

cleanupdate

U.S. DEPARTMENT OF ENERGY/BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES

ENVIRONMENTAL RESTORATION DIVISION — VOL.3/NO.3/AUGUST 1998

Lab to seek input from area residents on cleanup options

Brookhaven National Laboratory (BNL) and the U.S. Department of Energy (DOE) have made significant progress in identifying cleanup options for the remaining groundwater contamination at the Laboratory site. These areas include off-site solvent groundwater contamination and the tritium plume from the High Flux Beam Reactor spent fuel pool.

BNL is now working with the regulatory agencies overseeing the Lab's cleanup to finalize these options. Once that occurs, BNL and DOE will seek public input on these options.

Community input on these options will be used in the selection of alternatives to be evaluated in a feasibility study. A draft proposed cleanup plan will then be submitted to the regulatory agencies overseeing the Lab's cleanup (U.S. Environmental Protection Agency and N.Y.S. Department of Environmental Conservation) later this year. Once the plan is approved by the regulatory agencies, the public will be able to provide additional input and learn more about the proposed cleanup alternative.

While the Lab has already constructed and is currently operating four groundwater treatment systems (a fifth will be operational early next year), there are still several areas of on- and off-site groundwater that remain to be addressed. These areas contain solvents (also known as volatile organic compounds or VOCs), on- and off-site, and the radioactive elements tritium and strontium-90 (on-site) at levels above drinking water standards.

The VOC groundwater contamination originates from the central portion of the Lab site and extends to a point just south

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One of the empty storage tanks being removed from its concrete vault.

Former waste tanks removed; part of Building 830 cleanup

This summer, Brookhaven National Laboratory (BNL) is continuing to address potential sources of contamination by removing two storage tanks at Building 830. The tanks have been excavated and removed, and will soon be packaged for off-site disposal.

The two 1,000-gallon tanks, which have been emptied and are no longer in service, had contained mixed waste from Building 830 operations. Building 830 houses two experimental laboratories and a waste management department.

The project began with the excavation of the two tanks, which were buried under several feet of soil. After the tanks were inspected to ensure they were still intact, a crane was brought in to remove the tanks from their concrete vault using a large sling. Each tank was weighed, and they were both placed on a liner and covered to protect them. The next step will involve packaging the tanks so they can be sent off-site for disposal.

Additional work to be performed this summer includes removing a related valve vault, piping, contaminated soil, and vegetation. These items will also be packaged and sent off-site to a permitted storage facility for disposal.

Over the past five years, nine storage tanks have been removed, and another six are scheduled for removal next year. ■

New ERD manager on board

John Meersman, senior project manager for Bechtel National, Inc., has been named the new manager of BNL's Environmental Restoration Division. He succeeds Jim Kannard, who returned to Nevada due to a family illness.

"ERD staff has done a great job in characterizing contamination problems and identifying cost effective cleanup strategies," he said. "The challenge for the future is to build a consensus with our regulators and stakeholders as to how the cleanup should proceed, and then to implement the cleanup on schedule and within budget."

Before Brookhaven Science Associates (BSA) took over management of the Laboratory in March, Meersman became familiar with BNL as part of the transition team. BSA hired Bechtel National, Inc., to assume leadership of the Lab's Environmental Restoration program.

Meersman attended Stanford University where he earned a B.S. in civil engineering in 1976, an M.S. in environmental engineering in 1977, and a postgraduate degree in environmental planning in 1978.

Meersman has supported U.S Department of Energy environmental restoration programs at Hanford, Savannah River, Nevada Test Site and Oak Ridge. He is currently in the process of relocating his wife and two children from Oak Ridge, Tennessee to Long Island. ■

hookupdate

An update from the U.S. Department of Energy

The U.S. Department of Energy is nearing the end of its public water hookup project.

Work has been completed in almost all areas, and the grant to the Suffolk County Water Authority will be closed out on August 31, marking the end of the project. A certified mailing has been sent to the few property owners who have not responded to the free public water hookup offer.

Residents who have been hooked up, but have not yet made an appointment with a plumber for final connection, should do so as soon as possible. ■

More Peconic sampling planned

As part of an ongoing environmental investigation of the Peconic River area, Brookhaven National Laboratory (BNL) recently sampled Peconic River sediments. Very low levels of plutonium were detected on the Lab property and in the river bed one mile beyond BNL's eastern boundary.

The Lab, working closely with the regulatory agencies overseeing its operation, is now planning additional testing of the river sediment.

The next round of sampling, expected to begin in October, will look at several additional areas, encompassing a longer stretch of the river. BNL is currently working with regulators and data analysis specialists to develop a thorough and complete sampling plan.

The Peconic River investigation will be part of an environmental update to be given to the newly-formed Community Advisory Council during their first meeting on September 10.

All reports from BNL's Environmental Restoration Division are available at:

Longwood Public Library
800 Middle Country Road
Middle Island NY 11953
516-924-6400

Mastics-Moriches-Shirley
Community Library
301 William Floyd Parkway
Shirley NY 11967

BNL Research Library
Building 477A
Brookhaven Avenue
Upton NY 11973
516-344-3483

U.S. EPA Region II Library
Administrative Records Room
290 Broadway
New York NY 10007-1866
212-637-4296

What's new in the libraries:

- ***Operable Unit III Tritium Compilation Report*** (Indexed as BNL/OU3/11.4/581-592)
- ***Operable Unit V Remedial Investigation/Risk Assessment Report*** (Indexed as BNL/OU5/10.7/1-2633)
Comment period extended to September 27, 1998

cleanupdate

A newsletter from the Environmental Restoration Division (www.oer.dir.bnl.gov) at Brookhaven National Laboratory, *cleanupdate* is part of an on-going effort to inform people about environmental restoration issues and activities at the Lab. If you would like to be on the Environmental Restoration Division mailing list, or if you have any questions about the cleanup, please contact:

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Groundwater cleanup...

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of Flower Hill Drive in North Shirley at a depths greater than 200 feet below the land surface. Tritium and strontium-90 have been found beneath the central portion of the Lab site.

BNL and DOE have been working on cleanup options that would meet three goals: meeting drinking water standards in groundwater, completing cleanup of the aquifer in a timely manner (Upper Glacial within 30 years), and limiting plume growth. The options range from relatively non-intrusive actions like continued monitoring and using natural degradation and decay to address the contamination, to more active treatment, which would involve installing on-and off-site cleanup systems.

BNL and DOE have identified a selection of options they believe are a good starting point for discussions with regulatory agencies and the general public. Over the next several months, BNL will be presenting these cleanup options to regulatory agencies and the public in an attempt to reach consensus on a cleanup plan.

The cleanup options include separate remedies for VOCs, tritium and strontium. Since most of the VOC options involve varying levels of treatment system construction in the neighborhoods south of the Lab, public input from these areas is important.

All options discussed below also include extensive and ongoing groundwater monitoring.

Volatile organic compound cleanup options include:

1. Constructing and operating groundwater treatment systems in the residential neighborhoods of East Yaphank/North Shirley.
2. Constructing groundwater treatment systems in residential areas and at the leading edge of the plume (south of Flower Hill Drive).
3. Constructing groundwater treatment systems in an unpopulated area on North Street and at the leading edge of the plume (south of Flower Hill Drive).

Option one and two would necessitate the construction of one or more cleanup systems in residential neighborhoods. Differences between the three options include the number of systems constructed and the amount of time the cleanup will take.

On-site strontium-90 cleanup options include:

1. Construction of extraction and treatment systems to address the most concentrated strontium-90 areas on-site, including the Glass Holes, Pile Fan Sump and Waste Concentration Facility (see illustration).
2. Using in-place treatment technologies like permeable barriers to trap the strontium and hold it while it naturally decays.
3. Allowing residual strontium-90 in groundwater on-site to naturally decay, continuing groundwater monitoring to ensure drinking water standards are reached.

On-site tritium cleanup options include:

1. Installing a low-flow extraction system or carrying out a one-time extraction to address the higher concentrations of tritium at the front of the reactor.
2. Enhancing monitoring efforts and continuing operation of the current pump-and-recharge system.
3. Shutting down the current pump-and-recharge system and employing natural attenuation and monitoring to ensure drinking water standards are reached.

All of the strontium-90 and tritium options described above

are intended to prevent contamination above the drinking water standard from moving off-site.

The final remedies chosen for the contamination could be any one or a combination of the above options, depending on the input received from the public and regulatory agencies like the EPA and DEC. No matter which option is eventually chosen, the Lab will continue its aggressive groundwater monitoring effort to ensure the remedy remains effective over time.

This fall, BNL and DOE will be holding a community workshop. Members of the project team will be on hand to present information about the proposed cleanup options and solicit feedback from the public. ■



