

TRU TeamWorks

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

October 16, 2003

The Big Story EM-6 to review WIPP baseline



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A team from the DOE Office of Project Management, EM-6, will be on site next week to review the WIPP baseline and the integration of that baseline with the National TRU Program.

The baseline is a 30-year cost schedule and plan for the WIPP scope of work that extends through the project life cycle. (See *TRU TeamWorks, Working Smart*, August 25, 2003). All DOE sites were directed to develop baseline plans to comply with DOE Order 413.3.

The EM-6 team will review CBFO's ability to implement and execute its baseline plan. "DOE Order 413.3 directs sites to incorporate project management techniques into DOE operations," notes Ron Head, WTS manager of Project Analysis and Controls. "The directive for WIPP to begin creation of a baseline plan came in a memo from Assistant Secretary for Environmental Management Jessie Roberson in May. The WIPP team began working in early June. We have worked very hard to create this plan and we're ready for the review."

The EM-6 team will arrive on Tuesday for initial presentations by CBFO and WTS management. During the three day review, team members will tour the site, review documentation and conduct interviews. The review will conclude with a Thursday close-out meeting. "We will get an initial report of their findings at the close-out meeting," says Head. "At that time they will offer suggestions for improvement. We're eager to hear their comments."

EM-6 will issue a final report on the baseline review in early December.

**WIPP Shipments
(as of 10/16/03
at 7:05 a.m.)**

Shipments
scheduled to
arrive at WIPP
this week
19

Total shipments
received at WIPP
2,095



In the news

 <p>Certifications across the nation</p>	 <p>Service with a smile at EPD</p>	 <p>Top of the stack</p>	 <p>Get Out! Stay Out!</p>	 <p>The source for site information</p>	 <p>Our Team News</p>
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Wall-to-wall audits



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The CTAC audit and assessment team is busy site-hopping these days doing what they do best - auditing. The group conducts all generator site certification and recertification audits on behalf of CBFO. No small task when you consider the waste shipment schedule DOE is working to maintain and accelerate.

To receive authorization from EPA, NMED and CBFO to ship waste to WIPP, generator sites must undergo an initial certification audit. Once approved, sites maintain their certifications through an annual recertification program. If any new waste summary categories are identified at generator sites, the characterization processes for those must be certified. Changes to equipment used in the waste handling process also require certification. Sound overwhelming? Multiply that by the number of sites shipping to WIPP, and you will get an idea why the CTAC team is so busy.

The "wall-to-wall audit environment" was readily apparent last week. While two CTAC audit teams performed two site (ANL-E and NTS) recertification audits at the Skeen-Whitlock Building, a third team conducted a surveillance of Hanford's hydrogen and methane analysis process. Even though characterization activities at ANL-E and NTS have ended for now, the recertifications conducted last week will be good for one year, perhaps eliminating the need to conduct a full-fledged initial certification audit later if more waste is characterized for shipment.

"We have been very busy," admits Wayne Ledford, CTAC acting audits and assessments task manager. "The schedule has been that way for some time, but last week's audits in Carlsbad brought the action a little closer to home." The CTAC team's schedule for the next two months does not look to slow down much, either. The current audit schedule lists one or two audits, assessments, or surveillances at different facilities every week through November. Past that point, the schedule lists December audits as "to be determined," indicating CTAC teams will be busy through year's end.

Though multiple audits keep the CTAC team on the road, the group keeps its eye on the big picture. "Audit activity is a good sign for WIPP," comments Ledford. "The certifications, surveillances and assessments, if successful, allow the generator sites to ship waste and that keeps WIPP operations flowing smoothly as well."



Check under the lid, please



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WIPP Shipments

(as of 10/16/03
at 7:05 a.m.)

<p>Shipments scheduled to arrive at WIPP this week 19</p>
<p>Total shipments received at WIPP 2,095</p>
<p>Total Waste Disposed Underground at WIPP</p>
<p>CH drums 45,263</p>
<p>CH standard waste boxes 2,174</p>
<p>CH ten-drum overpacks 459</p>
<p>Cubic meters 15,658</p>

What do a Lamborghini Diablo and a TRUPACT-II have in common? Both cost around \$400,000 and both require specialized routine maintenance. It's true! A 12,000-pound stainless steel container—with few moving parts—requires routine maintenance. TRUPACT-II maintenance isn't performed by the typical mechanic, but rather maintenance inspectors employed by Westinghouse Engineered Products Department (EPD) located in Carlsbad.



Axial play inspection

TRUPACT-IIs receive a good amount of wear and tear during normal loading and shipping. To ensure leak-tight integrity, the containers undergo annual inspections and testing. The maintenance program is required by the Nuclear Regulatory Commission for Type B packages.

Each year the TRUPACT-II maintenance team develops an annual maintenance schedule for shipping coordinators so that they can arrange maintenance without impacting WIPP shipments.

When it's time for a TRUPACT-II checkup, the container is delivered to EPD. There, inspectors perform a visual and physical inspection. Visual inspection includes examination of bolt threads, locking ring-lock stops and other mechanical parts.

During physical inspection, specific areas of the TRUPACT-II inner containment vessel (ICV) and outer containment vessel (OCV) are filled with helium gas (at separate times). A helium mass spectrometer is then used to check primary O-rings, welds and vent port seals for leak-tightness.

EPD inspectors also check for cracks in welds and other surfaces by spraying a penetrating solution onto the container itself. The solution seeps into any undesirable cracks or imperfections to help inspectors locate potential problems. If imperfections are found, the container is repaired and retested. Inspectors follow a detailed inspection checklist developed by CBFO.

Every five years, each TRUPACT-II is vessel is pressure tested to one-and-a-half times the designed pressure rating. All welds and seals must be in good working order for the container to remain in service.



Maintenance inspector performs a visual inspection.

EPD's maintenance program is efficient. Inspectors average one to two TRUPACT-II inspections per week, with an average inspection time of four to five days per container.

There are 76 TRUPACT-IIs and 15 HalfPacts in the WIPP fleet.

WIPP's engineered barrier backfill takes the top spot



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What do the pharmaceutical industry and WIPP disposal have in common? The answer is they both use magnesium oxide (MgO). MgO is commonly used in the production of antacids, cosmetics, toothpaste and ointments. But at WIPP, MgO serves a much different purpose, sitting at the top of each TRU waste stack.

The U.S. Department of Energy uses MgO at WIPP as an engineered barrier that helps control disposal room chemistry and provides added assurance that WIPP will comply with the Environmental Protection Agency's regulatory requirements. The National Academy of Sciences recommended the use of a treated backfill material. They believed that it could substantially reduce the consequences of human intrusion—a remote possibility—into the repository during the next 10,000 years.

The large sacks of MgO are designed to chemically stabilize radionuclides and minimize their ability to be dissolved in water in the unlikely event that water should ever enter the facility. MgO will also remove carbon dioxide from the disposal room environment, thereby reducing pressure that could build up over time. However, this assurance measure is not taken into consideration by WIPP's performance assessment.

Total Waste Disposed Underground at WIPP

(as of 10/16/03
at 7:05 a.m.)

CH drums 45,263
CH standard waste boxes 2,174
CH ten-drum overpacks 459
Cubic meters 15,658

Panel 1, which was declared full in March, contains about 2000 sacks of MgO.



Workers place magnesium oxide on a waste stack in the WIPP underground.

Awareness saves lives



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October is Fire Protection Awareness Month. This year's National Fire Protection Association campaign theme is "When Fire Strikes, Get Out! Stay Out!" The 2003 campaign promotes safe response in the event of fire. Throughout October, the WIPP Safety Awareness Committee will offer information on fire safety on the job and at home.

Fire safety is serious business at WIPP, particularly in the underground. WIPP fire drills are conducted every six months as required by OSHA and the National Fire Protection Association. In the event of a fire, the WIPP goal is to evacuate all employees within 30 minutes. Post-drill assessments show that WIPP evacuations are typically completed within 10 to 15 minutes from the time the alarm sounds.

Volunteer office wardens are trained to assist in orderly evacuations. WTS Emergency Response Coordinator Buddy Webb says, "The chief office warden is ultimately responsible for full accountability. In an emergency, assistant office wardens account for the personnel in their respective departments; accountability lists are then forwarded to the chief office warden to ensure all personnel are accounted for. Office wardens perform an essential duty and do an outstanding job."

Faye Kirkes, chief office warden at the Skeen-Whitlock Building reminds employees to use the sign-in/sign-out board for accountability, commenting, "If you find yourself out of your normal work area when an alarm sounds, report immediately to the office warden in the area you're visiting."

The WIPP Safety Awareness Committee asks employees to be responsive when a fire alarm sounds.



Following is an excerpt from this month's edition of *Porcelain Press* which is from an actual incident report of an occurrence at an off-site WIPP contract facility. The fire alarm went off as a sub-contractor was soldering a heater at the facility. There was no fire, but the solder produced enough smoke to set off the fire alarm.

As soon as the building fire alarm went off there was a momentary pause while building occupants tried to decide if the alarm was due to a monthly alarm test, a surprise fire drill, or if it was a real event." These words from an incident report reflect common human behavior when a fire alarm is activated.

The report goes on to say "momentary confusion turned into an orderly and rapid evacuation of the building." Words and phrases such as normally, assumed, thinking it was a drill, usual notification, no evidence, initially thought, and delay in the response, were found in the report. While this incident ended without injuries or damage to property, there are lessons to be learned.

Unless it has been announced over the public address system that a fire alarm will be activated for testing or maintenance, employees should always react to the notification as a real event. Seconds saved in a real fire can often make the difference in the outcome of life and property (see story at left).

WIPP employee's quick response saves elderly resident and her home

Chon Armendariz, Mine Maintenance, smelled smoke. As he left for work Monday morning (October 13), he could see a neighbor's house ablaze. Armendariz called 911 and ran back to the burning house to see if anyone was inside. From the intense heat at the front door, Armendariz knew it was not safe to open. He noticed that the house next door to the burning house had begun to smoke. He banged on the door. The resident, an elderly woman, was unaware that the house next to hers was on fire. After the woman was safely evacuated, Armendariz helped arriving police hose down the woman's house.

POD keeps site personnel in the loop



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You may have read about the One-Minute Manager in business books. But do you know about WIPP's Five-Minute Managers?

They complete a key site operations Plan of the Day (POD) meeting in five minutes. Always at 7:15 a.m., Large Conference Room, Support Building, at the WIPP site.



POD in Progress

"It's a very good tool for us to get out a lot of information in a short period of time," says Leroy Bostick. As WTS Surface Operations and Maintenance manager, Bostick attends both POD and then Plan of the Week (POW) meetings on Thursday afternoons. WTS Work Control conducts both meetings, which are regularly attended by 20 to 25 key site personnel, including Carlsbad Field Office officials. After years of repetition, Bostick says it's well-known that the POD is *the* source for relevant information about daily plant operations.

Working Smart

Regular meetings can keep everyone in the loop.

Driven by WIPP procedures and DOE Conduct of Operations Order 5480.19, communication is specific and consistent. The POD begins with a report from the incoming Facility Shift Manager (FSM) on plant conditions. Leads for waste handling, radiological control, all surface maintenance zones, underground operations, underground maintenance and WTS-administered construction report scheduled work. Discussion is limited to "only the work that impacts some portion of site operations that day," explains Bostick. Non-impactive work may be noted on the agenda for information, but it won't be discussed.

WTS Work Control prepares for the daily meeting run by James Phillips and weekly POW run by Lisa Proctor. Their information source is the CHAMPS database. Details go out on Monday for the Thursday meeting, so scheduling conflicts may be resolved in advance. The POW provides site personnel a two-week look-ahead at planned work.

At the POD, the FSM gets details about scheduled maintenance that are vital to his responsibility for daily plant operations. The four FSMs on rotating shifts are Tex Winans, Jerry Burns, Richard Marshall and Russ Stroble. The incoming FSM arrives at the POD already briefed at a 6:45 a.m. shift turnover, from the outgoing FSM.

At 7:15 a.m. on any regular workday, you know where to find WIPP's Five-Minute Managers.



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Los Alamos part of team establishing baseline procedures for emerging bioforensics field

LOS ALAMOS, N.M., Sept. 24, 2003 -- Following the 2001 anthrax mail attacks, it became clear to law enforcement and forensic scientists that high-quality procedures for handling bioagents used in alleged criminal activity were not standardized across the research labs that were asked to respond.

Standardization would ensure that if the nation's best labs were again called to respond they could do so with confidence in their procedures. LANL scientists were part of a scientific working group established by the Federal Bureau of Investigation to resolve the issue.

The initial report of the Scientific Working Group on Microbial Genetics and Forensics (SWGMPF) was published in the September 25 issue of Science magazine. The article, "Microbial Forensics: Establishing Foundations in an Evolving New Field to Respond to Bioterrorism," called for a dedicated national system to analyze evidence from a bioterrorism act, biocrime or inadvertent microorganism/toxin release.

Los Alamos develops and applies science and technology to ensure the safety and reliability of the U.S. nuclear deterrent; reduce the threat of weapons of mass destruction, proliferation and terrorism; and solve national problems in defense, energy, environment and infrastructure.