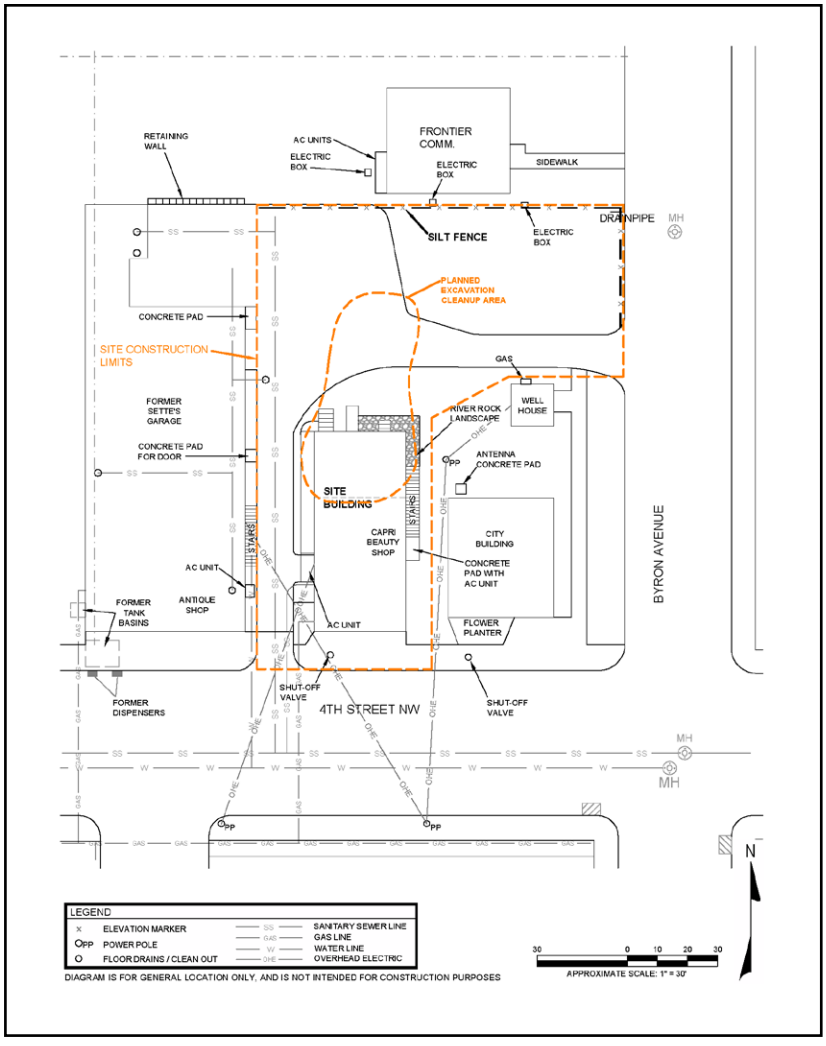
Proposed cleanup plan for Capri Beauty Salon Site

This Minnesota Pollution Control Agency (MPCA) fact sheet for the Capri Beauty Salon Site, located in Byron, Olmsted County, Minnesota, will:

- summarize site historical and investigation activities conducted during the remedial investigation;
- discuss the risks to human health and the environment that may be present at the site;
- describe potential cleanup alternatives considered in the November 2011 Focused Feasibility Study; and
- identify the MPCA's selected cleanup plan for the site and explain why the agency selected this option.

This fact sheet summarizes the cleanup alternatives evaluated to date for the Capri Beauty Salon Site. The alternatives summarized in this fact sheet are more thoroughly described in the November 2011 Focused Feasibility Study report, prepared by Terracon Consultants, Inc. For more details on all cleanup alternatives, see the Focused Feasibility Study and other pertinent documents in the Administrative Record, kept at the Minnesota Pollution Control Agency, 520 Lafayette Drive, N., in St. Paul, Minnesota.



Where is the site?

The former Capri Beauty Salon is located in the northwest quadrant of the intersection of Fourth Street, N.W. and Byron Avenue, N. in Byron. The site is in a mixed commercial and residential area in Byron. Primarily residential property is to the north, east and west, and commercial property is to the south, except the former Sette's Garage facility (LEAK8579) is on the adjacent property to the west. There is a school one block north of the site.

The Capri Beauty Site consists of approximately 0.2 acres of land that has been improved with an approximately 3,800-square-foot retail building. The building is a two-story, wood-frame building, with a stone foundation. There is a dirt basement under the northern third of the building and a dirt-floor crawl space under the southern two-thirds. Exterior features include gravel parking areas and landscaped grounds. The map on this page shows the location of the Capri Beauty Salon Site.

What is the site's background?

The building was moved to its current location in approximately 1898. For the past 35 years, the building has been used as a hair salon (Capri Beauty Salon) and a pet-grooming business. Before that, it was used Byron Lodge No. 135 of the Independent Order of Odd Fellows, a restaurant, a grocery store, and reportedly a laundry.

During the petroleum release investigation at the former Sette's Garage, chlorinated volatile organic compounds (VOCs) were detected, and it was determined that the source of the chlorinated VOC release was the Capri Beauty Salon Site. The primary contaminant of concern is tetrachloroethene (PCE) and its breakdown compound trichloroethene (TCE). The chlorinated VOCs appear to have been released to the surface on the northern side of the site building. PCE has migrated downward through the clay soils at the site to approximately 15 feet below ground surface. The chlorinated VOC soil contamination is primarily below the north end of the building and north of the building. The extent of the chlorinated VOC groundwater contamination is from the northern third of the building and offsite to the north. The PCE soil-gas cloud extends about 375 feet northeast, 250 feet southeast, and 300 feet west of the site. The PCE soil-gas cloud has impacted the indoor air quality in the Capri Beauty Salon.

What is the cleanup history at Capri Beauty Salon?

A temporary membrane active depressurization system was installed on the basement floor in 2008 to mitigate the potential for vapor intrusion into the Capri Beauty Salon building. Followup indoor air monitoring has indicated limited effectiveness of the vapor mitigation system. No other remedial activities have been completed at the site to date.

Because of the limited long-term effectiveness of the vapor mitigation system, alternative measures were examined in the November 2011 Focused Feasibility Study to manage the long-term vapor-intrusion risks.

Summary of site risks

The primary contaminant of concern (COC) for this site is PCE present in groundwater, which has been above the Minnesota Department of Health's Health Risk Limits (HRLs) and above the vapor Intrusion Screening Values (ISVs). PCE is a solvent that has been used in the drycleaning industry.

The property is connected to the Byron Municipal water supply system so there is a low risk associated with direct contact with the contaminated groundwater. Because PCE is very volatile, the potential route for exposure is vapor intrusion of soil gas into buildings located above the vapor plume.

Remedial action objectives

The remedial action objectives is to eliminate the risk associated with vapor intrusion due to the soil, groundwater and soil-gas impacts in the inferred source area, by eliminating either the source or the pathway for vapor intrusion into the Capri Beauty Salon, or any other building located on the site or on adjacent properties that are above the soil-gas plume in a way that provides a long-term solution to vapor intrusion of the COCs.

Summary of the proposed alternatives

The November 2011 Focused Feasibility Study identified and evaluated alternatives that could be used to remediate threats and/or potential threats posed by the site to human health and the environment if concentrations remained above the ISVs. These alternatives were developed to address the previously elevated chlorinated VOCs in the soil gas samples. The Focused Feasibility Study which evaluates these alternatives has been placed into the administrative record for the site.

Response action alternatives evaluated were based on the following primary scenarios:

1. Install a permanent vapor mitigation system in the basement.

   This alternative was rejected because the condition of the building's basement and crawl space would make it difficult to implement. The barrier would be susceptible to damage and could be

compromised. Therefore, it would not provide a permanent solution to vapor risk on-site and ongoing vapor monitoring at the site would be needed. Also, it would not provide a long-term solution to the groundwater contamination at the site, which could potentially cause chlorinated VOC vapor intrusion impacts at adjacent properties. An institutional control would be needed, describing the contamination on the site and limiting future use of the site.

2. Seal the first level floor of the building to limit the vapors that enter the building.

   This alternative would provide a greater chance of mitigating vapor intrusion into the building, but was rejected because it would not provide a permanent solution to vapor risk on-site and ongoing vapor monitoring at the site would be required. It would not provide a long-term solution to the groundwater contamination at the site, which could potentially cause chlorinated VOC vapor intrusion impacts at adjacent properties. An institutional control would be needed, describing the contamination on the site and limiting future use of the site.

3. Seal the earthen floor and crawlspace, such as coating the soil floor and foundation with cellular concrete.

   This alternative was rejected because of the difficulty in implementation and uncertainty of the long - term effectiveness. Ongoing vapor monitoring would be required at the site. It would not provide a long-term solution to the groundwater contamination at the site, which could potentially cause chlorinated VOC vapor intrusion impacts at adjacent properties. An institutional control would be needed, describing the contamination on the site and limiting future use of the site.

4. Purchase the property so that the site building may either be removed or demolished. Impacted soils in the source area would be left in place. The basement would be backfilled with clean fill.

   This alternative would eliminate the pathway for chlorinated VOC vapor intrusion into the building that is located on the site, but was rejected because the chlorinated VOC contamination in the source area would be left in place. It would not provide a long-term solution to the groundwater contamination at the site, which could potentially cause chlorinated VOC vapor intrusion impacts at adjacent properties. An institutional control would be needed, describing the contamination on the site and limiting future use of the site.

5. Temporarily support the north end of the building so the impacted soil may be excavated and disposed of at an approved landfill. Place an institutional control on the property, limiting property use, because of soil and groundwater contamination remaining outside the source area.

   This alternative would mitigate the contamination in the source area and would eliminate the vapor intrusion pathway. However, it was rejected because of the difficulty and potential hazard associated with excavating the impacted soil beneath the building without endangering the structure of the building. An institutional control still would have been needed, describing the contamination on the site and limiting future use of the site. However, the institutional control would have been less restrictive because the contamination in the source area would be removed.

6. Purchase the property so the site building may be moved or demolished. The impacted soils in the source area would be excavated and disposed of at an approved landfill. Place an institutional control on the property, limiting property use, because of potential soil and groundwater contamination remaining outside the source area.

   This alternative, with the building demolished and impacted soil beneath the building excavated and removed from the site, was selected because removing the contaminated soil in the source area will have a high long-term effectiveness by removing the source of contamination to the groundwater and the source of the chlorinated VOC vapors. This will eliminate the vapor-intrusion risks on site and reduce the risks to adjacent properties. An institutional control will be placed on the property to control future activities on the site to mitigate the risk associated with any residual contamination after the response actions have been completed. However, the control will be less restrictive because the contamination in the source area will be removed.

7. Purchase the property so the site building may be moved or demolished. Impacted soils in the source area would be excavated, treated onsite and returned to the excavation. Place an institutional control on the property, limiting property use, because of soil and groundwater contamination remaining outside of the source area.

   This alternative would mitigate the contamination in the source area and would eliminate the vapor intrusion pathway, but was rejected because the high cost of implementation, and because the effectiveness of treating the soils on-site is uncertain. If the alternative worked as designed, it would provide a long term solution by removing the source of contamination to the groundwater, and eliminate source of chlorinated VOC vapors. However, an institutional control would be placed on the property to control future activities on the site to mitigate the risk associated with any residual contamination after the response actions have been completed.

Summary of remedial action alternatives

Remedial action alternative	Long-term effectiveness	Ease of implementation	Cost
1. Vapor mitigation system	Low	Medium	Low
2. Vapor floor barrier	Medium	High	Low
3. Basement vapor barrier	Low	Low	Low
4. Remove site building	Medium	High	Low to medium
5. Support building, conduct excavation cleanup, and construct new basement	High	Low	Medium
6. Remove building and conduct excavation cleanup (the selected alternative)	High	High	Medium
7. Remove building, conduct excavation and on-site soil treatment	Medium	Low	High

What happens next?

The MPCA will present its Proposed Cleanup Plan at the Byron City Council meeting at 6 p.m. on February 27, 2013. The meeting will be at Byron City Hall, located at 680 Byron Main Court, NE., in Byron. The agency will take public comments on all alternatives and on the information that supports the alternatives until March 13, 2013. Public comments should be mailed to:

Nile Fellows, Project Manager
MPCA
520 Lafayette Rd N
Saint Paul, MN 55155-4194

MPCA staff will review these comments and make a final cleanup decision, which will be documented in a Minnesota Decision Document. Design and construction of the cleanup will then begin, in accordance with the Record of Decision.

Where can I get more information?

For more information about the Capri Beauty Salon Superfund Site or to the files about the site, including the November 2011 Focused Feasibility Study, contact Nile Fellows, site manager (phone 651-757-2352 toll-free/TDD 800-657-3864, email nile.fellows@state.mn.us).