Update 3/25/04 | **Shipments expected for the week 3/28/04 through 4/3/04: INEEL (2), RFETS (11), SRS (6)**

TRU TeamWorks

March 25, 2004

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

The Big Story

AMWTP sends first shipment to WIPP

INEEL's Advanced Mixed Waste Treatment Project (AMWTP) is officially on-line to WIPP, marking another important milestone in the INEEL clean-up mission. The first shipment of TRU waste from the AMWTP arrived at the site the evening of March 16. Though this is the first shipment of waste from the AMWTP, it is not the first shipment from INEEL.

photo courtesy bnfl-idaho.com

The AMWTP is responsible for retrieving, certifying and preparing 65,000 m^3 of TRU waste for disposal at WIPP. Approximately 54,000 m^3 of the waste is retrievably stored in earthen berms and 11,000 m^3 is stored above ground at INEEL's Radioactive Waste Management Complex. Steve Calvert, CTAC Audits and Assessments manager, explains, "The AMWTP received full certification of its characterization program at INEEL earlier this month. This shipment marks the first load of waste that was characterized, certified and shipped as a part of that program. INEEL shipped to WIPP in 2002 to complete DOE's 3100 m^3 agreement with the State of Idaho and the U.S. Navy. Shipments of waste characterized as a part of that program continued into 2003. The March 16 shipment from the AMWTP carries on INEEL's string of successes in meeting DOE's commitments to Idaho and other stakeholders."

AMWTP has been retrieving and characterizing stored waste at INEEL since March 2003. Waste containers that meet all WIPP waste acceptance criteria are queued for shipment to WIPP. Containers that require repackaging are stored for processing through the project's treatment facility, which is undergoing commissioning and is expected to begin operations later this year.

"We are extremely pleased to begin receipt of shipments from AMWTP," notes Kim Jackson, WTS Transportation manager. "The AMWTP is expected to make over 200 shipments to WIPP this year and we are ready to coordinate each one."

Friday, March 26 marks the fifth anniversary of WIPP operations. Story next week...

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Feedback

Contact us with feedback or submit your e-mail address for updates.
Click here to e-mail.

WIPP Shipments (as of 03/25/04 at 6:52 a.m.)

Shipments scheduled to arrive at WIPP 3/28/04 - 4/3/04
19

Total shipments received at WIPP
2,437

Total volume disposed at WIPP
18,912 m^3

FY04 Performance Metrics

In the news

Think tank

Hip to be square

Rig gig

Safe equation

Water work

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Characterization News

Hanford tank wastes: questions and answers

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DOE has begun evaluating whether some of the waste currently stored in the Hanford tank farms is transuranic waste that meets all of the criteria for disposal at WIPP. Here are some answers to questions raised by this topic:

Q: Is DOE trying to send high-level waste to WIPP?
DOE cannot and will not send high-level waste to WIPP. The disposal of high-level radioactive waste at WIPP is clearly prohibited by the WIPP Land Withdrawal Act of 1992 and the State of New Mexico and U.S. Department of Energy Agreement for Consultation and Cooperation.

Q: What's the difference between high-level and TRU waste?
High-level radioactive waste is defined by the Nuclear Waste Policy Act of 1982 as "The highly radioactive material resulting from the reprocessing of spent nuclear fuel…"

The WIPP Land Withdrawal Act of 1992 defines transuranic waste as: "Waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for: (a) high-level radioactive waste; (b) waste that the Secretary has determined, with the concurrence of the Administrator, does not need the degree of isolation required by disposal regulations; or (c) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with part 61 of title 10, CFR."

Q: Why has DOE handled all of the tank waste at Hanford the same?
When the only option for tank wastes was continued storage, it did not make sense to impose different management regimes on tanks that contained high-level waste and those that contained other types of waste. The Department focused instead on the risks presented by the long-term storage of liquid wastes in the tanks. Concerns such as tank integrity, gas generation, temperature increases and the possibility of criticality took priority over waste classification.

Q: So when did DOE begin to determine these tank wastes are TRU waste?
DOE has been working toward the precise characterization of these wastes for several years. National Environmental Policy Act documents issued since 1987 concerning the Hanford tanks stated that some contained transuranic waste. The inventory DOE prepared in 1995 for the initial EPA compliance certification application also noted that the waste in some of Hanford's tanks probably was transuranic waste suitable for disposal at WIPP.

Q: What is DOE's path forward concerning these wastes?
The Department will work to draw more firm conclusions about the nature of these wastes in consultation with key stakeholders, including NMED, EPA, other states and tribes.

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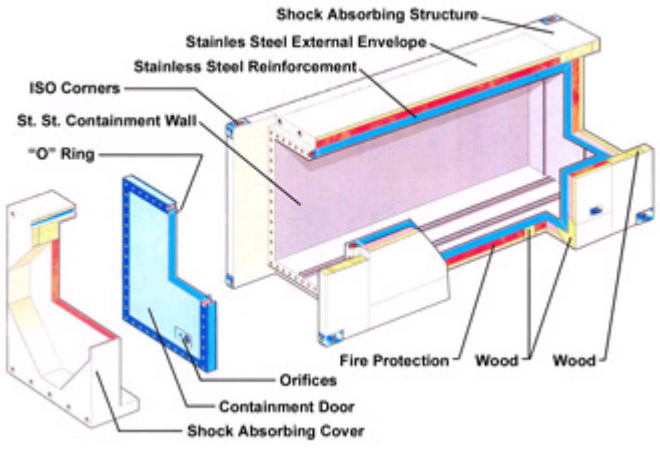
TRUPACT-III

The TRUPACT-II has become a trademark of sorts for the WIPP facility. When someone mentions transporting TRU waste, most people picture the large cylindrical container that resembles a thermos on steroids. However, the TRUPACT-II has limits to its capacity and in some cases is incapable of handling large waste containers. As a result, a larger transportation package was needed to accommodate these large containers.

Nuclear waste transportation is regulated according to the curie count, and under prior U.S. Nuclear Regulatory Commission (NRC) guidelines, any waste containing in excess of 20 curries of plutonium was to be transported in a double-containment package. The NRC recently approved a change to the transportation requirements for nuclear material in an effort to align them with the International Atomic Energy Agency (IAEA). According to IAEA guidelines, only single containment is required to transport waste in excess of 20 curries of plutonium.

On March 12, Packaging Technology, Inc. of Tacoma, Washington, submitted a safety analysis report (SARP) to the NRC seeking approval for a new Type B transportation package known as the TRUPACT-III. The new container is a rectangular package that measures 8'2" x 8'8" x 19'10.5" and weighs 53,000 pounds empty. Additionally, a major difference from the TRUPACT-II is the fact that the TRUPACT-III will rely on a single, integrated structure to protect the waste containers that are held within.

Prior to submitting the SARP, a scaled-down model of the TRUPACT-III underwent the same strenuous tests that were endured by the TRUPACT-II. Testing was done both physically and with the use of computer modeling. Once the tests were completed and it was determined that the package had successfully passed each one, only then was the SARP submitted to the NRC. It is expected to take approximately one year for the NRC to complete their review on the new TRUPACT-III SARP.



Editor's note: For additional information on the NRC approval process see the February 26 edition of TRU TeamWorks.

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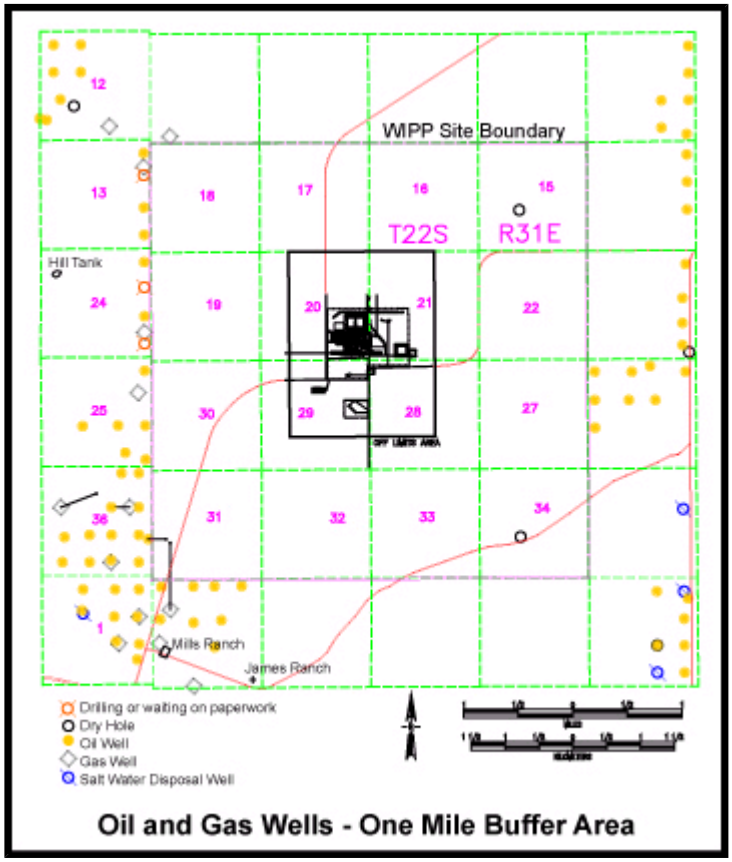
Hoist Schedule

As the bit turns

The recent blowout of a gas well adjacent to WIPP offices and residences in Carlsbad propelled the area's oil and gas production into the limelight – not that the industry is a minor regional player. Studies show that southeastern New Mexico – including the Roswell resource area – produces 92 percent of the state's oil and 48 percent of its gas.

Gas and oil rigs are a common sight around the WIPP site perimeter as well. In fact, there are 92 well site locations within one mile of the WIPP boundary. Some are producing wells, while others are in startup or application stages. The hydrocarbon-rich area had attracted producers well before WIPP lands were withdrawn for TRU waste disposal purposes.

To safeguard the long-term integrity of the WIPP repository, oil and gas drilling are prohibited on DOE-WIPP property. A memorandum of understanding (MOU) was established in 1994 between DOE and the Bureau of Land Management (BLM) and a joint powers agreement between DOE and the state's Oil Conservation Division (OCD). The MOU stipulates that BLM will forward applications to drill on BLM-owned land to DOE if the intended drill site is within one mile of the WIPP boundary. Likewise, the OCD copies DOE on requests to drill on state-owned land within the one-mile limit.



The Land Management group, headed by WTS Land Use coordinator Doug Lynn, visits each well location twice a month to check for leaks, spills or mechanical failures. "We notify the well operator immediately if we find problems at the drill site; we have received 100 percent response to all of our requests within 48 hours."

The group also looks for signs of trespass. According to Lynn, DOE may require companies that drill within 330 feet of WIPP boundaries to submit daily drilling logs for inspection. Because it's not uncommon for vertically drilled holes to drift horizontally during the drilling process, Land Management field technicians routinely inspect drilling logs to ensure horizontal displacement doesn't "wander" onto WIPP property (typical well depths are 6,000 to 11,000 feet).

DOE can request the BLM or OCD to halt drilling that encroaches on WIPP property and require the driller to plug and seal the well. Lynn notes that the producers have been very good neighbors, "In some cases producers have added cattle guards and many property improvements to access their wells."

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Formula for safety

Will anyone ever discover the scientific formula for safety? Well, it might not be an issue of balancing chemicals and atoms on either side of the equation, but one WIPP-related laboratory has come up with a pretty good answer.

Walking through SNL-CPG's laboratory facilities, laboratory manager Don Wall had high praise for the labs' safety record. "This is a safe environment to work in," says Wall. "There are very few hazards to begin with and we take safety issues very seriously, not only for worker health, but also to protect the environment."

The facilities include three laboratories. Two provide direct support to WIPP, the Instrument Lab and the Chemistry Lab. The third, the Soil and Sediment Lab, was originally designed for WIPP work, but is now used on other projects. No radioactive work is performed in any of the SNL-CPG laboratories.

Don Wall, SNL/CPG Laboratory Facilities manager, talking about the lab's equipment and safety features.

Peering through safety glasses, Wall is quick to point out the many safety features in the labs. The instruments have built-in safety features to prevent unnecessary exposure to high temperatures, x-rays or other hazards. Chemicals are safely stored in cabinets away from other materials that might react with them. Even sinks have clear labels on them to prevent prohibited chemicals from entering the sewer system.

"It always looks like this," says Wall proudly as he points to the orderly arrangement of chemicals in a cabinet. And today is just an ordinary day. There are no inspections of the lab today by SNL or DOE-Albuquerque. "This is the neatest and cleanest laboratory I've worked in," he adds. "Good housekeeping adds to safety."

So what is this lab's answer to safety? Their safety equation includes properly training lab workers, following standard lab procedures and using required personal protective equipment.

Most new lab employees here already have experience in a lab environment, but go through rigorous safety training before being allowed to work in this lab. Formal training, featuring video tapes, training modules and an extensive reading list could take up to 30 days to complete.

"Nobody begins work in this laboratory until I believe they can do so safely," Wall emphasizes. Sounds like the scientific formula for safety has already been identified.

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Shining light on the bluntnose shiner

Water issues mixed with minnow habitats can be troublesome topics. But for Jesse Roberts, it's strictly science.

The environmental and mechanical engineer for Sandia National Laboratories' Carlsbad Programs Group (SNL-CPG) studies surface water hydrology. Colleagues matter-of-factly explain that Roberts is a "soil and sediment transport specialist." That means he tracks river flow and course changes, soil erosion, sediment deposits and aquatic habitats.

Roberts' fieldwork employs a specialized mobile unit. He performs state-of-the-art analyses at a 5,000-square-foot Soil and Sediment Transport Laboratory. The equipment has theme-park names like ASSET Flume, SEAWOLF Flume or Laser Particle Sizer. Roberts' studies use science to "balance all interests," revealing long-term environmental impacts that may go unnoticed in the short-term.

Jesse Roberts, SNL-CPG

Pecos Bluntnose Shiner
Roberts' study of the Pecos bluntnose shiner minnow balanced interstate water delivery obligations with agricultural interests and preservation of an indigenous species. He assembled data that enabled state and federal water managers to make informed decisions about Pecos River water management. Reduced water flow has kept the riverbed wet as much as possible, avoiding unnatural flow rates.

New Mexico's Small Business Assistance Program made Roberts' three-year investigation possible for Carlsbad Irrigation District (CID). SNL makes its technical expertise available to small businesses with limited resources. Roberts and two other SNL scientists based in Carlsbad consult regionally, nationally and internationally on water issues.

Salt Cedar Eradication
Roberts continues to work with CID on a joint groundwater/surface water investigation of the impact of salt cedar eradication along the Pecos River. Roberts analyzes net gains of river water from salt cedar eradication. Factors include normal evaporation, bank stability, replacement vegetation water consumption, subsequent erosion, river course changes that encroach on farmland, and impact of sediment carried downstream to Brantley Dam on reservoir storage capacity.

Roberts checks equipment in the Soil and Sediment Transport laboratory

Other Projects
There are less-controversial projects for Roberts. At New Mexico State University Agricultural Science Center near Artesia, Roberts and Michael Chapin, a geohydrologist, are assisting southeastern New Mexico farmers with moisture-tracking of field crops. Data gathered from probes placed among crops helps farmers establish optimal irrigation schedules for highest crop yield, based on growing conditions.

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Worldwide Caution Public Announcement

March 19, 2004

This supersedes the Worldwide Caution dated January 9, 2004. It is being issued to remind U.S. citizens of the continuing threat of terrorist attacks. This Worldwide Caution expires on September 19, 2004.

The U.S. Government remains deeply concerned about the security of U.S. citizens overseas. U.S. citizens are cautioned to maintain a high level of vigilance, to remain alert and to take appropriate steps to increase their security awareness. We are seeing indications that al Qaeda continues to prepare to strike U.S. interests abroad.

Al Qaeda and its associated organizations have most recently struck in the Middle East and in Europe but other geographic locations could also be venues for attacks. Future al Qaeda attacks could possibly involve non-conventional weapons such as chemical or biological agents as well as conventional weapons of terror. We also cannot rule out that al Qaeda will attempt a catastrophic attack within the U.S.

Terrorist actions may include, but are not limited to, suicide operations, hijackings, bombings or kidnappings. These may involve aviation and other transportation and maritime interests, and may also include conventional weapons, such as explosive devices. Terrorists do not distinguish between official and civilian targets. These may include facilities where U.S. citizens and other foreigners congregate or visit, including residential areas, clubs, restaurants, places of worship, schools, hotels and public areas. U.S. citizens are encouraged to maintain a high level of vigilance and to take appropriate steps to increase their security awareness.

U.S. Government facilities worldwide remain at a heightened state of alert. These facilities may temporarily close or suspend public services from time to time to assess their security posture. In those instances, U.S. embassies and consulates will make every effort to provide emergency services to U.S. citizens. Americans abroad are urged to monitor the local news and maintain contact with the nearest U.S. embassy or consulate.

As the Department continues to develop information on any potential security threats to U.S. citizens overseas, it shares credible threat information through its Consular Information Program documents, available on the Internet at http://travel.state.gov. In addition to information on the Internet, travelers may obtain up-to-date information on security conditions by calling 1-888-407-4747 toll-free in the U.S. or outside the U.S. and Canada on a regular toll line at 1-317-472-2328.