



# EPA Response to Questions Posed by Area Residents

**Ottawa Radiation Areas Site**  
Ottawa, Illinois

April 2003

## Availability Sessions

Representatives of EPA, Agency for Toxic Substances and Disease Registry, Illinois Department of Nuclear Safety, and LaSalle County Department of Health will be available to discuss one-on-one with area residents site cleanup activities at two availability sessions.

**Date: Wednesday, April 23, 2003**

**Times: 3 – 5 p.m.**

**6 – 8 p.m.**

**Place: Ottawa City Hall  
301 W. Madison St.  
Ottawa, Illinois**

The following areas will be addressed in the remaining cleanup work:

- NPL-1 Open Lot Near Football Field
- NPL-4 Former Landfill Area
- NPL-8 Conservation Area
- NPL-9 Former Marquette Warehouse
- NPL-11 Bellevue Avenue Residences
- Illinois Power Building

For special needs or accommodations for the availability sessions, please contact: Joe Muñoz, EPA Community Involvement Coordinator at (312) 886-7935, or toll free at (800) 621-8431 Ext. 67935.



*EPA excavates lead-contaminated soil at the NPL-1 area.*

## Introduction

In January 2003, U.S. Environmental Protection Agency Region 5 visited with area residents to learn local public perception and identify community concerns of the Ottawa Radiation Areas Site in Ottawa, Ill. The following provides EPA's answers to the questions asked by the residents of the site's various National Priorities List areas during the community interviews process.

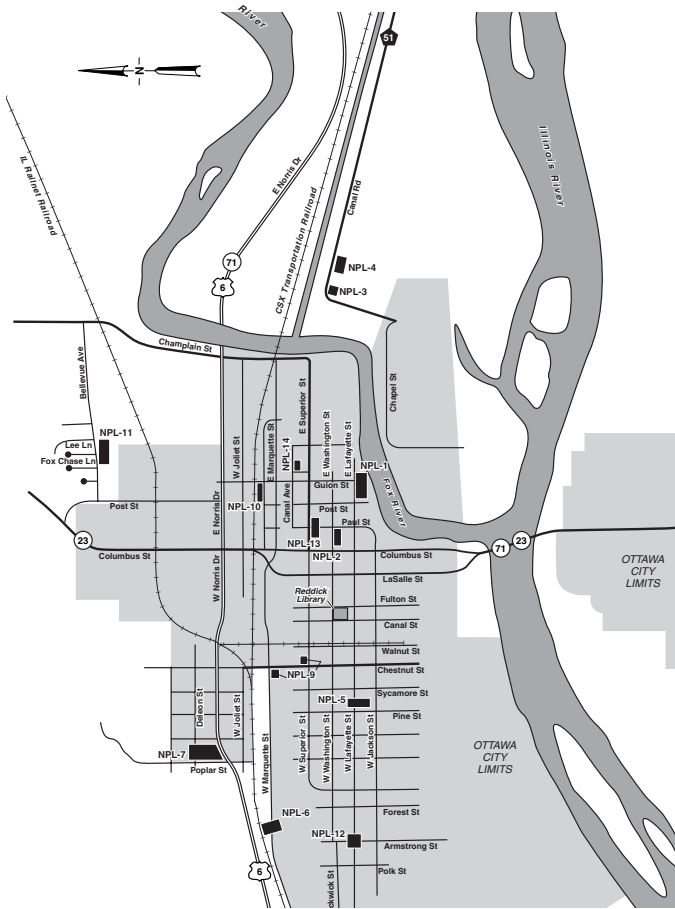
## Metal Contamination at NPL-1, 4 and 9

### *What were the work crews doing at the end of 2002?*

In May 2001, EPA checked some of the Ottawa Radiation Areas for a variety of metals. These tests had nothing to do with the radium contamination. We found two potential problem areas. The first was at NPL-4, where we found the metal beryllium in nearby residential wells. The second problem was lead contamination in soil at several scattered locations at NPL-1 and NPL-9.

The beryllium posed a potential health risk to people around NPL-4 who have residential wells. As a result of these tests, six homes were connected to the city of Ottawa municipal water supply. This phase of the project was completed in the spring of 2002.

In November and December 2002, EPA removed lead-contaminated soil from scattered locations at NPL-1 and NPL-9. At NPL-1, we removed 400 cubic yards of soil from four residential locations. In the industrial area of NPL-9, we removed about 5,000 cubic yards of soil. The soil was screened for radium and none was detected.



Ottawa Radiation Areas Location Map

## Cleanup Action and Funding

### What is the cleanup plan and cost of each NPL area?

Once the remedial design is completed in 2004, the next step is the remedial action, which is starting the actual cleanup. The following list explains what we plan to do at five of the 14 NPL areas.

#### NPL-1 – Open Lot Near Football Field

- Remove polluted soil
- Put clean fill in those areas and plant grass
- Test the soil we remove and dispose of it at a landfill that accepts radioactive material
- Collect water we find and treat or dispose of it
- Cost for NPL-1 – \$1,030,000

#### NPL-4 – Former Landfill Area

- Remove polluted soil
- Put clean fill in those areas and plant grass
- Test the soil we remove and dispose of it at a landfill that accepts radioactive material
- Collect water we find and treat or dispose of it
- Cost for NPL-4 – \$9,700,000

#### NPL-8 – Conservation Area

- Remove polluted soil down 10 feet
- Put clean fill in those areas and plant grass
- Sort the soil into polluted and unpolluted portions
- Test the soil we remove and dispose of it at a landfill that accepts radioactive material
- Collect water we find and treat or dispose of it
- Restrict the land's use to recreational with a deed restriction
- Cost for NPL-8 – \$32,970,000

#### NPL-9 – Former Marquette Warehouse

- Remove polluted soil
- Put clean fill in those areas and plant grass
- Sort the soil into polluted and unpolluted portions
- Test the soil we remove and dispose of it at a landfill that accepts radioactive material
- Cost for NPL-9 – \$600,000

#### Illinois Power Building

- Remove polluted soil
- Test the soil we remove and dispose of it at a landfill that accepts radioactive material
- Monitor the building for radon to make sure the levels are safe
- If the radon levels are high, we will reduce them with a radon-reduction system
- Cost for Illinois Power Building – \$40,000

### How many areas have been cleaned up?

EPA's priority was residential property and properties near residential areas, because they posed immediate and substantial danger to people. From 1995 to 1997, EPA removed more than 40,000 tons of radium-contaminated soil from 12 of the 14 sites (NPL-1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14). Work was not completed at NPL-1, 9 and 11 because of the cost and because the amount of material removed far exceeded the limits of the Superfund Removal Program. The work at the remaining contaminated soil on these three sites is expected to begin in the fall of 2004. NPL-4 and NPL-8 are not in residential areas.

### When is EPA going to start the cleanup and when will it be finished?

We expect work to begin in the fall of 2004, and estimate the work should be done in about two years.

***Is City Hall pressuring EPA to conduct these community interviews?***

No, we always give area residents a chance to be heard. EPA wanted to hear your concerns. We also wanted to take a fresh look at the best ways to get information about the site to you, and we were able to update our distribution list.

***Is there a Web site for just the Ottawa Radiation Areas site?***

EPA has not set up a Web site just for Ottawa. However, we have a Web site with general information about the National Priorities List. We update the Web site twice a year: <http://www.epa.gov/region5/superfund/npl/index.html>.

## **NPL-1**

***Has EPA tested NPL-1 area and the adjacent areas recently?***

The most recent tests were done in 2002, when lead contamination was found on nearby residential properties. EPA removed the lead-contaminated soil. Other tests in 1999 and 2001 were negative. If you would like to see the full results of these tests, please refer to:

- NPL-1 Site Characterization Report (WESTON, 1999)
- NPL-1 Predesign Investigation Report (WESTON, 2001)
- Ottawa Lead Sites Pre-Removal Report (WESTON, 2002)
- Ottawa Lead Sites Removal Report (WESTON, 2003).

## **Lead Contamination Removals at NPL-1 and 9**

***Regarding the recent cleanup, how can lead contamination be on one side of the street and radiation on the other side?***

The lead and the radium are not necessarily related. The radium contamination is in fill material that came from the Radium Dial Co. or Luminous Processes Inc. The lead contamination is mixed with the radium in these areas, but lead was also found in fill material that doesn't contain radium. The recent cleanup focused only on those areas where we found lead contamination, but not radium.

***How can we get a copy of what EPA found on the digging/testing of the open lot adjacent to NPL-1 during the fall of 2002?***

A copy of the report is available in the information repository at the Reddick Library, 1010 Canal Street, Ottawa, Ill.

## **NPL-8**

***What is the cleanup plan for NPL-8? Will they build a contamination processing plant on that site for the cleanup so they won't have to move the contamination so far?***

The cleanup at NPL-8 is still being designed, so all plans are tentative. Basically, though, here's what we expect to happen. Workers will dig up the contaminated soil, then it will be stockpiled, separated, loaded into transportation containers, and shipped to a low-level radiation landfill. You may see one or more buildings put up at the site, if that would benefit the cleanup effort in a cost-effective way.

***Can contaminated erosion fall into the Fox River?***

During the cleanup, we'll put erosion control measures in place to ensure that contamination does not leave the NPL-8 site, and we'll remove all contamination down to 10 feet below the ground. Therefore, there's no potential for erosion following the cleanup.

***How did radiation from the dial painting process/buildings contaminate the ground water?***

Actually, it didn't. The high concentration of radium in Ottawa's ground water comes from naturally high levels of radium in both the Galesville and St. Peter sandstone aquifers. EPA has determined that radium from the Ottawa Radiation Areas has not contaminated the ground water in the Galesville or St. Peter aquifers. We did find radium contamination in what's called "perched water," which is underground water that lies above the St. Peter aquifer. But this contamination can be easily removed with a filter.

***Is the radiation contamination airborne?***

There is no radiation contamination in the air right now, because grass and plants on the site ensure that the wind doesn't blow contaminated dust around the area. When we re-start the cleanup next year, we'll use a technique that controls dust, and we'll monitor the air above and around the site to be sure no radiation escapes. Also, when radium breaks down naturally, one

byproduct is radon gas, which can seep out of the ground. But radon gas disperses quickly in the air, so there's no danger from radon.

***Will EPA clean up the site without hurting the budget of the state of Illinois, Illinois Department of Nuclear Safety or Illinois Department of Natural Resources?***

We are negotiating the cleanup with our state partners, trying to find ways to reduce the cost to the state.

***Is it possible that EPA will drop NPL-8 and walk away? NPL-8 needs to be cleaned up because that area is where future growth and development will occur (urban sprawl). Kids use the open area as a playground for dirt bikes.***

EPA plans to clean up NPL-8 so that it can be used for recreation purposes such as a park or playground.

***Is it safe for people canoeing the Fox River to camp on the island and shoreline near NPL-8? Are signs posted on the shoreline of NPL-8?***

We know from sediment sampling that the shoreline near NPL-8 is not contaminated. No samples were taken on the island, but the shoreline samples indicate that the island is also free of contamination.

There are no signs restricting access to NPL-8 along the river. However, the steep banks and heavy vegetation along the river act as a natural barrier. EPA will post signs during next year's cleanup.

***Is the health of nearby employees affected by the contamination at NPL-8?***

No. Access to the site is restricted, and the grass and other plants on the site keep the dust from blowing any contamination off the site.

***After allowing work crews access to NPL-8, is it possible that the contamination could have been spread to business property?***

A strict decontamination program was in effect during all work at the NPL-8 site. All vehicles, equipment and people were decontaminated before leaving the site. As a precaution, EPA also screened everything and everybody to ensure that the decontamination process worked.

***The new industrial park is right across the street from NPL-8, should those employees be concerned about the contamination?***

No. Access to the site is restricted, and the grass and other plants on the site keep the dust from blowing any contamination off the site.

## **Health**

***Why do the cleanup crews have protective clothing and the residents have nothing?***

Cleanup crews – and anybody who goes onto the site – must follow a Health and Safety Plan, as required by the Occupational Safety and Health Administration. Because the workers are directly exposed to contamination, they need protective equipment. EPA monitors the air above and around the site to ensure that nearby residents are not exposed to contamination, so they don't need protective clothing.

***Does the contamination dissipate on its own?***

Radium contamination does decay, but it takes an extremely long time. The half-life of radium-226 is 1,600 years. This means that it would take 1,600 years for one gram of radium-226 to decay down to one-half gram. So the answer is, technically yes, but nobody wants to wait that long for results.

***Are learning disabilities associated with radiation exposure?***

There is no known association between radiation exposure and the development of learning disabilities in children.

***Will the digging make the contamination airborne?***

When we re-start the cleanup next year, we'll use a technique that controls dust, and we'll monitor the air above and around the site to be sure no radiation escapes.

***Could the digging affect the storm water drain system?***

Any time we dig near underground utilities – electrical, natural gas, phone, sanitary sewer or storm sewer – we work closely with state and local authorities. They help us locate the utility lines before we start digging, so there's no damage. In addition, if we dig near storm water catch-basins, we take steps to keep the contamination from entering open catch-basins.



***Does Ottawa have a higher rate of cancer than other towns in Illinois?***

The Illinois Department of Public Health and Northern Illinois University did a study on the incidence of cancer in LaSalle County – specifically in the area surrounding the Ottawa Radiation Areas Site. The researchers wanted to know if there is a high incidence of cancer among residents of Ottawa, and also how Ottawa’s cancer rate compares with that in areas of known radiation sites. The researchers reviewed Illinois State Cancer Registry data from 1986 to 1992. The registry lists cancers by tumor type, patient’s place of residence and patient’s age. Researchers analyzed only cancers known to be associated with radiation exposure, including leukemia and bone, liver, lung, and pancreatic cancer. The cancer rates for Ottawa were compared with rates for DeKalb County and the entire state of Illinois, and the data integrated with a Geographic Information System map to display the pattern of cancer cases throughout Ottawa.

Researchers found that the overall rate of cancer and the rate of lung cancer were higher on the north side of the city, where many of the radiation sites are located. While this is evidence that there may be a relationship between the incidence of cancer in Ottawa and exposure to the radiation sites, the results do not prove that a relationship exists.

***What are the levels of exposure to radiation in soil and water in Ottawa?***

We’re all exposed to small amounts of radiation every day. It comes from food and water, and from the soil and the air. It’s called "background exposure," and how much

you get depends on where you live. Radiation exposure is measured in "picoCuries," The "background" concentration of radium in Ottawa soil is 1.2 picoCuries of radiation in a gram of dirt. For drinking water, the figure has historically been 6.3 picoCuries in a liter of water. That’s over EPA’s standard of 5.0 picoCuries per liter. In 2002, the city of Ottawa installed a reverse osmosis system in its water treatment plant. As a result, the radium concentration has dropped to between 2.0 and 3.0 picoCuries per liter. The water supply now meets the drinking water standard for radium.

***What are the health effects of drinking and bathing in water that contains levels of radiation that exceed the EPA standard?***

Drinking water standards are developed with long-term exposure in mind. It’s not likely that you would suffer any significant health effects from drinking water that slightly exceeds the standard. Any exposure from water would be in addition to the small amounts of radiation that each individual is exposed to each day from soil, food, water and air.

***Is Lou Gehrig’s Disease associated with radiation exposure?***

Doctors don’t know what causes Amyotrophic Lateral Sclerosis, or ALS, also known as Lou Gehrig’s Disease. Research is being done to find out if there is an association with exposure to environmental toxins or occupational hazards. However, there is no known link between radium exposure and ALS.



*James Molholm, an environmental scientist with EPA’s contractor, logs the soil profile of the Geoprobe core for the investigation at the NPL-8 frontage property.*

## Information repository

A repository of information about the site is located at the Reddick Library. It contains many documents, including the Administrative Record, site-related technical documents, fact sheets, and general information concerning the Superfund program. The documents are there for your use.

### Reddick Library

1010 Canal Street

Ottawa, Illinois

## For more information

If you have questions or would like additional information about the Ottawa Radiation Areas Superfund site, please write or call:

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