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DRPA to ship river spoils to mines

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Coal mines may have fueled the industrial revolution, but they have scarred the hills of Pennsylvania with pits the size of canyons and acid-laced streams that are devoid of life.

Two projects to be conducted this spring will gauge whether dirt dredged from the Delaware River could be used to fill in strip mines and block the flow of pollutants into Pennsylvania's streams.

The projects could ease political opposition in South Jersey to deepening the Delaware's shipping channel if they prove a viable way of reducing the need for creating 75-foot-high piles of dredge material, or spoils, along the river in Gloucester and Salem counties.

Opponents of the \$311 million Delaware deepening project say they do not believe using river spoils to fill in mines will ever be practical or cost-effective. They say the mine-reclamation projects are being pursued now to deflect concerns about the deepening plan, currently on hold pending the signing of an agreement between the Army Corps of Engineers and Delaware River Port Authority.

In April or May, the U.S. General Accounting Office is expected to complete a yearlong review of the economic justification for the project and its environmental impact. The project is designed to improve access for tankers and larger cargo ships. But opponents question whether it will



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Iron-tainted runoff streams from the boarded-up Newkirk Tunnel in Tamaqua, Pa. Environmentalists say filling old strip mines with river spoils may stop the flow of polluted waters.

reap economic benefits.

"The point is, there shouldn't be any spoils in the first place," said Rep. Rob Andrews, D-N.J., who requested the review by the investigative arm of Congress. "The project doesn't make sense economically or environmentally."

The DRPA plans to send 50,000 cubic yards of sediments dredged during past channel maintenance and stored near Fort Mifflin in Philadelphia to a small abandoned strip mine in Tamaqua, Schuylkill County, about 100 miles away.

The Army Corps of Engineers plans to send another 50,000 cubic yards of material from the same disposal area to an ongoing pilot mine-reclamation project in central Pennsylvania known as Bark Camp, about 250 miles away.

The Army Corps plans to use discretionary funds to pay for the bulk of its \$5.4 million project to move the spoils to Bark Camp by train. The DRPA plans to solicit bids for its project within weeks and is not releasing cost estimates.

The authority has not decided whether to transport the spoils by train or trucks. The 50,000 cubic yards is enough sediment to fill 500 railroad cars or more than 3,300 dump trucks.

The two pilot projects will gauge the cost-effectiveness and best methods of transporting much larger amounts of sediments to fill in strip mines.

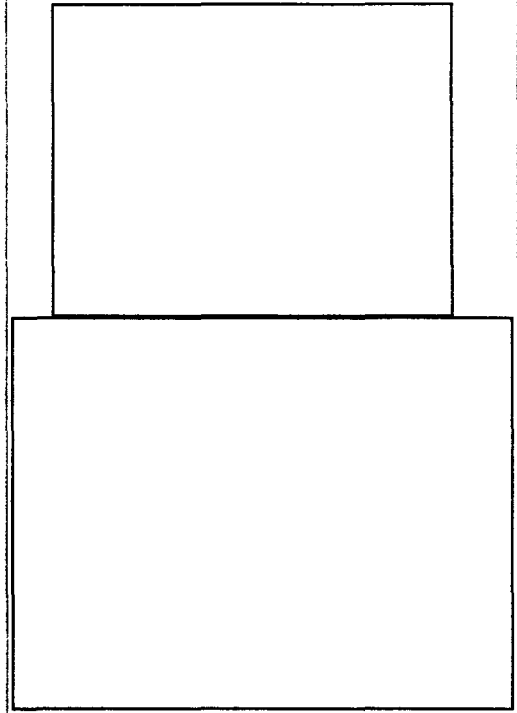
Equally important, Army Corps and DRPA officials are exploring whether the process could free up space in numerous existing spoils dumps, reducing the need to create new dumps to accept material from deepening the river or even just maintaining its current depth.

The Army Corps and DRPA plan to deepen 106 miles of the river's main channel to 45 feet from 40 feet. The project will generate more than 30 million cubic yards of sediments - enough to fill 12 professional football stadiums. About two-thirds of the spoils are expected to go to riverside disposal areas in Logan and Oldmans that the DRPA would have to acquire.

But Pennsylvania environmental officials are eager to acquire Delaware River sediments - whether from the deepening project or from routine channel maintenance - to fill in strip mines that pose safety hazards and have polluted some 2,500 miles of streams. The state could adopt a permit program allowing use of spoils to fill in mines by the end of the year.

In addition to cleaning up streams, river spoils could prevent loss of life and property damage caused when underground mines collapse, said J. Paul Linnan of Pennsylvania's

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Bureau of Abandoned Mine Reclamation. The material also could smother dozens of underground mine fires, some of which have smoldered for decades, he said.

"It can fix problems," Linnan said.

New Jersey's environmental activists face a dilemma. They acknowledge that filling mines with river spoils may be the best chance to clean up streams in coal-mining regions left barren by the drainage of acids and metals such as iron and aluminum from mines. But they don't want to undermine one of the most politically charged issues galvanizing opposition to the deepening project - creation of new riverside dumps to hold vast amounts of spoils.

Army Corps and DRPA officials insist the spoils are safe, but Gloucester County officials and local environmentalists fear industrial toxins such as cancer-causing PCBs will leach from spoils dumps into local groundwater supplies.

Environmental groups also assert the project will stir up toxins in the river and harm wildlife such as short-nosed sturgeon and horseshoe crabs in the bay.

M. Irvil Kear, a Schuylkill County environmentalist, hopes to see South Jersey's fears turned into a boon for residents of Pennsylvania coal-mining regions.

"The situation here right now is much worse than if we filled the mines with (dredged sediments)," said Kear, standing on a rocky ledge overlooking a deep pit to be filled with river sediments provided by the DRPA. "We were not in favor of this at first, but we grew to like it."

The view of the valley behind her is marred by hill-sized ridges of shale and other rocks discarded during the processing of anthracite coal. From a distance, strip mines appear as claw-like gashes torn into the sides of mountains.

"It was so depressing growing up here," Kear said. "But there are people who want to do something about this. The important thing is to do something to make this place better for future generations."

Pennsylvania officials have used coal discard piles like those in the valley to rebuild some of the area's mountains. But state officials say money for such projects is extremely limited.

Linnan estimates Pennsylvania has nearly 5,500 mining areas needing attention, including open mine shafts, strip mines, polluted streams, parcels of land over mines that are collapsing, and fires that have burned away from mines into virgin coal seams. The state estimates the cleanup cost at \$15 billion.

"We don't have the money in Pennsylvania to pay for this," Linnan said.

Streams throughout places like Tamaqua are nearly as acidic as vinegar. They cannot support fish or even insects. Some are stained bright orange or white from the metals in the water.

The Delaware River test projects were made possible in part by the success of a project that is using sediments from New York Harbor mixed with industrial ash to rebuild the mile-long flank of a mountain at the Bark Camp mine.

Fish and other aquatic life have returned to a stream below a strip mine that was filled in with sediments mixed with ash from the Essex County trash incinerator and coal-fired power plants.

Ash has been used to bind watery sediments dredged directly from New York Harbor.

On the other hand, at the Fort Mifflin disposal area in Philadelphia much of the water has drained from the spoils, giving them the consistency of topsoil. Still, the Fort Mifflin material provided by the Army Corps for Bark Camp won't be stable enough to be placed directly on the mountain without the addition of ash, Linnan said.

The spoils provided by the DRPA, however, will be shipped to Tamaqua without additional treatment. No additional stabilizer is needed since the material will be placed in a bathtub-like pit.

But Linnan said he believes even spoils stored in existing dumps along the Delaware may eventually need mixing with ash, which would increase the cost for mine reclamation.

With residents and officials in coal-mining regions warming to the use of dredge spoils, the biggest practical hurdle will be cost, in particular the cost of transporting materials by train or truck.

Dumping dredge spoils from the deepening project along the Delaware River would only cost an estimated \$5 per cubic yard, the Army Corps has estimated, because of the availability of cheap land.

By comparison, the mixing of harbor sediments with ash at a Jersey City processing facility and hauling the mixture by train to Bark Camp would cost \$54 per cubic yard.

The DRPA could choose to pay some additional costs for moving at least some spoils to mines. But the authority is vague about how much more it is willing to pay.

"This (reclamation) is something we'd very much like to see happen," DRPA spokesman Joseph K. Diemer said. "The material taken from the Delaware River has value, and we'd like to see it used for a good purpose."

Officials in Tamaqua, an economically distressed community of about 7,200, are eager to see the DRPA pilot project start. They are even willing to accept more than the 50,000 cubic yards they are currently expecting from the Port Authority.

About half of the 10-square-mile borough has been stripped away by mining. Young people have died when they accidentally drove ATVs and other vehicles over cliffs left by mining, borough manager Kevin Steigerwalt said.

"It's important to us to get these areas restored, reclaimed and returned to their original contours," he said. "The (dredged) material to be brought here seems to be cleaner than the land we have, strangely enough."