Treatment wall nearing completion at West Valley Demonstration Project
By: Matt Sargeant
Date: Wednesday November 17, 2010

In 1993, radioactively-contaminated groundwater was discovered on the surface of the West Valley Demonstration Project. Studies were performed the following year to find out what the contaminant was, how it got there and how far it had spread. The pollutant was found to be Strontium-90, a by-product of the nuclear fuel reprocessing work done in the Main Plant Process Building during the 1960s and 1970s when the plant was in commercial use. The cause of this contamination was a leak in a process line in the main building in the 70s, referred to as the groundwater plume, which began at the backside of the building and has moved downhill toward the border of the project. The area of the plume is roughly 1,500 feet by 500 feet.

Beginning in 1995, WVDP executed a “pump and treat” method to slow down the spread of Sr-90. This system cleared more than 54.7 million gallons of radioactive water, but a better solution was still being sought. In 2007, West Valley Environmental Services, LLC began designs of a passive wall, a concept developed by AMEC Geomatrix, to eliminate the Sr-90 from the groundwater. With help from the American Recovery and Reinvestment Act in 2009, setting up the wall was made possible this year.

On Tuesday, Nov. 9, WVDP held its quarterly public meeting in order to address several issues, including the treatment wall. Solving the problem of polluted groundwater is one of the focuses of the work at the WVDP, which also includes “deactivation and decontamination of site facilities, radioactive waste processing [and] drying the underground waste tanks,” all of which were addressed at the meeting.
Concerning the groundwater plume, John Chamberlain, technical advisor for WVES, said, “There’s this area on one portion of the site where water is carrying pollution to a plateau, so water that moves horizontally downhill over clay will become surface water.” Beneath the surface dirt and sand is clay, which does not allow water to pass through, preventing the groundwater from going deeper into the earth. If the groundwater were to hit the plateau, the clay would force the water onto the surface and beyond the border of the project. “The goal is to cut that off and contain it on the site.”

The proposed solution is the 850-foot long permeable treatment wall. The wall will extend along the border of the plateau to cut off the spread of Sr-90. The work began on October 17 and continued for two days until there were problems with the equipment being used and with soil containment. The construction of the wall resumed on November 2 and was uninterrupted until November 7 when materials ran out. The labor restarted on November 10 and is planned to continue until the wall is finished before the end of the calendar year. The wall is three feet wide, and the depth ranges from 19-30 feet, extending about two feet into the clay in order to cut off the spread of the groundwater.

What makes the wall effective is a group of naturally-occurring minerals called zeolite, which is being placed into the wall and allows water to pass through but absorbs the Sr-90. More than 1,900 bags of zeolite were used through November 7 when the supply ran out. Since then, 400 additional bags, weighing one metric ton each, have arrived in order to complete the treatment wall. This zeolite comes from the Bear River Mine near Preston, Idaho.

“Zeolite is perfectly safe,” said Chamberlain. “It’s used for animal feed and stuff.” The State University of New York at Buffalo’s department of civil, structural and environmental engineering was instrumental in performing various tests of zeolite, both on campus at UB and on site at West Valley.

To build the wall, WVDP is using what is called a “one-pass trencher,” which digs up dirt at one end while dropping the zeolite behind it in one motion. “Its arm goes out like a chainsaw, hinges and goes down until it’s vertical and digs dirt up on the surface,” explained Chamberlain. “You can load the back end with whatever you want to put in the ground. It goes through conveyers and is dropped down.” While the zeolite is placed in the trench, the trencher places the excavated soil into a container that is beside the trench. WVES has worked with Dewind One-Pass Trenching of Holland, Mich., to makes sure the zeolite would go in properly and the polluted soil that is dug up would be suitably controlled.

Without obstacles, “the last 250 feet could go pretty fast,” said Chamberlain. Once the wall is completed, there is nothing left to do but let the zeolite do its work. WVES will monitor the effects of the wall to ensure that it is successfully purifying the groundwater. The wall should last for at least 20 years – well beyond 10 years from now when WVDP plans to have made its decisions regarding what to do with the waste on the site.

“Ten years may seem like a long time,” said Thomas Attridge, program manager for New York State Energy Research and Development Authority, which owns the site, “but it will go by
quickly.” Attridge said much testing and many safety precautions are necessary in order to clean up the project, so it takes a longer time than many people would expect.

The cleanup began in 1980 when Congress passed the West Valley Demonstration Project Act, which directed the United States Department of Energy to begin the project for solidifying liquid high level waste. This solidification was completed in 2002, resulting in 275 canisters of glass waste that are being stored in the main building for now. According to a fact sheet provided by WVDP, “the cleanup is led by DOE, the site is owned by NYSERDA and WVES is the prime contractor.”

The meeting also provided several updates concerning the project:

- Bryan Bower, DOE-WVDP project director, said that “safety statistics have improved since last quarter.” The site has processed most of the waste and is preparing it for disposal away from West Valley.

- Bower explained that Nitrocision® technology will be used to decontaminate the cell walls and floors of the main building, which consists of about 55 cells. This technology conveys -250 degrees Fahrenheit liquefied nitrogen in order to remove the pollutants from the cell surfaces. A vacuum system will be employed to collect what has been removed and package it safely.

- A drying system is currently being installed to rid the underground storage tanks of moisture. The system is a “combination of new ventilation ductwork and [a] large dehumidifier,” according to Bower.

The existing ductwork had been taken out and stainless steel ventilation lines were put in their place. In addition, one of the two tanks has been removed to permit this installation. “The system will be operational in December,” said Bower.

- The current contract for the work at WVDP expires on June 30, 2011. Bower said, “A new contract will be ready for execution by June 30, when the contract expires.”

- After 30 years, the cost agreement between the DOE and NYSERDA was resolved, settling who is paying for what at the WVDP. “The right solution should be the right solution, regardless of who’s paying for it,” said Bower. “Waste has to move or stay regardless of who’s paying for it. This agreement separates ‘who’s going to pay for it?’ from ‘what’s the right thing to do?’” He pointed out that, while the amount of money will not affect what gets done, it will in fact affect how quickly the work is completed. “If you have a $1 billion project, getting $100 million a year, it’ll take 10 years to get done. Amount is important.”

- Attridge gave an update on NYSERDA, which included the status of the West Valley Central School Seismic Station to monitor activity in the ground and “provide real-time seismic data . . . including ground-shaking forces.” Lamont-Doherty Earth Observatory installed the station behind WVCS in August and connected the station to a computer monitoring station in WVCS in September. At present, “real-time data collection is underway.”
• NYSERDA has set up a meteorological station to collect weather data at WVDP. “It’s not online in a public forum, but I don’t know why it couldn’t be,” Attridge said. “There’s nothing sensitive about weather data.”

• The status of the LiDAR and Orthoimagry of Buttermilk Creek Watershed was addressed. This project produces pictures of the ground surface and allows the detection of changes over time every five years. NYSERDA already requires a report of these maps every 10 years.

• Tests have indicated that the very-low density polyethylene geomembrane that keeps water out of buried waste at WVDP should be replaced. NYSERDA is currently working on replacing the VLDPE with a “new XR-5 geomembrane cover,” a more durable material that has shown immediate stabilization.

• The West Valley Citizen Task Force, which meets to discuss topics regarding the work at WVDP, “is preparing a letter to the U.S. Department of Energy encouraging them to request full funding for the decommissioning actions planned during Phase 1” of the cleanup at WVDP. Their next meeting will be held on Wednesday, Nov. 17 at 6:30 p.m. at the Ashford Office Complex in West Valley.

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Public Notice

The New York State Energy Research and Development Authority (NYSERDA) will hold a public meeting on December 15, 2010, from 5:30 to 6:30 p.m., at the Ashford Office Complex, Conference Room C-1, at 9030 Route 219, Ashford, New York 14171, to inform the public of the proposed hazardous waste management activities at the Western New York Nuclear Service Center (WNYNSC). NYSERDA will then prepare NYSERDA’s Hazardous Waste Management Corrective Action Permit Application for the WNYNSC, which NYSERDA plans to submit to the New York State Department of Environmental Conservation (NYSDEC) in January. NYSDEC will then conduct a public review and comment process for this permit.

NYSERDA holds title to the 3,340-acre WNYNSC, located near West Valley, on behalf of the people of the state of New York. The State-Licensed Disposal Area (SLA), which ceased operations in 1975, occupies approximately 16 acres of the WNYNSC. The SLA is the primary facility on the WNYNSC property under NYSERDA’s cognizance and will be the focus of NYSERDA’s Hazardous Waste Corrective Action Permit Application.

At the meeting, NYSERDA personnel will discuss the Hazardous Waste Management Corrective Action Permit Application and public review process. For further information regarding NYSERDA’s permit application process, the meeting, or to arrange for special access arrangements to the meeting facility, contact Andrea Mellon at (716) 942-9960 extension 4054. Please call at least 72 hours in advance of the meeting to allow for arranging special access.
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Hanford’s Mission Support Team Delivers in Key Site Steward Role

The team tapped to provide infrastructure and site services crucial to the environmental cleanup project at the Hanford Site has displayed innovation and progress in many areas including information technology during the first year of work on the contract, Department of Energy (DOE) officials say.

“The alliance has built a lot of capabilities as they turn the corner on their first year,” said Jeff Frey, Acting Assistant Manager for Mission Support at DOE’s Richland Operations Office. The team has met day-to-day challenges for the large-scale integration effort and handled demands relating to stepped up cleanup activities stemming from the American Recovery and Reinvestment Act, Frey said.

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WVDP Achieves Major Volume Reduction in TRU Waste Processing

Three years ago, the Department of Energy (DOE) and its West Valley Demonstration Project contractor, West Valley Environmental Services, LLC (WVES), embarked on an ambitious plan to process all the stored transuranic radioactive waste – approximately 1,476 containers – to prepare it for transportation and offsite disposal.

WVES has achieved success in meeting its waste processing objectives at the West Valley Demonstration Project, located on the grounds of the Western New York Nuclear Service Center about 35 miles south of Buffalo. In addition, the volume of TRU waste returned to storage after processing has been reduced by 83 percent.

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Office of Environmental Management Assistant Secretary Inés Triay presented colleagues awards for significant contributions and years of service at an Employee Recognition Ceremony Oct. 26 in Germantown, Md. Shown with Triay (right) is Genia Parker, who was cited for her outstanding role as the Acting EM Budget Officer for the American Recovery and Reinvestment Act of 2009.
Hanford

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The Mission Support Contract (MSC) is one of three major efforts awarded for cleanup work at the site in southeastern Washington state under the Department’s Central Plateau acquisition strategy. These separate contractual efforts, which are designed to improve future operations, cover vital site services associated with the nation’s most challenging Cold War legacy — including tank farm operations and closure, waste and facility disposition, and mission support.

As prime contractor for the mission support job, the Hanford MSC performs a wide range of infrastructure, security, health and safety, and facility management services. These functions span five key areas: Safety, Security and Environment; Site Infrastructure and Utilities; Site Business Management; Information Resources/Content Management; and Portfolio Management.

“We’re learning as we go and over time we are identifying functions that should be centralized and which should be performed by each site contractor,” said Frey, explaining that the MSC not only oversees milestones and activities that aid a wide array of cleanup contractors

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According to Bryan Bower, the WVDP Project Director, “this reduction is important because of the personnel and environmental hazards associated with managing TRU waste. In addition, the disposal requirements are more stringent and more costly compared to the disposal of low level waste (LLW). Removal of this waste is required in accordance with the West Valley Demonstration Project Act and the costs for safe and compliant storage, maintenance, transportation are directly related to the volume of TRU waste, so reducing the TRU volume reduces total expenses. This is truly one of those projects where we improve safety, improve quality, and achieve cost savings.”

WVES developed a graded approach to TRU waste processing including non-intrusive techniques, targeted invasive processing and full processing, including size reduction and repackaging. Through non-intrusive techniques, approximately 40 percent of the stored TRU waste inventory was determined to be LLW. In these cases, the result-

ing LLW packages are further characterized, inspected and prepared for transportation and disposal as LLW at an offsite disposal facility.

Targeted invasive processing also has proven effective for waste packages that have areas of concentrated activity that can be removed from the remainder of the waste in the container. The removed waste is managed as TRU while the remaining waste container and contents are classified as LLW.

WVES has employed waste characterization and measurement techniques to map the locations of the highest concentrations of radionuclides in or on a component, and has successfully cut or isolated the TRU sections of the component from the LLW sections of the component. Using these techniques, another 10 percent of the stored TRU waste inventory was classified as LLW.

The contractor also has developed full processing capabilities for both contact-handled and remote-handled TRU waste. Many of the tools and techniques used for the processing

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but also performs a strategic planning role.

“They have done a good job in supporting additional work that has resulted from Recovery Act funding and demonstrated the ability to scale up and provide services in many more areas.”

Jeff Frey,
Acting Assistant Manager for Mission Support,
Richland Operations Office

The MSC focused on three main areas during its first year of operations, including development of a commercial service delivery model. The contractor deployed a first of its kind integrated management system that features an automated, online service catalog that is integrated with a mission service desk, according to Frey. This system permits one-stop shopping that gives Hanford’s cleanup contractors access to service level agreements and pricing details.

The alliance also has been “very successful” in developing safety and training standards for contractors that provide crucial services in areas spanning radiation safety, worker health and environmental protection, and many other site safety programs, Frey said.

In addition, MSA did some heavy lifting in the area of cost savings. For example, the contractor identified more than $20 million in cost savings during the first year of the contract. MSA then reinvested those savings in unfunded infrastructure projects, or in cost savings, which in some cases came in the form of rate reductions to Hanford project contractors.

In the area of site integration, the contractor “has built a lot of capabilities” including the creation of a Portfolio Analysis Center of Excellence (PACE) “with their own corporate resources.” The MSC has begun to “populate information” for cleanup work into the center, which will serve as a centralized planning tool to aid DOE with the options analysis and visualization of site and complex-wide priorities, Frey said.

The most striking example of progress demonstrated by the MSC occurred in the information technology realm, program officials said. With the onset of Recovery Act funding and more than 3,000 new incoming employees set to support cleanup work, the MSC realized quickly that access to the Hanford Local Area Network and other essential IT services was crucial. The team scrambled to put into place a wireless expansion that benefited contractors in a matter of days rather than months. The team expanded WIMAX coverage from 41 to 359 square miles across the Hanford site, providing network and voice services in remote areas and access to vital work and safety information. Said Frey: “They have done a good job in supporting additional work that has resulted from Recovery Act funding and demonstrated the ability to scale up and provide services in many more areas.”

These contractual efforts have “required some agility on their part” and helped the MSC achieve “strong customer satisfaction ratings,” he said.

WVDP

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of remote-handled TRU waste are developed specifically for individual waste streams and often utilize specialized tooling. For example, 36 boxes of radioactively-contaminated filters posed a waste processing dilemma due to their unyielding composition and high contamination levels.

WVDP engineers modified a drum crusher to remotely process these filters. Using the filter crusher, operators size reduced 149 filters and were able to package two size-reduced filters into a single waste package, achieving a size reduction factor of 4-6 times. Other examples of size-reduction technology employed by WVES in its contact- and remote-handled processing areas include plasma cutting, crushing, and mechanical size reduction.

WVES continues to assess requirements and opportunities to increase efficiencies in waste processing. To that end, WVES is currently pursuing several additional waste processing technologies including the remote deployment of a liquid nitrogen tooling system to decontaminate large components, and expansion of plasma cutting capabilities into other waste processing facilities.

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U.S. DEPARTMENT OF ENERGY

safety performance cleanup closure
Groundwater at WVDP will be filtered for decades by volcanic rocks

By: Press Release
Date: Wednesday October 27, 2010

A massive treatment wall under construction this week at a Western New York nuclear waste cleanup site will stop radioactive contamination in its tracks for decades, according to University at Buffalo engineers who modeled and tested the wall’s material.

While the treatment method was specifically designed for the West Valley Demonstration Project, it may eventually be applicable to other radioactive sites around the nation.

Extending up to 30 feet underground, the 850-foot-long wall is being constructed with 2,000 metric tons of clinoptilolite, a volcanic zeolite mineral similar to the material used in cat litter, horse stalls and waste-disposal.

It is believed to be the first time that this kind of full-scale, permeable treatment wall is being used to filter out radioactive material, in this case, strontium-90, which is found in spent fuel rods in nuclear reactors.

“It functions the way a kitchen water filter does,” says Alan Rabideau, PhD, professor of civil, structural and environmental engineering in the UB School of Engineering and Applied Sciences. “Only in this case, the filter is selectively removing strontium-90 in the ground.

“As it is held in place, the strontium-90 will decay right in this huge ‘filter,’” he explained. “It removes the strontium-90 and lets other dissolved minerals go.”

According to officials at WVDP, the installation of the treatment wall is an important first step toward eventually closing the facility.

In 1999, Rabideau’s research team demonstrated that this form of clinoptilolite would be suitable for groundwater remediation at West Valley.

His original, experimental work demonstrated that a nonradioactive strontium, which behaves like strontium-90, is captured within the honeycomb structure of the zeolite mineral, leaving the groundwater
essentially free of the contaminant.

For several years, larger-scale testing was deferred while stakeholders deliberated over plans involving how best to close the West Valley facility. Then, in 2007, the National Science Foundation awarded Rabideau and other environmental researchers at UB funding for an interdisciplinary program they called Ecosystem Restoration through Interdisciplinary Exchange, which is designed to train a new generation of environmental scientists, using a nontraditional, interdisciplinary approach.

ERIE student Shannon Seneca, a Western New Yorker and Native American, was interested in groundwater remediation.

Rabideau and Seneca began conducting more extensive testing using a “simulated” nonradioactive groundwater in the lab; eventually, the tests were duplicated using radioactive groundwater at the West Valley laboratory facility.

With the data they collected from these experiments, which continued for two years, a long period for such studies, they developed mathematical models using supercomputers at UB’s Center for Computational Research.

The goal was to find a way to predict just how long such a wall could continuously filter out the strontium-90.

The model accounted for the specific groundwater conditions at the West Valley site, such as the geochemical composition of the local groundwater, which contains unusually high levels of chemicals that compete with strontium-90 for storage sites within the zeolite crystals.

"We now have a computational tool that predicts for how long the wall will remain effective," says Rabideau. "Our analysis shows that between 10 and 20 years is the minimum performance that we can expect at West Valley and some plausible scenarios show the wall lasting much longer."

Monitoring points placed both within and outside the wall will provide data for an ongoing performance assessment.

The wall was designed by a team of geologists and engineers led by UB Department of Geology alumnus Rick Frappa at consulting firm AMEC-Gematrix of Amherst in close collaboration with Rabideau, Seneca and West Valley technical staff. Additional expertise was provided by Douglas Bablitch and Scott Warner from the company’s headquarters in Oakland, Calif.
Rabideau currently serves on a National Academy of Sciences panel that is exploring ways to improve hazardous waste management at thousands of sites where subsurface contaminants create problems for site closure, potentially threatening public water supplies.

While the groundwater plume at West Valley was not in danger of reaching drinking water sources, the parties involved have long agreed that the low-level radioactivity in the groundwater plume must be cleaned up.

In addition to Rabideau and Seneca, Colleen Bronner and Erin Johnson, both graduate students in the UB Department of Civil, Structural and Environmental Engineering, also worked on the project.

The University at Buffalo is a premier research-intensive public university, a flagship institution in the State University of New York system and its largest and most comprehensive campus. UB’s more than 28,000 students pursue their academic interests through more than 300 undergraduate, graduate and professional degree programs.

Founded in 1846, the University at Buffalo is a member of the Association of American Universities.
PACIOACTIVE FILTER – University at Buffalo professor Alan Rabideau and Shannon Sensa, UB graduate student in the university’s National Science Foundation-funded ERIE program, characterized the different types of zeolites (volcanic rock) to determine which would be most effective in filtering radioactive groundwater at West Valley; they also developed a model to predict their performance. John Chamberlain of the West Valley Demonstration Project.

TRENCHING – Illustration of trenching operations with arm fully extended into the ground. Dirt is removed cut the front of the trencher, while zeolite is placed immediately behind the excavated soil, which is placed in an above-ground containment unit. Photo courtesy of West Valley Demonstration Project.
West Valley cleanup goes heavy-duty

By Rick Miller
Olean Times Herald

WEST VALLEY — An important part of the cleanup at the West Valley Demonstration Project got under way this week.

A huge, yellow one-pass trenching machine is being used to construct a 850-foot long, 30-foot deep passive treatment wall of ground-up volcanic rock called zeolite to help clean up radioactive groundwater.

Zeolite is particularly good at latching onto radioactive Strontium 90, a plume of which originated from the Main Process Building when the site was the first commercial spent nuclear fuel reprocessing plant from the mid-1960s to the early 1970s.

The radioactive contamination formed a plume that is heading off the site toward nearby Erdman Brook, which empties into Cattaraugus Creek. It isn’t considered a public health threat because it is so diluted when it leaves the site, according to site officials.

The trenching machine, called a one-pass trencher, was built by Dewind One Pass Trenching of Zeeland, Mich. It is capable of digging a 36-inch trench up to 50 feet deep. In this case, it only has to go down 30 feet to reach a layer of clay. As the dirt is excavated, zeolite is being backfilled into the ditch.
The trenching machine started up on Sunday and shut down Tuesday after digging and filling with zeolite about 80 feet of trench. Operators are "beefing up" a conveyor for the dirt removed from the trench and hope to have it up and running by Nov. 1, according to Bryan Bower, site director for the U.S. Department of Energy.

Some intermediate-sized rocks wore down the conveyor belts that move the dirt into a soil retention system he compared to a 850-foot long, 30-foot wide swimming pool. The soil retention system is a wood-frame structure lined with a vinyl material to store and drain water from the excavated soil, some of which will have been exposed to Strontium 90. The water will then be treated and the soil stored for off-site disposal.

Until the trench is completed, however, the business end of the trencher remains underground. Access to the area is restricted. Two ponds used for water treatment are nearby.

Once in place, the zeolite, which sits in nearly 2,000 one-ton bags next to the trench area, will filter water passing through its sand-size granules. As the strontium 90 plume hits the "wall" of zeolite, its radioactive element should bond to the material.

It is a passive system designed to replace the pump-and-treat method now in use, which pumps and treats between 3 and 5 million gallons a year, said John Chamberlain, a spokesman for West Valley Environmental Services, the cleanup contractor working under the Department of Energy.

Mr. Chamberlain said the zeolite wall is designed to contain the leading edge of the Strontium 90 plume for 20 years. That coincides with the phased decision-making option the Department of Energy selected for the continued cleanup at the site in the town of Ashford.

The DOE has put off some portions of the cleanup — whether the underground tanks that held radioactive liquid and the state and federal low-level burial grounds will be removed — for up to 20 years, while continuing other aspects of the cleanup.

The material's effectiveness will be monitored via a series of sampling wells on both sides of the zeolite wall. Mr. Chamberlain pointed out during a tour on Friday.

Mr. Chamberlain said the Strontium 90 was first discovered in a ditch in 1993. Steps were taken, he said, to intercept the plume's leading edge and slow its movement toward the creek. A previous zeolite wall was installed using a different method about 10 years ago, but had mixed results. The trench method of installing the zeolite wall over a wide area of the North Plateau should be effective for the next 20 years.

"The trencher worked great," Mr. Chamberlain said. "They were just going good when they ran into the belt problem."

Scientists at the University at Buffalo have performed tests on the zeolite's effectiveness in removing Strontium 90 for several years and were involved in the original wall that used steel pilings driven into the ground rather than a trencher.

(Contact reporter Rick Miller at rmiller@eparis.com)
Tackling West Valley's leaking radiation
An experimental project to filter groundwater of Strontium-90 is about ready to be tested

By Denise Jewell Gee
News Staff Reporter

Engineers have been working for more than a decade to figure out how to stop radioactive material leaked years ago from the West Valley Demonstration Project from seeping into a nearby creek that flows toward Lake Erie.

They've built scale models, run sophisticated computer programs at the University at Buffalo and dug a trial containment wall on site.

All those years of work will be put to the test by next week, when construction on a trench more than two football fields long and filled with a volcanic mineral is complete.

"We don't often see the research that we do translate into projects that are helping communities and cleaning up the environment, especially something as innovative as this," said Alan J. Rabideau, a UB professor of civil, structural and environmental engineering. "For me, this is about as good as it gets in terms of combining research and education with actually solving a problem."

The problem, in this case, is that groundwater that trickles underneath the former nuclear waste reprocessing plant has been picking up a radioactive material known as Strontium-90 that was leaked into the ground under the plant decades ago.

The contaminated water then seeps into nearby Erdman Brook. The brook connects to Cattaraugus Creek, which eventually flows into Lake Erie.

While engineers believe the amount of Strontium-90 in the water is too small to pose an immediate health and safety risk, they want to stop the flow and address community concerns while government agencies determine the future of the West Valley site.

The method they've settled on — an in-ground permeable wall that works much like gravel in a Brita water filter — is expected to trap radioactive Strontium-90 for at least 20 years as groundwater passes through.

Engineers working on the project say it uses less energy, is more effective and cheaper than the traditional way of cleaning water — pumping it from the ground and treating it.
"This is a passive technology that, once it's in the ground, the only expense we have is just the monitoring aspect of it," said Rick Frappa, vice president and principal hydrogeologist for AMEC Geomatrix Inc., an Amherst firm that designed the wall.

If all goes well, they hope to shut down two pumps that have been removing and treating 2 million to 4 million gallons of contaminated water a year at the West Valley site.

"Once it's in, if it works right, we're hoping to get at least 20 years of removing Strontium without doing anything other than watching it," said John Chamberlain, technical adviser for West Valley Environmental Services. "Just on those two little wells, we're spending anywhere between $300,000 and $500,000 a year on treating water."

While the pump-and-treat system currently used on the site treats only a portion of the groundwater, the in-ground wall is expected to filter all of the water that carries Strontium-90 toward the creek.

The $10 million project — which received $7 million in federal stimulus funds — will create an 850-foot-long ribbon of volcanic mineral known as zeolite between the plant and the creek. Engineers expect the Strontium-90 to latch on to the zeolite as water passes through, cleaning the water of radioactive material.

Brian Smith, Western New York program director for Citizens Campaign for the Environment, said installing the zeolite wall is a positive step toward keeping the radioactive material out of nearby creeks, but he is cautious about its long-term effectiveness. "It is experimental, and we're not positive that it's going to work," Smith said. "We certainly support them moving forward with this, but looking at the bigger picture, we need to get back to the fact that this is just a Band-Aid to deal with the problem."

Citizens Campaign and other groups have called for the federal government to commit to a full cleanup of the West Valley site. The plant, which operated between 1966 and 1972, processed used reactor fuel to pull out uranium and plutonium for reuse. Efforts to clean up waste left on the site have been under way since 1980.

Officials discovered that Strontium-90 was spreading across the site in groundwater in 1993. They've since traced it to material that leaked under the plant while it was operating, Chamberlain said.

Once complete, the zeolite trench will be the largest in-ground wall of its kind used to filter out radioactive material.

"For decades, we've been spending a lot of money to remove groundwater, but we have restored very few sites because it's difficult to get the contamination out. This approach is different," said Rabideau, who has been working with UB graduate students to test the effectiveness of zeolite in filtering out the radioactive material. "It's a greener technology in that we're not using a lot of energy, and we're preventing the contamination from leaving the site."
Construction on the trench, which started Sunday, is on target to wrap up by the end of the week. A 200,000-pound machine designed specifically for this project has been ripping through the ground, pulling out dirt and replacing it with the green, sandlike zeolite mined from Idaho.

The machine, a one-pass trencher, will place 1,940 bags of zeolite that each measures one metric ton into the ground.

Contaminated dirt removed from the trench will be contained on site.

Eventually, engineers will either have to figure out what to do with the strontium trapped in the zeolite and in the dirt on the West Valley site or wait for it to naturally turn into a nonradioactive material.

"The goal is to contain it, and if you contain it, all radioactive materials at some time turn into something nonradioactive," Chamberlain said. "The longer it stays here, the longer it gives it to break down and turn into a nonradioactive form."

Chamberlain said engineers expect the zeolite wall to work for at least 20 years. Within 10 years, the Department of Energy is scheduled to make a decision on how to fully decommission the West Valley site.

Judith Einach, a member of the Coalition on West Valley Nuclear Wastes, said the citizens group hopes the zeolite wall will keep the radioactive material from spreading into the environment but wants to ensure it is continually monitored.

Eventually, she said, a decision will have to be made to either remove the waste or keep it safe until it degrades.

"It's going to take a long time for this site to be cleaned up," Einach said. "This is not going to happen overnight. So some of those questions — like what do you do with the collected radiation in the zeolite wall — those things you can't answer now, but you definitely have to answer them within the possible century that it's going to take to clean this site up."

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Wall to halt radioactive contamination

Updated: Thursday, 21 Oct 2010, 2:58 PM EDT
Published: Thursday, 21 Oct 2010, 2:58 PM EDT
Posted by: Eli George

BUFFALO, N.Y. (RELEASE) - A massive treatment wall under construction this week at a Western New York nuclear waste cleanup site will stop radioactive contamination in its tracks for literally decades, according to University at Buffalo engineers who modeled and tested the wall's material.

While the treatment method was specifically designed for the West Valley Demonstration Project, located 30 miles south of Buffalo, it may eventually be applicable to other radioactive sites around the nation.

Extending up to 30 feet underground, the 850-foot-long wall is being constructed with 2,000 metric tons of clinoptilolite, a volcanic zeolite mineral similar to the material used in cat litter, horse stalls and waste-disposal.

It is believed to be the first time that this kind of full-scale, permeable treatment wall is being used to filter out radioactive material, in this case, strontium-90, which is found in spent fuel rods in nuclear reactors.

"It functions the way a kitchen water filter does," says Alan Rabideau, PhD, professor of civil, structural and environmental engineering in the UB School of Engineering and Applied Sciences, "only in this case, the filter is selectively removing strontium-90 in the ground.

"As it is held in place, the strontium-90 will decay right in this huge 'filter,'" he explains. "It removes the strontium-90 and lets other dissolved minerals go."

According to officials at the West Valley Demonstration Project, the installation of the treatment wall is an important first step toward eventually closing the facility.

Back in 1999, Rabideau's research team demonstrated that this form of clinoptilolite would be suitable for groundwater remediation at West Valley.

His original, experimental work demonstrated that a nonradioactive strontium, which behaves like strontium-90, is captured within the honeycomb structure of the zeolite mineral, leaving the groundwater essentially free of the contaminant.

For several years, larger-scale testing was deferred while stakeholders deliberated over plans involving how best to close the West Valley facility. Then, in 2007, the National Science Foundation awarded Rabideau and other environmental researchers at UB funding for an interdisciplinary program they called ERIE (Ecosystem Restoration through Interdisciplinary Exchange), which is designed to train a new generation of environmental scientists, using a nontraditional, interdisciplinary approach.

ERIE student Shannon Seneca, a Western New Yorker and Native American, was interested in groundwater remediation.

Rabideau and Seneca began conducting more extensive testing using a "simulated" nonradioactive groundwater in the lab; eventually, the tests were duplicated using radioactive groundwater at the West Valley laboratory facility.

With the data they collected from these experiments, which continued for two years -- an exceptionally long period for such studies -- they developed complicated mathematical models using supercomputers at UB's Center for Computational Research.

The goal was to find a way to predict just how long such a wall could continuously filter out the strontium-90.

The model accounted for the specific groundwater conditions at the West Valley site, such as the geochemical composition of the local groundwater, which contains unusually high levels of chemicals that compete with strontium-90 for storage sites within the zeolite crystals.
"We now have a computational tool that predicts for how long the wall will remain effective," says Rabideau. "Our analysis shows that between 10 and 20 years is the minimum performance that we can expect at West Valley and some plausible scenarios show the wall lasting much longer."

Monitoring points placed both within and outside the wall will provide data for an ongoing performance assessment.

The wall was designed by a team of geologists and engineers led by UB Department of Geology alumnus Rick Frappa at consulting firm AMEC-Geomatrix of Amherst, N.Y., in close collaboration with Rabideau, Seneca and West Valley technical staff. Additional expertise was provided by Douglas Babilitch and Scott Warner from the company's headquarters in Oakland, Calif.

Rabideau currently serves on a National Academy of Sciences panel that is exploring ways to improve hazardous waste management at thousands of sites where subsurface contaminants create problems for site closure, potentially threatening public water supplies.

While the groundwater plume at West Valley was not in danger of reaching drinking water sources, the parties involved have long agreed that the low-level radioactivity in the groundwater plume must be cleaned up.

In addition to Rabideau and Seneca, Colleen Bronner and Erin Johnson, both graduate students in the UB Department of Civil, Structural and Environmental Engineering, also worked on the project.

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West Valley Central School students receive hands-on seismology experience

By: Jessie Owen

West Valley Central School has teamed up with seismologists at the Lamont-Doherty Earth Observatory of Columbia University and the New York State Energy Research and Development Authority to install a seismic monitoring station at the school. The device, which is situated on exposed bedrock, records thousands of measurements per minute; those are sent to the Internet to assist seismologists and earth sciences to "detect, locate and characterize earthquakes in Western New York, the northeastern United States and southern Ontario," said NYSERDA.

Students, School Superintendent Hillary Bowen, WVCS Board President Stephen Kowalski, NYSERDA Geologist Lee Gordon, Town of Ashford Supervisor Chris Gerwitz and LDEO Senior Research Scientist Dr. Won-Young Kim gathered to formally showcase the installation of the station on October 15.

"We're thrilled about this unique opportunity to expand the knowledge base about earthquakes," said Bowen. Gordon added, "This is an area in Western New York where there is a data gap. Students can take advantage of this state-of-the-art information."

The broadband system records thousands of measurements every minute, transmitting them to the Internet. "People all over the world can look at this data," said Kim. "It can record the signals of very small earthquakes happening locally or those happening very far away." Because of the sensitivity of the recording device, a glance at the recorded data online can show advance changes in weather, footsteps, strong winds and trains crossing on tracks. Seismologists can
determine based on the type of signal, shapes and waves, whether what is recorded is an earthquake or not and what kind of signal or disturbance occurred.

The sensor needed to be situated on exposed bedrock. “It’s not often that we find exposed bedrock where we have electricity and Internet,” said Gordon.

The data recorded from the WVCS seismometer and others located all around the world is kept in Washington state. This way, according to Kim, when technology is more advanced, scientists can take a second look. “You’ll be able to go back to see the recorded data from the past,” Kim said to the students. “We need these seismic signals to be kept for the future of environmental understanding and engineering.” This type of information will also be used by companies seeking to create buildings to withstand earthquakes.

The next closest seismic station is located on Mount Morris near Letchworth State Park. NYSEDA put up the $25,000 necessary for the equipment and LDEO installed the station near the school. “We were approached by NSERDA and Columbia for partnership and couldn’t have been more delighted,” said Bowen. “This whole experience has been wonderful.”

Students in Keem’s class will be able to monitor and analyze the recorded data from the seismometer. Keem says he will be implementing this into his Earth Science curriculum.

To view the WVCS data, visit www.ldeo.columbia.edu/LCSN, select “View Current Seismograms Recorded at LCSN Broadband Stations,” and choose “WVNY” under the drop-down menu at the lower left-hand side. For more information, call NYSEDA at 942-9960 or WVCS at 942-3267.
Cattaraugus County’s offer to take ownership of Gulf Road denied by Ashford

By: Chris Proctor

The Ashford Town Board rejected Cattaraugus County’s offer of $115,200 to take ownership of Gulf Road, during the Ashford Town meeting held October 13.

Councilman Charlie Davis had called it “morally wrong” for the county to hint at closing the road permanently should the town not take over full maintenance of the mile-long stretch.

Supervisor Chris Gerwitz notified the county that Gulf Road should be brought up to town standards at no cost to the town before an offer could be seriously considered. Gulf Road is currently closed and in need of what the town calls considerable repair.

In other town board news:
• Lisa Proctor and Kelly Blackman gave a report on this past summer’s recreation program. Fifty-seven children registered for the month-long session with an average daily attendance of 37 kids.

Five full-time instructors and two part-time assistants provided leadership with a daily agenda of crafts and games on the grounds of West Valley Central School. The rec program also took three all-day field trips: to Rock City Park outside Olean, Page’s Paradise Park in Depew and Alleghany State Park.

“These two women have done a great job with this program,” said Davis at the conclusion of the meeting.

• The board selected November 10 for a public hearing on the town budget. Details will be submitted to the Springville Journal as soon as possible.

• Paul Bembia of the New York State Energy Resource and Development Authority informed the board that a seismographic station has been installed at WVCS. The modern, broadband, three-component station will be used to improve earthquake detection capabilities in Western New York. It will also provide WVCS students with a hands-on component for earth science studies.

• Bembia also reported that NYSERDA has contracted with M.J. Harden, Inc. to perform aerial topographic mapping and aerial photography of the Buttermilk Creek Watershed. The project’s purpose is to detect West Valley Nuclear erosion problems.
• The board noted that the general elections will be held on Tuesday, Nov. 2 from 6 a.m. - 9 p.m.

• Gerwitz alerted board members to several Department of Transportation issues. The new Route 219 bridge is slated to open November 15, but officials are planning the ribbon-cutting ceremony for an earlier date. DOT has approved the sight lines at the new Peters Road intersection and will not be installing any traffic signals. Refurbishment of the old Route 219 bridge will include a 13-foot reduction in the structure’s width.

• NYS had made significant repairs on the east end of Ahrens Road, which falls within the state’s right-of-way.

“It took two years for them to get it done, but if we want it blacktopped it’s up to us,” said Highway Superintendent Tim Engel.

• Towns have until January 1 to take over dog licensing in NYS. Davis is working with Town Attorney Charles Harrigan on a fee schedule, while Town Clerk Patti Dashnau is arranging for the necessary computer program and paperwork.

• Engel told the board that the town’s loader still has a few good miles on it, but the excavator is going to have to be replaced. The truck purchased this past summer is due to arrive this week, completely outfitted.

• Board members were asked to consider updating the town’s Web site. Southern Tier West has offered to do the job for $250.

• Gerwitz read a letter to the board from E&M Engineers regarding the Fox Valley Bridge project, and why that project received only one bid response. E&M cited several possible reasons, including a short completion date, a more substantial structure than stood on that site before, the use of geofoam, retaining walls in front of abutments, the steep ravine and the difficult location.

Conversation ensued among board members and town officials brought into question both the guidelines issued by FEMA and the demands made by the DEC.

Gerwitz announced that an extension on the project had been granted, and the town now had until March 15 to get the job started.

• Bembia asked that town residents contact their members of Congress in support of a federal appropriation of $80 - $85 million per year for Phase 1 cleanup work at the West Valley Demonstration Project, which is expected to take about 10 years to complete.

The next Town of Ashford Board meeting will be held on November 10.
The Buffalo News

In-ground wall to filter water at NY nuke site

By Carolyn Thompson

Published: October 17, 2010, 11:54 AM
Updated: October 17, 2010, 0:01 PM

WEST VALLEY, N.Y. (AP) - Contaminated water inching through the ground at a nuclear cleanup site is about to hit a wall.

And if all goes as planned, it will seep through it and come out clean on the other side.

Crews at the West Valley Demonstration Project in Cattaraugus County are digging an 850-foot-long, three-foot-wide trench along the site's northwest edge and back filling it with crushed volcanic material called zeolite. The in-ground wall slicing to clay 19 to 30 feet below is meant to decontaminate groundwater as it moves through it toward Cattaraugus Creek in the Lake Erie watershed.

While permeable barriers have been used elsewhere to filter chemical contaminants, officials at West Valley believe this is a first for groundwater contaminated with radiation.

"It has a lot of benefits if it works," said John Chamberlain, technical adviser at West Valley Environmental Services, which holds the contract for cleanup of the site 30 miles south of Buffalo.

An underground plume of water contaminated with Strontium-90 was discovered at the site in 1993, believed to have originated from a leak that occurred in the 1970s when the land housed an operation that reprocessed radioactive fuel from nuclear reactors.

Installing the permeable wall is part of cleanup efforts that have been ongoing since 1980. It should address the groundwater concerns for up to 20 years, Chamberlain said, while state and federal officials work on the larger issue of whether the site should be completely decontaminated or if buried waste should be enclosed and left there.

On Sunday, a customized 200,000-pound trench-digging machine began chain-sawing through the earth creating a three-foot wide opening and back filling it with 2,000 metric tons of the rocky zeolite shipped in from an Idaho mine.

The zeolite, tested for about a year by University at Buffalo researchers, will work like a home
water softening system, attracting and holding the Strontium in place as water continues on. Wells will monitor its performance. The process is expected to significantly lower Strontium levels but not remove the radiation completely.

The wall will be anchored in the land's glacial clay layer to prevent water from going under it.

The $10 million project was favored over potential alternatives in part because there will be no additional water treatment cost once the wall is installed over a period of a few days, Chamberlain said. Right now, two wells pump and treat 2 million to 4 million gallons of water at a cost of $300,000 to $500,000 a year. An estimated nine wells would be needed, with an estimated treatment cost of more than $3 million, to be as effective as the long, continuous wall.

"The idea was just to overwhelm the front of the plume to contain it," Chamberlain said.

Judith Einach, a member of the Coalition on West Valley Nuclear Wastes, a citizens watchdog group, praised the action as proactive.

"It's an experimental procedure which we're certainly hoping will work," she said, adding the spreading radioactive plume has been "a high priority concern" for the group.

Although the levels of Strontium in water on site exceed Department of Energy safety standards, by the time the water reaches the creek 2 1/2 miles away, the levels have been diluted to below what are allowable in drinking water, Chamberlain said. The creek is not a drinking water source.

"It's safe, there's nothing that's impacting people right now," he said.

On the Net:

West Valley Environmental Services: www.wves.org

Coalition on West Valley Nuclear Waste: http://www.digitup.org

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In-ground wall to filter water at NY nuke site

Associated Press - October 17, 2010 12:05 PM ET

WEST VALLEY, N.Y. (AP) - Contaminated water inching through the ground at a New York nuclear cleanup site is about to hit a wall.

And if all goes as planned, it will seep through and come out clean on the other side.

Crews at the West Valley Demonstration Project in western New York are digging a three-foot wide trench as deep as 30 feet and filling it with volcanic material called zeolite.

The in-ground zeolite wall is meant to decontaminate groundwater as it filters through.

An underground plume of radiation-contaminated water was discovered at the site in 1993, believed to be from a leak in the 1970s, when the site housed a nuclear reprocessing operation.

In-ground walls have been used on chemical contamination but West Valley officials believe this is a first for radiation.

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DOE Releases RFQ for Decommissioning West Valley Demonstration Project

The Department of Energy (DOE) today released the final Request for Proposals (RFP) for environmental restoration services for Phase I Decommissioning and Facility Disposition Activities at the West Valley Demonstration Project (WVDP) in western New York. DOE anticipates the award of a cost-plus-award-fee, completion contract with a contract period of approximately seven years, based on an annual funding profile of $80 million.

DOE has selected a phased approach for decommissioning activities at the WVDP. Phase I Decommissioning is the first phase of a two-phased process for the cleanup of the site in accordance with the WVDP Act.

Services to be provided include:

- Project management and support services
- Site operations, maintenance, and utilities
- High Level Waste canister relocation
- Facility disposal
- Waste Tank Farm management
- NRC-licensed Disposal Area management
- Waste management and nuclear material's disposition
- Safeguards and security

DOE will hold multiple site tours in early November 2010. Proposals will be due in 60 days.

For information on the tours or on final RFP, please visit the procurement website at:
http://www.emcbr.doe.gov/WVDP_Phase_1_Decommissioning/
West Valley Fire Department making use of dry hydrants

By: Terry Stephan
Date: 2010-10-06

Most rural fire departments in the United States depend, to an extent, on dry hydrants. The West Valley Volunteer Hose Company is no exception.

Dry hydrants are large diameter (six or eight inch) pipes that can carry water from the bottom of a lake or pond to a convenient, above-ground location, preferably close to a municipal road. The devices allow the fire department easy access to water.

When water isn’t close to the scene of a fire, it has to be trucked in. If the supply is a long distance away, firefighters may need a number of trucks and personnel just to get water to the scene, leaving fewer people to fight the fire and less water to do it with.

Dry hydrants in scattered locations translate into a safer township. The WV Volunteer Fire Department is asking residents to volunteer to have dry hydrants installed at their properties. The hydrants would be installed with no cost to the landowner.

“The conditions have to be right,” said West Valley Fire Chief Kevin Murray. “The pond has to be close to the road, preferably at or below grade to the road.”

The installed pipe would be dry; the firemen would hook onto it with their pumps and draw water from the pond. Ponds usually don’t freeze to the bottom, so the water is available even when the pond is covered with ice in colder months.

Presently, the town of Ashford has only three dry hydrants, all in the southern portion of the township.

A grant from the federal government to the Cattaraugus County Soil and Water District around 12 years ago was used to install dry hydrants. About 45 were put in around the county. Two were installed in the town of Ashford, one on Ashford Hollow Road and the other on Route 240 at the south end of West Valley, not too far from the new fire hall. Recently, the fire department supplied the funds for materials to install another one on Schumacher Road.

Sometimes, homeowners can save money on their fire insurance premiums when they are located a shorter distance to an available water source such as a dry hydrant.

West Valley Environmental Services has hydrants on its property, as does the Ashford Office Complex on Route 219. If dry hydrants were spread out around the town, firefighters would have more options.

Murray said, “We really need more hydrants in the north part of the town.”

The dry hydrants are made from heavy duty plastic pipe with aluminum fittings at the end where the firefighters connect the pumpers’ hose. The hydrants require little maintenance other than painting and the fire department performs that function when needed.

To have the fire department look at a site as a possible hydrant location, call 942-3942.
The following table accompanied the article, "Former West Valley Nuclear Service Worker Reaches out to Local Politicians for More Help" when it was published in the *The Springville Journal*, Thursday, October 7, 2010. The subject article was first made publicly available online Wednesday, October 6 at metroWNY.com.

### West Valley Demonstration Project

*Data as of October 3, 2010*

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*A total of 168 unique individual workers are represented by the 268 cases reported.*

Former West Valley Nuclear Service worker reaches out to local politicians for more help

By: Fathi Ceraha, Journal editor

Date: Wednesday October 6, 2010

With strict safety standards imposed by such agencies as the National Institutes for Occupational Safety and Health, West Valley Nuclear Services imposes certain criteria to keep employees safe, including the use of dosimetry badges, which are worn by employees who work near radioactive nuclear waste. The badges measure the levels of radiation if the workers at the plant are exposed to any. Collins resident and former WUNS employee Bob Timmel explained that his dosimeter readings were taken monthly and the results were then written down to be saved in his records.

These records are crucial, as Timmel, who started working at WUNS in 1989, found out when he was diagnosed in 2003 with a malignant lymphoma: a radiation-induced cancer. "My doctor felt my disease was caused by my work," Timmel said. And he has a letter from his doctor to prove it.

Timmel is not alone, according to the Energy Employees Occupational Illness Compensation Program Act, which began on July 31, 2001 (www.dol.gov/owcp/energy/index.htm). The mission of the program is to provide lump-sum compensation and health benefits to eligible Department of Energy nuclear weapons workers (including employees, former employees, contractors and subcontractors of WUNS) and lump-sum compensation to certain survivors if the worker is deceased.

EEOICPA uses medical, employment and other information to make a decision about whether or not the applicant qualifies for compensation and benefits.

After petitioning for federal workers compensation in 2003, Timmel thought he had done all he had to do.

It wasn't until 2009, six years later, that the Department of Health and Human Services sent him a letter through NIOSH dated July 8, 2009 saying he had missing dosimetry records from 2002.

In the summer of 2009, Timmel applied to...
the DOE to get his missing records. "NIOSH said I could ask for records through the DOE, so I did," Timmel explained. Instead of records, however, he received a letter saying, "A thorough search was conducted for records responsive to your request," that was signed by Michelle Farris, a paralegal for the DOE and was dated September 9, 2009.

In July of this year, Timmel contacted the Department of Justice, and his 2002 records were found. Then he was able to continue with the petition for federal compensation.

"We have provided Mr. Timmel with those records. They weren't missing at all," explained Bryan Bower, DOE-WVDP director, who attributed Timmel's lost records on a data equipment failure.

The problem is, Timmel had already filed NYS and federal compensation cases before he knew he had missing records. His federal case was turned down last year and just this month, Timmel found out his NYS case was also turned down. He had forwarded his 2002 records after he got them but he said, "It sounds like they didn't allow the missing records. So they didn't review them. They wouldn't allow them because they were not available when I first filed." An appeal to his federal case is in the works.

Timmel's NYS compensation attorney, Hugh Stephens, of the Buffalo-based environmental law firm Stephens and Stephens, said he is prepared to file a Freedom of Information Act asking for an incident report that contains information on how the records of Timmel and 31 other WVNS employees were missing. Timmel said that, even though he now has a letter from the Department of Energy saying they have given him all his records, he is still not sure if that is true or even if they are accurate.

There may be a light at the end of the tunnel for some who may encounter similar issues, however.

Stephens said that, to avoid dose reconstruction, for which all employee records are necessary, a Special Exposure Cohort case, which is for a uniquely-defined category of employees established under the Energy Employees Occupational Illness Compensations Program Act, can be developed. If it can be proved to the DOE that employee records are unreliable, NIOSH cannot be expected to perform a dose reconstruction. This may eventually apply to the 32 people with missing records mentioned above.

NIOSH Office of Compensation Analysis and Support Health Physicist Grady Calhoun explained in part during an outreach meeting in August of 2007 that the SEC is comprised of classes of employees who have any of 22 specified cancers and who worked for a specified period of time at one of the SEC Work Sites (like West Valley) or participated in certain nuclear weapons tests and who meet additional requirements.

The 22 specified cancers for compensation for the SEC are: bone cancer, renal cancers, leukemia (other than chronic lymphocytic leukemia provided the onset of the disease was at least two years after first exposure), lung cancer (other than in-situ lung cancer that is discovered during or after a post-mortem exam), multiple myeloma, lymphomas (other than Hodgkin's disease), primary cancer of the: bile ducts, brain, breast (female or male), colon, esophagus, gall bladder, liver (except if cirrhosis or hepatitis B is indicated), ovary, pancreas, pharynx, salivary gland, small intestine, stomach, thyroid and urinary bladder.

Calhoun also said that an individual member (or the eligible survivors of a member) of a class of employees included in the SEC is entitled to compensation without having to undergo a dose reconstruction performed for his or her case by NIOSH, or to have a decision by DOE as to whether the cancer was "at least as likely as not" caused by occupational exposure to radiation, as is required for other cancer claims covered.

Stephens wants to let people know that even if a parent or grandparent or other relative alive or deceased had worked at WVNS, Bethlehem Steel, Hooker Chemical or other named places and died of one of the 22 cancers, a living relative can file an SEC with little information and receive the settlement.

For the most part, NIOSH acquires information from records obtained from DOE. Calhoun said almost all sites that are still in existence have extensive record holdings and some type of records database that allows researchers to find information pertinent to the site profile.

At the time Timmel filed his petition, he was still working at WVNS, but he quit just a year or so after, he says in part, because the company refused to give him a dosimeter badge to wear. WVNS said that he wasn't working in an area that required him to wear one even though Timmel had a note from his doctor requesting that he wear one while he was at work.

Timmel said he really wants politicians to step in and make it easier for the victims of cancer and other illnesses to get the compensation they deserve.

"I'm asking them to get involved; there are a lot of voters that are involved with this. There are a lot of families involved here. So I guess I'm kind of calling out to the politicians to help us," he said.

In May of this year, U.S. Senators Kristen Gillibrand and Charles Schumer stopped up to the plate and said WVNS was a Special Exposure Cohort for local nuclear weapons sites. This means that employees of those sites would not have to go through the dose reconstruction process. However, it is unclear if this petition would include WVDP workers or those who worked at a facility when weapons work was performed during the cold war days. A call to Schumer's office from the Journal for clarification and more information was not returned by deadline.

"West Valley is a modern phenomenon," Stephens said. "It was not in production of weapons."

Timmel wants a little more than Gillibrand and Schumer have offered so far. Though, "I'm reaching out to senators to come look at my paperwork. No one has looked at it yet. That's why I'm reaching out through newspapers. I'm requesting the involvement of senators. They can contact me anytime," he said.
When the plant opened in 1956 it was a nuclear fuel reprocessing plant until it closed in 1972.

In 1980, legislation directed the DOE to take the lead role in the solidifying of the high-level radioactive waste and decontaminating the facilities on site.

WNS, a Westinghouse subsidiary, was initially chosen to manage and decontaminate the nuclear site.

West Valley Environmental Services, under contract by the DOE and in cooperation with the New York State Energy Research and Development Authority, took over the cleanup in 2007.

"The DOE takes the health and safety of its employees, environment and the community very seriously," said Bower who added that any WVDP workers who have issues of any kind can call the employee concern office at 942-4747.

Anyone who wishes to sign a cold war heroes petition asking congress to reform the sick workers compensation program, can do so at www.change.org/petitions/view/cold_warHeroes_petition_congress_to_reform_sick_worker_compensation_program. This petition will target the U.S. Senate and the House of Representatives.

For more information on the EEOICPA program or for help filing a claim, visit www.dol.gov/owcp/energy. To fill out a petition form, contact Chris Elison, SEC petition counselor (interim), via e-mail at dca@nyc.gov or call toll-free, 1-877-222-7570. Parties can also contact Denise Brock, ombudsman to NIOSH, by calling toll-free at 1-888-272-7430.
We can’t afford another environmental disaster

Hydraulic fracking—injecting millions of gallons of chemical-laced water into shale to extract natural gas—injects billions of dollars into oil and gas companies. New York proponents selling this shortsighted economic lure forget that we are the Love Canal state, that West Valley is home to 600,000 gallons of nuclear waste buried in leaking tanks and that the Tonawanda Coke plant sheds toxic sludge and benzene-laced plumes.

Last week, in Susquehanna County, Pa., numerous families filed a lawsuit against a fracking company. “Releases, spills and discharges of combustible gases, hazardous chemicals and industrial wastes” from fracking is polluting their water and making them sick, residents say. We cannot let New York become the next environmental dead zone. The Environmental Protection Agency is slow to respond to real threats of toxicity to humans and the environment. Big businesses rarely stop polluting without a court order.

Like a heroin junkie waiting for the next big fix, New York State’s veins are thin. The real beneficiaries of natural-gas fracking won’t be New Yorkers, but rather big business, experts at creating dependency but avoiding responsibility for disasters they leave us to cleanup. Think British Petroleum. Love New York? Urge Gov. David Paterson to sign the moratorium on fracking.

Donna Budniewski
Buffalo
Please note that the Springville Journal and MetroWNY articles referring to a West Valley Citizen Task Force letter to DOE and NYSERDA concerning the panels for the Phase 1 studies Process are in error. The West Valley Citizen Task Force was the *recipient* of a copy of the letter referred to in the articles.
West Valley Citizen Task Force discusses proposed decision-making panel

By Elizabeth O'Neill
JOURNAL CORRESPONDENT

At the West Valley Citizen Task Force meeting held September 22, a letter was written to both the Department of Energy and New York State Energy Research and Development Authority directors at the West Valley Demonstration Project regarding the three-member panel that will make decisions regarding Phase 1 study process. The GTF opposed such a group as currently formulated, saying that it limits the effectiveness of public participation and increases the power of the agencies to obtain their desired predetermined decisions.

According to the GTF members, this panel will not enhance public participation. "Under this process, the public will not deal directly with the agencies to obtain final decisions. Instead, the panel will be making final decisions," the facility directors reassured the group that this would not happen and was not the original intent of the panel. The purpose is to assist in decision-making when it has a dead end. The directors admitted that they would not blame the citizens of West Valley for being cautious.

Request for proposals for this phase of work will be released shortly and will be based on cost plus award fee. The GTF hopes this project will be of help to everyone when the work is completed. The work includes many demolitions and removal of the facilities and equipment, including decontamination and storage of waste until a proper facility is created or located.

The federal government has not yet built a high level waste storage facility, but those at West Valley say one is in the works. This means contractors can decontaminate equipment and put the waste in containers, but the waste will be stored on-site awaiting some future location. West Valley is also hoping to secure some of those funds for their continued efforts.

Local interest groups are encouraged to write to Congress to help secure potential future funding where other funds will be exhausted and will not help with the West Valley progress. Many at the meeting expressed concerns about the progress continuing at the pace it has in the past few years. "We do not want to lose our successful strides," said one panel member. Many others agreed and will draft letters to Congress in support of funding this project. The future funds could come as other facilities accelerate their closures with government funds (i.e., Brookhaven and SpaceX Hill).
Planning Board to hear update on West Valley

Updated: September 28, 2010, 6:52 AM

ASHFORD—The Cattaraugus County Planning Board will meet Thursday at the Ashford Office Complex to receive an update on the status of the West Valley Demonstration Project.

Speaking at 7 p.m. will be Bryan Bower, director of the project for the U.S. Department of Energy.

The board also will consider other matters including a zoning amendment for 664 Broad St. in Salamanca to change a residential status to commercial to permit offices in a house.

A report will be presented from the Route 219 Corridor Development Committee.
West Valley Worker with cancer wonders about compensation Radiation-dose records missing

By George Minium
Olean Times Herald

A former West Valley Demonstration Project employee with an incurable lymphoma has been wondering for a year what it will take for him to qualify for federal workers' compensation.

Robert Timmel of Collins, who started working at West Valley Demonstration Project in 1980, can't understand why his federal workers' compensation claim was rejected. His doctor diagnosed him in 2003 with radiation-induced cancer from exposure when working as a technician at West Valley. In all, he worked at the nuclear cleanup site for nearly two decades, including six years after his cancer diagnosis. He then lost his job in 1999.

Mr. Timmel and his attorney, Stephen Hughes of the Buffalo-based environmental law firm Stephens & Stephens, are now trying to get the workers' compensation case reconsidered by the U.S. Department of Labor.

A key problem in the case is Mr. Timmel’s radiation dose records were not complete. He and his attorney

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worker

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contend this prevented accurate exposure analysis.

"My dose radiation

By reviewing a year's worth of radiation dose

We are seeking reconsideration of a proposed final
decision by the Department of Labor, Mr. Stephens
said. The DOL believes Mr. Timmel's claims should
be rejected because the probability of exposure, established
by a dose reconstruction performed by the National
Institute of Occupational Safety and Health (NIOSH),
was less than 50 percent, the attorney said.

But these types of compensation cases are supposed
to be handled fairly, the attorney said. The intent is to give the
benefit of the doubt to the individual by deeming the burden
of proof on the employer.

By reopening the case, the attorney said, he hopes it
will ultimately be granted a workers' compensation claim
which would range between $130,000 and $400,000
through the Federal Energy Employees Occupational Illness
Compensation Program (EEOICAP). Mr. Stephens said.

The EEOICAP began in 2000 through the Department of Labor.
The program's goal is to provide lump-sum compensation
and medical care to eligible U.S. Department of Energy
(DOE) nuclear weapons workers – including employees, former
employees, contractors and subcontractors – and lump-
sum compensation to certain survivors if the worker is deceased.

"If Mr. Timmel's request for reconsideration is granted
and the claim is approved,
he would receive $150,000 under Part G of the
EEOICAP and up to $400,000 under Part F of the act, as well
as comprehensive medical care," Mr. Stephens said.

Robert Timmel holds a fiber that tells West Valley Demonstration Project employees they "have a right to a safe and healthy workplace."

Years later, in a June 3, 2009, letter to Mr. Timmel, NIOSH said, "The majority of the record's radiation exposure was received during employment as an operator, according to records received from the Department of Labor and information provided in the interview process."

Radiation dose reconstruction, performed by NIOSH, which evaluates all available data relevant to the employee's radiation exposure. NIOSH's 2009 letter also stated, "NIOSH has determined that further research and analysis will not produce a level of radiation dose resulting in a probability of cancer of 50 percent or greater."

Because of this, "NIOSH has determined that sufficient research and analysis has been conducted to consider this dose reconstruction complete."

"However, NIOSH's letter stated later, "Actual dose measurements were not available for 2002. Additionally, the agency's letter said radiation exposure was based on a review of Mr. Timmel's dosimeter record and also includes badge exchanges for 2003 in which his actual records were not available." Mr. Timmel is certain he contracted cancer from working at the West Valley Demonstration Project."

"They have to go forward on the assumption that if there is no history of cancer in my family, my family didn't smoke and I have lived a clean life," he said.

"I believe West Valley Demonstration Project, I worked on that plant and a food processing plant."

Mr. Timmel said he had been trying to get his 2002 dosimeter results for some time now but was unsuccessful.

"We have asked how the [treatment] is going to reconstruct my close exposure with 31 months missing in 2002, which was the year before I was diagnosed with cancer," he said.

A 2009 health communication by West Valley Nuclear Services Co., which is the West Valley Demonstration Project's contractor at that time, also said dosimeter benders for part of 2002 were "lost for 22 radiological technicians."

To get help, Mr. Timmel earlier this year contacted the U.S. Attorney's office in Buffalo about his missing 2002 dosimeter records. The U.S. Attorney's office then made a request for the records to the DOE at West Valley Demonstration Project. Before long, Mr. Timmel's missing 2002 dosimeter records were located.

But Mr. Timmel said he was reluctant to believe the 2002 dosimeter records were really lost.

"I'm not sure if they actually were missing," Mr. Timmel said.

Mr. Stephens said, "Our current arguments in Mr. Timmel's case are centered on the suspicion of disappearance and the miraculous reappearance of dosimeter readings for Mr. Timmel and 31 other West Valley Demonstration Project workers."

Incident reports tend to underestimate the hazardous nature of exposure and some exposures were never reported at all.

But there was no cover-up of records, said Bryan Bower, a DOE project director at West Valley Demonstration Project. "As soon as we became aware his records were missing, we went to the contractor, which was West Valley Nuclear Services, back then in 2002. My staff went over and made sure he got the records as soon as possible."

Mr. Bower said the federal government has investigated Mr. Timmel's workers' compensation claim. He then added, "I'm not sure if they actually were missing."

"I believe West Valley Nuclear Services has had no difficulty obtaining records for me," he said.

"West Valley Nuclear Services is comprised of URS Washington Division, Jacobs Engineering, Environmental Chemical Corp. and Parlaw/Energy Solutions."

(Contact reporter Gary Niesters at gniesters@dowtownworld.com)