Minnesota Pollution Control Agency

South District, Site Remediation Section

Winona Ground-water Contamination (Gilmore/Clarks Lane)

Geographic/Winona County/#85.01/November 2000

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This Minnesota Pollution Control Agency (MPCA) fact sheet describes the proposed plan to manage health and environmental risks posed by soil and ground water contamination at the Winona Ground-Water Contamination (Gilmore Avenue/Clark's Lane) site in Winona County, Minnesota. This plan summarizes the history of the problem, results of soil and ground-water investigations and interim response actions, the details of the proposed response action, and options for the community to comment on the plan.

Where is the site?

Because the actual environmental impacts of the site have to do with the gradual movement of a shallow ground-water contaminant plume, the site includes an area of several city blocks. The “site” is an area roughly extending from the source property (see Figure 1), presently known as Leaf's Cleaners and Launderers at 1405 Gilmore Avenue, towards the east northeast or along Gilmore Avenue for a distance of approximately six blocks.

(Figure 1, ground-water plume map)

History of the problem - A Summary

In July of 1989, the MPCA determined a release of tetrachloroethylene (or PCE, which is short for perchloroethylene), a solvent-like chemical used in dry cleaning processes, had occurred and a Determination of Emergency was made. At least 25 area residences with impacted private drinking water wells were connected to city water as of November 1990, and the majority of the residents were awarded state compensation for water service replacement and for permanent sealing of their wells. Leaf's Services, Inc., under state order, was asked to respond to the contamination, and their response included the cleanup of two identified release areas in November 1990. These surficial areas included a dry cleaning fluid and sludge disposal drain and the general location where a waste dumpster was positioned for disposal of dry cleaning fluid waste related materials.

In 1991, the MPCA Citizens’ Board issued a Determination of Inadequate Response Authorization to use state Superfund money for Response Actions, and authorization to place a lien on the Leaf facility property. Subsequently, and beginning in 1991, the MPCA has retained consultants and other support remediation services to investigate the extent and magnitude of the contaminant plume and to utilize a ground-water remediation system. Bay West, Inc., a former MPCA consultant on this project, completed the installation of a ground-water remediation system in 1992 and a soil gas survey of the site in 1998 (see Figure 2).

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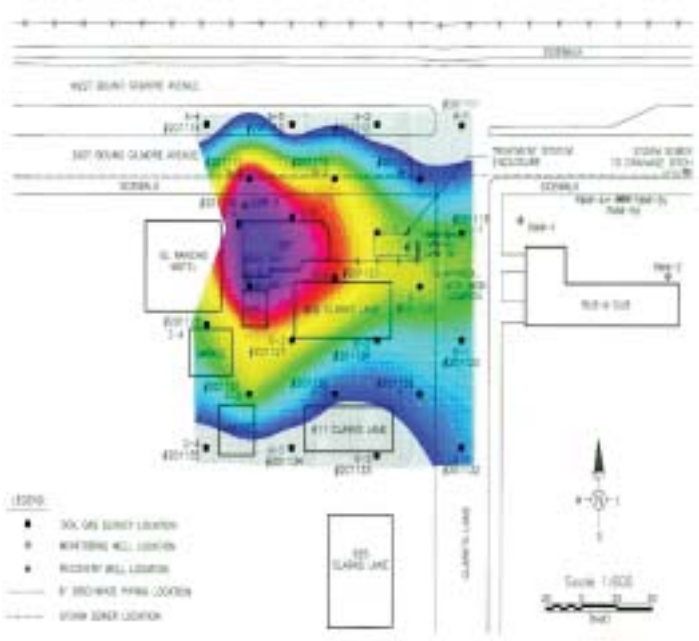
From the soil gas survey, it was concluded that significant soil mass remains underneath and within 25 feet of the Leaf building unit, with PCE and a typical break-down product, trichloroethene (TCE), observed at significant levels. The survey report also recommended that additional soil sampling be completed in order to better define the source zone of contamination.



(Figure 2, soil gas survey isoconcentration map)

In 1999 the MPCA retained Terracon, Inc., another MPCA multi-site consultant/contractor with hydro-geotechnical expertise, to complete the groundwater contamination and source zone characterizations. Presently, there are 22 ground-water monitoring wells and associated geotechnical boring records which indicate the presence of a dissolved phase plume, consisting primarily of PCE, extending more than 2,800 feet to the east-northeast and at depths of at least 60 feet from the source area.

In 2000, the MPCA and Terracon restored and reactivated the ground-water treatment system that had failed months earlier. Additional soil borings, ground-water samples, and indoor air samples were completed in and around the source property. PCE and other chlorinated contaminants were identified primarily in the 3 to 15 foot depths surrounding the site, with the majority of contamination at just above the approximate ground-water depth of eight feet. Indoor air is presently being monitored in three of the closest properties for chlorinated contaminants and petroleum contaminants. (Petroleum contaminants are also believed to be extending from two leaking underground storage tank sites, including the site, previously used as an automotive service station, and the nearby Rub-A-Dub Car Wash site. Both are being managed by MPCA remediation, program staff.)

The MPCA and Terracon have also just completed a 2000 Feasibility Study (June 30, 2000, with an October 25 and October 31, 2000, Addenda) which includes potential demolition and excavation options at the site and residential property at 605 Clark's Lane.

The Minnesota Department of Health (MDH) has also been engaged in the review of recent reports by Terracon, and has also provided technical review and comments for the MPCA and Terracon project team. They have also completed a `Health Consultation', dated September 28, 2000 for this contamination site. A concise abbreviated fact sheet has also just been completed by MDH for general distribution and review, dated November 2000.

How does the MPCA decide on the clean-up plan?

The Winona Ground-Water Contamination site is in state Superfund Program and is eligible for cost recovery under the state's Dry Cleaner Environmental Response and Reimbursement Account (Dry Cleaner Fund), established in 1995. The MPCA is the lead regulatory agency on the project and seeks to maximize cost recoveries by the Dry Cleaner Fund is paid for through annual registration fees (paid by active drycleaning facilities and related chemical suppliers). Under Minnesota's Superfund law, there are specific steps for completing a clean-up plan.

Now that the remedial investigation which defines the magnitude and extent of the source zone contamination and the dissolved phase contaminant plume in the ground water is nearly complete, the recently completed feasibility study can be reviewed for final clean-up plan decisions. The MPCA looks at the feasibility study and makes recommendations for the community about what is the best remedial option.

Among the questions the MPCA asks about the alternatives in the feasibility study, are:

- Does the alternative protect public health and the environment? (If it doesn't, it is eliminated immediately from consideration.)
- Is the alternative something that will be effective over the long term?
- Does the alternative involve any short-term risks to people or the environment?
- Is the alternative "do-able" or implementable?
- Is the alternative cost effective?
- Will the community accept the alternative?

What happens next?

The proposed plan consists of a number of actions that will monitor the ground water contamination, protect the public from impacts of the contamination, predict the future movement of the plume, and apply proven technologies to remediate the subsurface contaminated soil under the Leaf building.

- The MPCA will continue long-term monitoring of the ground water, and place additional ground-water borings in an effort to maintain perspective on the extent and magnitude of the dissolved phase contaminant plume. Included will be periodic sampling of monitoring wells installed throughout the plume area, to verify whether ground water conditions are stable.
- Project coordination with MDH technical guidance will be maintained. Included will be updates of indoor air contamination reports, and the Health and Safety Plan coordination efforts during the excavation of source area, contaminated soils.
- The monitoring will identify natural degradation taking place in the source area and in the ground-water plume. Natural degradation is a process in which the chemicals in the ground water break down into other hazardous breakdown products.
- The MPCA is investigating source area soil excavation which may include negotiations with multiple building and property owners on and around the site.
- The MPCA's responsibilities for a complete response action may span several more years, and during this time, new technologies may become available. The MPCA will evaluate any technologies that could be used to discover and remove the PCE, TCE and associated breakdown products. If the residual contaminants can be effectively removed, the ground water will be cleaned up faster.

How do I get more information?

There are several ways that community members can obtain more information about the Winona Ground-water (Gilmore Avenue/Clark's Lane) Contamination Site.

The community is also encouraged to call or e-mail the MPCA or Terracon (MPCA's environmental consultant) for additional information.

- Melanie Miland, MPCA South District, (507) 285-7151, e-mail address melanie.miland@pca.state.mn.us
- Terracon, (651) 770-1500, e-mail address pwiese@terracon.com

How do I comment on the proposed plan?

The MPCA welcomes comments in writing. Please provide your comments to:

Ed Olson, Project Leader
South District, Site Remediation Unit
Minnesota Pollution Control Agency
18 Wood Lake Drive Southeast
Rochester, Minnesota 55904

Or you may call (507) 280-2971 or use e-mail address edward.olson@pca.state.mn.us.

Where do I find more information about environmental issues?

Visit the MPCA web site at http://www.pca.state.mn.us for ways that you can help protect and restore the environment.