



United States  
Environmental Protection  
Agency

# Proposed Water Overflow Treatment for Creek Cleanup

## Lemon Lane Landfill

Bloomington, Indiana

June 2006

### Share your opinions

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

#### Public Comment Period

**June 14 – August 12 (midnight postmark), 2006**

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

#### Stuart Hill

EPA Community Involvement

Coordinator

EPA Region 5 (P-19J)

77 W. Jackson Blvd.

Chicago, IL 60604-3590

(800) 621-8431 ext. 60689, weekdays

10 a.m. - 5:30 p.m.

Fax: (312) 353-1155

E-mail: [hill.stuart@epa.gov](mailto:hill.stuart@epa.gov)

You may also share your views and ask questions at a public meeting on:

**July 13, 2006**

**7 p.m.**

**Monroe County Public Library**

**303 E. Kirkwood**

**Bloomington, Ind.**

During the meeting, EPA will explain the proposed cleanup plans for Lemon Lane 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 Stuart Hill. Stuart's contact information is listed above.

U.S. Environmental Protection Agency wants to modify the current cleanup plan for the Lemon Lane Landfill Superfund site by treating the stormwater overflow from existing storage tanks and digging up and disposing of contaminated mud and soil. These actions will reduce the levels of a hazardous chemical compound called polychlorinated biphenyls or PCBs. Capacitors and other electrical equipment disposed of in Lemon Lane 40 years ago contained PCBs that are now leaking and contaminating soil and mud around the landfill, soaking into underground water and flowing into nearby Clear Creek (*see site map on Page 3*).

The underground water (called ground water in technical terms) and several small springs flow into Clear Creek where the PCBs are settling in the mud (sediment) and being swallowed by fish. Clear Creek starts about one-half mile from the landfill and runs through the city of Bloomington where it joins Salt Creek near the Monroe Dam. After extensive tests, EPA and state partner Indiana Department of Environmental Management concluded the PCBs pose a health risk to people and animals that eat fish from Clear Creek. EPA and IDEM are negotiating with legally responsible party CBS Corp. to pay for the cleanup of Lemon Lane and five other capacitor disposal sites in the area.

EPA came up with one option for cleaning PCB-contaminated soil and mud in and around Lemon Lane Landfill. It also identified four alternative cleanup plans for reducing PCB-contamination in the underground water supplies and small streams that feed into Clear Creek. The four alternatives are described in more detail later in this fact sheet. The Agency examined the costs and effectiveness of each of the four ground-water cleanup alternatives and announced its preferred alternative would be a \$9.1 million option that calls for routing stormwater overflow from the current storage tanks on the Lemon Lane site through new treatment tanks. EPA will pick a cleanup plan after an extended 60-day 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.<sup>1</sup>

These proposed cleanup changes will be discussed at a public meeting July 13, 2006 in Bloomington, and people will have until August 12 to submit comments after the close of the regular 30-day comment period on July 13, 2006 (*see adjacent box*). EPA could alter the proposed changes further or even choose a new plan based on public comments.

<sup>1</sup> 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.

## Cleanup options

The complex cleanup of the area in and around Lemon Lane Landfill has been divided into three smaller, more manageable parts. EPA calls these parts “operable units.” OU1 was a 2000 project to clean up the source of the PCB contamination. The latest proposed cleanup of the underground water supplies that feed the springs and creeks near Lemon Lane has been designated Operable Unit 2. Operable Unit 3 is the proposed cleanup of soil and mud in and around the landfill.

### OU3 – Sediment and Soil

The continuing release of PCBs from Lemon Lane Landfill has contaminated mud and soil where Illinois Central Spring emerges from the landfill as well as from two areas near the water treatment plant. EPA did not consider alternative cleanup options for OU3 and concluded the only effective cleanup method would be to dig up contaminated sediment and remove it to an off-site disposal area. Three spots were identified for excavation: where Illinois Central Spring emerges from the landfill, the swallowhole and the Quarry springs. The Agency concluded no mud needs to be removed from Clear Creek.

Every bit of hazardous pollutant cannot be removed at cleanup sites, but scientists set an acceptable contamination level that will protect the health of people and animals that come in contact with water, mud and soil. In OU3, the sediment will be cleaned up to 1 part per million PCBs in drainage areas and 5 ppm on average in areas not used for drainage. Part per million is a term of scientific measurement and in this case means 1 part PCBs per million parts soil or sediment. EPA estimates to achieve these cleanup levels about 3,000 cubic yards of contaminated material will have to be removed from near the Quarry springs, swallowhole and Illinois Central Spring.

**Cost - \$1.2 million**

### OU2 – Ground Water

Four alternative cleanup plans for managing and cleaning up contaminated underground water supplies were considered by EPA. This ground water picks up PCBs and eventually flows into Illinois Central Spring and Clear Creek where the pollutant is eaten by fish. Each of the four cleanup options contains some common elements such as deed restrictions and covenants to limit uses of the site. Long-term soil, sediment and water monitoring are also part of each alternative. And all OU2 ground-water cleanup options include two work projects called

Modification A and Modification B. Modification A calls for installing a sump that will collect water from two small springs called Quarry B and Rinker springs. The water would be pumped to an existing treatment plant. Modification A would cost \$696,000. Modification B calls for installation of a new 36-inch water line that will handle all treated water and stormwater. This new pipe would discharge at the Third Street culvert, bypassing the swallowhole and quarry springs mentioned in the OU3 description above. The cost of this line would be \$272,000. Officials estimate each of the four alternatives would take about a year to construct.

With the deed restrictions and modifications A and B common to each option, EPA evaluated each of the four ground-water cleanup alternatives against nine criteria required by law (*see box for an explanation of the criteria on Page 4*). The four alternatives are summarized below, but full details are available in the technical documents on file in the Monroe County Public Library.

**Alternative 1 - No change to the current water treatment plant, modifications A and B:** In this alternative, the water treatment plant capacity would remain at the current 1,000 gallons per minute. With no change, 91 percent of the flow of Illinois Central Spring is captured with a minimum of 75 percent of the PCBs treated.

**Cost - \$6.9 million**

**Alternative 2 – Increase treatment plant capacity to 2,000 gallons per minute, modifications A and B:** The treatment plant capacity would double under this option, which includes the installation of several filters. This alternative would treat 98 percent of the flow of Illinois Central Spring and capture a minimum of 92 percent of the PCBs.

**Cost - \$11.2 million**

**Alternative 3 – No change to the current treatment plant but capture and treat the stormwater overflow from two existing storage tanks, modifications A and B (*this is EPA’s preferred cleanup alternative*):** In this option, the treatment plant would continue operating at its current capacity. Water currently overflows the treatment plant storage tanks during large storms and runs directly to Clear Creek without treatment. The overflow water under this alternative would be channeled to one or more tanks where it would be treated by granular carbon or some other filter material. This option would treat 99.9

percent of the Illinois Central Spring flow and remove 99.9 percent of the PCBs.

**Cost - \$9.1 million**

**Alternative 4 – Increase bulk stormwater storage capacity to 2.4 million gallons from 1.2 million gallons, modifications A and B:** In this alternative, the stormwater storage capacity would be doubled by installing two new storage tanks. This alternative would capture 92.8 percent of the Illinois Central Spring flow and treat a minimum of 78.2 percent of the PCBs.

**Cost - \$8.5 million**

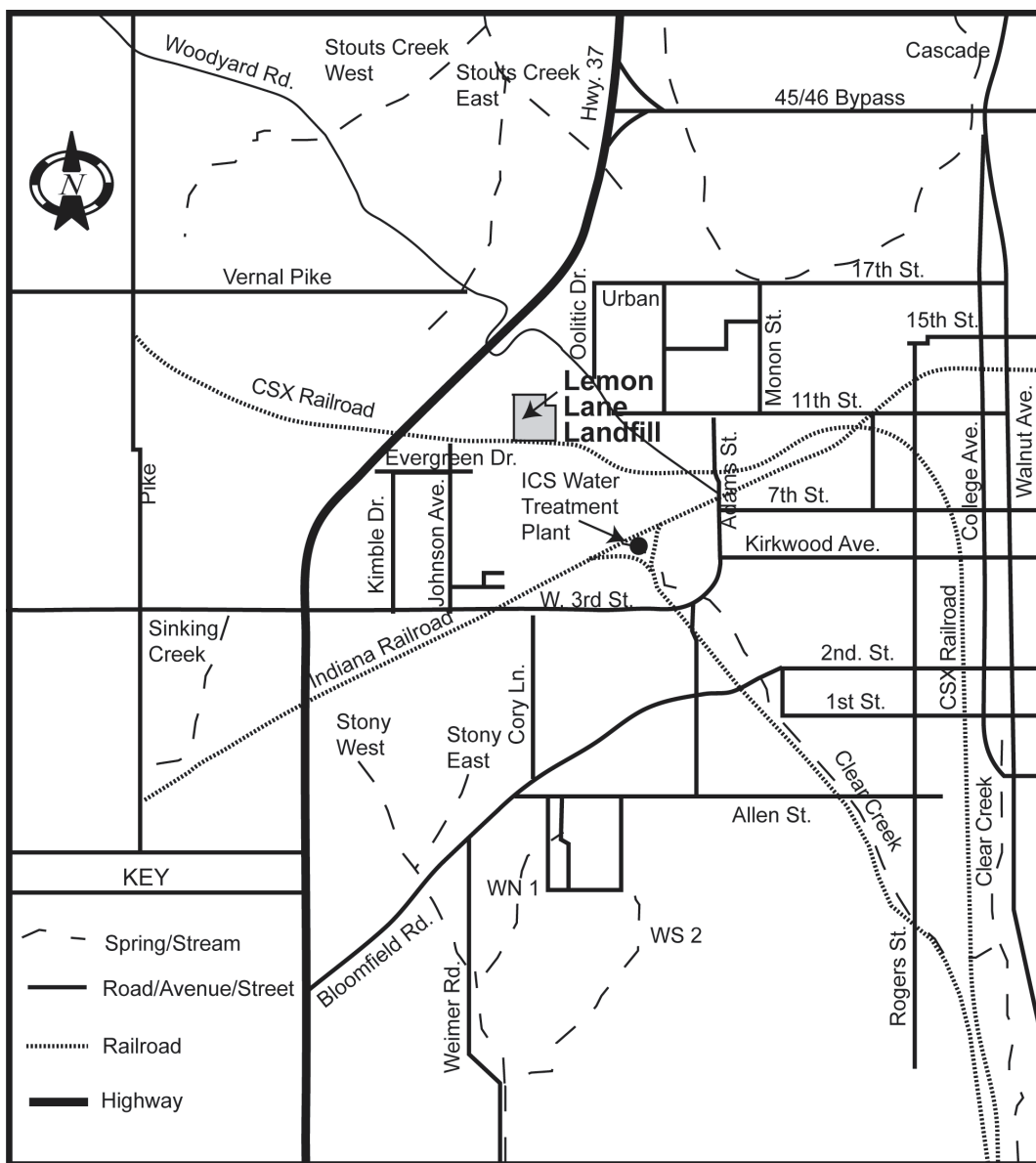
**Evaluation of OU2 alternatives**

EPA evaluated each Operable Unit 2 cleanup alternative against the nine criteria required by the Superfund law (*see the comparison chart on Page 4*) and selected as the best

one Alternative 3, capturing and treating stormwater overflow from the existing storage tanks through one or more new filtration and carbon treatment tanks. Alternative 3 is a cost-effective way to reduce the PCB-contamination in Clear Creek to a safe level and thereby lower or eliminate health risks for people and animals.

Since large rainstorms occur only a few times a year, the new overflow system would not spend as much money on permanent equipment and buildings as in Alternative 2. Alternative 2 is also less efficient because the new treatment plant capacity would remain idle for much of the year and could still be swamped if the area receives back-to-back heavy storms. Alternatives 1 and 4 were least effective in treating PCBs, making them less desirable choices.

**Lemon Lane Site Location Map**



## Explanation of evaluation criteria

- 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.
- Compliance with applicable or relevant and appropriate requirements (ARARs)** ensures that options comply with federal, state and local laws.
- Long-term effectiveness and permanence** evaluates how well an option will work over the long-term, including how safely remaining contamination can be managed.
- Reduction of toxicity, mobility or volume through treatment** addresses how well the option reduces the danger, movement and amount of pollution.
- 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.
- Implementability** evaluates how feasible the option is and whether materials and services are available in the area.
- Cost** includes not only buildings, equipment, materials and labor but also the cost of maintaining the option for the life of the cleanup.
- State acceptance** considers whether the state agrees with the selected option. EPA evaluates this criterion after receiving public comments.
- Community acceptance** considers whether the local community agrees with the selected option. EPA checks this standard after a public meeting and comment period.

## Evaluating cleanup choices against the nine evaluation criteria

EPA evaluated the cleanup choices against seven of the nine evaluation criteria. (See “Explanation of evaluation criteria” above.) The state and community acceptance criteria will be evaluated after public comments are received by EPA. The degree to which the cleanup choices meet the evaluation criteria, as determined by EPA, is shown in the table below.

| Evaluation Criteria  | Alternative 1                               | Alternative 2  | Alternative 3 | Alternative 4 |
|--|---|----------------|---------------|---------------|
| Overall Protection of Human Health and the Environment       | ■   | ■              | ■             | ■             |
| Compliance with ARARs  | ■   | ■              | ■             | ■             |
| Long-Term Effectiveness and Permanence                       | ◆   | ◆              | ■             | ◆             |
| Reduction of Toxicity, Mobility, or Volume through Treatment | ◆   | ◆              | ■             | ◆             |
| Short-Term Effectiveness                                     | ■   | ■              | ■             | ■             |
| Implementability   | ■   | ■              | ■             | ■             |
| Cost   | \$6.9 million                               | \$11.2 million | \$9.1 million | \$8.5 million |
| State Acceptance   | Will be evaluated after the comment period. |                |               |               |
| Community  | Will be evaluated after the comment period. |                |               |               |

■ = Meets Criteria    □ = Does Not Meet Criteria    ◆ = Partially Meets Criteria



# Lemon Lane Landfill Superfund Site Comment Sheet

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Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Zip \_\_\_\_\_

Place  
Stamp  
Here

Stuart Hill  
Community Involvement Coordinator  
Office of Public Affairs (P-19J)  
EPA Region 5  
77 W. Jackson Blvd.  
Chicago, IL 60604-3590

## Health risks to people and the environment

Health risks from Lemon Lane Landfill are primarily to people and animals that eat PCB-contaminated fish from Clear Creek. PCBs can cause liver cancer in humans, and scientists who studied the situation concluded a person who regularly ate fish from Clear Creek or swallowed mud and water from there over a lifetime could face a slightly elevated risk of developing cancer. However, the biggest health threat comes from non-cancer conditions caused by eating PCB-tainted fish. 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. Some good news: scientists concluded the non-cancer health threat from accidentally swallowing water or mud from Clear Creek is low.

Local wildlife that eats fish from Clear Creek includes kingfisher birds and mink, and the PCBs could cause reproductive problems in those species.

## About Lemon Lane

Lemon Lane operated as a sanitary landfill from the late 1930s to 1964. From 1958 until late 1964, a former Westinghouse Corp. capacitor plant in Bloomington used Lemon Lane and five other sites to dump parts and byproducts containing PCBs. The original landfill covered about 10 acres. The city of Bloomington owns most of the facility. The site is bordered by residential areas, railroad tracks and a cemetery.

The dump site was placed on the National Priorities List in 1982. The sites on this list are among the nation's most hazardous waste areas and are eligible for cleanup under the EPA Superfund program. Lemon Lane and the other five sites used to dispose of capacitors and electrical parts will eventually each have their own cleanup procedures. An initial cleanup plan for Lemon Lane and the other dump sites called for building a local incinerator to burn PCB-contaminated waste, but public opposition blocked that idea.

At Lemon Lane, the source control work involved digging up more than 80,000 tons of PCB-contaminated material and disposing of 4,400 capacitors. As part of this work the landfill area was also shrunk to 9 acres and a multi-layered cap was placed over the facility to keep water from seeping into the waste. Also in 2000, EPA constructed an interim, 1,000-gallon-per-minute water

treatment plant along with 1.2 million gallons of stormwater storage. The plant treats contaminated water from Illinois Central Spring, which is connected to the landfill and feeds Clear Creek. To enhance these cleanup measures and attack the PCBs which continue to pollute the surface water, underground water, soil and mud in and around Lemon Lane, EPA considered these latest proposed cleanup plans.

### Next steps

EPA in consultation with IDEM will evaluate public reaction to the preferred cleanup plans 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 file called a responsiveness summary, which will be part of the final decision document called the record of decision amendment. The record of decision 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.

### For more information

For more information on the Lemon Lane Landfill Superfund site, contact:

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### Information repository

Official documents about the site can be viewed at:

Monroe County Public Library  
303 E. Kirkwood Ave.  
Bloomington, Ind.

#### Lemon Lane Web site:

<http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0501812>

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## LEMON LANE LANDFILL SUPERFUND SITE: EPA Proposes Modification to Cleanup Plan

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