



EPA Proposes Changes to Plan For Vacant Properties Cleanup

Ottawa Radiation Areas Superfund Site
Ottawa, Illinois

May 2010

Share your opinions

EPA invites you to participate in the cleanup process at the NPL-11 site in Ottawa. Your input helps EPA determine the best course of action. A public meeting will be held:

Wednesday, May 19

6:30 p.m.

City Council Chambers
301 W. Madison St.
Ottawa

A public comment period provides you an opportunity to share your opinions about the site cleanup. Comments should be submitted from May 3 through June 11, 2010 in these ways:

- Orally or in writing at the public meeting.
- Via the Internet at www.epa.gov/region5/publiccomment/ottawa-pubcomment.htm
- Fax to Cheryl Allen at 312-408-2234
- E-mail Cheryl at allen.cheryl@epa.gov

Contact information

To learn more about the NPL-11 site or other Superfund Ottawa Radiation Areas, contact one of these team members:

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EPA Community Involvement
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allen.cheryl@epa.gov

Denise Boone

EPA Remedial Project Manager
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boone.denise@epa.gov

Call EPA Region 5 toll-free
800-621-8431, 8:30 a.m. to 4:30
p.m., weekdays

U.S. Environmental Protection Agency is recommending the current cleanup plan for the Ottawa Radiation Areas NPL-11 site be changed. The current plan calls for any radium-contaminated soil found at the vacant lot off Bellevue Avenue be dug up and replaced with clean dirt. However, new data collected before the actual cleanup work started showed the current plan would have been difficult to implement and much more costly, so EPA developed an alternative.

The new cleanup plan¹ proposed by EPA calls for no further excavation work at the site. Instead, institutional controls such as a deed restriction will be put in place barring soil excavation below the ground water table unless approved by EPA or the Illinois Emergency Management Agency. Ground water is an environmental term for underground water supplies. The institutional controls will allow for slab-type buildings with a radon reduction system to be constructed on the site and will also prohibit the ground water from being used for drinking water. And if soil is removed, it must be tested and moved from the site to an appropriate disposal landfill.

Also under this plan, every five years for at least 30 years EPA would check the site to make sure no changes have occurred that would affect the risk to human health and the environment. EPA will also evaluate the ground water in the future.

This change to the cleanup plan is not final. EPA wants to hear from you about this proposal. A comment period that provides an opportunity to share your opinions will run May 3 through June 11, 2010. See the box at left to find out how you can participate in cleanup decisions. The Agency could alter its proposed plan or choose a new option based on public comments so your opinions are important.

Site background

NPL-11 is the EPA designation for properties at 351 and 353 Bellevue Ave. on the northeast side of Ottawa. The site consists of two vacant, grass-covered parcels containing a few trees. To date EPA has removed a total of 4,176 tons of radium-contaminated soil from the site. Soil was dug up and removed from 5 to 12 feet below the surface. The area was then filled in with clean soil. Further investigation conducted by EPA in 2006 and 2007 found that although radium-contaminated soil had been excavated from the NPL-11 site, some polluted soil remained deeper underground.

(text continued on P. 3)

¹ Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, known as the Superfund law) requires the publication of a notice announcing the proposed plan. It also requires a public hearing and public comment period. This plain language fact sheet summarizes the more technical proposed plan document and other site-related environmental reports that can be viewed at the Reddick Library, Ottawa, and the EPA Region 5 office in Chicago.

Ottawa Radiation Areas history

The NPL-11 property is among 16 separate areas in and around Ottawa that were found to be contaminated with radioactive waste. Some areas also were polluted by heavy metals. Radioactive radium-226 probably came from two Ottawa companies that used radium sulfate paint in making glow-in-the-dark watch dials and faces. Radium Dial Co. operated from 1920 to 1932 and Luminous Process Inc. from 1932 through 1978. During the course of manufacturing, equipment, buildings and surrounding work areas became contaminated with radium-226. And making the problem even worse, plant waste was used as fill material at various locations around Ottawa.

Residential areas became EPA's cleanup priority because the radioactive contamination posed an immediate health risk. Between 1995 and 1997 EPA removed more than 40,000 tons of radium-contaminated soil from 12 of the 16 areas.

Risks to people and the environment

The risk at NPL-11 is primarily to residents and commercial/industrial workers. They can be exposed to contamination by inhaling radon gas escaping from the ground or by touching radium-contaminated soil. People could also get small particles of contaminated soil in their mouths by casual hand-to-mouth contact. Studies indicate wildlife is not threatened because the area is small and highly developed with no habitat.

Recommended cleanup alternatives

EPA considered four alternatives to clean up the contaminated property. Each option was evaluated against nine criteria required by law (see box on Page 5 for an explanation of the criteria). The options will not be evaluated for state and community acceptance until after the public meeting and comment period.

EPA recommends Alternative 4 as its preferred cleanup option because it provides the best balance of the nine criteria and meets the requirements of federal law. It protects public health and the environment over the long term, complies with state and local regulations, and is cost-effective.

Alternative 1 – No Action: EPA always includes a no action alternative as a comparison point for other options. Under this option, EPA would do nothing to clean up the contaminated property, which means there would be no effect on potential health risks. **Cost: \$0**

Three actions are common to Alternatives 2 and 3. They are:

1. "Soil excavation" is where soil contaminated with radium levels higher than allowable health standards would be dug up and placed into roll-off boxes until the soil is ready for disposal. Soil samples would be collected in the excavation area, specifically the bottom and walls, to ensure the contamination was properly removed. The excavation area would be restored with topsoil and seeded.
2. "Volume reduction" is where soil is separated to ensure that clean soil is not sent to the disposal facility.
3. "Off-site disposal" is where soil contaminated above allowable concentrations is moved from the excavation area to an approved disposal landfill. The contaminated soil would be loaded onto trucks and transported over surrounding roadways to the off-site disposal landfill.

Alternative 2 – Dewatering using continuous pumping, soil excavation, volume reduction, and off-site disposal:

In addition to the three common actions, ground water would be continuously removed from the excavation area. This is necessary because contaminated soil is located beneath the ground water. In order to excavate the soil properly, the underground water must be removed and properly contained. Ground water would be pumped directly into the treatment system at the site. The ground water treatment system would require two aboveground tanks and materials to filter the water as it enters the system. The filtered water would be discharged to the Ottawa wastewater treatment plant. Also, excavated soil would be allowed to dry in roll-off boxes. The water from the soil would be collected and also sent through the treatment system and into the city wastewater treatment facility. EPA would test the treated water regularly to ensure it meets standards. **Cost: \$4.9 million**

Alternative 3 – Installation of a vertical barrier, ground water collection, using continuous pumping, soil excavation, volume reduction, and off-site disposal:

In addition to the three common actions, a vertical barrier would be installed in the ground to contain the underground water and keep it from moving into the area of contaminated soil to be excavated. The vertical barrier would go down to the bedrock. Some ground water could still pass around the vertical barrier. That water would be pumped and stored in aboveground storage tanks and transferred to the ground water treatment system where it would be filtered and discharged to the Ottawa wastewater treatment plant. EPA would test the treated water regularly to ensure it meets the treatment plant's standards. **Cost: \$4.8 million**

Alternative 4 – Institutional controls (this is EPA’s recommended option): This alternative would not allow anyone to dig up soil below the ground water table unless approved by EPA or the Illinois Emergency Management Agency. EPA would prohibit the construction of any buildings without a radon reduction system and prohibit the use of ground water for drinking at the site. If soil is removed, it must be tested and moved from the site to the appropriate disposal landfill. EPA will review the site every five years for at least 30 years to ensure this cleanup option continues to protect people and the environment. **Cost: \$210,000**

Evaluation of alternatives

Each alternative went through a pre-screening process to evaluate its effectiveness, implementability and cost. After pre-screening, all the alternatives were retained. Alternative 1 would not be effective but was retained as a comparison point.

EPA recommends Alternative 4 because it provides the greatest overall protection of human health and the environment, is compliant with laws and regulations, offers short- and long-term protections, is easy to implement and is cost-effective.

In its detailed evaluation, EPA compared the alternatives to the nine criteria and formed the chart below.

All the alternatives except 1 provide overall protection of human health and the environment and comply with applicable environmental laws and regulations.

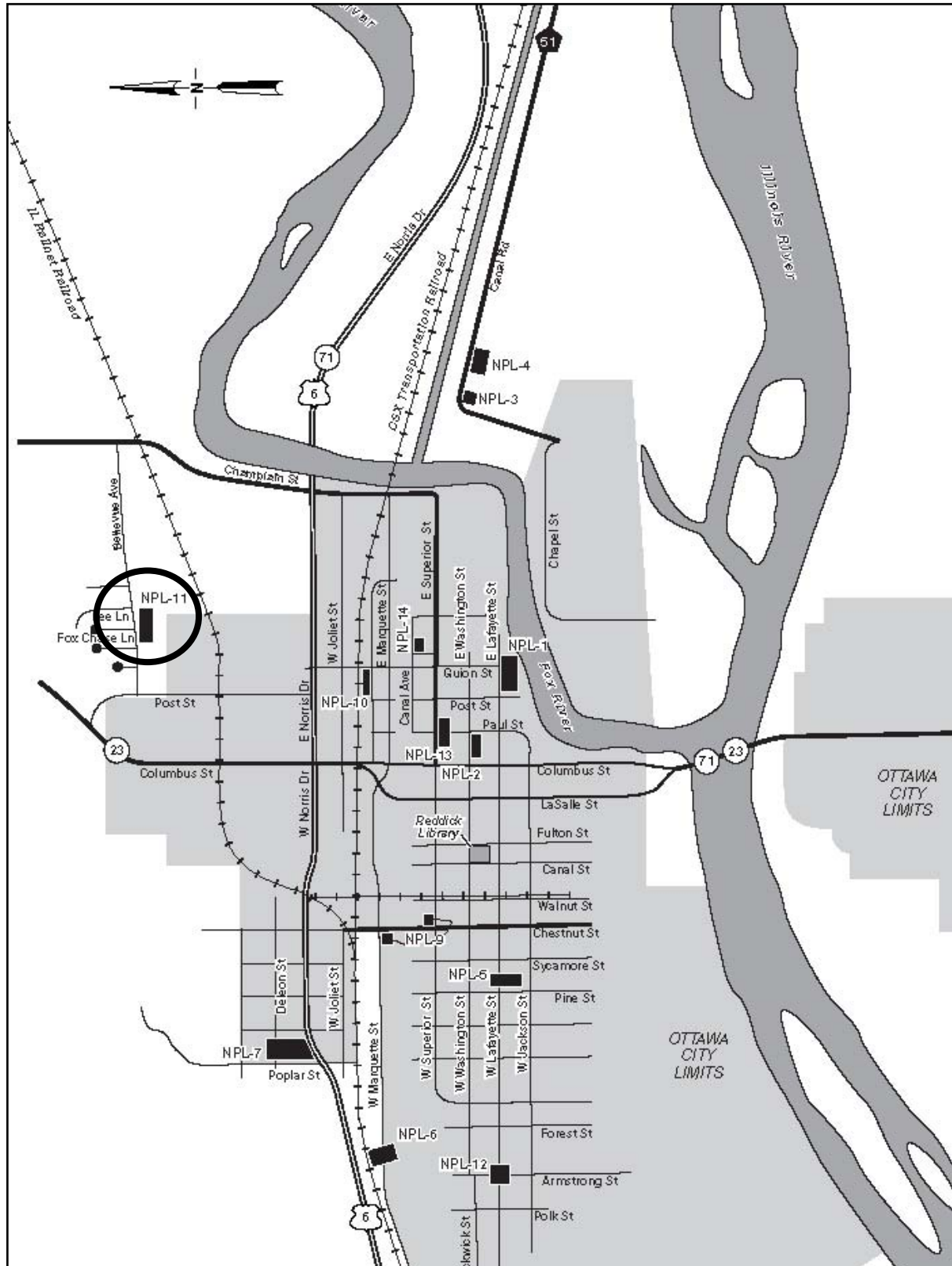
Alternatives 2 and 3 both provide excellent long-term effectiveness because all the contaminated material would be removed from the site and would allow unrestricted land use of the property. Alternative 4 also would be effective over the long-term because the controls that would be put in place such as digging restrictions would mean that the contaminated soil would not come in contact with people or the environment.

Treatment is not a principal element in any of the alternatives so none of them would reduce the toxicity, mobility or volume of the soil contamination.

Alternative 4 would be effective in the short-term because the site does not pose an imminent danger and the current risks are manageable if further time is needed to select or evaluate alternatives. Alternatives 2 and 3 would be less effective in the short-term because appropriate measures would need to be put in place to protect the community, workers and the environment from effects associated with implementing these options.

Comparison of Cleanup Alternatives				
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	\$0	\$4.9 Million	\$4.8 Million	\$210,000
State Acceptance	Will be evaluated after the public comment period.			
Community Acceptance	Will be evaluated after the public comment period.			
● Meets Criteria ■ Partially Meets Criteria ○ Does Not Meet Criteria				

* EPA concluded the “no-action” alternative would not protect people or the environment, and it was eliminated from further consideration.



All locations of the Ottawa Radiation Areas Superfund site are shown in this figure. The circled site NPL-11 is the subject of this latest proposed plan.

**OTTAWA RADIATION AREAS – NPL 11 SITE
PUBLIC COMMENT SHEET**

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

Name _____
Address _____
City _____
State _____ Zip _____

FIRST CLASS

Cheryl Allen
Community Involvement Coordinator
EPA
Region 5
Superfund Division (SI-7J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Alternatives 2 and 3 are somewhat difficult to implement because they both require excavation and disposal. Removing the contaminated soil could be difficult because of the need to manage the ground water and the depth of the excavation. Alternative 4 is the easiest to implement.

Next steps

Before it makes a final decision, EPA will review comments received during the comment period and at the public meeting. Based on new information presented in the comments, EPA may modify its preferred plan or select another option.

EPA encourages you to review and comment on the proposed cleanup plan. See the box on the front page on how to submit comments about the proposed cleanup plan. Much more detail on the cleanup options is available in the official documents on file at the information repository (listed on the front page) or EPA's website.

EPA will respond to the comments in a document called a "responsiveness summary." This will be part of another document called the "record of decision" or ROD that describes the final cleanup plan. The Agency will announce the selected cleanup plan in a local newspaper and will place a copy in the information repositories and post it on EPA's website.

For more information

A considerable file of site-related documents, engineering reports and environmental and health studies is available for public viewing at the Reddick Library, 1010 Canal St., Ottawa, or at the EPA Region 5 Records Center, 7th Floor, Metcalfe Federal Building, 77 W. Jackson Blvd., Chicago.

You can also get Ottawa Radiation Areas information from the EPA website:
www.epa.gov/region5/sites/ottawa.

Evaluation criteria

EPA uses nine criteria to compare cleanup options:

1. **Overall protection of human health and the environment** addresses whether an alternative adequately protects both human health and the environment. The cleanup plan can meet this criterion by reducing or eliminating contaminants or by reducing exposures to them.
2. **Compliance with applicable or relevant and appropriate requirements** assures that each project complies with federal, state and local laws and regulations.
3. **Long-term effectiveness and permanence** evaluates how well an option will work in the long term, including how safely remaining contaminants can be managed.
4. **Reduction of toxicity, mobility or volume through treatment** addresses how well the option reduces the toxicity (the chemical makeup of a contaminant that makes it dangerous), movement and amount of contaminants.
5. **Short-term effectiveness** is how quickly the project achieves protection, as well as its potential to be harmful to human health and the environment while it's being constructed and operated.
6. **Implementability** evaluates the technical feasibility of the cleanup plan, and whether materials and services are available to carry out the project.
7. **Cost** includes estimated capital or startup costs, such as the cost of buildings, treatment systems and monitoring wells. The criterion also considers costs to implement the plan, and operate and maintain it over time. Examples include laboratory analysis and personnel to operate equipment.
8. **State acceptance** is whether the state environmental agency, in this case the Illinois Emergency Management Agency, 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.

EPA Proposes Changes to Cleanup Plan For Vacant Properties Ottawa Radiation Areas Site

(details inside)

For more information

You may review site-related documents at:

Reddick Library
1010 Canal St.
Ottawa

On the web:

www.epa.gov/region5/sites/ottawa

OTTAWA RADIATION AREAS: Proposed Changes to Cleanup Plan

United States
Environmental Protection
Agency
Region 5
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