



United States  
Environmental Protection  
Agency

EPA Region 5 Records Ctr.



200910

# EPA Proposes Final Cleanup Plan for Residential Areas

**Kerr-McGee Residential Areas site**

West Chicago, Illinois

July 2003

## Upcoming public meeting

You are invited to attend a public meeting to learn more about the project:

**July 29, 2003**

**Beginning at 7 p.m.**

**West Chicago City Hall**

**475 Main St.**

**West Chicago, Ill.**

If you require special accommodations to attend the meeting, please contact Stuart Hill two weeks prior.

## Comment period

Your input helps EPA determine the best course of action. If you would like to comment on the project, comments are being accepted between **July 10 and August 11, 2003**. Your comments must be postmarked by the last day of the comment period. Please complete the comment form or send other correspondence to:

### Stuart Hill

EPA

Community Involvement  
Coordinator

77 W. Jackson Blvd. (P-19J)

Chicago, IL 60604

hill.stuart@epa.gov

### Rebecca Frey

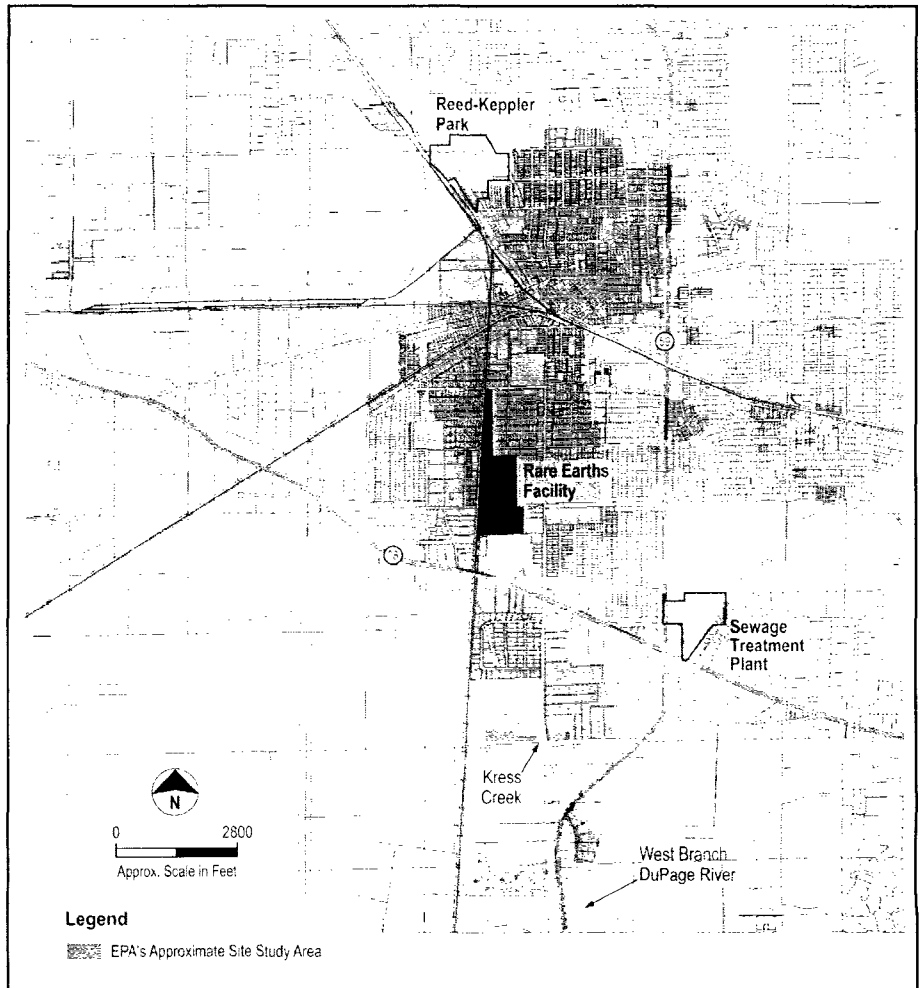
EPA

Remedial Project Manager

77 W. Jackson Blvd. (SR-6J)

Chicago, IL 60604

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*Residences included in the study are located in shaded areas.*

## No further cleanup action proposed

U. S. Environmental Protection Agency Region 5 is proposing that no further cleanup action be taken at the Kerr-McGee Residential Areas site after the ongoing removal of radioactive soil is completed. EPA expects the ongoing cleanup, which started in 1995, to be completed in 2003. At that time, radiation levels will be well within safe levels. Because current cleanup activities are expected to be sufficient and because EPA is required to formally issue a decision on a final cleanup plan, the agency is making a recommendation of no further cleanup action at this site. Still, EPA is required to complete the process of making a decision including a public comment period and issuing a formal document called a record of decision. EPA, in consultation with Illinois EPA, will select a final remedy for the site after reviewing and considering all information submitted during the 30-day public comment period (see sidebar).

Public comments on this proposed plan, and the information that supports it, are important contributions to the selection of a final cleanup plan for the site. Members of the public are encouraged to review the remedial investigation report for the Residential Areas site, dated July 2003, along with other relevant documents, at the site's information repository located at the West Chicago Public Library and at EPA Region 5's offices in Chicago.

### **Site location and description**

The Kerr-McGee Residential Areas site is comprised of residential, institutional, commercial, industrial and municipal properties in and around West Chicago, DuPage County, Ill., about 30 miles west of Chicago. EPA's study area for the Residential Areas site included 2,174 individual properties and is shown on the site location map on page 1. EPA's initial site study area was based on the results of a 1989 "flyover survey" of the city that identified potential areas of elevated radioactivity in the West Chicago area by using a helicopter equipped with sensitive radiation detection instruments. EPA later expanded the site study area based partly on the results of "scanner van" surveys that identified additional areas of elevated radioactivity (by using a modified commercial delivery truck equipped with sensitive radiation detection instruments) and based on other available information from the city and state.

### **Site background and cleanup activities**

Radioactive waste materials were generated at the West Chicago Rare Earths Facility, operated by Lindsay Light and Chemical Co. and its successors from 1932 until 1973. Kerr-McGee owned and operated the facility from 1967 to 1973, when it closed the facility. The facility produced radioactive elements such as thorium and radium by extracting them from ores, and this process resulted in radioactive waste materials known as thorium mill tailings.

Over several decades, before the health risks associated with radioactive materials were generally recognized, the thorium mill tailings at the Rare Earths Facility were available at no cost for people to use as fill material at residential, municipal and other properties throughout the West Chicago area. Winds also may have spread some of the thorium mill tailings stored on the facility to nearby properties. As a result of the wind-blown contamination and the use of the tailings as fill material, the soil at many properties in the West Chicago area became contaminated with radioactive materials.

Kerr-McGee and the city of West Chicago conducted a voluntary cleanup action at some of the contaminated residential properties located within the city during 1984 and 1985 using a cleanup standard established by Kerr-

McGee. Some of those properties eventually needed additional cleanup work because the cleanup standard that EPA established for the site in the 1990s was more stringent than the standard Kerr-McGee used in the mid-1980s.

Radioactivity surveys performed in the West Chicago area by the Nuclear Regulatory Commission and EPA resulted in EPA placing the site on the Agency's National Priorities List in 1990. The National Priorities List is a list of Superfund sites nationwide. In 1994 EPA began its investigation of the site, known as a remedial investigation, to determine which properties in the West Chicago area were contaminated. Knowing that there were limited options for cleaning up radioactive contamination and that the site investigation could last several years due to the size of the area, EPA decided to speed cleanup of the site using authority granted by the Superfund law. EPA studied the technical feasibility and cost of the available cleanup options and established cleanup standards for the site. EPA then decided that contaminated soil should be removed from the area and documented its decision in a 1994 Action Memorandum. In the meantime, EPA continued its site investigation to identify contaminated properties.

The 1994 Action Memorandum concluded that soil at the site should be removed until the site cleanup standard of 5 pCi/g above normal background radiation was achieved. EPA's sampling at the site showed that the background concentration was 2.2 pCi/g, resulting in a final cleanup standard of 7.2 pCi/g for total radium. On the same day that EPA signed the action memorandum, EPA ordered Kerr-McGee to conduct the cleanup at the site. Kerr-McGee started the project in the spring of 1995, and EPA expects the cleanup to be completed during 2003. The work consists of Kerr-McGee crews digging up the tainted soil at each contaminated property until EPA and the Illinois Department of Nuclear Safety verify that the cleanup standard is met. Kerr-McGee then backfills the excavated area with clean soil and restores the property. The contaminated soil is trucked to the Rare Earths Facility and from there it is shipped by train to a licensed permanent disposal site in Utah.

EPA conducted the bulk of its investigations at the site from 1994 through 1996 and from 1998 through 2000. In addition, the Illinois Department of Nuclear Safety conducted site investigations for EPA at a number of residential properties as EPA gained access from property owners who previously had not granted access. The investigations consisted of testing the outdoor areas of each property using hand-held radiation detection instruments and in some cases collecting soil samples for laboratory testing. EPA also conducted indoor testing at some properties during the early years of its investigation, not

because EPA thought there would be contamination inside buildings, but as a way to help locate contamination that might be located outside the walls or under the floor of the basement. The indoor studies did not add much value to the investigation, however, so EPA discontinued them after 1996.

During its investigation of the site, EPA identified 676 contaminated properties. Only three of the 2,174 properties in the site study area have not yet been tested. EPA will continue its efforts to gain access to those three properties for testing. So far, Kerr-McGee has cleaned up 670 of the 676 contaminated properties and has removed 110,627 cubic yards of contaminated soil from the site. EPA expects that the remaining contaminated properties will be cleaned up during 2003. Kerr-McGee will submit a final site cleanup report to EPA for review and approval after the ongoing cleanup is completed. That final report will provide more detailed information about the cleanup and will be available to the public after EPA approves it.

### **Risk assessment results**

EPA performed a health risk assessment as part of the remedial investigation report. The risk assessment initially had been conducted in 1997, prior to EPA expanding the site study area, based on the contaminated properties that had been identified at that time. Although the risk assessment was conducted while the cleanup action was occurring, the purpose was to estimate the risks to human health based on the conditions at the site prior to the cleanup. This is called a baseline risk assessment. The risk assessment takes into account the level of contaminants found at the site and the likelihood for people to be exposed to the contamination. Current land use at the site is predominantly residential, and EPA assumed that same type of land use would continue in the future. The baseline assessment concluded that cancer risks to human health associated with the radioactive contamination in the soil at the time exceeded the acceptable risk range. More detailed information about the risk calculations can be found in the remedial investigation report for the Residential Areas site dated July 2003.

The ongoing cleanup that began in 1995 has successfully removed the contamination and achieved the radiation standard for the 670 properties cleaned up to date. For the properties cleaned so far, the Illinois Department of Nuclear Safety collected and analyzed 2,604 samples to verify that Kerr-McGee achieved the radiation standard, and the average result was 2.9 pCi/g, which is well below the 7.2 pCi/g cleanup standard. When the cleanup is completed later this year EPA will consider the entire site safe for people.

### **Proposed final cleanup plan**

EPA is proposing that no further action be taken at the site after the ongoing cleanup is completed. To date EPA has investigated all but three of the 2,174 properties in the site study area and identified 676 that were contaminated. All but six of the 676 contaminated properties have been cleaned up to levels that achieve the site cleanup standard of 7.2 pCi/g, and EPA expects the remaining properties to be cleared during 2003. The ongoing cleanup action is effectively removing the contamination from the site and therefore removing the source of the risks to human health. Once the cleanup is complete EPA will consider the site protective of human health. As a result, EPA believes that no further action will be needed at the site after the ongoing cleanup is completed. EPA did not complete a feasibility study to review options for site cleanup since the cleanup already is nearing completion. Illinois EPA supports EPA's proposed cleanup plan for the site.

### **Next steps**

EPA will consider all public comments received during the public comment period before choosing a final cleanup plan for the site. A public meeting is scheduled for July 29, 2003 (see page 1). All comments received during the public comment period will be addressed in a "Responsiveness Summary" which will be included in the final decision document for the site, called a record of decision. The record of decision will be available for public review.

#### **For additional information**

Please visit the information repository:

West Chicago Public Library  
118 W. Washington St.  
West Chicago, Ill.

or the

Records Center  
EPA Region 5  
77 W. Jackson Blvd.  
Chicago, Ill.

You may also contact the Remedial Project Manager, Rebecca Frey at 312-886-4760, or the Community Involvement Coordinator, Stuart Hill at 312-886-0689; both can also be reached at 1-800-621-8431 between 9 a.m. to 4:30 p.m.



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## **KERR-McGEE RESIDENTIAL AREAS SITE: EPA Proposes Final Cleanup Plan for Residential Areas**

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Stuart Hill  
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