

TRU TeamWorks

January 15, 2004

A weekly e-newsletter for the Waste Isolation Pilot Plant team

The Big Story

WIPP "quarterly" meeting today

The quarterly WIPP meeting with the state of New Mexico and interested stakeholders is being held today. Participants meet at different locations around the state each quarter. Today's meeting takes place at the New Mexico Environment Department offices in Albuquerque.

CBFO Chief Scientist Roger Nelson is the regular WIPP representative to the meeting. This quarter, however, Nelson is joined by Lloyd Piper, CBFO deputy manager. "Mr. Piper sees the quarterly meeting as an excellent opportunity to meet our stakeholders and state counterparts," notes Nelson.

Though state officials often request information on specific WIPP topics, the focal point of today's meeting will undoubtedly be the release of the National Academy of Science's latest study on WIPP, titled "*Optimizing the Characterization and Transportation of Transuranic Waste Destined for the Waste Isolation Pilot Plant.*" The NAS report offers recommendations to improve technical soundness, efficiency, cost effectiveness, safety and the impact of requirement changes to characterization and transportation.

Other discussion topics include project status indicators, such as shipment and disposal figures. "The state has also requested information on the Basis of Interim Operations for Mobile Characterization, says Nelson. Phil Gregory, WTS senior technical advisor, will brief attendees on this subject and answer any questions they may have."

The "Quarterly Meeting" as it is known, is mandated to occur on a "periodic" basis by the DOE and state of New Mexico's Consultation and Cooperation agreement. Over the years it has evolved into a quarterly event that is seen by all participants as an integral component of open communication between WIPP, its stakeholders and regulators.



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WIPP Shipments
 (as of 1/15/04
 at 7:09 a.m.

Shipments scheduled to arrive at WIPP this week
 21

Total shipments received at WIPP
 2,268

In the news



RH Characterization Plan



Transportation



The miner's workhorse



Slips, trips and falls



LWA drives WIPP - Part 2



Our Team News

EPA offers preliminary approval for RH characterization plan

DOE recently received important news from EPA regarding the Remote Handled (RH) TRU waste program. In a letter from EPA's Frank Marcinowski, the agency announced its preliminary intent to approve the RH TRU waste characterization plan. In the letter, Marcinowski noted that the revised RH TRU waste characterization plan "...now provides an adequate framework for conducting RH waste characterization, while giving RH sites the flexibility to develop site-specific programs for characterizing waste." EPA approval of the RH TRU waste characterization plan signifies important progress toward a fully operational RH TRU program at WIPP. The plan is an integral part of WIPP's mission and a goal the project has worked toward for many years.



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DOE plans to dispose of RH TRU waste in horizontally-drilled boreholes in the rib, or wall, of underground disposal rooms.

Wille Most, WRES principal scientist provided some background, "In 1998, EPA evaluated repository performance considering both RH and CH TRU waste emplacement and determined that both RH and CH TRU could be disposed of safely. However, EPA required that a waste characterization plan be submitted for RH TRU to ensure inventory assumptions remained consistent."

WIPP submitted the RH TRU waste characterization plan to EPA in October. The submittal was soon followed by EPA's positive preliminary conclusion. Now that EPA has notified DOE and the public of its preliminary conclusion and intent to approve the RH TRU waste characterization plan, the agency is seeking public comment on the matter through January 30.

Pictured at right is an empty RH-72B shipping cask and trailer en route to the WIPP site. The Type B container is certified by the NRC to transport RH-TRU waste.



To allow sites to have flexibility in determining the characterization methods for RH TRU waste, EPA will review and approve site-specific characterization plans prior to an onsite audit. This is a definite difference between the characterization requirements for CH and RH TRU waste. For CH characterization, EPA reviews the site-specific characterization plan *during* the audit.

Once the public comment period is satisfied and incorporated into the determination, the characterization plan will become part of the final regulation governing WIPP. The project must still receive NMED approval before RH waste can be disposed of in the repository. EPA regulates the radioactive constituents of the waste; NMED regulates the hazardous contents.

Transportation - Who made these rules, anyway?



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WIPP has some of the most rigorous transportation requirements and protocols in the nation. In the 1992 WIPP Land Withdrawal Act, Congress mandated development of a WIPP-specific transportation safety program. Today's program is the result of a collaborative effort between DOE and impacted states and sovereign tribal nations.



WIPP Shipping Routes



A typical TRU waste shipment

WIPP Shipments
(as of 1/15/04
at 7:09 a.m.)

| |
|---|
| Shipments scheduled to arrive at WIPP this week 21 |
| Total shipments received at WIPP 2,268 |
| Total Waste Disposed Underground at WIPP |
| CH drums 47,670 |
| CH standard waste boxes 2,396 |
| CH ten-drum overpacks 609 |
| Cubic meters 17,256 |

WIPP transportation safety protocols were established in 1993 and published by the Western Governors' Association in its *WIPP Transportation Safety Program Implementation Guide*.

Other partners to the program, the Southern States Energy Board and the Midwest office of the Council of States' Government, issued companion publications.

In 1995 a memorandum of agreement (MOA) was signed between former DOE Energy Secretary Hazel O'Leary and the Western Governors' Association endorsing the protocols. The following year a similar MOA was initiated between the Southern States Energy Board and Energy Department. These agreements are reviewed and signed anew by each president's administration.

Detailed protocols were developed for:

- High-quality driver and carrier compliance
- Independent inspections
- Bad weather and road conditions
- Safe parking during abnormal conditions
- Advance notice of WIPP shipments, shipment tracking and shipment status information
- Medical preparedness
- Mutual aid agreements
- Emergency response plans and procedures
- Emergency response equipment
- Training and exercises
- Public information and participation
- Highway routing of WIPP shipments
- Program evaluation

All applicable transportation regulations and guidelines are incorporated into these protocols. Casey Gadbury, CBFO National TRU Waste Logistics Team Leader, says, "These protocols are the result of federal, state and tribal officials working together with one ultimate goal in mind - safe and uneventful transport of transuranic waste to WIPP. With over 2,260 shipments of transuranic waste made to WIPP in almost five years with no releases of radioactive material and no injuries or fatalities, the record speaks for itself."

Marietta, the miner's workhorse



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Total Waste Disposed Underground at WIPP
(as of 1/15/04 at 7:09 a.m.)

| |
|----------------------------------|
| CH drums 47,670 |
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Think "WIPP." Images that come to mind are WIPP trucks and their distinct thermos-like TRUPACT-II shipping containers and the much photographed Marietta drum miner, grinding its way through 250,000,000 year-old salt.

The Marietta drum miner was the draft horse of early WIPP mining. The drum miner and road header – another mining machine whose "pineapple" head cuts in an arch – single-handedly rough cut and finished Panel 1, plus the miles of drifts needed to access the panel and form the original mine footprint. Today, the remote-operated EIMCO miner, a beefier version of the Marietta, does most of the hard work. The Marietta and its two-person crew continue to perform ground control.



The DOSCO rotary head (road header) mining machine and its pineapple-shaped cutting head underground at WIPP.

WIPP purchased the Marietta drum miner in 1986. "It's been a good machine," says David Hernandez, WTS Ground Control manager. TRIUNE, a local mine equipment and supply company services the Marietta. The 75-ton machine can cut a swath 11-feet high and 11.5-feet wide and is capable of mining out 75 tons of salt per minute. "The Marietta has given us a lot of good service," says WTS Senior Mining Engineer Bob Pressett.



View of the Marietta's rotary drum and bits.

In the mid-'80s, the earth chomping machine was hoisted underground in five main pieces where it was reassembled. The pre-owned machine had been used at Kaiser Steel's Sunnyside mines in Utah to mine coal – around 70,000 tons of it. According to long-time WIPP personnel, the \$800,000 electric-powered Marietta was purchased in "like new" condition.

The Marietta's drum head has approximately 150 four-inch bits that, depending on hardness of the cutting surface, must be changed out every three or four shifts. Pressett notes that about 200 bits are kept in stock. In recent years, the Marietta has trimmed out East 140 and rehabilitated the roof in the northern end of the mine.



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Slips, trips and falls

Nearly a half million people are injured each year at work due to slips, trips or falls. Falls are the second most common type of job-related accidents and account for 10 percent of on-the-job deaths. Falls on level surfaces represent at least 20 percent of all occupational accidents.



Good housekeeping and increased awareness can help eliminate the cause of most falls that occur in the workplace. There has already been one recordable injury this fiscal year at WIPP due to one of these types of accidents.

Slips, trips and falls can happen to anyone, anywhere, even while walking on flat surfaces. Adding additional tasks while you are walking can increase your chances for injury. The following is a list of things that may affect you while you are walking:

- Talking on a cell phone
- Balancing several items at the same time
- Writing or reading while walking
- Eating or drinking

Adding more tasks to focus on while you are walking increases your chance of falling by tripping over unseen obstacles, slipping on wet surfaces, stepping off of uneven edges, walking into someone or something or just losing your balance.

Be watchful for all hazards someone could slip on, trip over or that could cause a fall. If you come across a hazard, stop and fix it, or stay there until someone else can fix the problem. It is important to the safety and well-being of all employees that all potential hazards are reported and eliminated.

Here are a few tips to help you avoid slips, trips and falls:

- Take your time. Watch where you are going.
- Adjust your walking for changing conditions such as uneven or wet/icy surfaces.
- Keep aisles, steps, walkways and work areas clean and clear of tripping hazards.
- Clean up spills or barricade the area until the spill can be cleaned.
- Wear appropriate footwear for the job you are doing.
- Don't run at work.
- When reaching for something above shoulder level, use a step stool or ladder.
- Use handrails where they are provided – such as in stairwells.
- Be aware of medications that may affect your balance or motor skills.

**Part 2: Know your drivers
WIPP Land Withdrawal Act**



The WIPP Land Withdrawal Act (LWA), Public Law 102-579, is the fundamental driver for WIPP and the National TRU Program (NTP). Here's Part 2 of our LWA quiz. The link to the law is <http://www.emnrd.state.nm.us/wipp/lwa.htm>. Part 2 answers will be published in the next issue of TRU TeamWorks .

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How Well Do You Know the LWA?

7. To which three organizations does the LWA assign responsibility for evaluating and publishing analyses for all phases of WIPP operations?
 - a. State of New Mexico, Environmental Protection Agency, Nuclear Regulatory Commission
 - b. State of New Mexico, National Academy of Sciences, Environmental Evaluation Group
 - c. Defense Nuclear Facilities Safety Board, Department of Transportation, DOE Environmental Management

8. The LWA includes a requirement for WIPP to purchase American-made goods whenever possible.

True False

9. Who does the LWA designate as the "administrator" for the WIPP project?
 - a. Secretary of Energy
 - b. Carlsbad Field Office Manager
 - c. Environmental Protection Agency Administrator

10. Engineered barriers, as defined in the LWA, are:
 - a. "Backfill, room seals, panel seals, and other man-made barrier components of the disposal system."
 - b. "Packaging engineered to contain gas generation, flammability, expressiveness, solubility, brine and geochemical interactions."
 - c. "Characterization, licensing, construction, operation, or closure of any site."

11. How often does WIPP have to recertify its operation with the State of New Mexico and the EPA?
 - a. Every 4 years
 - b. Every 5 years
 - c. Every 6 years

12. When does the "decommissioning phase" for WIPP officially conclude?
 - a. When all disposal rooms and alcoves are filled with waste and sealed
 - b. When all shafts in the repository are back-filled and sealed
 - c. When all shipments are complete and the 35-year project life concludes

Answers to WIPP Land Withdrawal Act Quiz Part 1:

1. (b) 6.2 million cubic feet
2. (a) Department of Energy National Security and Military Applications of Nuclear Energy Authorization Act of 1980
3. (a) Land disposal restrictions
4. False
5. (a) To demonstrate the safe disposal of radioactive waste materials generated by atomic energy defense activities
6. True



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WIPP welcomes Detwiler

WIPP is pleased to welcome **R. Paul Detwiler** who has been appointed acting manager of the U.S. Department of Energy's Carlsbad Field Office effective today (January 15). Detwiler joined DOE in 1994 and has been involved with WIPP issues since 1996. Look for his profile in next week's edition of *TRU TeamWorks*.



Herbert Cruickshank is the Carlsbad Field Office's new TRU Waste Planning manager. Cruickshank comes to CBFO from Rocky Flats Environmental Technology Site where he was instrumental in decontamination and decommissioning activities. Cruickshank will oversee WIPP shipping coordination activities, the eight-week rolling schedule and other National TRU Program initiatives.

Safety Spotlight

The Safety Awareness Committee, with support from Steve Youngerman, WIPP Site Operations deputy manager, continues to "catch" employees working safely! The employees (pictured below) were caught working safely while performing the inspection and cleaning of the Station A sample probes. Cleaning Station A probes requires the orchestrated use of heavy equipment, communication systems and personnel. This team has successfully completed these probe-cleaning inspections for the last six years without an accident. The inspection is a joint effort by WTS, CTAC, EEG and CEMRC employees. WTS employees were rewarded for their safe behavior with flashlight key chains that have "I got caught working SAFELY!" printed on them.



We congratulate the following personnel (pictured from right to left): Luke Meadors, Rick Eggleston, John Dickson, Jerome Hernandez, Steve Youngerman, Ernie Endes, and Linda Frank-Supka. Additional support is obtained from three additional personnel who are not pictured here: James McKinney, Robert Valenzuela and Joe Walker.

Note: Station A supports the WIPP Effluent Monitoring Program for regulatory compliance. Data gathered by the Station A sampling system is used to determine any potential radiological impact to the surrounding environment.