



NASA Glenn
Plum Brook Station

FIFTH EDITION
OCTOBER 2002

Decommissioning NEWS

Plum Brook Station

A quarterly
newsletter
to inform the
public about NASA's
Decommissioning
Activities

IN CASE YOU'VE EVER WONDERED WHAT'S GOING ON:

NASA Is Inviting People to Attend Our Fourth Annual Community Information Session on October 16

Nearly 30 years after NASA ceased its operations - and safely removed the nuclear fuel from its two test reactors - NASA is decommissioning the closed Reactor Facility at Plum Brook Station. On Wednesday, October 16, from 7:30 p.m. to 9 p.m., the public is invited to attend a Community Information Session - in the Perkins High School cafeteria (3714 Campbell Street).

Over the past three years, NASA has taken many steps to let community members know about our plans for decommissioning the Reactor Facility. We recognize, however, that many people still may not be aware of what's happening or may not have the answers to their questions.

Have you ever wondered:

- How will NASA safely decommission the facility?
- How much radiation is there?
- How is NASA ensuring the safety of the public, the workers and the environment?
- What progress has been made and what are the next steps?
- How will NASA safely dismantle several hundred tons of metal and concrete?
- How will NASA safely package and transport all the low-level waste from the project?
- How can the community be sure NASA is doing what it says?

According to NASA Decommissioning Project Manager and Norwalk resident Tim Polich, "NASA values its relationship with the community. Over the past several months, we've had the opportunity to provide Reactor Facility tours for members of our Community Workgroup and the media, and wish we could bring everybody in to show what we're doing. Unfortunately, we cannot, but the Community information Session is the next best thing. It will really give people the big picture."

The event will feature text and visual displays staffed by members of the Decommissioning Team, a narrated slide presentation and a video that will run continuously. Members of the Decommissioning Community Workgroup and NASA retirees who once worked at the Reactor Facility will be on hand to answer questions and share their experiences. NASA Senior Project Engineer and Huron resident Keith Peacock has given presentations on the project throughout Erie County and says "The Community Information Session offers a unique opportunity for one-on-one dialogue between community members and NASA. We welcome the opportunity to meet and talk with all our neighbors."

The public is invited to attend the entire Community Information Session - or just drop by. In addition, NASA will hold its quarterly Community Workgroup meeting on October 16, starting at 5:30 at Perkins High School. It is also open to the public. ■

Plum Brook Station remains one of NASA's most vital and active test facilities, with only the closed Reactor Facility being decommissioned. Plum Brook Station continues to operate four "world class" test facilities including:

Space Power Facility

the world's largest thermal vacuum chamber for ground testing large equipment in a simulated space environment (i.e., surrounded by a vacuum and at very hot and cold temperatures) before taking the equipment into space

Spacecraft Propulsion Research Facility

the world's only facility that simulates the actual flight conditions of space on full-size rocket vehicles

Hypersonic Tunnel Facility

the United States' largest clean-air wind tunnel capable of performing tests up to seven times the speed of sound

Cryogenic Propellant Test Facility

tests cutting-edge technology for high-energy space propulsion systems of the future

WHAT'S INSIDE

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Other ways to receive Decommissioning INFORMATION

FACT SHEETS

Since June 1999, NASA has produced fact sheets dealing with various aspects of Decommissioning. Copies are available at public libraries throughout Erie County, at the Community Information Bank at the BGSU Firelands Library, on our Decommissioning Website at www.grc.nasa.gov/www/pbrf and by calling our Information Line at 1-800-260-3838.

COMMUNITY INFORMATION BANK

NASA has established a Community Information Bank (CIB) at the BGSU Firelands Library. The CIB serves as a permanent repository of information on the Decommissioning Project which NASA continually updates. All information at the CIB is available to the public upon request.

DECOMMISSIONING WEBSITE

Decommissioning information is available on-line. Visit us at www.grc.nasa.gov/www/pbrf

SPEAKERS

NASA will provide speakers upon request to civic, community and school organizations throughout Decommissioning. A video or slide presentation may be presented. For further information, contact Sally Harrington through our Information Line at 1-800-260-3838, her direct line at 216-433-2037, or at s.harrington@grc.nasa.gov.

Community Workgroup Meets as Project Kicks into Gear

Having toured the Reactor Facility as part of its April meeting, the Community Workgroup met again on July 23 at the EHOVE Career Center in Milan. Eight Workgroup members and several members of the public listened to a discussion of NASA's plans for characterization of the Reactor Facility, the Reactor Internals Investigation, the results of NASA's Activation Analysis and a topic of particular interest - NASA's plans for controlling and containing dust and any airborne contamination during Decommissioning.



After the April Reactor Tour, Workgroup members heard a presentation by NASA's Keith Peacock (seen at left of screen).



Participating in meeting discussion are (clockwise from left): NASA's Keith Peacock; Workgroup member Bob Speers; NASA's Sally Harrington; Wes Watson of the U.S. Army Corps of Engineers and Workgroup member John Blakeman.

This meeting served as another example of NASA's continuing responsiveness to questions from the community, as Workgroup members had requested information on dust control. Mike Lambert, a health physicist with subcontractor Framatome, provided a thorough look at the steps that will be taken to protect the public, the workers and the environment. The comprehensive plan includes a number of "engineering controls - to prevent or minimize generation of contamination at the source," and provides for "redundant measures," including special enclosures, filter and ventilation systems and air monitors. One important tool NASA will employ is a High Efficiency Potential Air (HEPA) filter system. Mike said the HEPA system's portable units are 99.97% effective, adding that the ventilation system will operate at a process flow of 24,000 cubic feet per minute - meaning the air inside the containment vessel will turn over every 30 minutes.

According to Mike, Decommissioning activities in which control of airborne material is especially important include the segmentation process (scheduled to begin in January 2003), when subcontractor Wachs Technical Services will cut up the reactor tank and its components. Much of the cutting will be done remotely, using a separate work platform. In addition to the measures to eliminate contamination, the team will build a special enclosure, known as a "glove bag," to further minimize the generation and release of contamination. Mike said the ventilation system inside this "glove bag" would be kept at a slightly negative air pressure (compared to outside the reactor containment vessel), such that air will come into the enclosure - not escape it. During segmentation, there will be continuous monitoring and sampling of the air inside and outside the containment vessel. This monitoring will help NASA track the efficacy of all these efforts. The samples will be analyzed on site, enabling NASA to take remedial action if needed. While very engaged in listening to Mike's presentation, Workgroup members also seemed reassured - and satisfied with the steps being taken.

Another topic of the evening was the plan for characterizing radiation within the Reactor Facility. NASA Senior Project Engineer Keith Peacock said a Characterization Plan - a detailed radiation survey that "goes from the top to the bottom of the facility" - was being developed. It will be used to identify what low-level waste can be sent to licensed disposal sites and to design the "final site survey" to ensure (when Decommissioning is complete) that the former facility site is safe. According to Keith, characterization is not a new - or onetime - activity. Some work has taken place this year, using a two-person health physics (HP) crew. He added that data from this work "will be fed into the plan." Once approved, a crew of four HP technicians and a supervisor will undertake the formal effort over several months.

Keith also talked about the results of NASA's Activation Analysis, which was done using sophisticated computer models. When metal is exposed to high levels of neutron radiation, it can be changed into a different material that is itself radioactive. This is what happened to the stainless steel inside the reactor tank. The Activation Analysis looked at the amount of neutron radiation involved and the exact geometric and material makeup of the reactor tank and all its internal structures. Keith said the result of this rigorous analysis was "pretty close" to earlier, less sophisticated predictions. Altogether, there are about 81 tons of activated metal, which will be removed and disposed of as low-level radioactive waste at licensed facilities in South Carolina and Utah.

Workgroup members listened to an update on another planned activity: the reactor tank entry and Reactor Internals Investigation. The purpose is to visually verify what equipment/components are still inside the tank, determine their physical condition and test radiation levels in several ways. NASA was to use the Reactor Facility's overhead crane to lift the shrapnel shields that have covered the tank since it was built. Once the shields were lifted, the plan called for the crew to open a hatch on the top of the tank and perform a variety of tests, including the snipping of a piece

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**Do you want some news? Do you have questions or comments on Decommissioning?
CALL OUR INFORMATION LINE AT 1-800-260-3838.**

FYI: Safe Waste Packaging during Decommissioning

Many of the questions NASA has received from the public involve what will happen to the radioactive waste from Decommissioning. All the waste at the Reactor Facility is low-level, dry and solid, resulting from the equipment, tools and

fixtures once used in the facility - and on and in the reactor vessel and its components. In this edition of Decommissioning News, we look at what is there and how NASA will safely package the waste. In our January edition, we'll look at how NASA will safely transport the waste for disposal or reprocessing.

The U.S. Nuclear Regulatory Commission (NRC) has three classifications of low-level radioactive waste (LLRW) for disposal purposes: A, B and C. The classification is based on radioactive isotopes present in the waste and their potential to migrate. Class A has the lowest levels; Class C the highest. NASA Senior Project Engineer Keith Peacock estimates that throughout the entire Reactor Facility, approximately 95% of the low-level waste is Class A, around 5% is Class B and less than 1% is Class C.

All LLRW must be specially packaged for transport, with the U.S. Department of Transportation (DOT) providing three classifications for shipping the waste. The classification is based on the dose rate, or amount of radiation coming from a container that is protective of health and the environment. The type of shipping container used depends on the type and amount of specific isotopes present in the waste. The three DOT classifications for shipping are: Low Specific Activity (LSA), Type A and Type B. Type A containers are designed to retain their contents under normal conditions of transport, such as vibration, heavy rain and pressure from stacking; Type B to protect and retain their contents under both normal and severe accident conditions. They are certified by the NRC before use and then recertified every five years.



Workers prepare to move a loaded B-25 box out of a Reactor Facility quadrant.



Casks like the one on this "lowboy" truck will be used to package materials during segmentation of the reactor vessel and internals.

Most of the waste from Decommissioning has very low levels of radioactivity and will be shipped under the LSA classification, with the waste packaged in DOT-mandated "strong, tight containers." These include steel drums, Sealand containers (metal structures pre-mounted on trucks) and B-25 boxes.

NASA is making extensive use of B-25 boxes, which are made of steel and are approximately four feet tall, six feet wide and four feet deep. The B-25 boxes were first used last year during pre-decommissioning, when NASA sent a LLRW shipment to the Alaron licensed reprocessing facility in Pennsylvania. They have also been used for packaging loose equipment formerly located in the facility's quadrants and canals. The boxes have been safely maintained in a designated storage area of the facility, for eventual transportation and off site disposal or reprocessing.

During segmentation of the reactor vessel and internals, NASA will use a crane to move the cut pieces to a staging area in the Reactor Facility's quadrants. Crews will place the pieces into cylindrical steel liners roughly five feet in diameter and six feet tall, to meet disposal requirements. They will seal the liners, survey them for radiation and store them in a secure area. Later, they will place the liners in Type B containers - casks - to meet shipping requirements and the crane will lift the casks onto a "lowboy" (large flatbed) truck. Then the driver, truck and contents will be surveyed for radiation before departure to a licensed disposal facility.

Throughout Decommissioning, NASA will coordinate shipments with local authorities, including the Erie County Emergency Management Agency and Perkins Police Department. For security

COMMUNITY WORKGROUP PROFILE Ethel Roldan

For Ethel Roldan, community advocacy has been a way of life. The Sandusky resident and grandmother has long worked in the interests of the poor in Erie and Huron counties, especially in Sandusky's Black community. She worked for the Erie Huron Community Action Commission (as Assistant Director, among other positions) and for the Domestic Relations Court in Erie County. Then, in 1994, Ethel founded the Center for Cultural Awareness, where she served at risk youth until her retirement last year.

When NASA formed the Community Workgroup in 1999, Ethel was quick to join. At that time, she recalls, "I did not quite know what the dangers (of Decommissioning) might be, but I did not want the Black community to be the last to be notified if something happened." Because she has "never been afraid to ask questions," Ethel initially expressed concerns relating to the transportation of low-level radioactive waste from Decommissioning and project safety issues. But Workgroup presentations - including one on NASA's Environmental Assessment - increased her confidence. "NASA has been so willing to answer questions and has been so patient," she says, adding, "from being involved with the Workgroup and talking to (NASA officials), I can tell people the project is safe."

The community activist sees the Workgroup as "a good way to keep the community informed," observing, "It's important for people to know someone who lives where they do. It's a positive that NASA took people from the community that (other) people know." She also praises the willingness of Workgroup members to "help each other understand" aspects of Decommissioning and lauds NASA for sharing information, citing "the people in charge and the people brought in to discuss topics."

Since she joined the Workgroup, Ethel says she's received "25 or 30 questions" from neighbors and fellow members of St. Stephen's AME Church, which hosted a Workgroup meeting in January. Many of the questions arise from small group discussions about several topics. In responding to them, Ethel explains, "I tell people I've been to the meetings and - that NASA is working in a very careful way." She has also encouraged neighbors to "call NASA if you want more information," because the project is "no secret. No question we've asked has gone unanswered." She also believes the Information Line (1-800-260-3838) is an important tool that helps her "feel a personal connection" to the project, adding, "I can call (NASA) and when they say they'll call back, they do."

Ethel believes that, even as the group's personnel may change, the Workgroup should be a fixture until the end of the project, concluding "I'm most impressed with the (NASA) effort to get information to the Workgroup. It's extraordinary." ■

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VISIT US ON-LINE

You can find our
Decommissioning Website at
www.grc.nasa.gov/www/pbr



Topics in Upcoming Issue

Project Update
Safe Waste Transportation
Community Information Session Recap

GOOD NEWS NASA Hosts Media Briefing & Reactor Tour

The success of April's Reactor Tour for Workgroup members and some NASA retirees showed that, indeed, seeing is believing. On June 26, local and statewide media outlets had their chance, when NASA conducted a Media Briefing and Tour at the Reactor Facility. Decommissioning Team members and several NASA Glenn senior managers were on hand to greet reporters and photographers from several newspapers and radio stations. The briefing and tour resulted in many positive stories about Decommissioning, both in print and on the air, with Decommissioning Project Manager Tim Polich noting the event had "enhanced public understanding of the project." ■

Community Workgroup (continued from page 2)

of aluminum tubing that goes into the tank. Aluminum tubing was being sampled because it does not become activated by radiation the way stainless steel does. In his presentation, Keith described NASA's plans to take "swipe samples" (using remote sampling devices) to establish loose contamination levels and use a remote camera to take direct radiation readings.

But Keith was upfront with the audience, observing, "We have a facility that was mothballed for 30 years...We're not going to do this until we are ready and confident." He added that NASA had to conduct a "load test" for the crane - to ensure it could lift 125% of the expected load's weight before being approved for lifting the shields. If the crane could not handle the 125% load, he said NASA would not proceed with the tank entry until the proper procedures were in place, adding that safety - not the work schedule - would dictate the timetable for the Reactor Internals Investigation. [Note: This commitment would lead NASA to postpone the latter until fall while reviewing its lift procedures.]

The Reactor Internals Investigation will be among the topics discussed at the next Workgroup meeting, taking place on Wednesday, October 16, at 5:30 p.m. in the Perkins High School cafeteria. NASA's Community Information Session will follow the meeting. ■

Safe Waste Packaging (continued from page 3)

purposes, NASA will not provide exact shipment dates to the public but will provide general schedule information and note when the shipments have been successfully completed. We will include these updates on our 24-hour, toll-free Information Line (1-800-260-3838). ■



NASA Glenn Plum Brook Station

6100 Columbus Avenue
Sandusky, Ohio 44870

Community Information Session

WEDNESDAY, OCTOBER 16
7:30 p.m. - 9 p.m.

Perkins High School Cafeteria
3714 Campbell Street

(Workgroup Meeting at 5:30 p.m.)