:03** 2014 Release & Ground Control Status
 - Fire and Release prevented all ground control activity for 9 months
 - As a result this required abundant “catch-up” bolting in areas that could not be maintained as the process of ground control becomes more difficult the longer it is not performed.
 - The creation of contaminated areas introduced new complications
 - Having to work wearing ppe and respirators
 - Most ground recovery efforts are now focused in contaminated areas
 - Workers currently bolting at 25% the rate of pre-release bolting
- **01:22:26** Recent Events
 - Panel 3 Exhaust Drift



- Restricted access in 2013 due to VOCs
 - Initial fall discovered January 19, 2015
 - Access Prohibited February 23, 2015
 - Subsequent falls on February 3 and October 3, 2016
 - No ground support was installed in this area
 - Panel 4 Inlet Drift
 - Area restricted March 8, 2016
 - Initial fall discovered September 9, 2016
 - Prohibited September 13, 2016
 - Additional fall discovered September 27, 2016
 - Initial fall damaged and destroyed the bulkhead
 - Panel 7, Room 5
 - Restricted April 5, 2016
 - Unstable ground identified (low angle fracture)
 - Ground was scaled back
 - Not an actual rock fall, part of normal mining operations at WIPP
- **01:27:27** Conclusion
 - WIPP is dedicated to safety
 - Release event has made ground control more difficult
 - Ground control remains the highest priority to ensure safe operations
 - WIPP's ground control system is robust and strong
 - Constant monitoring, experience and remediation
- **01:30:15** Q & A
 - Norbert: The rock fall in panel 4 occurred where you'd least expect it, why?
 - The geology in this area contains several discontinuous anhydrite stringers. It is believed the falls are related to the developing fractures breaking up to and along these anhydrite stringers. This requires extensive bolting operations, but no ground control was occurring. These areas appear to be near panels 3, 4, 5 and 6. Existing bolts were stronger than their accompanying plates, these were slated to be replaced but were unable to be due to the release event, resulting in the failure of these plates.
 - Internet: What's being done to prevent falls in panels 1, 2 and 6?
 - Panels 3 – 6 are currently prohibited.
 - Panels 1 and 2 are restricted
 - Considered safe, but under surveillance
 - Internet: Do salt creep rates change throughout the mine?
 - Yes, all locations are unique. The bigger the opening the bigger the rate of (salt) creep. Current and past ground control activities also play a role.
 - Internet: What is the extent of the damage done on the bulkhead in panel 4? Does it continue to provide integrity?
 - The bulkhead was crushed and has no remaining integrity.



- Internet: Are panels 3 and 4 lost? Can they be saved with ground control?
 - **Todd Shrader: CBFO and DOE is currently in the process of deciding whether or not to close the south end of the mine (South of drift 2750).**
 - **Planning on phases to close these areas.**
 - **Installing salt barriers/bulkheads.**
 - **Advantages: will eliminate approximately 60% of the contaminated areas underground and help contain VOCs. Will also help concentrate equipment for workers.**
 - **Cons: Will lose ability to open up new waste emplacement areas south of 2750.**
 - **Makes more sense safety wise to write these areas off as opposed to spending resources trying to recover them.**
 - **Will need to work with NMED and EPA to meet closure requirements.**
- Norbert: Comments on cost requirements and placement of new exhaust shaft. What is the final goal after sinking new shaft with regards to new panels? What were findings from alternative studies?
 - Todd Shrader: I do not know about the alternative studies.
 - Alternatives might look at different configuration of panels are there better configurations than our current setup?
- Internet: CORR mentioned in presentation to take 2 weeks, but it was stated to take 4 weeks. Why?
 - Todd Shrader: CORR takes 2 weeks to complete and 2 weeks to complete corrective actions associated with the review.

The Town Hall Meeting was adjourned at 7:00 PM on October 13th, 2016.