

cleanupdate

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

ENVIRONMENTAL RESTORATION DIVISION — VOL.5/NO.1/APRIL 2000

On March 2, community members learned about the Peconic River/Sewage Treatment Plant cleanup and got an opportunity to ask questions at a public meeting. Representatives of Brookhaven National Laboratory and the U.S. Department of Energy were present to respond to questions.



Roger Stoutenburgh

Department of Energy seeks input on Peconic River/Sewage Treatment Plant cleanup

The U.S. Department of Energy (DOE) and Brookhaven National Laboratory (BNL) are currently seeking public input on the proposed remedy for contaminated Peconic River sediments, soils at the Lab's sewage treatment plant, and area groundwater. This remedy is detailed in the *Operable Unit V Proposed Plan*, which was released on February 15. DOE invites the public to review this plan, which is available online at <http://www.oer.dir.bnl.gov/ou5doc.html>, and send in your comments.

Already, based on feedback from the public, DOE has extended the public comment period by 60 days to May 15, 2000. All comments should be submitted no later than that date.

Community airs concerns

In late February and early March, DOE held four meetings to give the public an opportunity to learn more about this cleanup project and to provide their input on the proposed remedy. Over 30 community members attended two roundtable meetings on February 23rd and 29th, while 18 community members attended the public meeting on March 2nd. Fourteen community members attended the Peconic River and Bay workshop on March 7th (see page 4 for more information).

Opinions stated thus far by the public have varied widely. Some of the comments received to date include:

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Laboratory sample results confirmed

On March 9, 2000, the Community Advisory Council (CAC) at Brookhaven National Laboratory (BNL) was given a presentation on the Suffolk County Department of Health Services (SCDHS) Peconic River sampling activities. The CAC, a diverse group of about 32 organizations serving as advisors to BNL's Director, John Marburger, is currently evaluating the Proposed Plan for cleaning up the Peconic River sediments. To assure a full understanding of the issue, they have requested that local, state and federal regulatory agencies attend the CAC sessions. The group is intent on fully understanding the current conditions and evaluating the appropriateness of the proposed cleanup activities. A consensus recommendation with regard to cleanup is expected from the group before the May 15, 2000 close of the comment period.

At the March CAC meeting, Andrew Rapiejko from the SCDHS provided information about split samples taken with BNL. Mr. Rapiejko reported that samples analyzed to date - Peconic River sediment and water, and soil from BNL's sewage treatment plant - have been very consistent with the results reported by BNL. The rest of the analytical data for the SCDHS project, which includes fish and shellfish samples, is expected by late April of this year.

The CAC will further explore the cleanup issue in April. Representatives from the U. S. Environmental Protection Agency and the New York State Department of Environmental Conservation, whose sample data are also consistent with the Laboratory results, are expected to attend the meeting. The CAC will have an opportunity to understand the concerns and expectations of these regulatory agencies. The information obtained from the agencies, coupled with information from BNL, will all be

considered by the CAC in developing a formal comment for the public record.

The participation and dedication exhibited by the CAC members in developing comments on this plan is welcomed and appreciated by the Department of Energy and BNL. The CAC has already provided well-informed, well-reasoned recommendations for the groundwater cleanup. Its comments on the Peconic River cleanup are eagerly anticipated. ■

Magothy aquifer study planned

In April 2000, as part of its ongoing groundwater cleanup project, Brookhaven National Laboratory (BNL) will begin characterizing contamination in areas of the Magothy aquifer. This groundwater sampling and analysis effort is expected to take about 18 months to complete.

The Magothy aquifer begins about 200 feet below the land surface in the BNL vicinity, and extends downward for several hundred feet. The Upper Glacial aquifer lies above the Magothy, while the Lloyd aquifer is below it.

The Laboratory previously investigated portions of the Magothy aquifer during its Operable Unit III remedial investigation. Existing information, however, is limited. In response to community and regulator concerns, the Laboratory plans a more extensive characterization and monitoring effort that will extend to about 400 feet below land surface.

When this investigation is completed, the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency and the N.Y. State Department of Environmental Conservation will evaluate the need for cleanup of the Magothy aquifer. DOE will notify the public and provide an additional opportunity for public comment if a remedy for the Magothy is deemed necessary. ■

cleanupupdate A newsletter from the Environmental Restoration Division (www.oer.dir.bnl.gov) at Brookhaven National Laboratory, *cleanupupdate* 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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Moving dirt, making progress

Brookhaven National Laboratory (BNL) is continuing to make progress in removing contaminated soils from the Lab site. That progress will accelerate even more as the Operable Unit I (OU I) cleanup of on-site soils proceeds this year. The OU I accomplishments to date and upcoming actions are detailed below.

The U.S. Department of Energy and the Laboratory are committed to minimizing waste generation and shipment during the OU I project. By employing advanced cleanup technologies, as described below, BNL can reduce the volume of waste while still meeting our cleanup goals.

Progress to date

- Chemical Holes soils and debris

Since last November, more than 1,600 cubic yards of soils have been loaded into railcars and transported to a licensed disposal facility in Utah. BNL excavated these soils from the Chemical Holes – 55 pits on the Laboratory site where chemical containers, glassware and other debris were buried between the 1950s and early 1980s. After the excavation, debris from the pits was sorted and packaged, and the soils were stockpiled for later disposal.

Four soil stockpiles and some non-hazardous debris have been disposed of. Twelve additional stockpiles and some packaged debris remain to be shipped. All material should be disposed of by the end of 2001.

- Mercury removal

This spring, ten 55-gallon drums of soils from the Chemical Holes were treated to remove mercury. These soils also contained low levels of radioactive materials, and would have required more difficult and costly disposal as "mixed waste" without treatment. Removing the mercury allowed the Lab to dispose of the mercury and soils separately, the first as hazardous waste and the second as radioactive waste.

- Building 811 tank sludge

In the fall of 1999, 70 cubic yards of sludge (over 14,000 gallons) were removed from six out-of-service underground storage tanks at the Lab's Waste Concentration Facility (Building 811). The sludge was solidified and packaged, and will be shipped off site for disposal in the near future. The tanks and surrounding soils are scheduled for removal in 2001.

Future actions

- Landscaping soils

In April 2000, BNL began excavating isolated areas of landscaping soils on site. About 1,400 cubic

yards of soils containing low levels of cesium-137 will be excavated from twelve separate areas. This excavation will affect a total of less than an acre of land.

The excavated soils will be sorted by the innovative "segmented gate system." In this system, soils are carried along a conveyor belt and scanned to determine the level of contamination in small volumes of the soil. The system then quickly and easily separates soils with radioactive materials above cleanup goals from soils below cleanup goals. This is expected to greatly reduce the volume of soil that must be shipped off site for disposal and the ensuing disposal costs.

Dust control methods are an important feature of the project plans. The community has voiced concerns about contaminants in the soil becoming airborne. Several dust control methods will be employed, such as spraying the soil with water during excavation and sorting, and suspending work during periods of high wind. Additionally, the Lab will conduct air monitoring during excavation and packaging activities.

- Other areas

The Operable Unit I cleanup will encompass several additional on-site areas in the future, including the Lab's former hazardous waste management facility. BNL will provide updates as work proceeds. ■

Fire in a debris pile

On March 11, a smoldering fire broke out in a debris pile from the Chemical Holes excavation, located in an open area in the southeastern portion of BNL. The debris consisted primarily of soil, with small amounts of metal, glass, and wood. Investigators determined that the fire was caused by spontaneous combustion of some straw mixed with the soil and debris. This can sometimes occur as a result of bacterial action.

The fire consumed much of the packaging, but affected little of the waste. Airborne and surface measurements of radiation levels were taken during and after the fire because the soils in this pile contained very low levels of radioactivity. These measurements all showed normal background levels. Follow-up surveys also indicated normal background levels.

The fire investigation is complete; a further investigation is being conducted to identify root causes to prevent a similar occurrence. The Laboratory is dedicated to continued improvement in performance through this type of self-evaluation and corrective action. BNL employees, local civic leaders, and state and local agencies were immediately notified about the fire and will continue to be updated. ■

Preserving the Peconic – A cooperative effort

On March 7, 2000, Brookhaven National Laboratory (BNL) hosted, for the fourth consecutive year, a Peconic River and Bay workshop. Held in BNL's Berkner Hall and attended by 21 people, this workshop presented information on the Peconic Estuary Program, the Peconic River fish ladder project, and BNL's Peconic River cleanup plan.



During their tour, workshop attendees learned about the operation of BNL's sewage treatment plant, which uses a state-of-the-art tertiary treatment system.

This workshop offered an important opportunity

for community members to learn about efforts to clean up, preserve and protect the Peconic River ecosystem and its natural resources. Following the presentations, attendees took a tour of the Lab's sewage treatment plant and one of the on-site portions of the Peconic River slated for cleanup.

In the past, this workshop has focused on research initiatives being conducted at BNL, such as brown tide research. This year, the agenda was opened up in an effort to help the public better understand the many programs affecting the Peconic River and Bay.

Walter Dawydiak, of the Suffolk County Department of Health Services, presented a brief overview of the Peconic Estuary Program. This program is focused on concrete methods of pro-

tecting and preserving the Peconic estuary – a vital Long Island ecosystem. Participants in this program include a wide variety of people representing citizen and environmental groups, businesses, schools, and local, state and federal governments.

Chris Smith of the Cornell Cooperative Extension and Byron Young of the N.Y. State Department of Environmental Conservation presented information on a fish ladder project. Installed at Grangable Park, the fish ladder is designed to assist alewives traveling upriver to reach additional areas for spawning. The alewife is used for bait and is eaten by larger game fish. The fish ladder is expected to reopen past habitat to the alewife and increase its population, thereby increasing the game fish population.

The final speaker, Jason Remien, Project Manager for the BNL sewage treatment plant and Peconic River cleanup, presented the proposed cleanup plan that was released on February 15. Following the group tour mentioned earlier, Jason led interested people to the other on-site areas of the Peconic River that are proposed to be remediated. More information on the proposed cleanup is available in the *Operable Unit V Proposed Plan*, which is posted online at <http://www.oer.dir.bnl.gov/ou5doc.html>. ■

For more information on the Peconic Estuary Program:

- Visit the web at <http://www.co.suffolk.ny.us/health/pep/>
- Contact the Program Office at 852-2077

More steps toward groundwater cleanup

After several years of investigation, sampling, community input, remediation plan design and actual cleanup, Brookhaven's environmental restoration program is now rounding the final turn and heading for the home stretch.

The groundwater program has moved from the investigative phase to the design and cleanup phase. The U.S. Department of Energy (DOE) and the Lab are gearing up to turn their full attention to final cleanup activities. Among these are groundwater cleanup actions for the Building 96 area and the tritium plume, and the design and installation of additional groundwater treatment systems.

Building 96

Many years ago, Building 96 was a drum storage area. As with many such sites across the country, attention to this storage area was not as rigorous as it would be today. During past years, chemical spills and leaks probably took place.

Investigations in the area of Building 96 revealed that this was a likely source of chemical groundwater contamination. The chemicals are primarily volatile organic compounds (VOCs) used as solvents in years past. Also, soils in this area contain polychlorinated biphenyls, better known as PCBs.

Groundwater treatment systems, already placed near the Laboratory boundaries to prevent further migration of chemicals off site to assure protection of the public, were given priority. Now Brookhaven is planning to address the source area.

The Laboratory has excavated some of the soils containing PCBs (see photo), and additional excavation is planned to remove all soils with PCBs above regulatory levels.

Additionally, BNL plans to construct a groundwater treatment system to remove the VOCs from this area. Installation of this treatment system, along with others upstream of the existing systems, will eventually allow systems at the Lab boundary

to be shut down. When the systems are shut down after several more years of operation, groundwater monitoring will continue. The systems will be restarted if monitoring shows it is necessary.

The system at Building 96 will clean the groundwater within the treatment wells, using air stripping, rather than pumping the water to another location for treatment.

A similar system is already operating in an industrial park south of the Laboratory, and has proven extremely effective in removing VOCs. At Building 96, the wells have already been installed. The treatment facilities will be installed as soon as excavation of the soils containing PCBs is completed.

Tritium remedy

BNL is also installing groundwater extraction systems to address tritium released from the High Flux Beam Reactor (HFBR). The cleanup plan being agreed to with the regulatory agencies (see article, page 8) calls for extraction wells to be placed very close to the HFBR. The plume from this facility has not reached the Lab boundary and is already well below the drinking water standard at the leading edge. The Lab is installing these wells to assure that higher concentrations of tritium will never reach the site boundary.

The extraction wells will be used to remove the highest levels of tritium contamination with the smallest amount of water possible. Since the HFBR is now permanently shut down and the spent fuel pool, the original source of the tritium, is empty, the tritium source no longer exists. Removing the highest tritium

(see Groundwater, page 9)



A layer of soil approximately six inches deep, containing high levels of PCBs, was removed from the Building 96 area. Additional excavation is planned.



Roger Stoutenburgh

Pile Fan Sump removed

On March 1, 2000, a structure known as the "pile fan sump" was removed from the ground where it was buried during construction of the Brookhaven Graphite Research Reactor (BGRR) more than 50 years ago. The removal of the pile fan sump and the surrounding soils is an important milestone for the BGRR decommissioning project team.

While in service, the sump – a concrete box five feet wide, seven feet long, and ten feet deep – was used to collect rainwater and other precipitation.

Laboratory Director John Marburger and others observed the removal of the Pile Fan Sump on March 1.

This water drained from five large fan rooms in the fan house on the hill above the sump and from the reactor's exhaust stack. The sump was a known source of contamination; sampling done early in the decommissioning project demonstrated that water had leaked from the sump to the surrounding soil.

Because of the known contamination, removal of the pile fan sump was performed as a "time-critical" action, with the approval of and oversight by the U.S. Department of Energy (DOE). The document approving this removal action – titled *Action Memorandum: Brookhaven Graphite Research Reactor Pile Fan Sump Removal* – is included in the Administrative Record at local libraries, and on the web at <http://www.bgrr.bnl.gov/docs.html>.

(continued on next page)

Study looks at reactor decommissioning options

The draft *Brookhaven Graphite Research Reactor (BGRR) Removal Action Alternatives Study (RAAS)* was released for public comment on January 28, 2000. The RAAS screened possible alternatives for the BGRR decommissioning against legal requirements and the community values expressed during roundtable meetings held in 1999.

The decommissioning project team held two open houses during the public comment period so that they could answer questions about the study. The team also briefed the Community Advisory Council and the Brookhaven Executive Roundtable on the RAAS. The public comment period closed on February 28, 2000.

The majority of the comments received from stakeholders indicated that the Reactor Building (Building 701) should be preserved for future use, possibly as

a science museum. Most – but not all – of the responders feel that the reactor pile is safe where it is, and need not be removed. Several responders added that more characterization needs to be done before final decisions are made.

The Laboratory will now finalize the draft recommended alternatives, and suggest that those alternatives be studied further. The final RAAS will be sent to the U.S. Department of Energy (DOE) in mid-April. DOE will make the final decision about which alternatives will be considered in an Engineering Evaluation/Cost Analysis study. The final RAAS will be available at the BGRR web site: <http://www.bgrr.bnl.gov>.

The decommissioning project team wishes to thank the people and organizations who provided comments on the RAAS. ■

The removal process

Before the sump was removed, more than 250 feet of pipe between the fan house and the sump was excavated and packaged for shipment. As the pipes were removed, they were checked for contaminants (including hazardous materials, as well as radioactive material). The soil surrounding the pipes was also checked. Some small amounts of contamination were found near two of the pipe joints, and that soil was removed. Clean soil was used to backfill the pipe excavation areas.

When the sump itself was removed, some contaminated soil was found directly under the sump. The concrete sump was constructed with a one-foot-by-one-foot-by-two-foot extension on the bottom. It appears that the base of this extension was the source of leakage – possibly due to age and weathering. Approximately 300 cubic yards of soil were removed and will be shipped off site. Soil removal extended to a depth of approximately 22 feet and did not extend down to groundwater level; the soil tested clean well before that depth was reached.

The decommissioning team performed real-time soil tests during the excavation. In addition, verification samples are being analyzed by the New York State Department of Environmental Conservation at an independent laboratory, and by a DOE independent verification contractor, to assure that all contamination has been removed. The sump excavation site will be refilled with clean soil. ■



Roger Stoutenburgh

The 27,000 pound concrete sump was removed by crane and placed into a large shipping container. It will be sent to a licensed facility in Utah for disposal.

DOE approves BGRR air ducts cleanup

The U.S. Department of Energy (DOE) recently signed an Action Memorandum approving the removal of the Brookhaven Graphite Research Reactor (BGRR) above-ground ducts as a "time-critical" removal action. "Time-critical" removal actions are approved when there is a need for an immediate response to a known hazard.

The BGRR was an air-cooled reactor. During operation, cooling air was pulled through the reactor pile and sent through a series of filters and coolers within below- and above-ground ducts. Fans then exhausted the air through the familiar red-and-white stack. These fans were removed in the winter of 1999-2000. The below-ground ducts and air filters will be studied in a future sub-project.

The concrete above-ground ducts are part of the BGRR original construction, and are about 225 feet long. The concrete is showing signs of age and weathering; the surface is beginning to crack and flake. Small

fist-sized chunks of concrete have fallen from the ducts (the uppermost portion is about 35 feet in the air) to the ground. Moreover, there is evidence of previous rainwater intrusion into the ducts, and the original exterior surface coating contains lead, asbestos, and PCBs.

At this point, the greatest hazards are to workers (due to small chunks of concrete falling) and to the ground (through contact with the old sealant containing lead, asbestos, and PCBs). The area under the ducts is roped off, and the area is inspected weekly, after high winds, and after rainfall. Any materials found are removed from the ground.

When the BGRR decommissioning project was initiated, project planners assumed that the above-ground duct remediation would go through the normal decision-making process. In this process, an Engineering Evaluation/Cost Analysis study is performed

(see Air ducts, page 11)

Groundwater cleanup plans near finalization

After many months of soliciting input from community members, holding public meetings and information sessions, giving presentations to the Laboratory Community Advisory Council, and working with regulatory agencies, final decisions are being agreed to for cleaning up the groundwater at and near Brookhaven National Laboratory (BNL).

The U.S. Department of Energy (DOE) has been working closely with the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC) to reach concurrence and gain signatures on the *Operable Unit III Record of Decision (ROD)*.

The ROD will mark an important milestone in BNL's environmental cleanup program. Once signed by EPA, with the concurrence of the DEC, it will clear the way for the Lab to begin constructing additional groundwater treatment systems to add to the six systems already operating on and off the BNL site.

Several changes from the proposed cleanup plan, which was released in March 1999, were made in response to community and regulator concerns. Some changes were discussed in the September 1999 issue of *cleanup*. Additional changes made since that time are detailed below.

Volatile organic compounds

BNL already has installed five treatment systems specifically to address groundwater containing volatile organic compounds (VOCs). Also, DOE provided public water hookups to a large area south of the Lab.

Current plans in the DOE-signed ROD call for the installation of eight additional treatment systems in locations both on and off the Laboratory site. BNL will extensively monitor the groundwater quality to determine the effectiveness of these treatment systems. The effectiveness of these systems will be evaluated quarterly and yearly.

Deep contamination in the Magothy aquifer will also be studied, as described in the update on page 2, to determine if treatment is needed.

Tritium

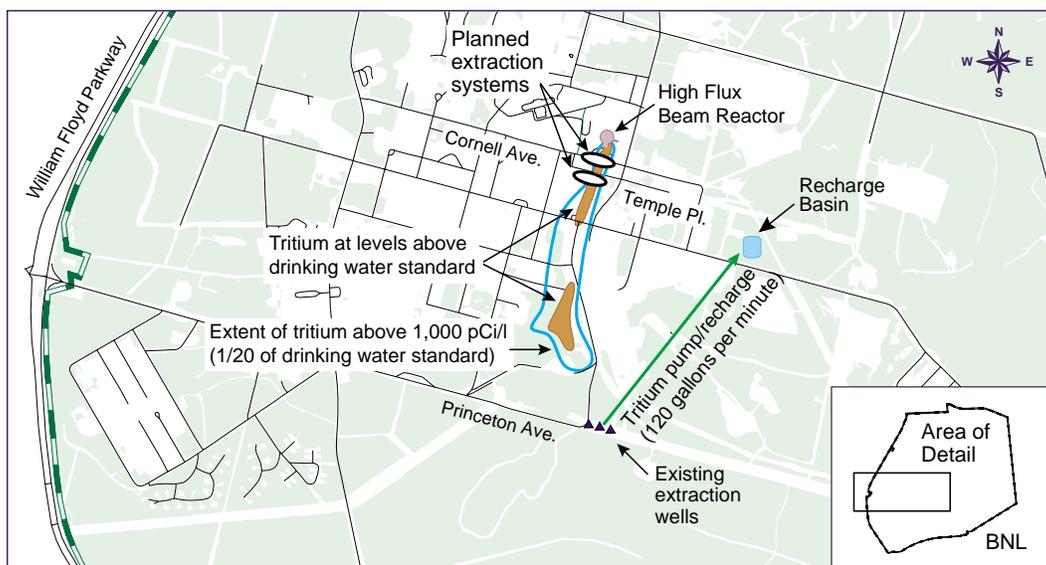
Shortly after the on-site tritium plume was discovered, the Lab constructed a groundwater extraction system at Princeton Avenue (see map below) to inhibit contaminated groundwater from moving toward the site boundary. This system removes the groundwater and pumps it to a basin on the Lab site, where it re-enters the aquifer. The additional travel time required to flow south from this basin allows the tritium levels to decrease, ensuring that levels higher than the drinking water standard will not leave the Laboratory site.

The current remedy for tritium is a modification of the remedy proposed in March 1999. After an evaluation, the Princeton Avenue system will be placed on stand-by and restarted if needed. Also, BNL will construct two pumping systems on Cornell Avenue and Temple Place (see map). Both systems will be just south of the High Flux Beam Reactor (HFBR), whose spent fuel pool is the former source of the tritium.

The low-flow system at Cornell Avenue will be activated if tritium levels at the front of the HFBR exceed 2,000,000 picocuries per liter (100 times the drinking water standard of 20,000 picocuries per liter). It will be used to remove the highest concentrations of tritium. The detailed operational parameters of this system will be developed during the remedial design.

The Temple Place system will operate for up to one year as needed. It may operate longer than one year if necessary in order to meet the cleanup objectives. Groundwater monitoring will evaluate the effectiveness of these systems.

Evaluation of monitoring data shows that, at the observed concentrations, tritium will not reach the site boundary at levels above the drinking water standard. These systems provide further assurance of meeting cleanup goals.



One system to address the on-site tritium plume is currently operating. Two additional extraction systems are planned. Plume contours shown above are draft contours from December 1999.

Strontium

The ROD remedy for strontium-90 in groundwater is identical to the proposed remedy. Groundwater extraction wells will be installed in several locations on the Laboratory site where strontium has been found. The groundwater will be extracted and treated with ion exchange to remove strontium-90. The clean water will be returned to the aquifer. Before treatment begins, a pilot study will test its effectiveness.

Next step

Recent progress in the Operable Unit III cleanup is described in the article on page 5. Additional work will begin following the signing of the *Operable Unit III Record of Decision*.

DOE and BNL hope to have the ROD finalized this spring. Once it is signed, the additional groundwater treatment systems will be designed and constructed over the next several years. DOE expects that all of the systems will be operational by 2006 or earlier. ■

Groundwater...

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levels will help the plume to continue to dissipate through radioactive decay and natural dispersion.

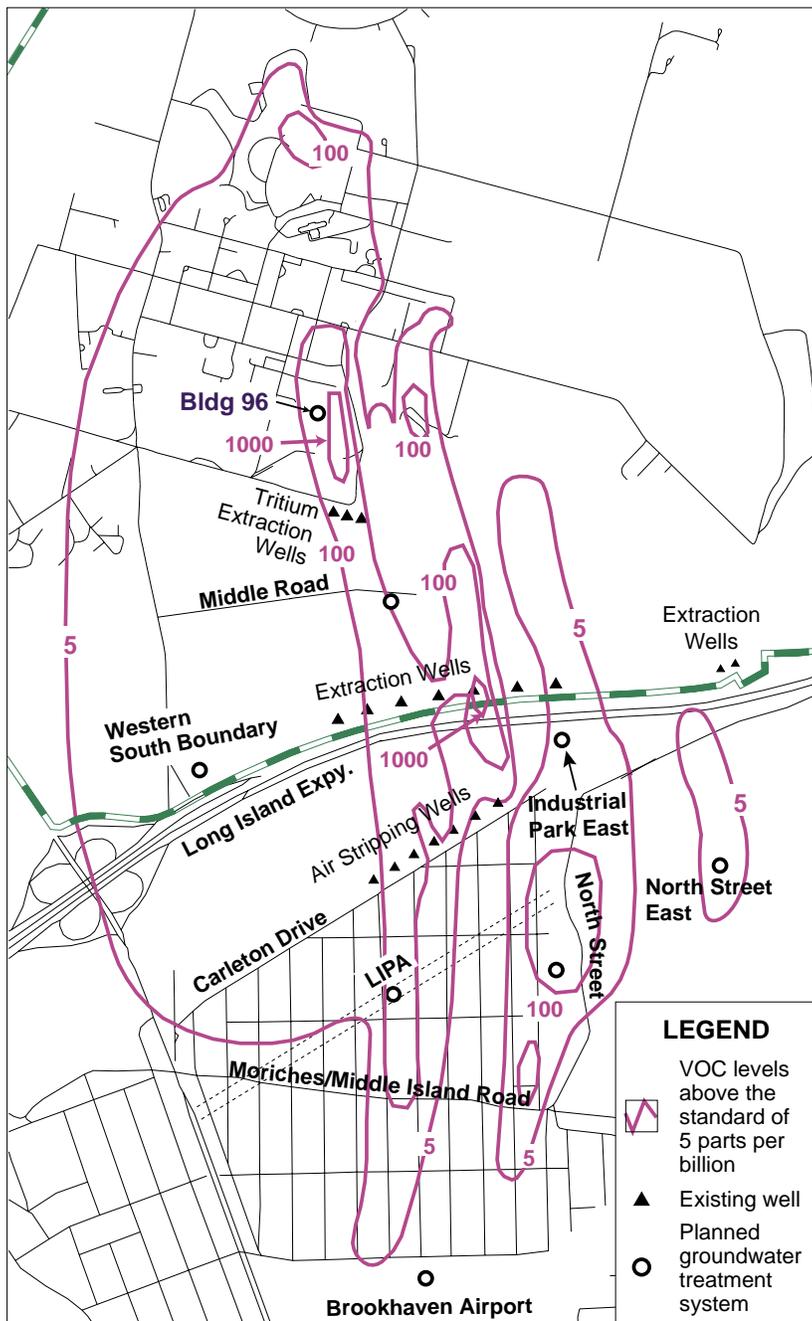
System designs

Designing groundwater cleanup systems is critical to the success of the cleanup effort. Designers must consider the type of contaminant, available areas to construct a treatment system, location of utilities below the ground surface, the cleanup goal to be achieved, the impact on other treatment systems located nearby and local hydrogeological conditions. Right now, a lot of this design work is underway.

Middle Road - A system is being designed for installation on site at Middle Road (see map, above right) that will remove the VOCs migrating toward the site boundary. Construction of this system is planned for October 2000.

Southwestern Boundary - This system was added to the cleanup remedy as a result of community and regulatory input. The public voiced concern that this part of the plume could reach the Carmans River. While this could occur, levels entering the river would be below drinking water standards and would be immediately diluted to nondetectable levels. However, in response to the public concern, DOE agreed to conduct additional treatment in this area. Construction is planned for 2001.

North Street East - This system will be the second treatment system constructed off the BNL site. Placing a system in this area will prevent further migration of



Five VOC groundwater treatment systems already are operational both on and off the Laboratory site. An additional eight systems are planned.

the VOCs located to the north. Construction of this system is also anticipated for 2001.

The goal for the Department of Energy and Brookhaven National Laboratory is to have all of the cleanup systems installed and operating by 2006 or earlier. Currently, DOE and BNL are making a concerted effort to accelerate the cleanup schedule. This is being done with substantial support from the community organizations that have banded together for a common cause – cleaning up the Laboratory for good. As Dr. Marburger, Laboratory Director, likes to say – we will "Clean it up and keep it clean."

DOE and BNL are committed to working closely with our neighbors to assure sound environmental stewardship by the Laboratory. ■

Community seeks funding to accelerate cleanup



On January 13, BNL's Community Advisory Council held a press conference at the Laboratory advocating increased Department of Energy funding for the Lab's environmental cleanup. Richard Amper, a representative of the Long Island Pine Barrens Society, was among the speakers present. The Community Advisory Council recommends that cleanup funding be increased by an average of \$16.6 million per year for the next 3 years. This would cut the cleanup time in half and would reduce the total cost by at least \$18 million over time.

Photo courtesy of the *Long Island Advance*

hookupdate

An update from the U.S. Department of Energy

The U.S. Department of Energy, Brookhaven National Laboratory and the Suffolk County Water Authority are identifying homes and/or businesses in the hookup area south of the Laboratory that have elected not to connect to the public water supply. This three-way effort will let these property owners and residents know they can have their private well drinking water tested for free.

Working with the Water Authority and its database, the Department and Laboratory will identify those homes and businesses that elected not to accept the free hookup to the public water supply. That free hookup offer was made in early 1996 and ended in May 1998. The hookup was a precautionary measure to prevent possible exposure to chemical contamination in groundwater from Brookhaven.

The free hookup offer went out to all properties within these boundaries: south of the Long Island Expressway; east of River Road; north of Sunrise Highway; and west of Wading River Road. The hookup area extends north of the expressway just east of the Laboratory's east boundary, along North Street and Schultz Road.

Once these properties are identified, owners and residents will be contacted. Those who wish to have their private well drinking water tested will be able to have it done for free by the Suffolk County Department of Health Services. The Department of Energy will pay the fee.

"Communicating with people in the hookup area is a priority for the Department of Energy," said Scott Mallette, senior environmental advisory for the Department's office at Brookhaven. "This update should be complete, and direct contact made with owners and residents, by the end of this summer." ■

Air ducts...

(continued from page 7)

before a decision is made among possible courses of action.

During initial characterization of the ducts, however, it was discovered that the ducts were in worse physical condition than was originally thought. The only viable alternatives were to repair the ducts until they could be removed, or to simply take them down now. DOE has agreed that the most prudent action, especially considering worker safety and protection of the environment, is to remove the above-ground ducts now.

Earlier this year, Brookhaven National Laboratory requested bids on this removal, and prospective contractors met with the decommissioning project team to discuss the job. Contract bids were evaluated for their safety procedures and operating techniques, as well as cost. A contract has been approved, and work is scheduled to begin in April 2000.

The *Action Memorandum: Brookhaven Graphite Research Reactor Above Grade Ducting Removal Action*, the document approving this time-critical removal action, is available in local libraries and on the web at <http://www.bgrr.bnl.gov/docs.html>. ■

Peconic River...

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- Consider how the excavation may disrupt the ecosystem.
- If excavation is chosen, care must be taken to prevent the spread of contamination from windblown dust or from sediments being washed downstream.
- Leaving the contaminated sediment in place will cause less damage than excavating it.
- The river should be restored to as pristine a state as possible, using whatever methods are most effective.
- The use of phytoremediation should be evaluated more extensively, using different criteria than those in previous studies.

Community members also requested that consideration be given to including them in the resolution process as these comments are reviewed and considered by DOE.

Public input is requested

Detailed reports on the Operable Unit V project are available in the Lab's Administrative Record. The public libraries in Middle Island and Shirley, as well as the Lab's own research library, keep copies of this record. Some information is also available on the web at <http://www.oer.dir.bnl.gov>.

A fact sheet summarizing this cleanup project was mailed to the community in February. You can see it online at <http://www.oer.dir.bnl.gov/ou5doc.html> or request a copy by calling (631) 344-7459.

As noted previously, the public comment period for the Operable Unit V cleanup will end on May 15, 2000. DOE will review and consider all of the input received and make a final cleanup proposal. This proposal will then require concurrence by the N.Y. State Department of Environmental Conservation and signature by the U.S. Environmental Protection Agency.

DOE grants extension

The Department of Energy has extended the public comment period for Operable Unit V by 60 days, to **May 15, 2000**.

"We want to ensure that the cleanup methods selected are both appropriate and effective," says John Meersman, manager of BNL's Environmental Restoration Division. "This requires careful consideration of public comments and final agreement with the regulatory agencies."

Next steps

The cleanup decision will be documented in the *Operable Unit V Record of Decision (ROD)*, which will include DOE's responses to public comments. As with other cleanup-related documents, the ROD will be placed into BNL's Administrative Record, where it will be available for public review.

Following the signing of the ROD, the selected cleanup remedy will be designed and implemented. If the remedy includes excavating river sediments, BNL expects to hold additional meetings with the public to gather input on their concerns about and desires for the excavation process. This input will be incorporated into the cleanup design as much as possible.

The Laboratory is also working to ensure that areas cleaned up stay clean. "We have an active and effective pollution prevention program already in place that will help protect the Peconic River for the recreation and enjoyment of future generations," Meersman states.

BNL currently expects the OU V ROD to be signed in the summer of 2000. If this schedule is maintained, cleanup is expected to begin in 2001. ■

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Please mail this form to: Kathy Gurski, Brookhaven National Laboratory, Bldg. 51, P.O. Box 5000, Upton, NY 11973.