
Water Collection Improvements Proposed for Landfill Cleanup

Neal's Landfill
Bloomington, Indiana

July 2007

Share your opinions

EPA invites your comments on this proposed cleanup plan for PCB-contamination coming from Neal's Landfill. Your input is important. EPA may modify its recommendations based on information and comments from area residents.

Public Comment Period
July 6 – Sept. 17 (midnight postmark), 2007

You may fill out and return the enclosed form, or you may mail, fax or e-mail your comments to:

Thomas Alcamo
EPA Remedial Project Manager
EPA Region 5 (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590
Phone: 312-886-7278
Fax: 312-886-4071
E-mail: alcamo.thomas@epa.gov

Share your views and ask questions at the public meeting:

August 7, from 6:30-9 p.m.
Monroe County Public Library
303 E. Kirkwood, Bloomington, Ind.

During the meeting, EPA will explain the proposed cleanup plan for Neal's Landfill. After the presentation, the public may comment on the project or ask questions. A court reporter will record the meeting and all comments. People can also submit their written comments at the meeting. If you have any questions or need special accommodations for the meeting contact:

Dave Novak
EPA Community Involvement
Coordinator
800-621-8431 Ext. 67478
novak.dave@epa.gov

U.S. Environmental Protection Agency wants to modify the current cleanup plan for the Neal's Landfill Superfund site by making improvements in the water collection system while continuing to operate a previously constructed water treatment plant. The amended cleanup plan also proposes to dig up contaminated soil and mud (sediment) in and along a small stream called Conard's Branch. Maintaining the treatment plant, improving the collection system and removing additional soil and sediment will reduce the levels of a hazardous chemical compound called polychlorinated biphenyls or PCBs. Electrical capacitors disposed of in Neal's Landfill 40 years ago contained PCBs that leaked and soaked into underground water supplies that feed Conard's Branch, which flows north into the larger Richland Creek. This proposed cleanup plan is designed to reduce the amount of PCBs present in the water, mud and soil near the landfill.

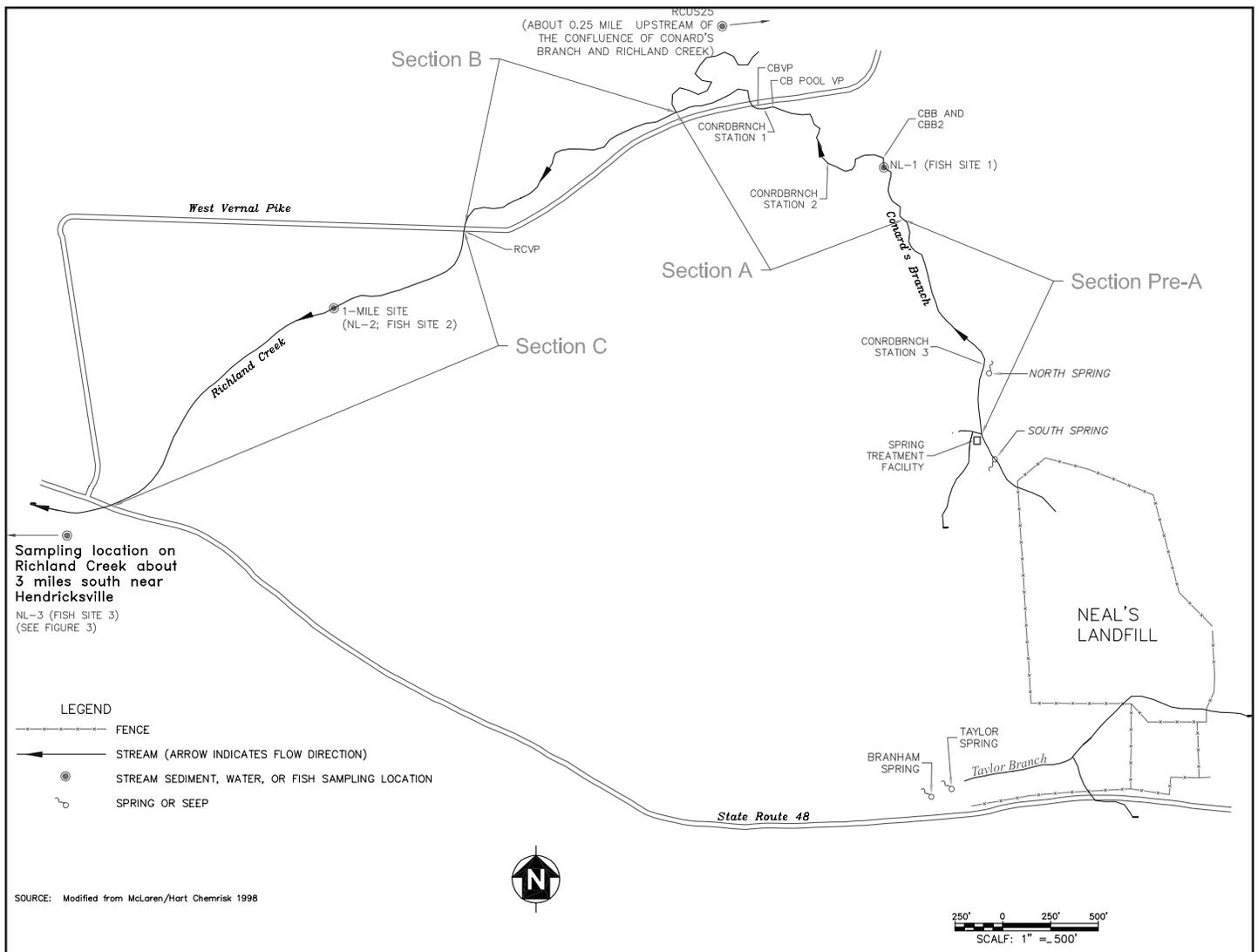
Those PCBs are settling into Conard's Branch where they are consumed by fish. After extensive tests, EPA and state partner Indiana Department of Environmental Management concluded the PCBs pose a health risk to people who eat fish caught from the downstream Richland Creek or who are exposed to soil and mud around that creek and Conard's Branch. Animals are also at risk when they eat fish from both Richland Creek and Conard's Branch.

EPA evaluated seven options for reducing the amount of PCBs contained in underground water flowing from Neal's Landfill. The seven alternatives are described in more detail later in this fact sheet. EPA examined the costs and effectiveness of the seven ground-water alternatives and announced its recommended choice would be a \$1.6 million option that calls for the new collection system and rerouting a water discharge pipe from the current treatment plant. The Agency also proposed one workable alternative – excavation -- for reducing PCB levels in soil and mud near the landfill. Excavation would cost \$1.2 million.

EPA will pick one of the seven ground water cleanup options as its final cleanup plan after an extended public comment period and a public meeting. The selected cleanup plan will be announced with a local newspaper notice and in an EPA document called record of decision amendment or ROD amendment.¹

The public will also get a chance to discuss these proposed cleanup changes at a public meeting Aug. 7 at the Monroe County Public Library in Bloomington, and people will have until Sept. 17, 2007 to file written comments about the proposed plan (see P. 1 box for more details). EPA could

¹ Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA known as the Superfund law) and Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan require public participation in the process of approving a proposed ROD amendment. This fact sheet summarizes the technical documents about the ground water, soil and sediment cleanup that are available for viewing at the official site repository located in the Monroe County Public Library.



alter the proposed changes further or even choose a new plan based on public comments so it is important your voice is heard.

Health risks to people and the environment

Health risks from Neal's Landfill are primarily to people who eat PCB-contaminated fish from Richland Creek or who come in contact with contaminated mud and soil around the creek or Conard's Branch. Contact can come from touching or accidentally swallowing contaminated mud or soil. PCBs are classified as probable human carcinogens. Conard's Branch contains only small fish that would not be consumed by humans, but bigger more edible fish swim in downstream Richland Creek. Scientists who studied Neal's Landfill concluded that over a lifetime, a person who regularly eats fish from the stretches of Richland Creek near the landfill or comes in contact with mud and water from there could face a slightly elevated risk of developing cancer. Another health threat comes from the slightly higher-than-average chances of experiencing non-cancer conditions caused by a lifetime

of eating PCB-tainted fish from Richland Creek. PCBs cause problems in the immune, reproductive, nervous and endocrine systems of humans. Children are especially susceptible to the ill effects of PCBs, which can cause learning disorders and lower IQs.

Animals are at risk from eating fish from Conard's Branch and Richland Creek. Local wildlife such as kingfisher birds and mink that eat fish from Richland Creek within two miles of the landfill could also experience reproductive problems from PCBs, scientists said.

About Neal's Landfill

Neal's Landfill, located about five miles west of Bloomington, consists of 18 acres used as a dump and landfill on a larger parcel owned by a number of parties over the years. The most recent owner is deceased and the property was willed to the Sycamore Land Trust, which has not officially accepted ownership. Access to the landfill is restricted to gated entrances off State Road 48 and a private drive south from Vernal Pike. The site is located in a rural setting, and a few residences sit within a mile of the property. Neal's Landfill, originally known as Whitehall

Pike Landfill, began accepting municipal trash in 1950. It was later renamed Neal's Landfill after a former owner. Between 1958 and 1965 the landfill was expanded into low-lying areas next to an east-west ridge. During 1966 and 1967, scrap capacitors containing PCBs from a former Westinghouse Corp. plant in Bloomington were disposed of at Neal's Landfill. EPA considers CBS Corp., which took over Westinghouse, as the party legally responsible for the pollution. Legal negotiations between EPA and CBS to conduct a final cleanup at Neal's Landfill and five other PCB sites in the Bloomington area are ongoing.

Neal's Landfill was placed on the National Priorities List in 1981. The sites on this list are among the nation's most hazardous waste areas and are eligible for cleanup under the EPA Superfund program. An initial cleanup plan for Neal's Landfill and the other dump sites called for building a local incinerator to burn PCB-contaminated waste, but public opposition blocked that idea.

Extensive sampling and cleanup work on Neal's Landfill began in 1983. Work done over the years included fencing, removing capacitors and contaminated soil, building a clay cap over the landfill and dredging polluted sediment from and along Conard's Branch and Richland Creek. A 450 gallon-per-minute (gpm) treatment plant (with capacity to treat up to 500 gpm) to collect contaminated water from South Spring, North Spring, and a small stream called the Southwest Seep began operation in 1990. Those small streams feed Conard's Branch.

Under a 1999 cleanup plan, about 42,000 tons of PCB-contaminated material was disposed of in an off-site location, more than 4,000 capacitors were removed, the landfill size was shrunk, and a multi-layer cap made from clay and plastic liner was installed over the remaining area. However, the continuing release of PCBs and other hazardous chemicals from the small springs connected to the landfill is recontaminating soil, sediment and underground water and is creating the need for this latest proposed cleanup plan.

Cleanup options

The complex cleanup of the area in and around Neal's Landfill has been divided into three smaller, more manageable parts. EPA calls these parts "operable units." OU1 was the 1999 cleanup project. OU2 is the underground water supplies that feed the springs near Neal's Landfill, while Operable Unit 3 is the soil and mud in and around the springs. The proposed cleanup changes described in this fact sheet deal with OUs 2 and 3. The goals of the proposed cleanup are to reduce the amount of PCBs released from ground water to Conard's Branch and Richland Creek, improve PCB levels in fish so they can be safely eaten and cut PCB mass in soil and mud thereby lowering amounts of the contaminant available to fish.

OU3 – Sediment and Soil

The continuing release of PCBs from Neal's Landfill has contaminated mud and soil in and along Conard's Branch. Studies show creek mud is a major factor in contaminating fish tissue with PCBs. EPA did have the option of taking no action on the tainted mud and soil, but instead the Agency is proposing to remove 1,141 cubic yards of material from in and around the branch. That action will reduce PCB levels to within established health guidelines. The excavated mud and soil would be taken to an approved off-site landfill for disposal. Cost of this project would be \$1.2 million.

OU2 – Ground Water

Seven alternative cleanup plans for managing and cleaning up contaminated underground water supplies were considered by EPA. This ground water that runs under Neal's Landfill picks up PCBs and eventually flows into Conard's Branch and Richland Creek. Each of the seven cleanup options except the no action alternative, contains some common elements such as deed restrictions and covenants to limit future uses of the site. Long-term soil, sediment and water monitoring are also part of each alternative. Cost of this project would be \$1.6 million.

EPA evaluated each of the seven ground-water cleanup alternatives against nine criteria required by law (see box on P. 4 for an explanation of the criteria). The seven alternatives are summarized below, but full details are available in the technical documents on file in the Monroe County Public Library.

Alternative 1 - No Action (shut down current water treatment plant): A no action alternative is always included in EPA's analysis as a comparison point. Cost - \$0

Alternative 2 – Continue to operate 450 gpm water treatment plant: The water plant treats about 47 percent of the spring flow and 38 percent of the PCBs released by the landfill. Cost - \$1.5 million

Alternative 3 – Operate current treatment plant with improvement of water collection system (this is EPA's recommended cleanup alternative): In this option, the water collection system would be improved so it will capture spring water that currently bypasses the treatment plant when water levels are low. The collection system would be located downstream from the treatment plant in Conard's Branch. To prevent the treatment plant from processing water it has already treated, discharge pipes would also be moved farther downstream in Conard's Branch. These steps would treat 51 percent of the spring flow and reduce PCB mass by 39 percent. Cost - \$1.6 million + \$1.2 million for sediment removal for a total of \$2.8 million

Alternative 4 – Operate current treatment plant, improve water collection and add 2 million gallons of stormwater storage: The difference in this alternative from Alternative 3 is a large storage system would be added to catch excess water during storms. The additional stormwater storage would increase spring flow treated to 59 percent with a 48 percent reduction in PCBs released. Cost - \$3.7 million + \$1.2 million for sediment removal for a total of \$4.9 million

Alternative 5 – Expand current treatment plant to 1,000 gpm capacity, improve water collection: In this option, the capacity of the current 450 gpm treatment plant would be doubled while the water collection system and new discharge point described in Alternative 3 would also be implemented. This option will treat 66 percent of the spring flow with a 50 percent reduction in PCBs released. Cost - \$3 million + \$1.2 million for sediment removal for a total of \$4.2 million

Alternative 6 – Expand current treatment plant to 1,000 gpm capacity, improve water collection and add 2 million gallons of stormwater storage: Implementing all the expansions, new systems and storage will treat 74 percent of the spring flow and reduce PCBs 64 percent. Cost - \$5.1 million + \$1.2 million for sediment removal for a total of \$6.3 million

Alternative 7 – Continue operating 450 gpm treatment plant with water collection improvements and the addition of three settling basins constructed in a series: In this option, Alternative 3 would be implemented along with building three settling ponds to treat stormwater. The basins would cover a total of 18 acres. This option would treat nearly all the spring flow and reduce PCBs 75 percent. Cost - \$4.7 million + \$1.2 million for sediment removal for a total of \$5.9 million

Evaluation of alternatives

EPA decided the “no action” alternative for contaminated soil and sediment would not protect people or the environment so the Agency will conduct the excavation. As far as the ground water cleanup for Operable Unit 2, EPA evaluated the seven alternatives against the nine criteria required by the Superfund law (see the comparison chart) and selected as the best one Alternative 3 -- maintaining the treatment plant, improving the water collection system and moving the discharge pipe. Even though Alternative 3 doesn't treat as much spring flow or reduce PCB amounts as much as some of the other options, it is the most cost-effective way to reduce pollution in Conard's Branch and Richland Creek to a safe level and lower or eliminate health risks to people and animals. If selected, the total cost of the OUs 2 and 3 proposed plans would be \$2.8 million.

Explanation of evaluation criteria

- 1. Overall protection of human health and the environment** addresses how well an option protects people and the environment. This standard can be met by reducing or removing pollution or by reducing exposure to it.
- 2. Compliance with applicable or relevant and appropriate requirements (ARARs)** ensures that options comply with federal, state and local laws.
- 3. Long-term effectiveness and permanence** evaluates how well an option will work over the long-term, including how safely remaining contamination can be managed.
- 4. Reduction of toxicity, mobility or volume through treatment** addresses how well the option reduces the danger, movement and amount of pollution.
- 5. Short-term effectiveness** compares how quickly an option can help the situation and how much risk there will be while the option is under construction.
- 6. Implementability** evaluates how feasible the option is and whether materials and services are available in the area.
- 7. Cost** includes not only buildings, equipment, materials and labor but also the cost of maintaining the option for the life of the cleanup.
- 8. State acceptance** is whether the state environmental agency, in this case Indiana DEM, agrees or disagrees with EPA's recommended alternative.
- 9. Community acceptance** evaluates how well the community near the site accepts the option. EPA evaluates community acceptance after it receives and evaluates public comments on its recommended alternative.

**NEAL'S LANDFILL
PUBLIC COMMENT SHEET**

Detach this page, fold on dashed lines, staple, stamp, and mail

Name _____
Address _____
City _____
State _____ Zip _____

FIRST CLASS

Thomas Alcamo
EPA Remedial Project Manager
EPA Region 5 (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Ground water

Evaluation Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Overall Protection of Human Health and the Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compliance with ARARs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Long-Term Effectiveness and Permanence	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reduction of Toxicity, Mobility, or Volume through Treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Short-Term Effectiveness	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Implementability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cost	\$0	\$1.5 M	\$2.8 M	\$4.8 M	\$4.2 M	\$6.2 M	\$5.9 M
State Acceptance	State of Indiana supports Alternative 3.						
Community Acceptance	Will be evaluated after the comment period.						

■ = Meets Criteria

□ = Does Not Meet Criteria

Next steps

EPA in consultation with IDEM will evaluate public reaction to the recommended cleanup plan during the comment period before deciding on a final choice. Based on new information or public comments, EPA may modify its proposed option or select another of the cleanup alternatives outlined in this fact sheet. EPA encourages you to review and comment on the cleanup alternatives. Much more detail on the cleanup alternatives is available in the official documents on file at the Monroe County Public Library in Bloomington.

EPA will respond to the comments in a document called a responsiveness summary, which will be part of the final decision document called the record of decision amendment. The ROD amendment describes the final cleanup plan selected for the site. EPA will announce the selected cleanup plan in a local newspaper and will place a copy on file in the information repository at the Monroe County Library.

Public Comment Period Extended to Sept. 17, 2007

August 7
6:30-9 p.m.
Monroe County Public Library
303 E. Kirkwood, Bloomington, Ind.

Also, share your views and ask questions at the public meeting:

303 E. Kirkwood, Bloomington, Ind.
Official documents about the site can be viewed at the Monroe County Public Library,

containing large amounts of site information: www.copa.org
A private group called Citizens Opposed to PCB Ash also maintains a Web site
Need more information?



United States
Environmental Protection
Agency

Region 5
Office of Public Affairs (P-19J)
77 West Jackson Blvd
Chicago, IL 60604

First Class Mail
Postage and Fees Paid
EPA
Permit No. G-35

**NEAL'S LANDFILL:
Water Collection Improvements Proposed for Landfill Cleanup**