



Soil Treatment to Begin

Lockformer Site
Lisle, Illinois

March 2003

Availability Session

EPA staff and state and local officials will be available to discuss one-on-one with area residents the cleanup of the Lockformer site at an availability session.

Date: March 27, 2003

Time: 12 p.m. - 2:30 p.m.
& 6 p.m. - 8:30 p.m.

Place: Lisle Library District
777 Front St.
Lisle, Ill.

Questions or Concerns

If you have any questions, concerns or complaints regarding the cleanup or would like additional information regarding the cleanup activities, please contact:

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Emergency Response Branch

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Ext. 39351

E-mail: faryan.steven@epa.gov

Information Repository

Copies of technical reports, fact sheets, and other documents related to the Lockformer cleanup are available at the information repository set up at the following local library:

Lisle Library District
777 Front St.
Lisle, Ill.

Web Sites

This and additional site information can also be found on the following Web sites:

www.epaosc.net/lockformer
www.epa.gov/region5/sites/
Scroll through to find the Lockformer site.

Soil treatment at the Lockformer site is about to begin. Construction of the two soil cleanup technologies began in November 2002 and will be completed shortly. One of the technologies, called soil vapor extraction, is expected to begin operating in early May. The other, called electrical resistive heating, is expected to start in late May. These systems are designed to remove the trichloroethylene, also known as TCE, and other contaminants from the soil on the Lockformer property. More detail about how these two technologies will be used at Lockformer can be found on Pages 2 and 3 of this fact sheet.

Upcoming Activities

An addition to the Lockformer building, which will be used to house the electrical power system as well as the cleanup equipment, will soon be completed. All construction and installation of the soil treatment systems is expected to be completed in the next couple months. Once these systems begin operating, the treatment will run 24 hours a day, seven days a week and is expected to take several years. EPA and their contractors will oversee all activities associated with the soil cleanup.

Safety Plan

A plan has been developed to ensure the protection of area residents, Lockformer employees and cleanup workers. Area police and fire departments have received training regarding how to respond in the unlikely event of an emergency. Additions to the plan are being made in cooperation with local officials to include emergency notification of area residents and businesses if conditions warrant.

Air Monitoring

Air monitoring will be done while the soil treatment technologies are operating. Readings will be taken inside the plant, at four locations at the edge of the work area, at four locations at the edge of the property, and in the residential neighborhoods next to the site. This is to ensure that the contaminant levels in the air do not exceed state and federal air-quality standards. If the contaminant levels ever exceed air-quality standards, the systems will be shut down until the problem can be resolved.

Access Restriction

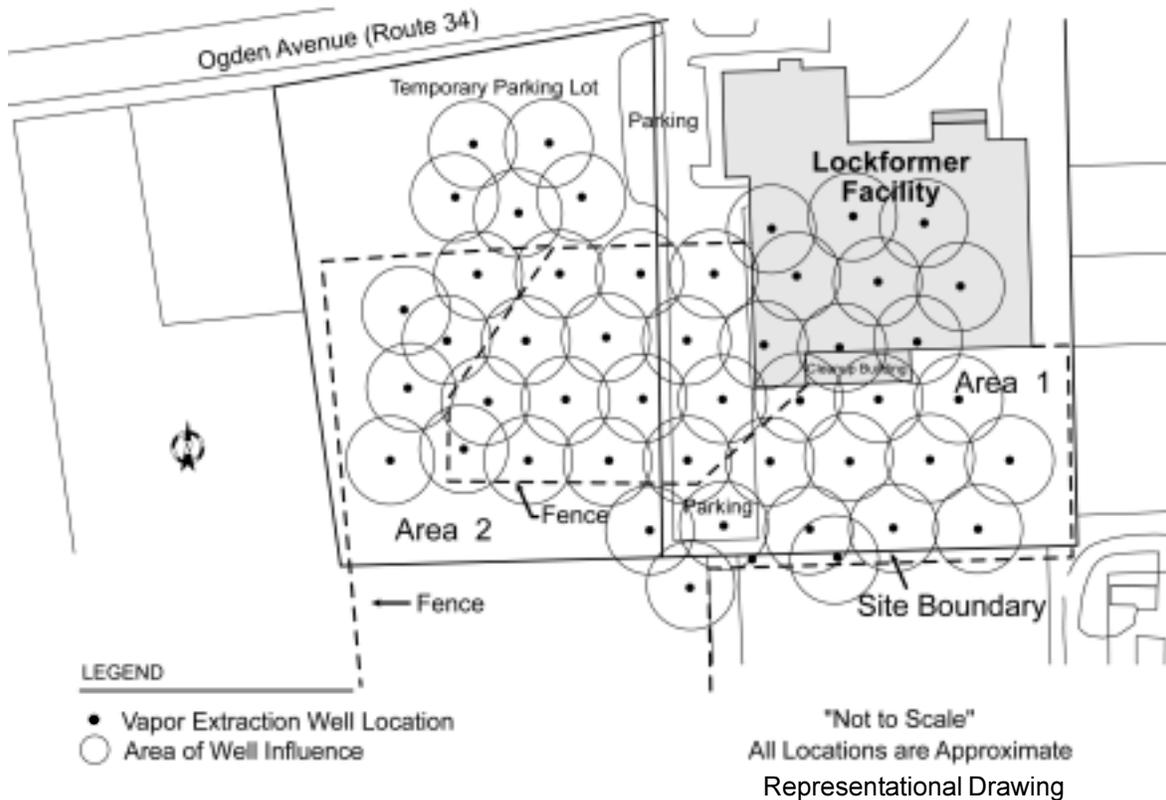
A six-foot chain link fence has been installed around the property to guard against trespassers. Video cameras have been installed to monitor activity at the site. Signs have also been posted to caution people not to enter the cleanup area. Because of the hazards posed by the high voltage electricity and the high temperatures on the site, residents are urged to warn children and anyone unfamiliar with the cleanup to stay out of the fenced area.

Traffic, Noise, Odor Issues

Traffic associated with the construction and cleanup at Lockformer will continue on Auvergne, Elm and Chicago throughout the course of the cleanup. However, EPA will make every effort to minimize this traffic. A temporary road was installed on the site to handle the construction and cleanup traffic. This road has been reinforced with extra gravel to reduce the amount of mud tracked into the streets. If an excessive

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Soil Vapor Extraction Diagram



Soil Vapor Extraction System

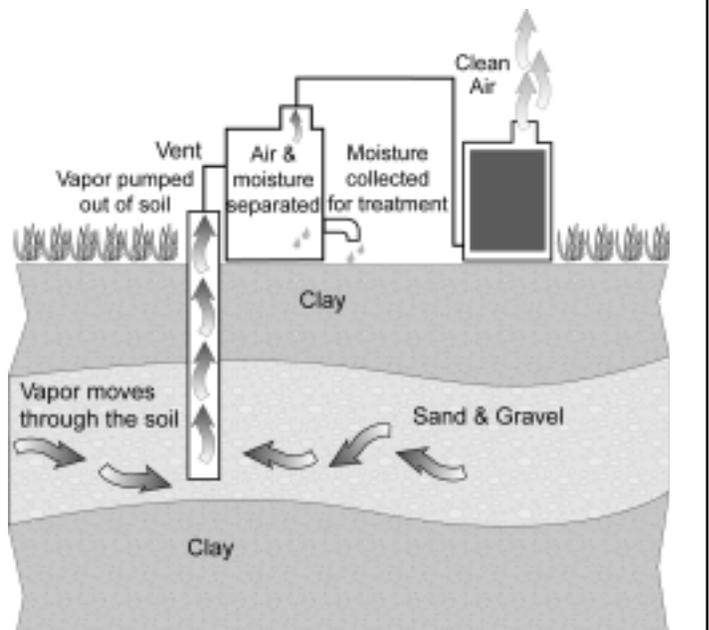
A layer of soil consisting of sand and gravel will be treated with a technology called soil vapor extraction. Forty-eight extraction wells have been installed into this layer of contaminated soil. These wells will be used to bring the contaminated vapors trapped in the soil to the surface. The vapors will be put through a carbon filter before being released. These emissions will be monitored continuously to ensure that they meet state and federal air quality standards.

Although previous tests show that little water is expected to come out of the vapor, a mechanism will be used to separate the water and vapors. In addition to extracting vapors from the soil, moisture trapped in the soil will be extracted and treated before being pumped to the sanitary sewer system.

The levels of the contaminants in the vapor will be monitored before and after it goes through the carbon filters to ensure that no contaminants are released and to be sure that the filters are working effectively. Two large carbon filters will be used and a third will be available as a backup. EPA estimates that the carbon filters will need to be changed approximately once a month.

The soil vapor extraction system will remain flexible to ensure its effectiveness adjusting to, among other things, seasonal changes.

Soil Vapor Extraction Cross-Section



Wells drilled into the affected layer of soil. A vacuum pump brings contaminated vapors, which have been trapped in the soil, to the surface. The vapors are then put through a carbon filter to remove the contamination and clean vapors are released into the air. Moisture trapped in the soil is also extracted and cleaned before being sent to the sanitary sewer system.

Electrical Resistive Heating System

A layer of soil consisting of clay will be treated with a technology called electrical resistive heating. After the soil vapor extraction system has been installed and has operated successfully for at least two weeks, the electrical resistive heating system will begin operating. Electrical resistive heating works by heating the soil to approximately 212 degrees with electricity to create steam. The contaminants attach to the steam and are carried up to the surface as the steam rises. A condenser will be used to separate the air from the water, although most of the TCE will stay in the air. The air and water will be collected and passed through carbon filters to remove the contaminants. The cleaned air will then be released into the atmosphere and the clean water will be recycled and used to cool the condenser.

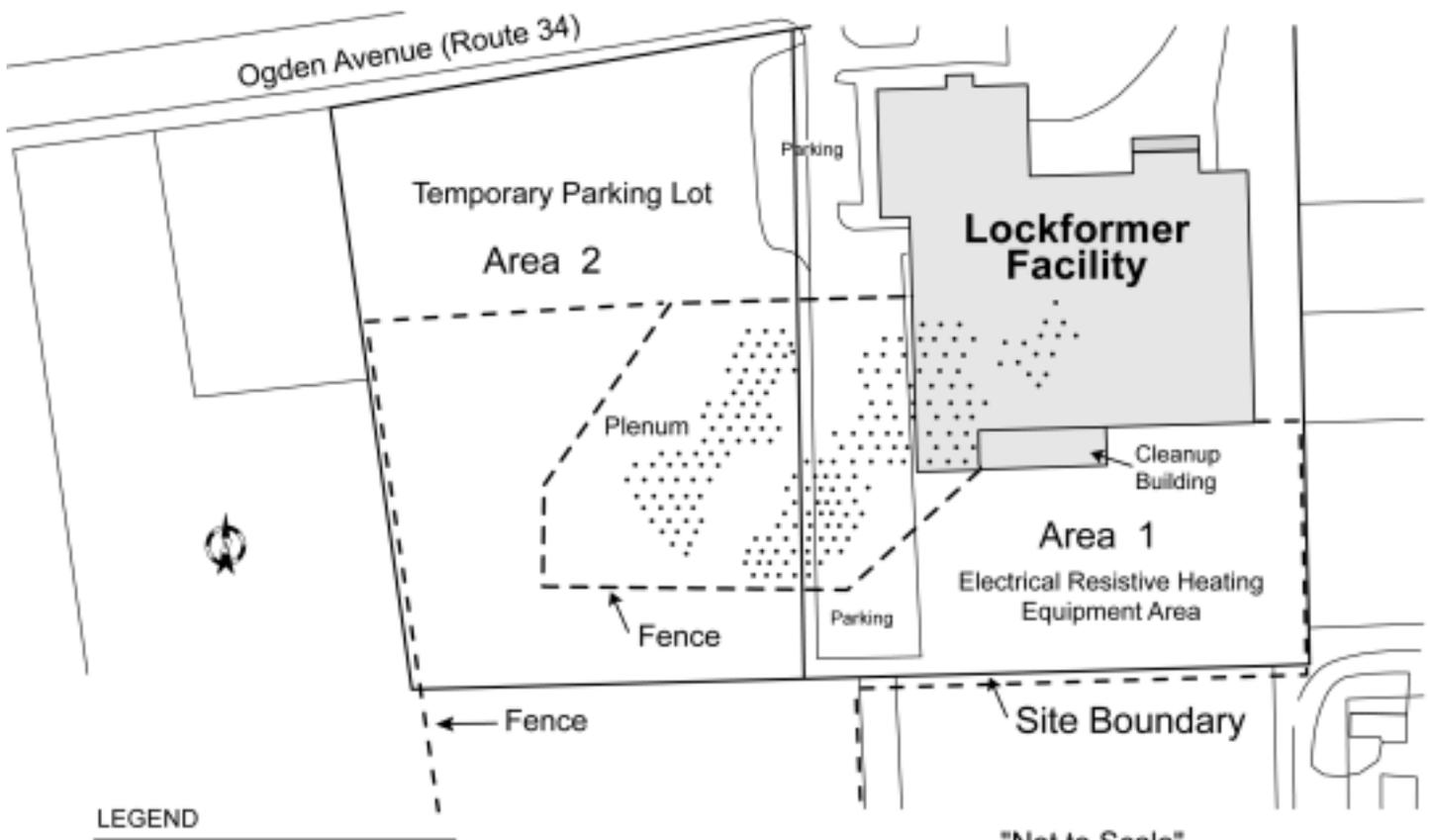
Electrodes installed into the clay layer will be used to heat the soil. The contractors began installing the elec-

trodes on Feb. 12 and expect installation to be complete in July. Because the area of contamination was larger than originally expected, more than 200 electrodes will be installed. Forty-seven of the electrodes will be placed beneath the Lockformer building.

A barrier, called a plenum, has been placed on the ground to capture contaminants that will rise to the surface when the ground is heated. This barrier, which consists of layers of pipes, pea gravel, fabric, crushed rock and asphalt, will also limit any loss of heat or steam and will act as a base to help support the soil treatment equipment. A drain has been installed for non-contaminated storm water drainage.

The temperature of the electrodes and air emissions will be monitored continuously by computer which will be accessible both on and off site.

Electrical Resistive Heating Diagram



LEGEND

- Electrode Location

"Not to Scale"

All Locations are Approximate
Representational Drawing

amount of mud is carried onto the streets, at the end of the day, the streets will be cleaned.

All waste material collected during the cleanup will be tested before leaving the site and will be disposed of according to the appropriate state and federal regulations.

If any waste is considered hazardous, it will be handled by a licensed hazardous waste hauler and the trucks containing this waste will be marked accordingly. Prior to leaving the site, all vehicles that have come into contact with contaminated soil or waste material will be washed and decontaminated.

Noises associated with the construction, such as drilling, will stop once the construction is complete, which is expected in July. The noise associated with the running of the cleanup systems is expected to be minimal. All of the pumps and vacuum systems have been put inside the Lockformer building addition. This will keep the noise down during the operation of the cleanup systems. Odor has not been an issue during the construction of the systems. However, when the electrical resistive

heating begins operating, a musty soil-like odor may be detected downwind of the facility. Carbon filters used in both cleanup systems will help control these odors. It is important to note, however, that odor does not mean the air is contaminated.

For More Information

For more information about the Lockformer cleanup, please contact:

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