Multi-Site Community Involvement Plan

Behr Dayton • Valleycrest Landfill • Valley Pike

Dayton and Riverside, Montgomery County, Ohio

EPA

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TABLE OF CONTENTS

INTRODUCTION

Describes the purpose and intended uses of this CIP. pg 1

COMMUNITY CONCERNS AND QUESTIONS

Summarizes what community members are concerned about, the questions they asked and what they told U.S. EPA. pg 5

COMMUNITY INVOLVEMENT GOALS AND ACTIVITIES

Highlights U.S. EPA's goals, activities and timeline for conducting site-specific activities to keep residents and local officials informed and involved during the cleanup process. pg 19

THE COMMUNITIES

Presents background information on the cities and neighborhoods, profiles the economic and ethnic makeup of the communities, and summarizes the communities' history and past involvement at the sites. pg 25

THE SITES

Shares background information about the locations and history of activities at each of the sites. pg 41

APPENDICES

Appendix A – Glossary – Initials – Acronyms: Lists the definition of key words, initials and acronyms (words are in bold throughout the document).

Appendix B – Community Interviews: Provides a copy of the questions asked during the community interviews.

Appendix C – Community Resources: Identifies places where community members can find more information about the sites and possible meeting locations.

Appendix D – List of Contacts: Provides a list of federal, state, and local agencies and neighborhood organizations.

Appendix E – Community Engagement and the Superfund Process: Gives an overview of the step-by-step process the U.S. EPA follows to determine the best way to clean up a contaminated site and opportunities for community involvement throughout the process.

Appendix F – Environmental Justice: Describes Environmental Justice and U.S. EPA's commitment to the affected communities.

Appendix G – Agency for Toxic Substances and Disease Registry Fact Sheets: Includes ATSDR ToxFact fact sheets on contaminants of concern affecting the sites.

Appendix H – Reuse Plan: Presents a Reuse Assessment for the Valleycrest Landfill site.

INTRODUCTION

The U.S. Environmental Protection Agency prepared this Multi-Site **Community Involvement Plan** to engage and support the **community** affected by three **Superfund** sites located in Montgomery County, Ohio. This **CIP** focuses on the Behr Dayton and Valleycrest Landfill sites in Dayton and the Valley Pike site in Riverside. Though these sites differ technically, the locations of these sites are within four miles of each other and affect the same community members; therefore U.S. EPA prepared one CIP instead of three separate ones to more effectively conduct outreach efforts. U.S. EPA's **community involvement** effort is committed to promoting effective and meaningful communication between the **public** and the Agency. U.S. EPA wants to make sure the community's concerns and information needs are considered as activities at each site progresses.

This CIP was prepared to support environmental and **cleanup** activities at the Behr Dayton, Valleycrest Landfill and Valley Pike sites. U.S. EPA used several information sources to develop this plan, including research, discussions with community members, information gathered at meetings and community interviews. Interviews were conducted with residents and local officials interested in the Valleycrest site activities and cleanup efforts in February 2014. In March 2014, U.S. EPA conducted interviews with McCook Field community members about the Behr

(*Words in **bold** are defined in Appendix A.*)

Goals of U.S. EPA's community outreach program:

- Assist the public in understanding the decision-making process during project design and cleanup and the community's role in that process.
- Give the public accessible, accurate, timely and understandable information about the project as it moves forward.
- Ensure adequate time and opportunity for the public to give informed and meaningful input and for that input to be considered.
- Reflect community concerns, questions and information needs.
- Respect and fully consider public input throughout the entire process.

The CIP is a working document that will evolve as the investigation and cleanup process continues and input is received from the community. It is intended to be flexible, adaptable and used as a guideline for U.S. EPA's communication with the community.

Dayton site. During the February and March interviews, U.S. EPA learned about the number of Turkish families who have immigrated to this area and subsequently reached out to local Turkish leaders to discuss the activities at the three sites. In July 2014, U.S. EPA conducted community interviews with residents and city officials and talked with community members at a **public meeting** about the Valley Pike site.

"The Dayton area has more Superfund sites and faces more environmental issues in a consolidated area than anywhere. The area suffers from "'industrial legacy'."

- Dayton City Official

This CIP describes U.S. EPA's plan for addressing concerns raised and keeping residents informed and involved in cleanup activities at the sites. U.S. EPA will use this document as a guide to involve and communicate with residents, businesses and local government in the Dayton and Riverside areas.

If you are interested in submitting comments or have questions or suggestions concerning the CIP, please contact:

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A member of the Turkish community provides translation services as U.S. EPA and Ohio EPA representatives meet with the Turkish leaders and community members in May 2014 to inform everyone about the sites.

CIP Overview

This CIP contains the following sections:

Introduction

Describes the purpose and intended uses of this CIP.

Community Concerns and Questions

Summarizes what community members are concerned about, the questions they asked and what they told U.S. EPA.

Community Involvement Goals and Activities

Highlights U.S. EPA's goals, activities and timeline for conducting site-specific activities to keep residents and local officials informed and involved during the cleanup process.

The Communities

Presents background information on the cities and neighborhoods, profiles the economic and ethnic makeup of the communities and summarizes the communities' history and past involvement at the sites.

The Sites

Shares background information about the locations and history of site activities at each of the sites.

Appendices

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"U.S. EPA learned so much from the people we talked with – the passion, the interest they have about their community. The interviews gave us an insight into the concerns and information needs of the communities."

- U.S. EPA Community Involvement Coordinator

U.S. EPA representatives were invited to the Old North Dayton Business Leaders meeting in May 2014 and updated attendees on site activities.

Community Engagement is Essential to the Success of Superfund Cleanups

Ongoing input and involvement by the community is essential to U.S. EPA's efforts to provide effective **community engagement**. U.S. EPA has learned that its decision-making ability is enhanced by actively seeking input and information from the community. Community members need to be involved in all phases of the cleanup so that the **contamination** is addressed in a way that protects people and the environment – now and in the future.

U.S. EPA discusses the Behr Dayton site with members of Dayton's Planning Department.

Residents, former employees, business owners and local government officials may be able to provide valuable information about a hazardous site that can help U.S. EPA determine the best way to clean it up. Information can help determine the location of contamination, how people may be exposed to it and perhaps potential sources of the contamination.

COMMUNITY CONCERNS AND QUESTIONS

Summarizes what community members are concerned about, the questions they asked and what they told U.S. EPA.

What U.S. EPA Heard

This section focuses on the concerns and issues that U.S. EPA heard from community members about the sites.

To learn about concerns, questions and information needs related to the Behr Dayton, Valleycrest Landfill and Valley Pike sites, U.S. EPA conducted community interviews with over 50 residents, local officials and other interested community members from February through July 2014. Newspaper ads were placed and postcards were mailed to individuals on the sites' mailing lists announcing the interviews and asking interested stakeholders to schedule an interview to talk with U.S. EPA about their concerns. Other interviews were scheduled by direct phone calls. Additionally, Agency representatives talked with people at various community meetings.

Knowledge and Awareness

During each of the site-specific community interviews, U.S. EPA learned that the vast majority of people they talked with knew about the site in their respective area. People focused on the Behr Dayton site were aware that U.S. EPA is, and Chrysler had been, involved with the cleanup of the site and that contamination could be affecting indoor air quality and groundwater. They also were aware of the testing performed and of the contamination. Some of the interviewees are involved with the McCook Field Neighborhood Association and get their information by attending the association's meetings.

All but one person interviewed about the Valleycrest Landfill site (a Kiser school employee who did not live in the area was not aware of the landfill's history) said they were aware of the landfill and had been for many years. Some people lived right next to the landfill and said they would find "all kinds of nice things when the dumping started therein about the 1960s such as purses, steering wheels and artificial flowers." Some of the people interviewed have been involved with the Valleycrest Neighbors and Concerned Citizens and

Note to readers: *This section is intended to faithfully record and reflect the issues and concerns expressed to EPA by residents, officials and others interviewed during the community interviews. By necessity this is a collection and summary of thoughts, observations and, in some cases, opinions. Please be cautioned that the statements contained in this section may or may not be factual and that the opinions and concerns expressed may or may not be valid.*

Old North Dayton Neighborhood Association and get information about site activities through the groups' respective meetings.

Everyone U.S. EPA spoke to about the Valley Pike site was aware of the problems and said they had been kept informed about site activities.

Information Needs

During the site-specific interviews, the majority of people said they believe that U.S. EPA has done a good job of keeping them informed of the site activities. City officials in both Dayton and Riverside said they have received very few phone calls or inquiries about any of the sites. While some people would like to receive updates via e-mail, the majority of interviewees want to receive updates and information through the mail. Also, many residents suggested that information be sent home through the school children. One city official said door-to-door outreach is the best way to get information to residents. People said they would attend meetings if they thought the subject matter was of interest to them.

Community Advisory Group

At each of the interviews and meetings, U.S. EPA discussed the possibility of forming a **community advisory group**, or **CAG**. Several people expressed interest in being part of the CAG and believed the CAG would be a good resource for the community. Based on feedback from the communities, U.S. EPA will schedule a meeting to explain how to form a CAG and will support the community during the process of establishing a CAG.

Concerns Voiced

During the interviews and at various meetings, U.S. EPA listened to the concerns about the sites from the community members and everyone expressed concern about health problems and property values. People also asked about **potentially responsible parties** and who would be paying for site cleanups. Interviewees from the Behr Dayton and Valley Pike sites had concerns and asked questions about the **vapor intrusion**

During a community meeting, a resident shared other concerns with U.S. EPA about the neighborhood.

contamination and the mitigation systems. The most frequent concern raised by people about the Valleycrest Landfill site was reuse of the property.

Community members also expressed concerns about other issues in their communities, not directly related to the site. U.S. EPA listened to these concerns and suggested contacts in Dayton that would be better able to address their concerns. Some of the concerns shared with U.S. EPA were:

- Can the properties around the vacant houses be cleaned up first? Dogs, cats and children play in around them and they are exposed to all the trash, etc.
- The neighborhood needs speed limits/speed bumps on the streets because of children playing.
- More trash cans are needed.
- Vacant houses need to be cleaned up. They are used as drug houses and there are dirty needles laying around, which are dangerous.
- Many sidewalks in the neighborhood are in need of repair.
- How can we take empty space and make it into parks?
- More police protection and quicker response is needed when we call the police.

On the following pages you'll find more detailed information about the concerns U.S. EPA heard about each site. A list of frequently asked questions is also included at the end of this section.

The Turkish community was very pleased when Stuart Patterson Park was cleaned up because their children play at the park. After the residents talked about the large piles of debris in the park, U.S. EPA talked with Dayton officials who responded quickly and cleaned up the area. Stuart Patterson Park was originally named Walters Grove. The park was renamed after John H. Patterson's (founder of The National Cash Register Company) nephew was killed in a plane crash at McCook Field in 1918.

Behr Dayton Site

U.S. EPA first held community interviews between April 20-23, 2009, and a CIP was developed in January 2010 (this site is the only site of the three with a previous CIP). U.S. EPA talked with residents, property owners, and local officials and asked them about various issues related to the Behr Dayton Thermal System VOC Plume site. The results of the meetings showed varying levels of knowledge and understanding of the site. At a neighborhood meeting on March 10, 2014, U.S. EPA shared information about the site. On March 10-13, 2014, U.S. EPA talked with 25 individuals who participated in the community interviews. Their concerns and issues, along with information learned from the 2009 interviews, are highlighted below.

Health Concerns

The majority of residents interviewed were concerned about the health effects of the contamination. Health concerns and symptoms that residents mentioned that they, or people they knew had included: dizziness, nose bleeds, pulmonary disease, emphysema, lung issues, trouble breathing, kidney problems and cancer. Residents having these issues were concerned with the associated health costs and medical bills. Several residents also indicated they had pets with health issues and thought contamination was likely the source.

Numerous residents interviewed in 2014 were concerned about long-term exposure. One of those was a resident who had previously lived in the area for over 55 years, another said she had raised her children in the area and still another who had a brother who lived in the basement of their house before the mitigation system was installed. A tenant in an apartment building found out about the contamination only five years ago and was worried about long-term exposure because he has lived at this address and in the site area over 14 years. He mentioned there had been many other tenants in his building that died of cancer. He stated his landlord never informed him of the contamination.

Several business owners were unsure if they were putting their employees at risk, especially if they worked or trained in the basements of their buildings. They also worried about employees taking legal action against them in the future if the employee developed health problems. In addition to asking if the drinking water was contaminated, numerous people interviewed inquired about the safety of growing a garden and eating produce from it.

Mitigation Systems

Many of the residents interviewed expressed concerns regarding site testing and the installation and maintenance of mitigation systems. Residents said they were not sure how to tell if the mitigation systems were working properly and were not sure whose responsibility it was to cover costs regarding inspections, maintenance and replacement of the systems. Some said their systems had not been inspected since being installed. Most would also like to see results of testing on their properties as well.

Public Health - Dayton and Montgomery County representatives interviewed said the testing program should be ongoing. They also indicated that new owners need to be made aware of the vapor intrusion and be able to request testing. The current properties with mitigation systems had seen various results; therefore, testing should be continued.

Plume changes were a general concern for many of the interviewees. Some asked if the plume would travel far enough to merge with other nearby plumes. Several residents interviewed in 2014 were worried about new homes being exposed as the plume grows. A member of the Public Health - Dayton and Montgomery County believed that because the plume was changing, there may be new homes that need to be tested.

There are concerns that residents who are new to the neighborhood may not know the history of the site. Their homes may not have been tested in the past and may need to be tested. Concerns were also shared about a language barrier with the Turkish community and perhaps a need for a translator to go to homes to ensure homeowners knew about the contamination and homes being tested.

Property Values

The impact of contamination from the site on property values is also a concern. In 2009, several residents indicated their property values had decreased significantly. Several residents expressed financial concerns about selling their properties, as it would be difficult to sell homes in the area, and felt they could not rent homes in the area since it is in an industrial location. Residents in general were frustrated and concerned about the site as it related to their property.

In recent interviews, several residents stated they were concerned about vacant properties because many of their neighbors had abandoned their homes. Several suggested that the contamination had impacted the economic viability of the community along with a weakening housing market.

In addition to property values declining, several homeowners mentioned that their insurance rates increased substantially, and that it was impossible to switch insurance providers. The homeowners thought the increase was likely due to the contamination and proximity to the site.

Most of the residents interviewed expressed appreciation that U.S. EPA was taking over the cleanup and keeping the community informed. Several residents felt frustrated with Chrysler, because they thought Chrysler should have acted quicker in response to cleaning up the contamination.

Valleycrest Landfill Site

On February 18 and 19, 2014, U.S. EPA conducted 20 in-person interviews and one telephone interview with people who have an interest in the Valleycrest Landfill site including residents, school employees, students, city officials and neighborhood association representatives.

U.S. EPA had the opportunity to talk with students in a 6th grade science class at Kizer Elementary School. Ms. Narsete and the students talked about the Agency, the Valleycrest Landfill site and the environment.

Health Concerns

Most of the residents interviewed expressed concerns that the site was contributing to higher cancer rates and other health problems in the area. One person interviewed said that there are so many people in the area with cancer and so many others who have died from cancer and asked "Is the contamination catching up with us?" Eight people said that either they or other family members have asthma and wanted to know if it was caused by the **contaminants** at the site. One person said that family members have severe depression and asked if anything in the air could cause mental problems.

Property Values

Many of the residents expressed concern that their property values suffer because of the site. They said that even if their individual property was not affected, they know people who can't get loans to fix up their house because they are in a Superfund area. Many interviewees also said that they can't sell or buy houses in the area because of the site.

Reuse of Property

Of most concern to everyone interviewed was the reuse of the site property. Listed below are the most frequent responses U.S. EPA received when they asked interviewees what they would like to see in a reuse plan:

- Green space, usable space
- Soccer fields
- Paved pathways, walking pathways
- Beautiful ponds
- Flowers
- Multicultural/multi-religion uses
- Solar installations
- Spaces for children to play
- Recreation center
- Bring jobs to the community
- Beneficial to the neighborhood and Dayton; need a site that won't need upkeep
- Something to pull the community together

Valley Pike VOC Site

On July 16, 2014, U.S. EPA met with a Riverside councilman to discuss the Valley Pike site and also talked with several residents about the site during the public meeting.

U.S. EPA listens to concerns about the Valley Pike site.

Health Concerns

A resident commented that he had health concerns about the exposure to the contaminants. He said his wife works in the dirt in his yard and gets terrible blisters. He said they have gone to doctors and the doctors don't know the cause and he wondered if it is from the contamination. Another resident stated that she has three family members with cancer and other friends who have cancer or have died from cancer. One woman stated her daughter-in-law who lives in the basement miscarried and is pregnant again and she is worried she will miscarry again.

Mitigation Systems

Many of the residents interviewed expressed concerns regarding site testing and the installation and maintenance of mitigation systems. A resident asked who was responsible for maintenance of the system as she had heard that the property owner would have to pay if the system broke.

Property Values

Many of the residents expressed concern that their property values suffer because of the site.

Local community members pick up fact sheets and other information provided at the July 16 Valley Pike meeting.

General Questions and Comments

Behr Dayton Interviews – March 2014

Q Am I putting my employees at risk by having them do training in the basement of my business?

A If your business has been tested and shown to be below the action level of 1.7 parts per billion, or ppb, by volume of trichloroethylene, or TCE (with the cleanup system running, if applicable), then the answer is no, based on the risks posed by this site.

Q Is the site contamination causing cancer?

A A report released in 2008 by the Ohio Department of Health, or ODH, entitled, "Cancer Incidence Among Residents of Census Tract 17, Dayton, Montgomery County, Ohio 1996-2005," evaluated cancer in the part of Dayton affected by the Behr groundwater plume. This assessment revealed a higher than expected number of total cancer cases, and the number of lung and bronchus (respiratory tract) (20 cases) and larynx (4 cases) cancer cases, but these cancers were determined to be mostly attributed to smoking. Ninety percent of those diagnosed with lung/bronchus cancers were current or former smokers; of the four larynx cancers, two were confirmed tobacco users, and tobacco use for the other two were unknown. The types of cancers associated with occupational exposure to TCE are kidney, liver, non-Hodgkin's lymphoma, multiple myeloma, cervix, Hodgkin's lymphoma, prostate, and leukemia. The number of cases of these types of cancer were not found to be higher than expected in this population. The cancer study can be found here: http://www.epaosc.org/site/doc_list.aspx?site_id=3677.

Q Was my lung cancer caused by the TCE?

A Exposure to TCE has not been found to be associated with an increased risk of lung cancer. An estimated 80 to 85 percent of all lung cancers are caused by tobacco use. Other risk factors for lung cancer include secondhand (environmental) tobacco smoke; exposure to radon, arsenic and asbestos; air pollution; a history of tuberculosis and some types of pneumonia; and a family history of lung cancer. ODH (2008) found that none of the cancers associated with TCE exposure was elevated in a study of cancer in the community. While lung cancer was elevated in the community, all but two cases had a history of tobacco use.

Q If there are health concerns, what are other signs besides having headaches?

A Breathing high levels of TCE may cause headaches, lung irritation, dizziness, poor coordination (clumsiness), and difficulty concentrating. If this occurs over as long period of time, it may cause nerve, kidney, and liver damage. More information about possible health effects from TCE exposures can be found here: https://www.odh.ohio.gov/~/media/ODH/ASSETS/Files/eh/HAS/tce.ashx.

Q My children were raised in the neighborhood. Should I be concerned for their health?

A The highest indoor air level of TCE measured indoors in the Behr study area (260 ppb) occurred before systems were installed in residential homes to reduce the level of TCE vapors. Exposure to TCE at some of the higher levels measured in the community (between 5.6 and 33 ppb) can cause immune system and kidney problems in humans, and has shown developmental issues in animal studies. Levels of TCE measured indoors after the vapor systems were installed in residences are now below levels of health concern. If you have specific concerns about your child's health, please consult with your pediatrician. For a more detailed evaluation of community exposures, or to download a copy of the ODH study, please visit: http://www.atsdr.cdc.gov/HAC/pha/BehrDaytonThermalSystemsVocPlume/Behr-Dayton%20Thermal%20Systems_PHA_Final_08-11-2014_508.pdf.

Q Some of my family lived in my basement before the mitigation system was installed. Should they get tested for anything?

A There are tests to measure TCE in the body, but these tests only detect recent exposures and should be conducted only under the recommendation of a physician. If you have specific health concerns and wish to discuss those concerns with a physician specializing in environmental medicine, it is recommended that you ask your regular doctor for a referral to the Center for Occupational Health at the University of Cincinnati (513-558-1234). The facility's website is http://eh.uc.edu/occmed/.

For questions about your child's health, you can contact Dr. Nick Newman, who is a doctor in the Pediatric Environmental Health Specialty Unit at Cincinnati Children's Hospital Medical Center. He can speak with concerned parents over the phone and see patients who are thought to have been exposed to contamination such as TCE. Dr. Newman's telephone number is 513-803-3688 (select the option to be sent to the nurse, who can connect you with Dr. Newman).

Q What are the risks that TCE poses to humans?

A TCE is a colorless liquid used as a solvent for cleaning metal parts. Drinking or breathing high levels of TCE may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. TCE has been found in at least 852 of the 1,430 National Priorities List Superfund sites identified by the U.S. EPA.

Q My flowers are not growing; should my soil be tested?

A The soil itself is not affected by site contamination, and U.S. EPA is not aware of harmful effects to flowering plants from the relatively low levels of TCE vapors to which the plants could be exposed. Because this area has been used for various industrial practices for many years and due to the age of the houses, it is possible that soil could be contaminated for other reasons.

Q Is the produce that grew in my garden safe to eat? Is it safe to plant a garden?

A Again, U.S. EPA does not believe that the site contamination would affect plants. However, other factors (not related to the site) could be affecting the quality of the soil. If you have concerns, the EPA recommends using raised bed gardens with soil that you know is clean.

Q Is the drinking water safe?

A Yes. The contamination is flowing away from the Dayton well field that is used for drinking water.

Q How can I get my mitigation system checked?

A If you are concerned with the operation of an existing vapor reduction system, contact U.S. EPA's Project Manager Erik Hardin at hardin.erik@epa.gov or 312-886-2402.

How often should my system be inspected?

Vapor reduction systems are to be visually inspected on an annual basis.

Who do I contact if my mitigation system is not working?

If you are concerned with the operation of an existing vapor reduction system, contact U.S. EPA's Project Manager Erik Hardin at hardin.erik@epa.gov or 312-886-2402. Should we include here information about the 5-year warranty and responsibility of the homeowner as discussed in the Valley Pike section?

How far are we from a Record of Decision?

U.S. EPA expects the investigation of the area of contamination to continue into 2015, leading to a cleanup investigation report. Then, a study will be conducted to evaluate the cleanup options. The Record of Decision, which is a document that explains the cleanup plan, is based on these reports and studies, so the Agency does not expect a ROD until early 2016.

Are there best practices for cleanup?

These will be determined as part of the study of the cleanup options.

Will the leaky wall in my basement allow TCE to come in?

TCE enters homes through cracks in the basement floor or walls, as well as floor drains. The best way to determine if TCE is entering a home is to test the indoor air. If your house has not been tested, contact Erik Hardin to determine if you are eligible: hardin.erik@epa.gov or 312-886-2402.

How does the chemical go away?

The chemical (TCE) is removed from homes by drawing vapors from below the structure and venting them above the eaves. The vapors are significantly diluted when released to the outside air and are also degraded by sunlight.

What are the chances that the plume will go across the railroad tracks?

The plume (area of contamination) has generally travelled to the south and southwest of the Behr facility. The location of surface structures such as railroad tracks would have no effect on the plume's path.

If a house is demolished, should there be concern about the basement? Leave it?

When a house is demolished, all vapors trapped in the house would be released and quickly diluted by the outside air, so this is not a health concern.

If I build a new building, will I have to put a vapor barrier down?

This is not required, but it is a good idea to install some sort of vapor barrier (or vapor reduction system) in any new building or residence. This is because it could be years before the plume is reduced to the point that it no longer poses a vapor intrusion risk. Also, there are other potentially harmful vapors that can enter homes from underground.

Is the plume moving?

Yes, the plume is moving in a south by southwest direction from the Behr facility.

How deep are waters flowing?

The groundwater varies in depth but generally extends to around 100 feet below ground.

Valleycrest Landfill Interviews – February 2014

What is the game plan for the site?

U.S. EPA is working with the Department of Justice in negotiations with the responsible parties for cleanup costs and funding the cleanup. It is anticipated that the remedial design for the site will be begin in 2015 and the cleanup will begin in 2016. Schedule details will be determined in the upcoming negotiations.

Several organizations and entities including the city of Dayton Planning and Community Development, Economic Development and Water departments; Dayton Environmental Advisory Board; city of Riverside; Valleycrest Neighbors and Concerned Citizens; Old North Dayton Neighborhood Association; Dayton Citywide Development Corporation; Valleycrest Landfill Site Group and U.S. EPA Region 5 have been working on a reuse plan for the Valleycrest Landfill site. A reuse assessment for the site has been prepared (see Appendix H of this CIP).

What is the theory on getting the rest of the property cleaned up? There should be more than 13 acres out of 100.

The site ROD, signed in July 2013, contains details for the overall site cleanup. U.S. EPA will work with interested parties to evaluate potential reuse ideas throughout the remedial design and construction to ensure that the remedy remains protective.

Where were the drums taken to?

The drums were taken to an off-site authorized landfill.

How long will plastic liners last at the landfill?

The constructed remedy will be maintained into the future to ensure that protectiveness is maintained, including repairs as needed. This will be done on a continual basis.

Will they monitor wells?

Groundwater will be monitored as part of the constructed remedy into the future.

Do you have to get rid of the trees that are there?

The remedial design will determine what areas require clearing before remedy construction. Trees and surface vegetation cannot be allowed to grow on top of the constructed landfill cap as they could damage the cap's effectiveness. Trees along the site boundary will be maintained for shielding to the extent possible as long as they do not interfere with the protectiveness of the cap.

Is it true that only 3 to 5 acres are going to be reused?

There are no immediate plans for reuse. U.S. EPA will work with interested parties to evaluate potential reuse opportunities to ensure remedy protectiveness is maintained.

Does the methane burner still work?

Yes, it only runs when there is enough gas.

Q Who makes the final decision of what the site is used for or will we just be told that it is a done deal (like we have been told before)?

A U.S. EPA has ultimate approval for reuse plans which must be privately funded and maintain the remedy protectiveness. The Agency will evaluate impacts of potential reuse to ensure the remedy remains protective.

Q Is the fence going to be taken down?

A The immediate plans are for the fence to be repaired/replaced as part of the site remedy.

Q How many parts per billion/parts per million are really harmful to people?

A The site remedial investigation contains an assessment of risk from the site contaminants to human health and the environment. The selected remedy will address the risks posed by the contamination at the site.

Q Who owns the Valleycrest land?

A Currently a corporation owns the land, but there are plans in place to transfer ownership to another entity. It is not known at this time who will become the owner of the land.

Q Who funds the cleanup?

A The intent is to get the responsible parties to pay for the cleanup. Currently, U.S. EPA is working with the Department of Justice in negotiating funding of the cleanup with the responsible parties. If there are no assets available from the responsible parties, money from Superfund will be used.

Q Who approves the reuse plan?

A U.S. EPA has ultimate approval for reuse plans which must be privately funded and maintain the remedy protectiveness. The Agency will evaluate impacts of potential reuse to ensure the remedy remains protective.

Q Who is going to do the [cleanup] work? Will you use local people?

A The responsible parties will be pursued to fund the cleanup work in upcoming negotiations. U.S. EPA with help from Ohio EPA, will oversee the work to make sure it is done according to approved cleanup plans. The responsible parties will make the decision on what contractors are used, and the use of those contractors must be approved by U.S. EPA.

U.S. EPA recommends but cannot require that local contractors and individuals be used, but they must have the proper training to perform the work.

Valley Pike VOC Interviews – July 2014

What is vapor intrusion?

Vapor intrusion occurs when underground pollutants release chemical vapors that travel up through the soil, accumulate beneath building foundations and cause indoor air pollution when the chemical vapors enter buildings through cracks or holes in foundations and crawl spaces. Measuring the amount of chemical vapors under the sub-slab or within the crawl space of the property can indicate the potential for a vapor intrusion problem.

How did these vapors get into my basement?

Volatile organic compounds, or VOCs called tetrachloroethylene or PCE, and trichloroethylene or TCE, were used as industrial solvents in the area. In a July 2013 sampling project, elevated concentrations of PCE and TCE were discovered in the groundwater and the soil gas beneath the Riverside neighborhood. Elevated PCE and TCE vapors were also discovered accumulating under the foundation in multiple residences in the neighborhood. Unsafe indoor air concentrations of PCE and TCE were also detected in residences. The diagram below shows how vapors can enter a house.

How do you sample my house to find out if I have a problem?

Sub-slab or crawl space sampling are performed to find vapor intrusion problems. For residences with a basement floor, sub-slab testing is performed with probes that are temporarily installed in the house slab and attached to a test canister to sample volatile organic compounds, or VOC vapors trapped under the house. Crawl space sampling is completed by placing a test canister inside the crawl space.

If I do not get the system in my house, is my health at risk?

In order to evaluate your potential health risk, we would need to know what your indoor air concentrations are. Residents who have indoor air TCE and PCE levels of health concern were offered a treatment system. If you were not offered a system but still have concerns, we would encourage you to call the Agency for Toxic Substances and Disease Registry, or ATSDR to discuss the results of your indoor air sampling. If you were offered a treatment system because your indoor air levels of TCE and PCE were elevated and chose not to have it installed, you could be at increased risk for health effects. ATSDR's Health Consultation describes the potential risks of long and short-term exposure to TCE and PCE. Michelle Colledge at ATSDR (312-886-1462) is available to discuss any health concerns you have given your indoor air results.

If I am a renter, what do I need to do to encourage my landlord to sign the access agreement to get my home tested?

U.S. EPA requires landlord and renters to sign an access agreement for vapor intrusion sampling. U.S. EPA and other agencies have reached out and contacted the owners when their contact information was made available. If a renter is having an issue with the landlord signing the access agreement, U.S. EPA or the city can contact the property owner and explain the importance of testing.

Can the city of Riverside or the health department take action against the landowner if they choose not to sign the access agreement?

The City cannot take any action against the landowner if they choose not to grant access.

If my landlord will not sign the access agreement can I move out and stop my lease?

This is a legal question, and it would be in the best interest of the tenant to seek a legal opinion.

How long will the residential mitigation system have to run?

The VAS will be required until the groundwater source is remediated. The groundwater is the source of VOC vapors.

What is the potential operational timeframe or lifetime of the equipment?

The VAS fan is warranted for 5 years. In similar projects, fans are operational for 10+ years.

What happens if the system breaks down? Who pays for repairs?

If there is a problem with the system after the 5-year warranty period, repairs are the responsibility of the homeowner.

Are PCE and TCE vapors getting into the drinking water lines?

No, the drinking water, which comes from the city of Dayton's public water supply, is not impacted by these site conditions.

Is there a monthly charge for the EPA installed mitigation system?

There is no monthly charge from EPA for the installed system. You may see about a $6-$7 per month increase in your electric bill.

Is a house being condemned based on sampling results?

No.

If I have a private water well, can it be used?

Contact Tom Hut at the Dayton-Montgomery County Health Department (937-225-4439) about private well use.

Why did some houses only get sub-slab samples and not indoor air samples taken?

If a residence has a basement floor, a sub-slab sample is the most accurate vapor intrusion sample. If there is no basement floor, a crawl space or indoor air sample is obtained.

Why are some houses not contaminated and they are next to houses that are?

There are many factors to be considered in why one house has contamination and other does not. Cracks in the foundation, having a basement or crawl space, or settling of the house can affect the air being contaminated.

Is this contamination at Valley Pike related to the Valleycrest Landfill problem?

No. The Valleycrest Landfill Site is downgradient of the Valley Pike VOC Site.

Who is responsible for the contamination? What is EPA doing about getting them to pay?

EPA continues to conduct a potentially responsible party search to identify responsible parties.

How do I get information about this site?

EPA has a website that provides updated and contact information about this site. It is www.epa.gov/region5/cleanup/valleypikevocsite.

An information repository that has information about the site is available at the E.C. Doren Public Library. You can also visit the U.S. EPA Project Office at 2049 Harshman Rd., Riverside to get information or talk with staff there about your questions or concerns.

COMMUNITY INVOLVEMENT GOALS AND ACTIVITIES

Highlights U.S. EPA's goals, activities and timeline for conducting site-specific activities to keep residents and local officials informed and involved during the cleanup process.

When establishing the objectives for a site-specific community involvement program, U.S. EPA considers several factors, including federal requirements and U.S. EPA policy that assess the nature and extent of known or perceived site contaminants and known community concerns and requests.

To be effective, the community involvement program must be designed to meet the community's informational needs, give information in a timely manner, and accommodate the community's interests and its willingness to participate in decision-making processes. U.S. EPA must also share information in language the public can understand.

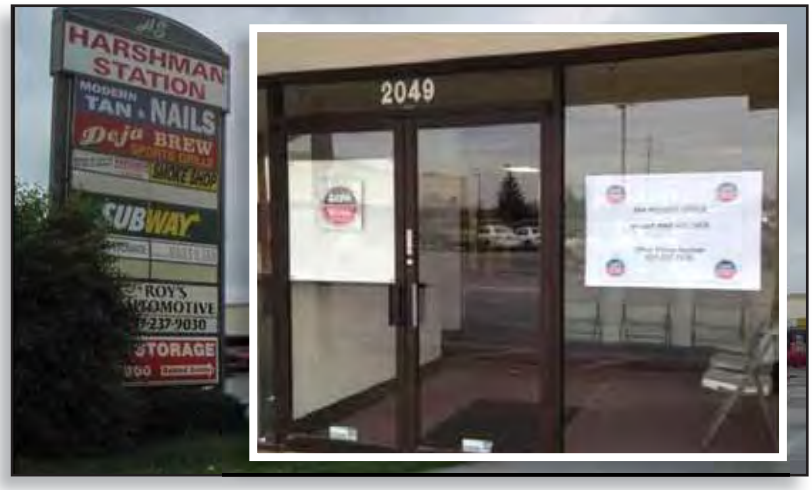
To meet the needs of the community, respond to information obtained during community interviews and meetings, and to meet federal requirements, the following objectives have been established for community involvement efforts:

- Enlist the support, coordination and involvement of local Dayton and Riverside officials and community leaders, including the Turkish community.
- Enlist the support, coordination and involvement of Montgomery County and Ohio EPA.
- Monitor resident interest in the site and respond accordingly.
- Keep the community well informed of ongoing and planned site activities.
- Explain technical site activities and findings in an understandable format for residents.
- Get public input on key decisions.
- Change planned activities, where warranted, based on community input.
- Update U.S. EPA's websites regularly and provide useful information on it for the community.
- Update Montgomery County, Dayton and Riverside officials on a periodic basis even if no activities are occurring at the sites.
- Hold public meetings, when necessary, within the community to give all residents an opportunity to attend.

U.S. EPA has or will put in place the activities described on Page 20 to meaningfully and actively engage the community in decisions regarding the cleanup of the Behr Dayton, Valleycrest Landfill and Valley Pike sites. The following plan is intended as opportunities for communication between the community and U.S. EPA and to address key concerns and questions raised during the community interviews and meetings conducted in 2014.

Specific Community Involvement Activities

To address community concerns and questions described in the Community Concerns section, U.S. EPA has conducted (or will conduct) the activities described below. Through these activities, it is the Agency's goal to inform, involve and engage the community during site cleanup decisions and efforts. As the needs of the community changes, U.S. EPA will modify the community involvement strategies to address them.



The U.S. EPA Project Office on Harshman Road is near the Valley Pike site and community members can come to the office to sign access agreements, get copies of fact sheets and meet with U.S. EPA officials.

- **Maintain point of contact.** Ginny Narsete is the primary liaison between U.S. EPA and the Dayton and Riverside communities. Ms. Narsete serves as the point of contact for community members and fields general questions about the site. For technical site issues, Ms. Narsete coordinates with EPA's **remedial project managers** and **on-scene coordinator** for the sites. These include Erik Hardin, RPM for the Behr Dayton site, Dion Novak, RPM for the Valleycrest Landfill site and Steve Renninger, OSC for the Valley Pike site.

  U.S. EPA will include current contact information for the project staff on all written and electronic information and will notify the community of any contact information changes.

- **Establish a toll-free number for residents to ask questions and receive information.** Ms. Narsete (ext. 64359), Mr. Hardin (ext. 62402) and Mr. Novak (ext. 64737) are located in the Chicago office and can be reached using the toll-free number in the box to the right. Ask for them by name or use the telephone extensions listed above. Residents can call this number as questions or concerns arise instead of waiting for a public meeting or to receive written information. U.S. EPA provides this toll-free number periodically in local newspaper advertisements and includes the toll-free number in all fact sheets and all other U.S. EPA communications with the public.

- **Establish a project office.** U.S. EPA has set up a project office for the Valley Pike site at 2049 Harshman Road, Riverside, Ohio. The Valley Pike site is currently being addressed under a removal action and U.S. EPA and its contractors are working at the site on a daily basis. The project office provides a location where residents can come and talk with U.S. EPA and get additional information about the site activities.

The EPA has designated the following people as primary site contacts for local residents:

Ginny Narsete
Community Involvement Coordinator
312-886-4359
narsete.virginia@epa.gov

Erik Hardin
Remedial Project Manager
312-886-2402
hardin.erik@epa.gov

Dion Novak
Remedial Project Manager
312-886-4737
novak.dion@epa.gov

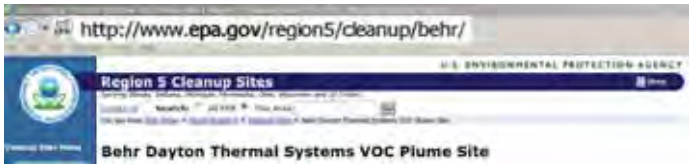
They can also be reached weekdays toll-free at 800-621-8431 from 8:30 a.m. to 4:30 p.m.

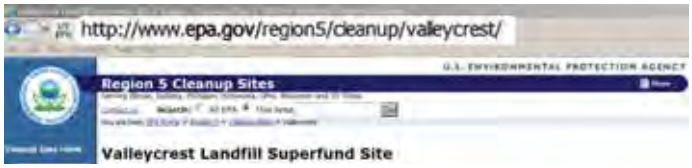
Steve Renninger
On-Scene Coordinator
937-237-7530
renninger.steve@epa.gov

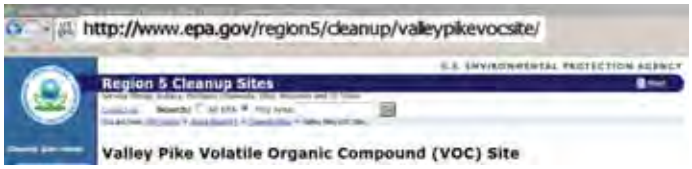
- **Maintain communication with local officials, agencies and community residents.** U.S. EPA interviewed local officials from Montgomery County and the cities of Dayton and Riverside. They indicated that they would like to be contacted with updated site information on a periodic basis so that they can update their constituents. Both Montgomery County and city officials indicated they would put contact information for U.S. EPA staff and information about the site progress on their respective web pages to keep the community informed. U.S. EPA will continue to maintain communication with the local officials throughout the remainder of the cleanup process.

The city of Riverside posted the invitation to the Valley Pike public meeting on their city website.

- **Share site information on the Internet.** Information on site activities and past communications for each of the sites are provided on the following U.S. EPA websites and will be updated as events occur:







- **Update and maintain the site mailing list.** A mailing list of local residents, organizations, businesses and officials has been established for the individual sites. These lists will be used for mailing fact sheets, site updates, invitations to public meetings and events and other site-related information mailed to the community. The lists will be updated regularly to reflect address changes, changes in elected officials and to add new people interested in site activities.

  U.S. EPA uses the site mailing list to distribute written information such as fact sheets and meeting notifications. This is a way to ensure that those that do not have access to the Internet or other information sources still have a way to receive information directly about the site and are notified about important meetings. The mailing lists are for U.S. EPA use only and are not shared with outside entities. If a community member is interested in being placed on one or more of the site mailing lists they can contact Ginny Narsete, **CIC**.

- **Prepare and distribute fact sheets and site updates.** Fact sheets, letters and site updates summarizing current information about the site and describing upcoming activities may be prepared and distributed to those on the site mailing and e-mail lists. These documents are written in non-technical language and are typically done to coincide with important site activities.

  U.S. EPA uses these types of documents to give the community detailed information in a relatively quick, simple and easy-to-understand manner. In addition to being shared with individuals on the site mailing lists, fact sheets and site updates are also placed in the **information repository** (*see Page 22*) and posted on U.S. EPA's website: www.epa.gov/region5/cleanup/behr, www.epa.gov/region5/cleanup/valleycrest and www.epa.gov/region5/cleanup/valleypikevocsite.

- **Establish and maintain a site-specific information repository.** U.S. EPA has set up a local information repository for each of the sites at the following locations:

  E.C. Doren Branch Library
  701 Troy St.
  Dayton, OH 45404
  (temporarily located at 359 Maryland Ave. until mid-December 2014)

  The repository is a reference collection of site information available to the public for reading and photocopying. Documents include fact sheets, technical reports, the CIP, general Superfund information and other documents. U.S. EPA adds new documents about the site as the documents become available. Information repositories give residents local access to site information in forms that can be easily read and photocopied for future use. An online information repository is also available on each site's web page www.epa.gov/region5/cleanup/behr, www.epa.gov/region5/cleanup/valleycrest and www.epa.gov/region5/cleanup/valleypikevocsite for the community to access information electronically.

The E.C. Doren Public library is the closest Dayton Public library to the sites and houses information for each of the sites as well as general Superfund information.

- **Establish and maintain the administrative record.** A copy of the **Administrative Record** for each of the sites can be found at the libraries listed above and at the U.S. EPA Region 5 Superfund Record Center in Chicago (*see Appendix C*). U.S. EPA will update the Administrative Record as necessary. The Administrative Record gives residents a paper trail of all documents U.S. EPA relied on, or considered, to reach decisions about the Superfund site cleanup.

- **Conduct public meetings, hearings and information sessions.** A public meeting is an opportunity for U.S. EPA to present specific information and a proposed course of action. U.S. EPA staff is available to share information and answer questions. A public meeting is not a formal public hearing where testimony is received. Instead, it might be a meeting to exchange information or comments. In addition, U.S. EPA may hold an informal open-house style meeting, called an availability session, where residents can meet EPA experts one-on-one to discuss the activities at the site. Either type of meeting allows community members an opportunity to express their concerns and ask questions of the Agency, state or local government officials. Public meetings or availability sessions can be held at various times throughout the investigation and cleanup process. A meeting is typically scheduled when there are technical milestones or the community has expressed an interest in having a meeting.

  A public hearing is a formal meeting wherein U.S. EPA officials hear the public's views and concerns about a U.S. EPA action or proposal. There are specific regulations about when the Agency is required to consider such comments when evaluating its actions. Public hearings are recorded by a professional transcriber and become part of the administrative record. The comments are also posted on the Web.

  U.S. EPA will consider conducting additional meetings at different times and different locations throughout the community to give all residents an opportunity to attend as needed.

- **Assist the communities in forming a community advisory group.** A CAG is made up of local residents and provides a formal mechanism for community members to have a voice in decisions. U.S. EPA encourages the formation of CAGs. Representatives from multiple community organizations, associations, businesses, etc. form a group. They meet periodically to discuss site events and create partnerships with the surrounding community. They also provide community recommendations on cleanup decisions to U.S. EPA. They are best for communities willing to attend regularly scheduled formal meetings for ongoing needs. More information on CAGs can be found at www.epa.gov/ superfund/community/cag.

  U.S. EPA will hold a meeting to present information on how to form a CAG. During the interviews, several individuals expressed an interest in forming one CAG to support all three sites. This CAG would be a diverse group, representing all populations and interests of the neighborhoods affected by the Superfund sites in the area.

- **Write and distribute news releases and public notices.** U.S. EPA will prepare and release announcements to the local newspaper such as The Dayton Daily News to share information about events such as significant site investigation findings, completion of major milestones, significant scheduling information and other pertinent site-related information. U.S. EPA will also provide this information to Montgomery County and the cities of Dayton and Riverside for posting on their respective websites.

  News releases allow U.S. EPA to reach large audiences quickly. They will also be posted on U.S. EPA's websites, www.epa.gov/region5/cleanup/behr, www.epa.gov/region5/cleanup/valleycrest and www.epa.gov/region5/cleanup/valleypikevocsite. U.S. EPA typically publishes news releases and public notices to announce major events such as comment periods, public meetings and major milestones such as the selection of a cleanup plan.

  U.S. EPA will issue news releases and public notices as site activities progress. Copies of the news releases and public notices will also be available in each site information repository.

- **Evaluate community involvement and outreach efforts and make adjustments as warranted.** This CIP was designed to consider site- and community-specific factors as well as to comply with federal requirements. Community concerns, the objectives of the community involvement program for the sites and specific activities to address these concerns in this CIP were based to a large extent on information obtained during interviews with local residents and county and city officials. U.S. EPA recognizes that changes in areas such as community perceptions, information needs and population demographics can occur over time and that such changes may necessitate a revised approach to conducting community involvement activities. For this reason, as well as to determine whether the activities in this plan are achieving their intended objectives, periodic reviews will be done to determine whether additional activities are warranted or whether changes to current methods of starting up the activities outlined in this plan are necessary. As the needs of the community changes, U.S. EPA will modify the community involvement strategies to address them in a CIP revision.

The table on the following page presents the general timeframe for the activities above.

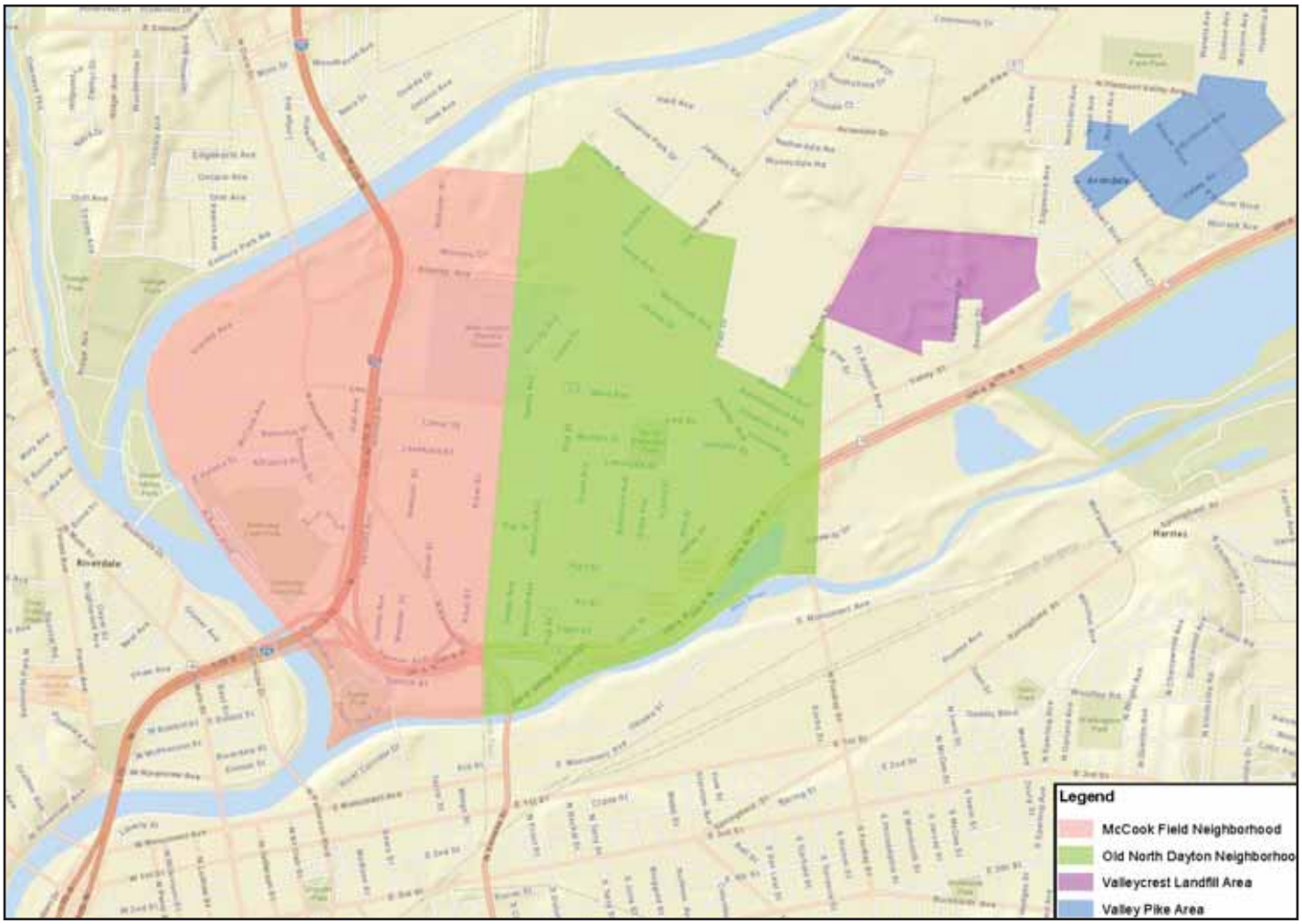
A Community Advisory Group is made up of representatives of diverse community interests. Its purpose is to provide a public forum for community members to present and discuss their needs and concerns related to the Superfund decision-making process. A CAG can assist EPA in making better decisions on how to clean up a site. It offers EPA a unique opportunity to hear-and seriously consider-community preferences for site cleanup and remediation. However, the existence of a CAG does not eliminate the need for the Agency to keep the community informed about plans and decisions throughout the Superfund process.

Timeframe/Status of Community Involvement Activities

Community Involvement Activities	Status
Maintain point of contact	Completed
Establish a toll-free number	Completed; publish on written materials and U.S. EPA website
Establish a project office for the Valley Pike VOC Site	Completed
Conduct community interviews and develop community involvement plan	Completed
Maintain communication with local officials, agencies and community residents	Ongoing as needed
Share site information on the Internet	Completed; update as needed
Update and maintain the site mailing list	Completed; update as needed
Prepare and distribute fact sheets and site updates	Ongoing as needed
Establish and maintain a site-specific information repository	Completed; update as needed
Establish and maintain the administrative record	Completed; update as needed
Conduct public meetings, hearings and information sessions	Ongoing as needed
Assist the communities in forming of a Community Advisory Group	In process
Write and distribute news releases and public notices	Ongoing as needed
Evaluate community involvement and outreach efforts and make adjustments as warranted	Periodically throughout the cleanup process

THE COMMUNITIES

This section describes the composition of Dayton, Riverside and the McCook Field and Old North Dayton neighborhoods and the history of community involvement with the sites. All communities are located in Montgomery County, Ohio .



This map shows the locations of the neighborhoods and communities affected by the three sites outlined in this CIP. EPA has prepared one CIP because outreach activities and the formation of one Community Advisory Group connects these communities.

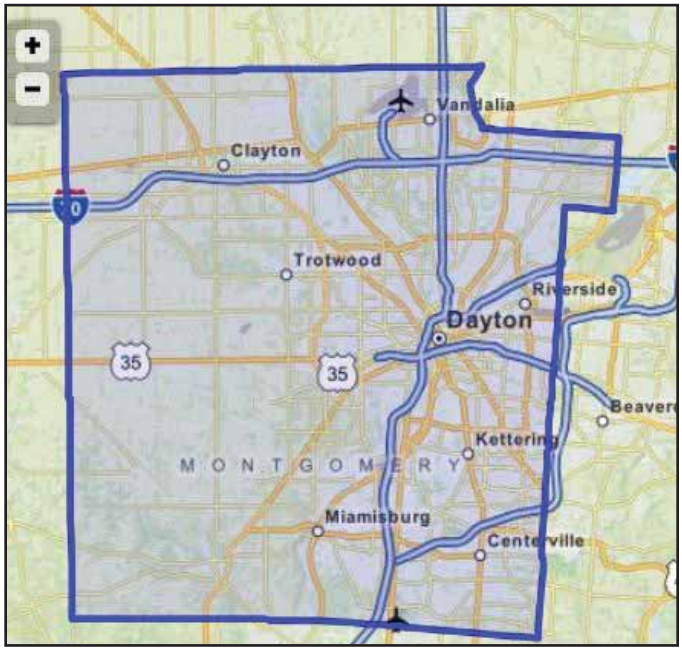
Dayton Community Profile

Downtown Dayton, Ohio and the Great Miami River.

Dayton is located in Montgomery County, Ohio, at the "Crossroads of America." It is the sixth largest city in the state of Ohio and encompasses an area of about 59 square miles. Dayton is located within the Miami Valley region of Ohio. The Miami Valley refers to the land area surrounding the Great Miami River and includes the Little Miami, Mad, and Stillwater Rivers.

Dayton was incorporated in 1805 with a government of seven council members, a supervisor and a Marshall. Today, Dayton's government consists of a city manager, mayor and four city commissioners. The City Commission meets every Wednesday at either 8:30 a.m. (morning meetings held on the second and fourth Wednesdays of each month) or 6:00 p.m. (evening meetings are held on the first, third, and fifth Wednesday of each month). Dayton was the first large American city to adopt the city manager form of municipal government in 1913. The Dayton city commissioners are elected at large on a non-partisan basis for four-year overlapping terms. Each member has equal voting power. The city manager is appointed by the City Commission and is responsible for budgeting and implementing policies and initiatives.

By the 1820s, the town was becoming overwhelmed by the volume of their own supplies due to lack of proper transportation to sell the supplies outside of town.



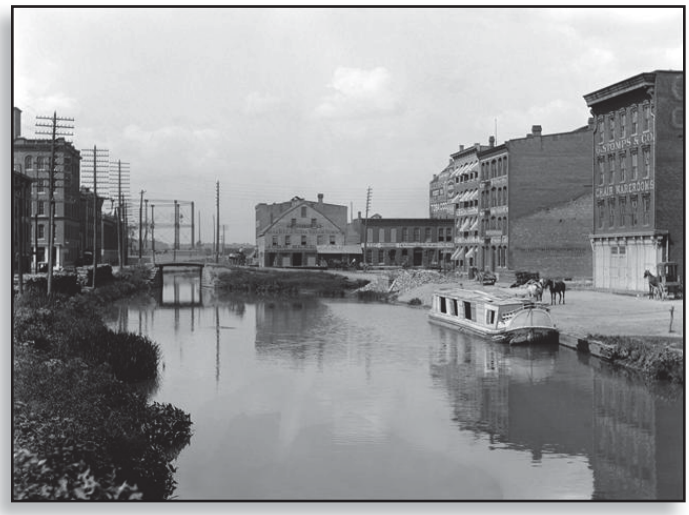
In 1827, construction began on the Dayton-Cincinnati canal that ran through Dayton at what is now Patterson Boulevard. The canal, later extended to Lake Erie, greatly contributed to the town's economic growth. Many industries began manufacturing goods in the area and by 1840 the town's population was over

Dayton is named after Jonathan Dayton. Though he never set foot in the area, he was a signatory to the constitution and at the time the city was established, he owned (in a partnership with others), 250,000 acreas in the Great Miami River basin. He was a captain in the American Revolutionary War and later served as the 4th Speaker of the U.S. House of Representatives.

In 2008, 2009, and 2010, Site Selection magazine ranked Dayton the number 1 mid-sized metropolitan area in the nation for economic development.

6,000. On March 8, 1841, Dayton was granted its city charter. The canal was Dayton's main reason for success until the growth of the railway into the area in the 1870s. Bringing travelers and new industries, Dayton grew to a population of more than 37,000. (Source: www.cityofdayton.com).

Dayton is home for many patents and inventions that date back to the 1870s, including the first mechanical cash register and the first hydraulic pump. Dayton is also the home of famous African American poet and novelist, Paul Laurence Dunbar. Brothers Wilbur and Orville Wright, who owned a bicycle shop on



Former Miami-Erie Canal facing Erie Street in Dayton, Ohio.

West Third Street in Dayton, invented the world's first airplane. Their long list of aviation accomplishments earned Dayton and Montgomery County the reputation of being the "Birthplace of Aviation". (Source: www.wikipedia.org).

Downtown Dayton, Ohio during the Great Dayton flood in March 1913.

A disastrous flood, the worst in Dayton history, occurred in March 1913. The Great Dayton flood claimed 300-400 lives and caused $100 million in damages. Residents raised $2 million to contribute to permanent prevention of another similar disaster. This led to the establishment of the Miami Conservancy District, one of the first river management and flood control agencies in the United States. A series of dams

Since 2009, immigrants, particularly from Turkey, began moving to Dayton to seek economic opportunity. Dayton's foreign-born population increased by 50% on its own between 2000 and 2010, as immigrants came to the area. Between 2011 and 2012, the city's immigration rate increased 40%.

In 2011, Dayton was rated third out of the top 50 cities in the nation by HealthGrades for excellence in healthcare.

and hydraulic pumps were installed throughout the city and have protected the Miami Valley since.

Since the 1980s, Dayton's population has been steadily declining due to the loss of manufacturing jobs and regionalization of metropolitan areas. The housing crisis that began in 2008 has also contributed to Dayton's population decrease. The loss of the manufacturing industry has allowed the city to grow into other industries such as healthcare and education. Healthcare makes up much of Dayton's economy, with a yearly economic impact of $6.8 billion and a workforce of 32,000. Many Dayton area hospitals are consistently ranked by Forbes, U.S. News and World Report, and Health Grades for clinical excellence.

Dayton started a plan in 2011 called Welcome Dayton to make the city more "immigrant-friendly." Over 100 individuals and representatives from immigrant, public and private groups voluntarily came together to discuss how to engage new residents in revitalizing neighborhoods, growing the population and strengthening the city's economic base. Welcome Dayton was established based on recommendations and suggestions from four sub-committees consisting of business and economic development; local government and the justice system; social and health services; and community, culture, arts and education. The plan also welcomes newcomers to the area and promotes a kind and inviting attitude to the community.

The following sections provide a more detailed look at each of the communities.

McCook Field Neighborhood Community Profile (Behr Dayton Site)

General Alexander McDowell McCook

The McCook Field neighborhood is located just north of downtown Dayton, along the east side of the Great Miami River, west of Keowee and Webster Streets and south of Helena Street. This neighborhood area has extensive aviation history dating back to the early 1900s. McCook Field was named for Civil War General Alexander McDowell McCook (of the "Fighting McCooks") who once owned part of the property.

During World War I, due to the presence of several aircraft and automobile plants in Ohio, the National Advisory Committee on Aeronautics established a military installation at McCook Field. This 254-acre complex was the temporary home of the U.S. Army Signal Corps' Airplane Engineering Division. As an engineering and research facility, McCook Field has been described as the single most influential agency in the early years of American air power. McCook's engineers and technicians researched, developed, manufactured, tested, and evaluated military aircraft and all of their associated components and equipment. Hangars, office buildings, shops and laboratories were built at the site. At its peak, McCook Field had 1,096 civilian employees and 378 military personnel.

A 1922 photo of the hangars at McCook Field. Source:www.airfields-freeman.com/OH/Airfields_OH_SW.htm#mccook.

Major W. Schroeder set 30,900 foot two-man altitude record in a Packard-Le Peré LUSAC-11 Biplane at McCook Field, 24 September 1919. Source: en.wikipedia.org/wiki/McCook_Field.

The McCook Field was intended for experimental flying. The runway was laid out by Orville Wright and was only 1,000 feet long and 100 feet wide. The field's relatively small size could not accommodate the larger aircraft that quickly emerged after World War I. The warning "This Field is Small, Use It All!" was painted on top of the airfield's hangars. If an aircraft overshot the runway or failed to get airborne, it would end up in the Great Miami River. Because the smallness of the area and the proximity to streets and homes made experimental flying very dangerous McCook Field relocated in 1927 to the new location and was renamed Wright Field.

McCook Field was located in a flood plain and is where Kettering Field is now located. The Army's Air Base structures were located on what was the site of the Parkside Homes Housing Project before the Project was demolished in 2008. Parkside homes were originally built in 1941 to fill a critical housing need by civilian employees of Wright Field.

In the late 1940s, commercial enterprises such as department stores, banks, and pharmacies began

expanding to the suburbs. Dayton's first modern-style shopping center was built on part of the area of what was previously McCook Field. It also included a bowling alley and movie theater.

The Salvation Army Ray and Joan Kroc Corps Community Center opened in 2010 and is located on 17.5 acres in the McCook Field neighborhood. The center offers many services to the community including education, social services, worship and the arts and recreation. Also on the property where the Kroc Center is built is the historic Duncarrick Mansion. The mansion, placed on the National Register in 1983, houses administrative offices, meeting rooms and an Old Dayton Museum.

The Salvation Army Ray and Joan Kroc Corps Community Center.

At present, the McCook Field neighborhood consists of commercial, industrial, residential and park and recreation areas. Unfortunately, due to a challenging economy there are also numerous unoccupied buildings and homes and vacant lots.

McCook Field Neighborhood Demographics (Behr Dayton Site)

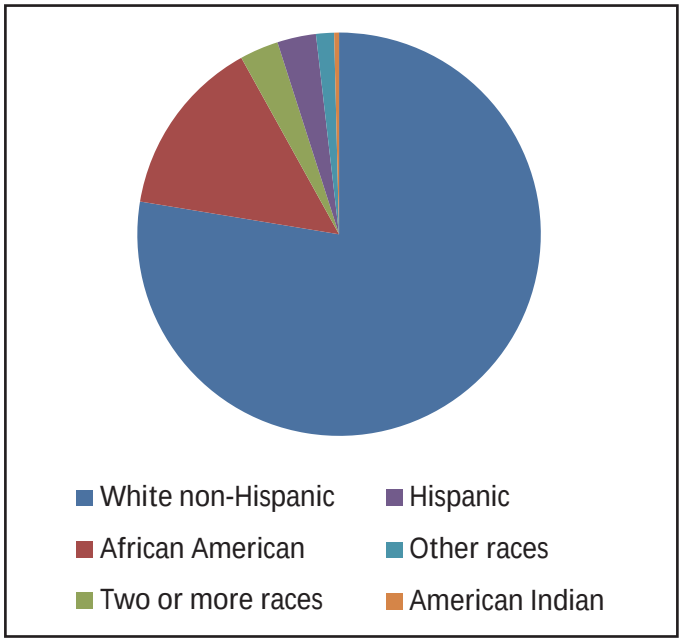
Based on 2010 U.S. Census data, the McCook Field community has a population of 770. This reflects a population decrease of about 63 percent from the 2000 census. The population is predominantly white non-Hispanic (80 percent), followed by African American making up 14.8 percent, Hispanic 3.2 percent, two or more races 3.2 percent, other races 1.5 percent and American Indian 0.4 percent.

The American Slovak Club is located in the McCook Field Neighborhood.

The median resident age in McCook Field is 33 years. Approximately 48 percent of households are family households. About 7 percent of the population have a high school education or equivalent and about 2 percent have attained a bachelor's degree or higher.

The 2011 median household income was $20,795. This compares to the median household income for Dayton of $28,843 in 2011.

Population of McCook Field Neighborhood

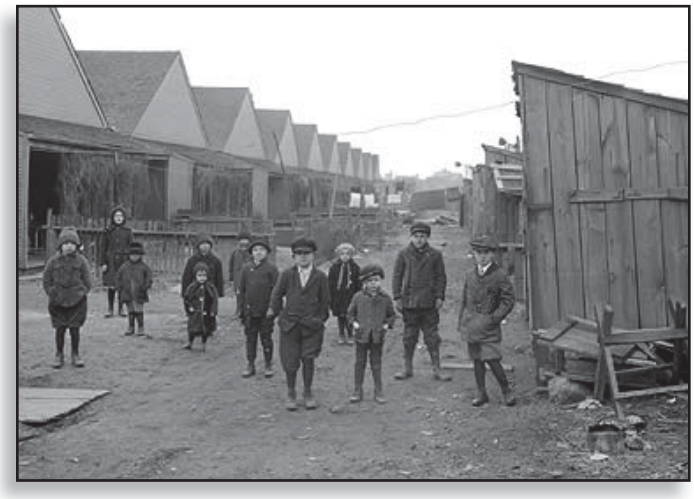


Old North Dayton Neighborhood Community Profile (Valleycrest Landfill Site)

The Old North Dayton neighborhood is located northeast of downtown Dayton between the Great Miami and Mad Rivers. The first settlers in the neighborhood were German immigrants, when the neighborhood was known as Texas. In the 1890s, Eastern European immigrants, mainly Poles, Hungarians and Lithuanians, moved into the area and worked as laborers for the various industries, making Old North Dayton a unique and diverse neighborhood.

This sign welcomes people to the Old North Dayton neighborhood.

One of the most notable communities was the Kossuth Colony organized by Jacob Moskowitz, a Pittsburgh-based developer. One of Moskowitz's job duties was to find, recruit, house and sustain a group of skilled workers for a specific company. In 1906, Moskowitz was looking to provide workers for the Barney and Smith Train Car Company, one of the largest and most respected manufacturers in Dayton. To support the workers, Moskowitz built slender homes called "doubles" that had five rooms on each side. The colony, surrounded by a 12-foot wooden fence, held about 200 Hungarian immigrant welder and steel workers and their families who worked for the rail car company. If the workers lost their job with the company they were evicted from the colony.



Children inside the Kossuth Colony in Old North Dayton, Ohio.

It was a city within itself, complete with a bank, grocery and general store, travel agency, and Dayton's largest tavern. Church services were held in one of the homes with visiting priests until St. Stephens Church was founded in the colony. Doctors, lawyers, and other professionals on Moskowitz's approved list were let into the colony as needed. The workers were not paid in U.S. currency but were issued script by Barney and Smith. Workers walked about one mile from the colony to the factory. The requirements of living in the colony

"Our nature is to protect each other; the area used to be high crime but it has changed. Five years ago I could not walk down the streets by myself, but now I am comfortable to let my 11 year old out to play in the neighborhood. Neighbors watch out for everyone – no matter what ethnicity."

- Resident

Ahiska Turkish American Community Center

"Creating a Unity Among Diversity"

In 2012, the Ahiska Turkish American Community Center (ATACC) held its grand opening in Dayton. This non-profit organization helps provide the Ahiskan members of the community with the education and tools necessary to succeed and become quality citizens.

were that all purchases by the immigrants had to be made in the colony stores, which were owned by the rail car company. If the stores did not carry items that the immigrants needed, then they were allowed to go elsewhere. If unapproved purchases were made outside the colony, those people lost their job with the company and were evicted.

The Great Dayton flood in 1913 led to the eventual closing of the colony. Workers on the first shift walked to work on that Tuesday morning but became stuck by the raging flood waters. Though the colony itself was not damaged, workers and men in the colony tore down the wooden fence to build rafts to rescue

Houses on Mack Avenue in the Kossuth Colony Historic District in Old North Dayton, Ohio.

the factory workers and other stranded by the flood. The fence was never rebuilt and Barney and Smith, whose factory was severely damaged by the flood, never recovered from their losses and closed down the factory. The immigrants from the colony either moved out of the area or integrated throughout Dayton, many living near the old colony. Some of the original colony homes still stand in Old North Dayton. On December 21, 1979, the Kossuth Colony area was listed in the National Register of Historic Places and has also been named a historic district by the Dayton.

Old North Dayton is still a working-class neighborhood and home to many immigrant families. In 2005, a refugee group of Ahiska Turks from the Russia region of Krasnodar began arriving in the U.S. in search of work, freedom and a place to raise their children. They have rehabilitated more than 200 homes in the neighborhood that were left abandoned or in poor condition. The low cost of homes has enabled them to grow in the neighborhood, spending more money and resources on education and businesses and less on the cost of living. Even non-Turkish neighbors have been inspired to renovate their homes to continue the trend of revitalizing the neighborhood's appearance.

"This area is family oriented – cousins all grew up together and our family just celebrated 100 years on our property."

- Resident

The Polish Club has been used as a meeting place for community members.

In recent years, the Ahiska Turks have worked with The Ohio State University and Dayton representatives on the Vacant to Vibrant urban farming initiative to improve the landscape in the neighborhood. They are farming vacant land within the area and the project has helped create jobs in the Turkish community.

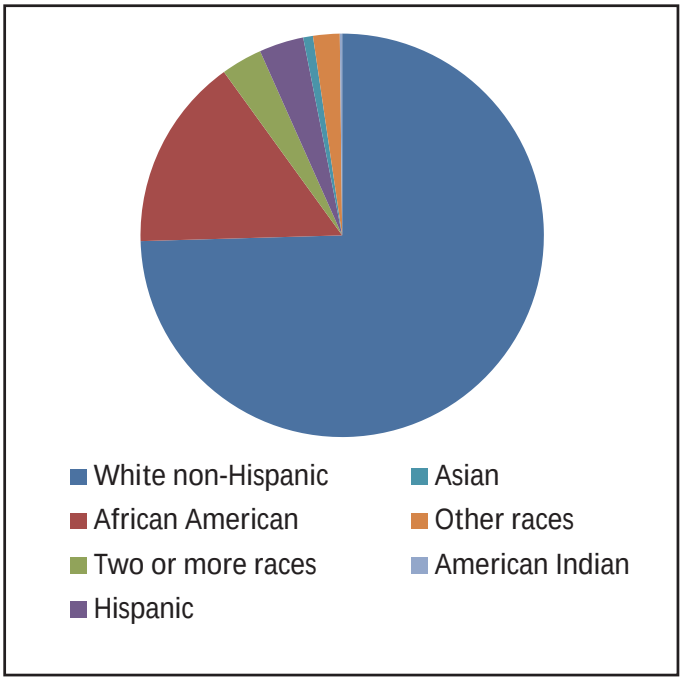
Old North Dayton Neighborhood Community Demographics (Valleycrest Landfill Site)

Based on 2010 U.S. Census data, the Old North Dayton community has a population of 5,902. This reflects a population decrease of about 8 percent from the 2000 census. The population is predominantly white non-Hispanic (77 percent), followed by African American making up 16 percent, Hispanic 3.7 percent, two or more races 2.8 percent, other races 2.2 percent, Asian 0.8 percent and American Indian 0.2 percent.

The median resident age in Old North Dayton is 33 years. Approximately 42 percent of households are family households. About 14 percent of the population have a high school education or equivalent and about 12 percent have attained a bachelor's degree or higher.

The 2011 median household income was $26,688. This compares to the median household income for Dayton of $28,843 in 2011.

Population of Old North Dayton Neighborhood



Riverside Community Profile (Valley Pike VOC Site)

Riverside, adjacent to Dayton and located in east central Montgomery County, encompasses a total area of 9.76 square miles. Riverside was established in 1994 from a merger between the Village of Riverside and Mad River Township.

The city of Riverside's administration building on Harshman Road houses the Council Chambers and Police and Fire Departments.

The city is governed by a mayor and six council members. The council meets the first and third Thursday of each month. A deputy mayor is selected from the council members.

Riverside is the gateway to the National Museum of the U.S. Air Force, drawing over 1.3 million visitors each year, making it one of the most frequently visited tourist attractions in Ohio. The museum's collection contains military aircraft of historical and technological importance along with memorabilia and artifacts that relate to the history and development of military and commercial aviation.

Riverside is the home to a system of neighborhood parks.

- Shellabarger Park, located on Burkhardt Road, near the City's eastern border, is the home to the Riverside Community Festival, held the last full weekend of August. The park has a ¾-mile walking path with an extensive children's play center as well as a covered shelter. The park also has several acres of green space and can accommodate two soccer fields.
- Rohrer Park, located on Rohrer Boulevard has multiple soccer fields, baseball fields, basketball courts, swing sets, a play center, and a ¾-mile walking path. A picnic shelter with picnic benches, grills, and electric service is also available.
- Drennen Park, located off Penn Avenue, serves the residents of the Park Lane neighborhood. This eight-acre park is composed of green-space and hosts a play structure and a basketball court.
- Community Park, located on Old Harshman Rd., has a walking path, baseball field, football field, volleyball court, basketball court, shelters with picnic tables and a bark park.

- Eintracht Club on Old Troy Pike, home to the Eintracht Singing Society, club that promotes German culture and traditions. Riverside plans to construct a canoe/kayak landing along the adjacent Great Miami River along with other outdoor amenities for residents to enjoy.

A number of public and private school systems serve students in Riverside including the Mad River Local School system, Dayton City Schools, Huber Heights City Schools, Fairborn City Schools and Beavercreek City Schools. In addition, St. Helens Elementary and Carroll High School are both located in Riverside.

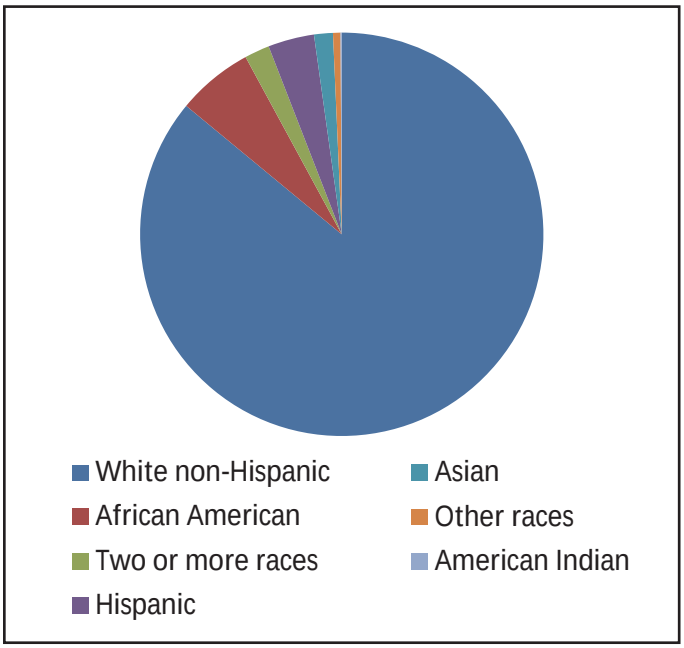
Riverside Community Demographics (Valley Pike VOC Site)

Based on 2010 U.S. Census data, Riverside has a population of 25, 201. This reflects a population increase of about 7 percent from the 2000 census. The population is predominantly white non-Hispanic (86 percent), followed by African American making up 6.1 percent, Hispanic 3.7 percent, two or more races 2.0 percent, Asian 1.5 percent, other races 0.6 percent and American Indian 0.1 percent.

The median resident age in Riverside is 35 years. Approximately 65 percent of households are family households. About 84 percent of the population have a high school education or equivalent and about 15 percent have attained a bachelor's degree or higher.

The 2011 median household income was $38,774. This compares to the median household income for Dayton of $28,843 and for Montgomery County of $44,585 in 2011.

Population of Riverside



"Out of adversity good things can rise."

- Riverside Council Member

This table shows a comparison of median age, number of family households, the percentage of residents who have completed a high school education or equivalent, the percentage of those who have attained a bachelor's degree and the median household income for McCook Field Neighborhood, Old North Dayton Neighborhood, Riverside, Dayton and Montgomery County.

	Median Age	Family Households	High School Education or Equivalent	Bachelor's Degree	Median Household Income
McCook Field	32	48%	7%	2%	$20,795
Old North Dayton	33	42%	14%	5%	$26,688
Riverside	35	65%	33%	9%	$38,774
Dayton	34	53%	30%	11%	$28,843
Montgomery County	39	62%	30%	14%	$44,585

Community Involvement Efforts

The community interviews and meeting with residents, officials and neighborhood groups represent U.S. EPA's continuing efforts to keep the community informed and solicit input. During the interviews, U.S. EPA learned a lot about the changing neighborhoods and additional ways to keep the community informed. More detail on these interviews and concerns and questions raised by community members can be found in the Community Concerns and Questions section beginning on Page 5. Additional community involvement activities are discussed in the Community Involvement Goals and Activities section.

U.S. EPA talks with Dayton's Planning Department about the sites.

U.S. EPA RPM meets with the city of Dayton's Water Department to talk about the Superfund sites in the Dayton area.

On March 20, 2014, members of the EAB, city of Dayton staff, representatives from the Valleycrest Neighbors and Concerned Citizens group and the EPA site team met to discuss reuse of the Valleycrest site.

Dayton Environmental Advisory Board

The Environmental Advisory Board was established to support the formulation of sound policy with respect to environmental issues important to the citizens of Dayton. The City Commission selects members of this board. The Board advises the City Manager, City Commission and City Departments on matters related to the environmental quality of the city of Dayton, either in response to requests from the city or as a result of a need observed by the Environmental Advisory Board.

Below are activities conducted for each specific site and additional outreach activities in the community.

Behr Dayton Site

In July 2003, U.S. EPA mailed out a fact sheet to residents and local officials. This ToxFAQs publication from ATSDR provided answers to the most frequently asked health questions about TCE (*see Appendix G*).

In February 2007, a public meeting was held to discuss air quality sampling. U.S. EPA and Ohio EPA addressed media about sampling and mitigation in August, and an additional public meeting was held in November to discuss basement testing at homes.

Neighborhood Organizations

Supporting the Behr Dayton site is the McCook Field Neighborhood Association. McCook Field area residents also formed a group called the Behr VOC Area Leaders, or BVOCAL.

The McCook Field Neighborhood Association meets on the first Tuesday of the month at the KROC Center, 1000 North Keowee St.

A fact sheet was published in September 2008 explaining that long-term investigation had begun and that the site had been proposed for placement on the **National Priorities List**, or **NPL**. The NPL is a list of the nation's most polluted sites eligible for investigation and cleanup under U.S. EPA's Superfund program. A public meeting was held in October to explain and answer questions about the proposal to place the site on the NPL, the long-term investigation and the vapor intrusion work.

In April 2009, U.S. EPA held community interviews with residents, property owners and local officials. In May 2009, the site was placed on the NPL. U.S. EPA mailed out a fact sheet to residents and local officials in August 2009. The fact sheet updated the community on the long-term investigation and future work and testing to be performed. A public meeting was held in September 2009 to explain site activities and the vapor intrusion work.

A CIP was developed in January 2010. U.S. EPA held a public meeting in July 2010 to present the **RI/FS** plans to the community.

U.S. EPA talks about community concerns on the Behr Dayton site with Dayton's Deputy City Manager.

In March 2014, U.S. EPA conducted community interviews with residents, property owners, and local officials to learn about concerns or issues the community had regarding the Behr Dayton site.

U.S. EPA mailed a proposed plan fact sheet explaining the cleanup options for the site to area residents in November 2014. Also, the community was invited to submit comments on the clean up options during the public comment period (November 20 - December 20, 2014). U.S. EPA will reviesw and consider comments revised before making a final decision on the cleanup option.

Valleycrest Landfill Site

In September 1999, U.S. EPA mailed out a fact sheet to residents and local officials. The fact sheet updated the community on the status of work being conducted at the site and announced a public meeting that was held at Stebbins High School. U.S. EPA established the site information repository at the Burkhardt Avenue Public Library. The information repository was moved to E.C. Doren Public Library at 701 Troy, Dayton because it is closer to the site.

U.S. EPA CIC interviews a Kiser School employee to learn about her concerns regarding the Valleycrest Landfill site.

Neighborhood Organizations

The Old North Dayton Neighborhood Association (ONDNA) and the Valleycrest Neighbors and Concerned Citizens (VNCC) are neighborhood organizations involved with the Valleycrest Landfill site.

The Old North Dayton Neighborhood Association meets on the second Tuesday of the month at Kiser Elementary School, 1401 Leo St.

In February 2002, U.S. EPA 5 awarded a $50,000 technical assistance grant to the Old North Dayton Neighborhood Association, a community organization in Dayton, Ohio.

In January 2003, U.S. EPA mailed a Valleycrest Bulletin to residents and local officials. This bulletin provided an update on the site and announced a February 2003 public meeting.

A **proposed plan** fact sheet was mailed to residents and local officials in July 2012. The fact sheet explained the results of the **remedial investigation** and the cleanup alternatives were presented. A **public comment period**, which gave the community an opportunity to provide input on the proposed cleanup plan, was held from August 9 to September 10, 2012. A public meeting and hearing was held on August 16, 2012 to provide an opportunity for community members to give comments on the proposed plan.

In February 2014, U.S. EPA conducted community interviews with local residents, students and city officials to learn what the community knows about the Valleycrest Landfill site and how U.S. EPA can best communicate with the community about the site.

Valley Pike VOC Site

In December 2013, U.S. EPA mailed a fact sheet to the community discussing the vapor intrusion issues in the Valley Pike neighborhood and requesting access for homes in the area of concern. U.S. EPA also provided information on a local project office that was established in the area.

A second public meeting was held in July 2014 to announce the expanded sampling area, results of the investigation to date and to get additional access agreements from residents. During July, U.S. EPA conducted community interviews with residents and local officials about activities at the site and to get information about the best way U.S. EPA can communicate with the community about site activities.

U.S. EPA held a public meeting on December 10, 2013 to explain the vapor intrusion problem and to request access agreements from property owners. Over 200 people attended the meeting and U.S. EPA received many signed access agreements at the public meeting.

"EPA has impressed the community with their responsiveness. They have come in and done what they said they would do. A lot of work has been done in six months."

- Riverside City Official

U.S. EPA frequently meets with area residents to discuss sampling results and explain sampling activities at the project office.

Over 60 interested community members attended the July 2014 public meeting about the Valley Pike VOC site.

Meeting with the Community

Turkish Neighborhood

During the community interviews for both the Behr Dayton and Valleycrest Landfill sites, U.S. EPA learned about the Turkish community in the area and the important role they have in the community. In the afternoon of May 28, 2014, U.S. EPA and Ohio EPA representatives met with Turkish community leaders to discuss the Superfund sites in the Dayton area and to learn more about their community and information needs. That same evening, U.S. EPA and Ohio EPA presented information about the sites to the Turkish community at a public meeting and answered questions from residents.

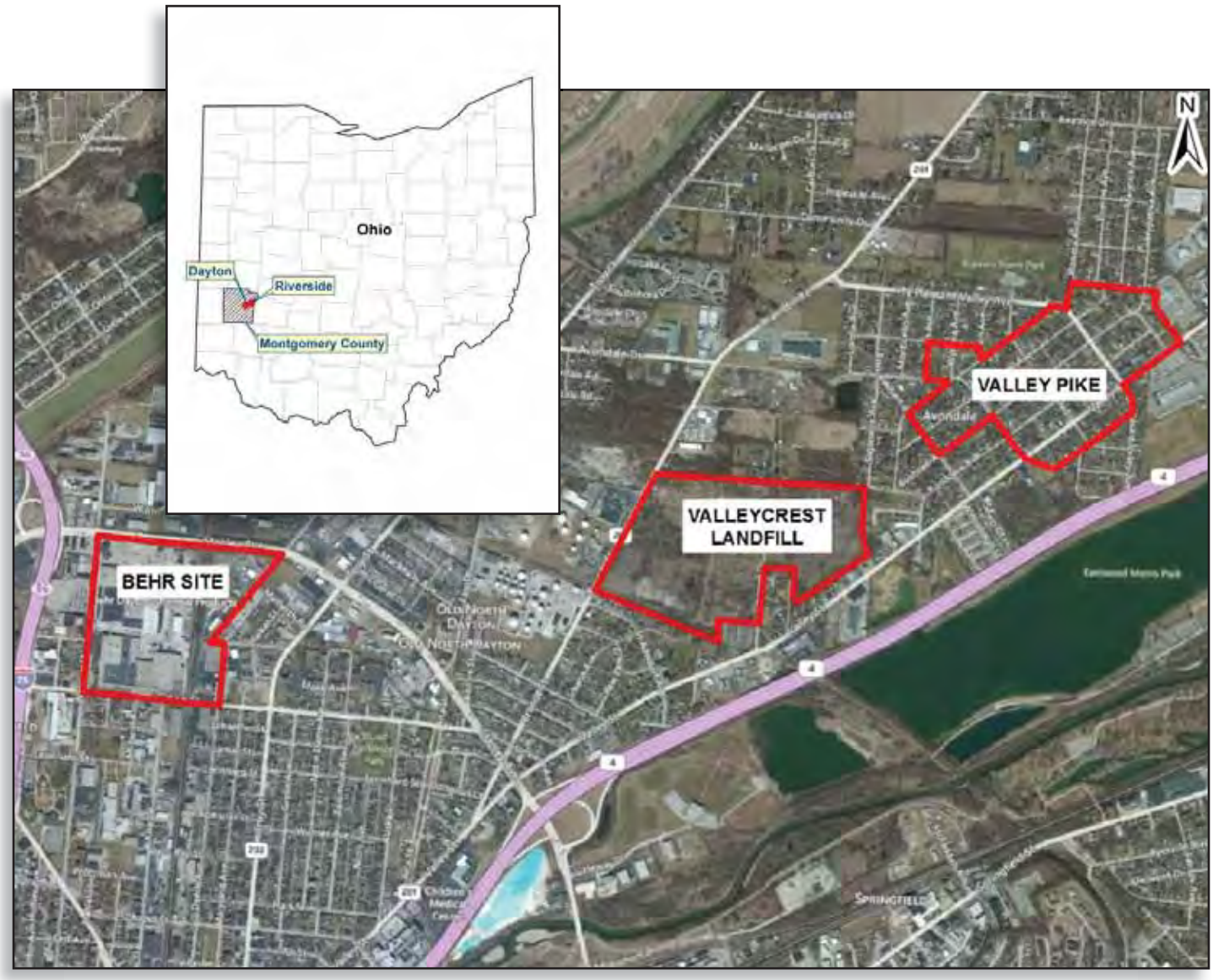
U.S. EPA and Ohio EPA representatives talk with Turkish community leaders about the Behr Dayton, Valleycrest and Valley Pike sites. A member of the Turkish community translated the discussions.

Old North Dayton Business Leaders

On May 28, 2014, U.S. EPA representatives were invited to the Old North Dayton Business Owners association meeting to give an update on the Behr Dayton, Valleycrest Landfill and Valley Pike site activities.

THE SITES

This section presents a description and history of activities at the Behr Dayton, Valleycrest Landfill and Valley Pike sites located in Dayton and Riverside, Montgomery County, Ohio. Below is a figure showing the location of each of the sites in proximity to each other. As discussed previously, the sites have different contaminants and technical concerns, but U.S. EPA believes the same community is affected and therefore, one CIP has been prepared.



BEHR DAYTON THERMAL SYSTEMS VOC PLUME SITE BACKGROUND

The map above outlines the location of the Behr Dayton Facility.

Site Location and Description

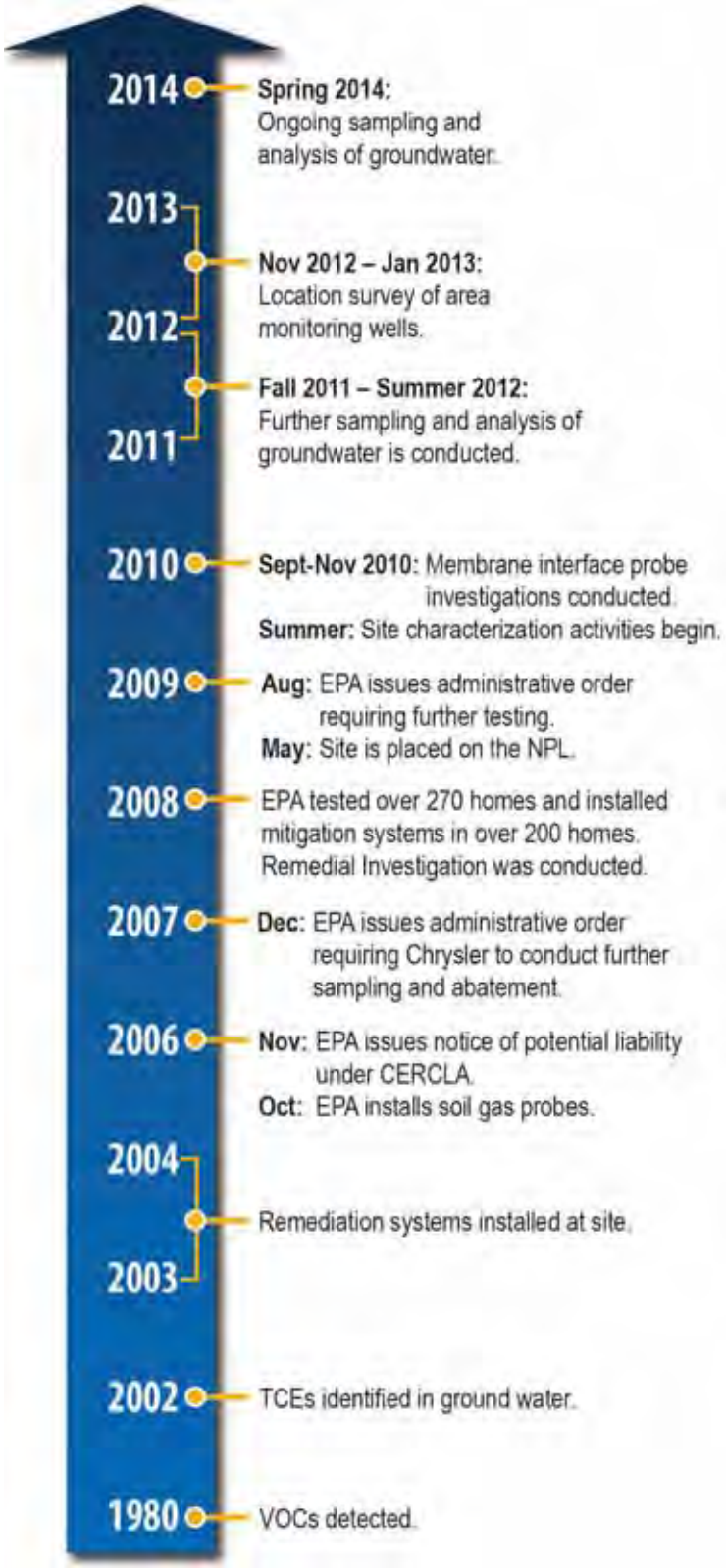
The Behr Dayton Thermal Systems VOC Plume facility is located in Dayton, Ohio, 2 miles north of downtown, at 1600 Webster Street. The site lies approximately 1 mile north of the confluence of the Great Miami River and the Mad River and about 1 mile east of the confluence of the Great Miami River and the Stillwater River. The site is also approximately 1 mile south of the city of Dayton's well field.

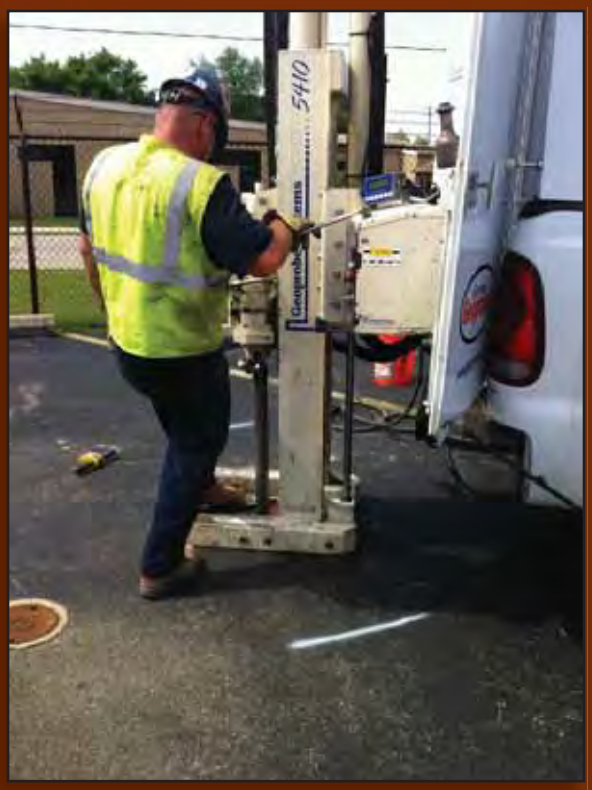
Land use surrounding the area is a combination of residential and commercial/industrial. The site is part of the Northeast Priority Board and is contained in the neighborhood of McCook Field. The site also includes groundwater contamination that extends beyond the boundary of the facility. The extent of the contamination is still being investigated.

Site History

The Behr Dayton Thermal System plant, which manufactured vehicle air conditioners and cooling systems, was owned by Chrysler from 1937 to 2002 and sold to Behr America in 2002.

Since the early 1980s, **volatile organic compounds**, or **VOCs**, including the solvent trichloroethylene, or TCE, have been detected in soil and groundwater beneath





A worker uses direct push technology, or DPT equipment to take samples. DPTs are a category of equipment that push or drive steel rods into the ground. They allow cost-effective, rapid sampling and data collection from unconsolidated soil and sediment. A tremendous variety of equipment is available, particularly in the type of attachments used at the end of rods to collect samples and data. These attachments may collect soil, soil gas or groundwater samples.

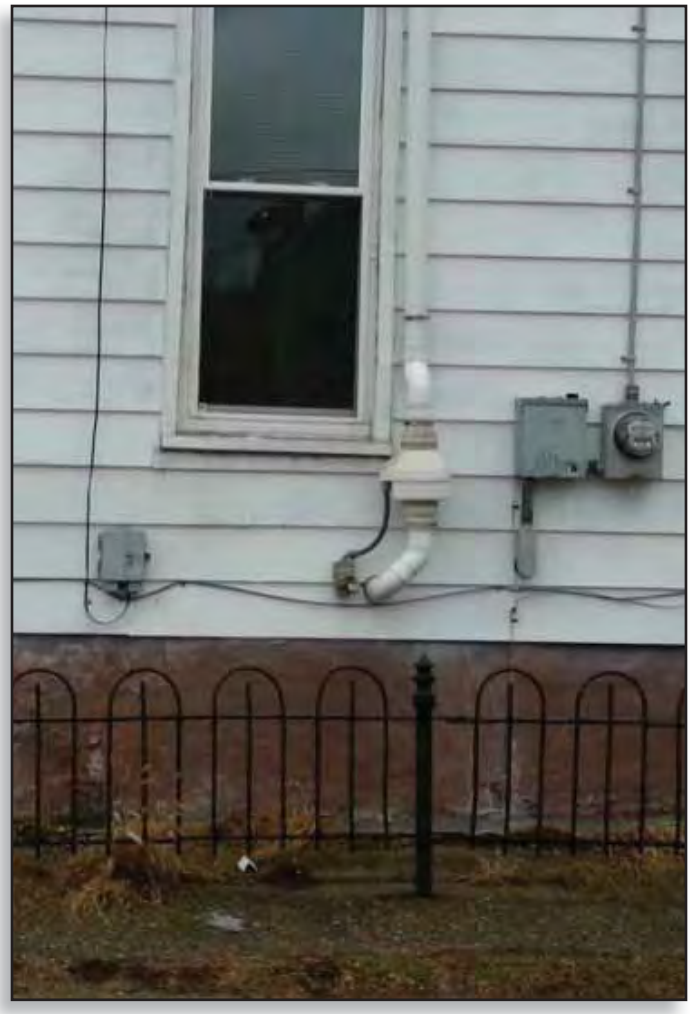
the site. In 2002, Ohio EPA documented groundwater contamination and conducted an analysis of human health risks. To clean up the TCE at the site, a soil vapor extraction system and groundwater remediation system were installed at the Behr Dayton facility. These remediation systems accounted for removing more than 2,000 pounds of VOC-contaminated materials from soil and groundwater at the Behr Dayton site.

A series of tests conducted in 2006 showed that TCE-contaminated groundwater had flowed south-southwest of the site through residential, commercial and industrial areas. This prompted Ohio EPA to conduct additional testing to determine if residences were at risk from VOCs. Soil testing was conducted to determine if the soil contained vapors from TCE. The vapors can move up through the soil and into the basements of homes and other buildings in a process called "vapor intrusion." In October 2006, Ohio EPA installed seven soil gas probes along Daniel Street, Lamar Street and Milburn Avenue to evaluate the risk posed by vapor intrusion and collect subslab air samples. Results of the testing showed significant levels of VOCs and other chemical contaminants at several residences.

On November 6, 2006, Ohio EPA formally requested that U.S. EPA investigate the possibility of TCE vapors seeping into nearby homes and other buildings. In November 2006, U.S. EPA's Emergency Response Branch tested residences located immediately south of the plant. Results from air samples taken beneath the homes showed TCE vapor levels above those considered safe by the Ohio Department of Health and the Agency for Toxic Substances and Disease Registry, or ATSDR.

As a result, U.S. EPA tested 276 homes in the McCook Field neighborhood for potentially hazardous vapors and installed mitigation systems in 148 residences to remove the vapors.

In February 2008, some of these residences still showed contaminant levels above acceptable levels, and more than 200 homes and buildings had mitigation systems installed. Although the site is located approximately 1 mile south of the city's well



A vapor mitigation system installed in a residence.

field, there is no evidence of contamination in the city's drinking water source.

In September 2008, residents filed a class action lawsuit against the Behr Dayton plant and Chrysler, demanding financial restitution for risks to their health and for decreased property values.

On September 3, 2008, U.S. EPA formally proposed the site to be placed on the National Priorities List and on May 11, 2009, the site was placed on the NPL.

The site is now being investigated under the Superfund program and U.S. EPA is conducting a long-term study to investigate the source and extent of TCE contamination at the site. The results of the study will be used to look at ways to clean up the site in a way that protects human health and the environment.

Chrysler filed for bankruptcy in April 2009 and stopped work and testing at the site; therefore, U.S. EPA issued a legal document called a **Unilateral Administrative Order**, or **UAO**, to Behr Dayton Thermal Products LLC requiring essential work and testing to address vapor intrusion problems caused by groundwater contamination. Since 2010, several sampling and analysis activities have taken place on and around the site as part of the studies being conducted by U.S. EPA. The most extensive sampling and analysis activities occurred during the summer of 2012 and spring of 2014.

In the fall of 2014, U.S. EPA began the review of several options to clean up a portion of the Behr Dayton site. These options were based on the findings of several technical and financial studies, which were summarized in a document called an engineering evaluation/cost analysis, or EE/CA, report. The EE/CA studies were completed to determine the type and extent of contamination and to evaluate alternatives for addressing this contamination. The public was invited to comment on the EE/CA report during the public comment period (November 20 – December 20, 2014). The final cleanup plan will not be selected until after U.S. EPA reviews comments received during the public comment period.

VALLEYCREST LANDFILL SITE BACKGROUND

Site Location and Description

The "official" name of the Valleycrest Landfill is the North Sanitary Landfill, but it is more commonly known and called the Valleycrest Landfill. The Valleycrest Landfill is located northeast of the city of Dayton in Montgomery County, Ohio. The landfill site is roughly 100 acres and is split into two sections by Valleycrest Drive. The eastern section is about 35 acres and the western section is about 65 acres. U.S. EPA and Ohio EPA divided the landfill into smaller sections called Disposal Areas 1-5. Formally listed at 950 Brandt Pike, the site is above the Great Miami Aquifer, which is the sole source of drinking water for the city of Dayton.

A residential neighborhood is just east and northeast of the site, and several individual homes are on the north. The site is bordered on the southeast by commercial and residential structures and Valley Pike. The CSX railroad property and some residences are located to the southwest. Two residences and several industrial facilities including the Brandt Pike petroleum terminals, Van Dyne Crotty Inc., an industrial cleaner facility and the Hotop demolition landfill are on the west side.

Site History

Keystone Gravel Company of Dayton owns the site and operated it as a sand and gravel quarry from before 1935 until the 1970s. Between 1966 and 1975, B.G. Davis Co., Inc., conducted landfill operations at the site under the name of NSL, Inc.

industrial waste from the Dayton area was used at the landfill to fill unlined gravel pits that were created by former mining operations. These pits contained water that may have entered the sand and gravel aquifer that the pits intersect. Drums filled with used oil and liquid chemicals were emptied directly onto the ground or into the unlined gravel pits. Many of these drums contained waste paint or other VOCs. Reports indicated that drums full of **hazardous waste** were put in the eastern section, known as Area 1. This practice continued until about 1970 when the western section, known as Area 5, was used for waste disposal. Waste disposal in Area 5 continued until about 1975. In March 1985, leachate was observed flowing down hillsides and forming ponds in on-site low areas.

In February 1986, U.S. EPA began a series of inspections at the site and installed monitoring wells in the sand and gravel aquifer beneath the landfill. In June 1991, chemical analysis of groundwater samples and

One of the drums excavated from Area 5.

View of the vapor extraction system installed in Area 5.

subsurface soil samples showed elevated levels of VOCs, heavy metals, and **PCBs**. Several residential drinking water wells in the area were contaminated with various organic compounds and affected residents were connected to the Dayton municipal water supply.

The site was placed on the NPL in 1994. A year later, Ohio EPA Southwest District Office took charge of overseeing the studies on cleaning up the site, known as a **remedial investigation/feasibility study**, or an **RI/FS**.

In September 1996, an underground fire was discovered within Area 1. At this time approximately 100 partially-buried drums associated with the underground fire were removed. By November 1997, additional investigation by Ohio EPA indicated the potential of thousands of buried drums on the landfill. In January 1998, Ohio EPA requested U.S. EPA's assistance in conducting a **time-critical removal action** at the site to further identify areas of drum disposal, remove the drums and other contaminated material and install a gas abatement system, as appropriate. A landfill gas management system to intercept migrating landfill gases at the perimeter of the site was installed in 1998.

On September 10, 1998, a group of 10 companies signed an AOC. The group took the name Valleycrest Drum Removal Action Group, or VDRAG. Its members include: Bendix (Allied Signal), Blaylock Trucking Corporation, Danis Industries Corporation, DAP/ Roberts Consolidated, Dayton Industrial Drum, Gayston Corporation, General Motors Corporation*, NCR Corporation*, North Sanitary Landfill Corporation and Industrial Waste Management*.

** Three group members – NCR, General Motors and Waste Management – have formed the Valleycrest Removal Action Coalition, or VRAC.*

Industrial waste disposed of at the site include used oils, solvents, scrap paint, lampblack, electrical transformers, brake grindings containing asbestos and sewage. Contaminants found include a family of chemicals called VOCs such as TCE and **1,1-dichloroethene** as well as other pollutants such as ***vinyl chloride, methylene, chloride, phenols***, PCBs, **lead, mercury, cadmium** and **cyanide**. *(See the glossary in Appendix A for more information on the contaminants.)*

Under a removal action beginning in 1998 and continuing through 2004, about 43,000 drums and containers of hazardous waste were dug up from Areas 1 and 5, hauled away and disposed of at an off-site hazardous waste landfill. More than 65,000 cubic yards of contaminated soil and waste material was also removed and disposed of at the off-site hazardous waste landfill.

A vapor extraction system was installed in the soil and debris stockpiles from Area 5 to remove VOCs. Contractors dug several trenches on the southern portion of Area 5 looking for buried tankers. No tankers were found, but an additional 81 buried drums were. These drums were removed and disposed of at an off-site hazardous waste landfill. Area 1 was also treated with an onsite vapor extraction system.

The RI determined that four contaminant sources were affecting the groundwater, air and soil. The four pollution sources are waste, leachate, landfill gas and a hazardous, hard-to-remove substance called **non-aqueous phase liquid** abbreviated as **NAPL**. NAPL has an oil or tar consistency and is often referred to as "free product" because it does not readily mix with or dissolve in water and is present in the environment as a separate, floating or sinking material.

Landfill gas abatement system installed at the site.

The estimated 2.5 million cubic yards of waste at the Valleycrest Landfill contained dozens of **hazardous substances** including some naturally occurring **Radium-226** at slightly higher-than-background levels in Disposal Area 3. The Ohio Department of Health concluded the radiation posed no health threat, but all the cleanup alternatives included capping to prevent future exposure. Excessive levels of methane and VOCs were detected in the landfill gas at the site. The movement of landfill gas is presently controlled by a perimeter landfill gas collection system. NAPL was found mainly in Disposal Areas 1 and 5 with an estimated volume of 4,400 gallons. NAPL is considered the principal threat waste at Valleycrest because it is highly toxic and moves easily.

In July 2012, U.S. EPA proposed a cleanup plan for the landfill, which included installing a solid waste cap, a perimeter extraction system for liquid seepage and a newly installed perimeter gas collection system to clean up and contain remaining waste at the landfill, which will completely replace the existing system. In August 2012, the Record of Decision, known as a a **ROD**, was signed. The ROD is the cleanup plan for the site.

Currently, U.S. EPA is working with the Department of Justice in negotiating with site PRPs cleanup costs and funding the cleanup. It is expected that the **remedial design** for the site will be completed in 2015 and the cleanup will begin in 2016.

VALLEY PIKE VOC SITE BACKGROUND

Site Location and Description

The area of concern is in the Valley Pike neighborhood in Riverside, Ohio. Preliminary boundaries for the investigation included Hypathia Avenue on the east, Rohrer Boulevard on the west, Guernsey Dell and Minnesota Avenues on the north and Valley Pike Street on the south. This area included about 130 residences. Based on Phase 1 sampling results, U.S. EPA changed the boundaries to include Forest Home Avenue, Prince Albert Boulevard, Broadmead Avenue and Warrendale Avenue areas. Also, the boundaries were expanded from the 2500 blocks to the 2400 and 2300 blocks of Forest Home Avenue, Guernsey Dell Avenue and Bushnell Avenue. In October 2014, U.S. EPA expanded the area of concern again to the west of Sagamore Ave. The current area of concern now includes about 400 residences (see figure below).

Site History

The U.S. EPA's Emergency Response Branch is investigating a pollution issue called "vapor intrusion" in the Valley Pike neighborhood under environmental work called a time-critical removal action.

On May 9, 2013, the Ohio EPA requested assistance from U.S. EPA at the Valley Pike VOC Site. U.S. EPA is working with the following agencies on the Valley Pike site: Ohio Department of Health, Ohio EPA, Agency for Toxic Substances & Disease Registry, Public Health – Dayton and Montgomery County and the city of Riverside. In its preliminary sampling, U.S. EPA and the other agencies conducted several tests and found some elevated levels of chemical vapors.

The pink line shows the area of concern for the Valley Pike VOC site.

SUMMA canister used to collect a sub-slab sample.

A vapor abatement system fan installed outside the house to remove contaminated vapor.

U.S. EPA and Ohio EPA conducted a vapor intrusion investigation in July 2013 including groundwater, soil gas, sub-slab and indoor air sampling (Phase 1). Ohio EPA noted potential hazards posed to nearby residences and businesses from subsurface movement of solvent vapors into indoor air. VOCs are especially prone to vapor intrusion. In this case, U.S. EPA is concerned about VOCs called **tetratchloroethylene** or **PCE** or **PERC**, and trichloroethylene or TCE, which were used as industrial solvents in the area. U.S. EPA found elevated concentrations of PCE and TCE in the groundwater underneath the neighborhood, in the soil gas and in the sub-slab samples. Unsafe indoor air concentrations of PCE and TCE were also detected in residences. The drinking water, which comes from the Dayton's public water supply, is not impacted by these site conditions.

Since July 2013, U.S. EPA sampled over 184 residences and installed 35 **vapor abatement systems**. The **VAS** is very similar to a radon system and includes installing a sub-slab or crawl space depressurization system, sealing cracks in walls and basement floors and includes proficiency air sampling to ensure the VAS is working properly.

Additional groundwater sampling was conducted the week of March 24, 2014 to determine the extent of aquifer contamination in the neighborhood. The expanded area of concern was largely based on groundwater analytical results as well as the Phase 1 results.

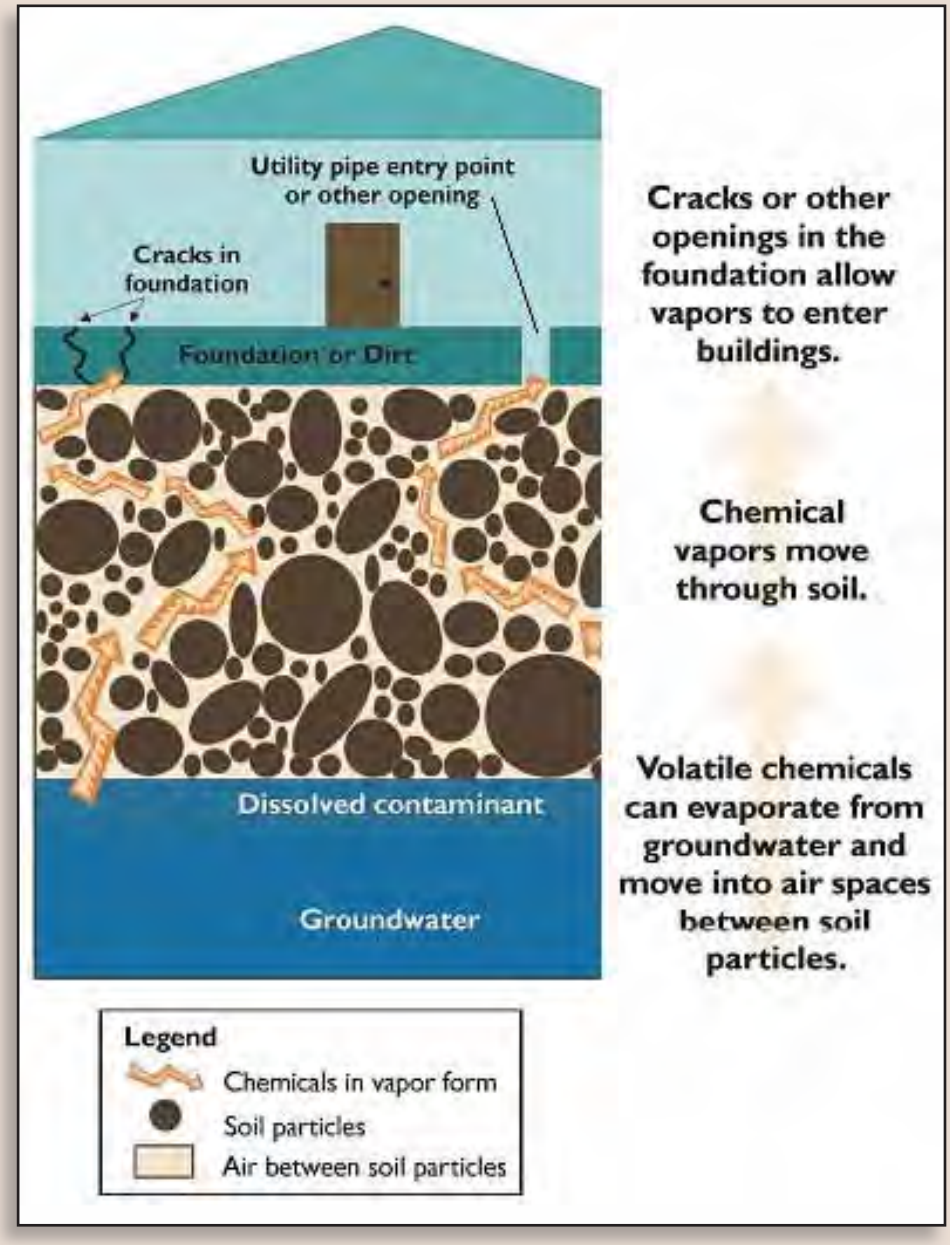
U.S. EPA continues to sample homes at no cost to the residents to determine if they have vapor intrusion seeping in their crawl spaces or basements. Residents must sign an access agreement for U.S. EPA to conduct the sampling.

U.S. EPA installed and sampled 13 temporary groundwater wells in the Riverside neighborhood.

Vapor intrusion

Vapor intrusion occurs when underground pollutants release chemical vapors that travel up through the soil, accumulate beneath building foundations and cause indoor air pollution when the chemical vapors enter buildings through cracks or holes in foundations and crawl spaces. Measuring the amount of chemical vapors under the sub-slab or within the crawl space of the property can indicate the potential for a vapor intrusion problem.

Sub-slab and crawl space sampling are performed to find vapor intrusion problems. In sub-slab testing, probes are temporarily installed in the house slab and attached to a test canister to sample volatile organic compounds, or VOC vapors trapped under the house. Crawl space sampling is completed by placing a test canister inside the crawl space.



Appendix A

Glossary – Initials – Acronyms

1,1-Dichloroethylene. An organic liquid with a mild, sweet, chloroform-like odor used in making adhesives, synthetic fibers, refrigerants, food packaging and coating resins such as the saran types.

Administrative Record. The body of documents that forms the basis for the selection of a particular response at a site. For example, the Administrative Record for remedy selection includes all documents that were considered or relied upon to select the remedy through the record of decision.

Cadmium. A soft silver-white metal that is usually found in combination with other elements. Most cadmium used in the United States today is obtained as a byproduct from the smelting of zinc, lead, or copper ores. Cadmium may be released into the air from zinc, lead, or copper smelters. Breathing high levels of cadmium for a long time can cause problems with the lungs and kidneys.

CAG. See **Community Advisory Group**.

CERCLA. See **Comprehensive Environmental Response, Compensation and Liability Act**.

CIC. See **Community Involvement Coordinator**.

CIP. See **Community Involvement Plan**.

Cleanup. Actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term "cleanup" is sometimes used interchangeably with the terms "remedial action," "remediation," "removal action," "response action," or "corrective action."

Community. An interacting population of various types of individuals, or species, in a common location; a neighborhood or specific area where people live.

Community Advisory Group. A committee, task force, or board made up of citizens affected by a hazardous waste site. CAGs provide a public forum for community members to present and discuss their needs and concerns about the decision-making process at sites affecting them.

Community Engagement. The process of involving communities in all phases of the cleanup process. Communities are asked to provide input on how the cleanup will be conducted and how it may affect community plans and goals. See also Community Involvement.

Community Involvement. The term used by the EPA to identify its process for engaging in dialogue and collaboration with communities affected by Superfund sites. The EPA community involvement approach is founded in the belief that people have a right to know what the Agency is doing in their community and to have a say in it. Its purpose is to give people the opportunity to become involved in the Agency's activities and to help shape the decisions that are made.

Community Involvement Coordinator. The EPA official whose lead responsibility is to involve and inform the public about the Superfund process and response actions in accordance with the interactive community involvement requirements set forth in the National Oil and Hazardous Substances Pollution Contingency Plan.

Community Involvement Plan. A plan that outlines specific community involvement activities that occur during the investigation and cleanup at the site. The CIP outlines how EPA will keep the public informed of work at the site and the ways in which residents can review and comment on decisions that may affect the final actions at the site. The document is available in the site's information repository maintained by the EPA. The CIP may be modified as necessary to respond to changes in community concerns, information needs and activities.

Comprehensive Environmental Response, Compensation, and Liability Act. A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act. Commonly known as Superfund, CERCLA is intended to protect people's health and the environment by investigating and cleaning up abandoned or uncontrolled hazardous waste sites. Under the program, the EPA can either:

- Pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to do the work; or
- Take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

Contaminant. Any physical, chemical, biological or radiological substance or matter that has an adverse effect on air, water or soil.

Contamination. Introduction into water, air and soil of microorganisms, chemicals, toxic substances, wastes or wastewater in a concentration that makes the medium unfit for its next intended use. Also applies to surfaces of objects, buildings and various household use products.

Cyanide. Usually found joined with other chemicals to form compounds. Examples of simple cyanide compounds are hydrogen cyanide, sodium cyanide and potassium cyanide. Sodium cyanide and potassium cyanide are both white solids with a bitter, almond-like odor in damp air. Cyanide and hydrogen cyanide are used in electroplating, metallurgy, organic chemicals production, photographic developing, manufacture of plastics, fumigation of ships, and some mining processes.

Hazardous Substance. Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive or chemically reactive. Any substance designated by the EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or is otherwise released into the environment.

Hazardous Waste. Byproducts that can pose a substantial or potential hazard to human health or the environment when improperly managed. Hazardous wastes usually possess at least one of four characteristics (ignitability, corrosivity, reactivity or toxicity) or appear on special EPA lists.

Information Repository. A file containing current information, technical reports and reference documents regarding a site. The information repository usually is located in a public building convenient for local residents such as a public school, town hall or library.

Mercury. Mercury is a heavy silvery-white metal commonly known as quicksilver. It is the only metal that is liquid at room temperature. Mercury is used in thermometers, barometers, manometers, blood pressure meters, float valves, switches, relays, fluorescent lights, and other devices. Mercury and most of its compounds are extremely toxic and must be handled with care; in cases of spills involving mercury, specific cleaning procedures are used to avoid exposure and contain the spill. Exposure may result from using or breaking products containing mercury. Mercury can be absorbed through the skin and mercury vapors can be inhaled. Elemental (metallic) mercury primarily causes health effects when it is breathed as a vapor, where it can be absorbed through the lungs. Breathing mercury vapors for a long time can cause tremors; emotional changes—e.g., mood swings, irritability, nervousness, excessive shyness; insomnia; neuromuscular changes—such as weakness, muscle atrophy, twitching; headaches; disturbances in sensations; changes in nerve responses; and performance deficits on tests of cognitive function.

Lead. Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining and manufacturing. Because of health concerns, lead from paints and ceramic products, caulking and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States. Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys and reproductive system.

Methane. A colorless, nonpoisonous, flammable gas created by anaerobic decomposition of organic compounds. It is a major component of natural gas used in the home.

Methylene. A colorless liquid with a mild, sweet odor that does not occur naturally in the environment. Is used as an industrial solvent and as a paint stripper and may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film. Exposure occurs mostly from breathing contaminated air, but may also occur through skin contact or by drinking contaminated water. Breathing in large amounts of methylene chloride can damage the central nervous system. Contact of eyes or skin with methylene chloride can result in burns.

NAPL. See **Non-Aqueous Phase Liquid**.

National Priorities List. The EPA's list of serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. The EPA is required to update the National Priorities List at least once a year.

Non-Aqueous Phase Liquid. Organic substances that are relatively insoluble in water and are less dense than water.

NPL. See **National Priorities List**.

On-Scene Coordinator. The designated U.S. EPA official who coordinates and directs Superfund removal actions.

OSC. See **On-Scene Coordinator**.

PA/SI. See **Preliminary Assessment and Site Investigation**.

PCBs. See **Polychlorinated Biphenyls**.

PCE/PERC. See **Tetrachlorethylene**.

Polychlorinated Biphenyls. A family of organic (carbon-containing) compounds. PCBs are extremely permanent in the environment; they do not break down into less harmful chemicals over a long period of time. PCBs may enter the food chain and be consumed by humans. If ingested, they are stored in the fatty tissues of animals and humans and are extracted with normal body waste. These compounds have no smell or taste and exist as either oily liquids or solids. Health effects that may result from exposure to PCBs include skin irritations (rashes and acne) and irritation to the nose and throat. Long-term exposure to PCBs can cause liver damage and has been shown to cause cancer in laboratory animals.

Potentially Responsible Party. Any individual or company (including owners, operators, transporters or generators that has been identified as being potentially responsible for or contributing to a spill or other contamination at a Superfund site. Whenever possible, through administrative and legal action, U.S. EPA requires PRPs to clean up hazardous sites that have been contaminated.

Preliminary Assessment and Site Investigation. The PA/SI is the process of collecting and reviewing available information about a known or suspected hazardous waste site or release. The PA/SI usually includes a visit to the site.

Proposed Plan. A plan for a site cleanup that is available to the public for comment.

PRP. See **Potentially Responsible Party**.

Public Comment Period. A formal opportunity for community members to review and contribute written comments on various EPA documents or actions.

Public Meeting. Formal public sessions that are characterized by a presentation to the public followed by a question-and-answer session. Formal public meetings may involve the use of a court reporter and the issuance of transcripts. Formal public meetings are required only for the proposed plan and Record of Decision amendments.

Public. The community or people in general or a part or section of the community grouped because of a common interest or activity.

Radium-226. A naturally occurring silvery-white radioactive metal that can exist in several forms called isotopes and is a radioactive substance formed from the breakdown of uranium and thorium. Exposure to high levels results in an increased risk of bone, liver, and breast cancer. Until the 1960s, radium was a component of the luminous paints used for watch and clock dials, instrument panels in airplanes, military instruments, and compasses.

Record of Decision. A ROD is a legal, technical and public document that explains which cleanup alternative will be used at a Superfund NPL site. The ROD is based on information and technical analysis generated during the remedial investigation and feasibility study and consideration of public comments and community concerns.

RD/RA. See **Remedial Design/Remedial Action**.

Remedial Design/Remedial Action. Remedial design is a phase in the CERCLA response process in which technical drawings are developed for the chosen remedy, costs for implementing the remedy are estimated and roles and responsibilities of EPA, states and contractors are determined. During the remedial action phase, the remedy is implemented generally by a contractor, with oversight and inspection conducted by EPA, the state or both.

Remedial Investigation/Feasibility Study. The remedial investigation is a study designed to collect the data necessary to determine the nature and extent of contamination at a site. The feasibility study is an analysis of the practicality of a proposal—e.g., a description and analysis of potential cleanup alternatives for a site such as one on the National Priorities List. The feasibility study usually recommends a selection of a cost-effective alternative. It usually starts as soon as the remedial investigation is under way; together, they are commonly referred to as the remedial investigation/feasibility study.

Remedial Project Manager. The EPA official who is the technical lead on a project.

Responsiveness Summary. A summary of oral and/or written public comments received by EPA during a comment period on key EPA documents and EPA's responses to those comments.

RI/FS. See **Remedial Investigation/Feasibility Study**.

ROD. See **Record of Decision**.

RPM. See **Remedial Project Manager**.

SARA. See **Superfund Amendments and Reauthorization Act**.

Superfund Amendments and Reauthorization Act. Modifications to the Comprehensive Environmental Response, Compensation and Liability Act, enacted on October 17, 1986.

Superfund. The program operated under the legislative authority of CERCLA that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority and conducting and/or supervising cleanup and other remedial actions.

TCE. See **Trichloroethylene**.

Tetrachloroethylene. A manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Time-Critical Removal Action. Removal action where, based on a site evaluation, on-site activities must be initiated within six months of determination that the threat to public health or welfare of the environment is imminent.

Trichloroethylene. A chemical which is used as a solvent to remove oils and grease from metal products and is found in adhesives, paint removers, typewriter correction fluids and spot removers. TCE is colorless liquid with an odor similar to ether and is a manufactured substance which does not occur naturally in the environment. It minimally dissolves in water and can remain in groundwater for a long time. TCE evaporates from surface water and soil, although it evaporates less easily from soil. Exposure from TCE is most commonly through breathing air that has TCE vapors, drinking or showering in contaminated water, or direct contact with contaminated soil. Long-term exposure to this family of chemicals is suspected of causing cancer, as well as problems of the liver and weakening of the immune system.

Unilateral Administrative Order. Is a legal order issued by EPA directing PRPs to pay for correction of violations, take the required corrective or cleanup actions, or other action or activity. It describes the action to be taken and is forcible in court.

UAO. See **Unilateral Administrative Order.**

Vapor Abatement System. A system installed to reduce health risks in buildings where chemical vapors from contaminated soil and groundwater may be inhaled by indoor occupants. Pipes are placed near the basement walls, in closets and in low-traffic areas and vent pipes and fan may be visible on the outside of the house. The fan in the system runs continuously. The system is also called a vapor mitigation system.

Vapor Intrusion. Occurs when underground pollutants release chemical vapors that travel up through the soil and accumulate beneath building foundations. Air in the building becomes polluted when vapors enter through cracks or holes in foundations and crawl spaces.

VAS. See **Vapor Abatement System**.

Vinyl Chloride. Vinyl chloride is a colorless gas. It burns easily and it is not stable at high temperatures. It has a mild, sweet odor. It is a manufactured substance that does not occur naturally. It can be formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC). PVC is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

VOCs. See **Volatile Organic Compounds**.

Volatile Organic Compounds. A type of organic compound that tends to change from a liquid to a gas at low temperatures when exposed to air. As a result of this tendency, VOCs disappear more rapidly from surface water than from ground water. Since ground water does not come into contact with air, VOCs are not easily released and can be remain in ground water that is being used for drinking water, posing a threat to human health. Some VOCs are believed to cause cancer in humans.

Appendix B

The following pages contain a list of questions that were used as a guide during the community interviews. The interviews were conducted in a discussion format and therefore not all questions were asked of each interviewee.

Interview Questionnaire
Behr Dayton Site

Name: _____ **Date/Time/Location:** _____

Affiliation or Address: _____

Phone: _____ **E-mail:** _____

1. Are you aware of contamination at the Behr Dayton site located on Webster Street?

2. If so, what do you know about the Behr-Dayton site?

3. How long have you been aware of the site?

4. Is yours one of the homes that has been tested for vapors? If so, were the levels high? If so, did you get a mitigation system installed?

5. Are you interested in receiving more information about the sites? If yes, what's the best way to provide that information to you (email, regular mail)?

6. Do you feel the site has received adequate coverage by the local/regional media?

7. Where do you get your information about the site? Are there particular newspapers, radio or TV stations, or internet sites that you prefer?

8. If a public meeting about the site were held, where is a good location? Would you attend? How frequently (Yearly, only at milestone events, etc.)? Do you think the community should be updated about the site?

9. Are you part of a community/neighborhood group? Would you be interested in joining a Community Advisory Group?

10. Are there any other people or groups you think we should talk to about the Behr Dayton site?

11. When possible, site information is posted on EPA's website. Have you used the EPA Region 5 web site?

12. How interested are you in environmental issues in general?

13. Have you had contact with government officials about the site? Do you feel these officials have been responsive to your concerns?

14. What are your concerns about the contamination at the site?

15. (If yes to #1)

16. What risks do you think the site, in its current state, poses to you or your children?

Interview Questionnaire
Valleycrest Landfill and Valley Pike VOC Sites

Name: _____

Address: _____

Home Phone:(_____) _____ **Cell Phone: (_____)** _____

E-Mail Address: _____ **Date:** _____

1. Do you live or work on or near the Site? If no, are you affiliated with any organization that has an interest in the site? [What organization]?
2. How long have you been a resident in the area?
3. How long have you been aware of environmental concerns at the site?
4. What do you know about the site?
5. What concerns do you have about the site?
6. Do you have ideas about reuse of the property?
7. How do you normally get information about the site?
   a. Newspaper (specify)
   b. Radio station(s) (specify)
   c. TV station(s) (specify)
   d. Internet
   e. Other (specify)
8. What television stations do you watch?
9. What radio stations do you listen to?
10. How would you like to be informed concerning future site activities (mail, e-mail, telephone, newspapers, television, radio, social media such as Facebook)?
11. Have you had any contact with local, state or federal agencies about the site?
12. If EPA holds a public meeting or availability session, would you attend? Yes ____ No ____
    a. Do you normally attend the public meetings?
    b. What day and time would be most convenient for you?
    c. If not, what obstacles keep you from attending?
13. Do you have suggestions about locations for future meetings?
14. Do you feel that you have been adequately informed about the site?
    a. If no, what other kinds of information would you like?
15. Site information is posted on the EPA's web site. Have you used the EPA web site?
    a. Information repositories exist at Dayton Public Library and in the Chicago EPA office. Have you ever used the information about the site held at one of these places?
16. Are there any other people or groups you think we should talk to about the site either because they have unique information or would like to know more from EPA?
17. Do you hold any position – elected, appointed, hired – with any municipal state or federal agency?
    a. If so, which and what is the position?
18. What is special/important about your community?
19. Do you have any questions?

Interview Questionnaire City Staff
Valleycrest Landfill and Valley Pike Sites

Name: _____

Address: _____

Home Phone:(_____) _____ **Cell Phone: (_____)** _____

E-Mail Address: _____ **Date:** _____

1. How long have you worked for the City/County?
2. What do you know about the site?
3. What concerns do you have about the site?
4. What, if any communication have you had communication with the residents about the site?
5. Do you have ideas about reuse of the property?
6. How do you normally get information about the site?

a. Newspaper (specify)

   b. Radio station(s) (specify)

   c. TV station(s) (specify)

   d. Internet

   e. Other (specify)

7. How would you like to be informed concerning future site activities (mail, e-mail, telephone, newspapers, television, radio, social media such as Facebook)?
8. If EPA holds a public meeting or availability session, would you attend? Yes ____ No ____

   a. Do you normally attend the public meetings?

   b. What day and time would be most convenient for you?

   c. If not, what obstacles keep you from attending?

   d. Do you have suggestions about locations for future meetings?

9. Do you feel that you have been adequately informed about the site?

   a. If no, what other kinds of information would you like?

10. Site information is posted on the EPA's web site. Have you used the EPA web site?

    a. Information repositories exist at Dayton Public Library and in the Chicago EPA office. Have you ever used the information about the site held at one of these places?

11. Are there any other people or groups you think we should talk to about the site either because they have unique information or would like to know more from EPA?

12. Do you have any questions?

Appendix C

Information Repository, Administrative Record, Websites and Public Meeting Locations

Local Information Repositories

E.C. Doren Public Library

701 Troy Ave.
Dayton, OH 45404
937-496-8928
www.daytonmetrolibrary.org/facilities/branches/ecdoren
(temporarily located at 359 Maryland Ave. until mid-December 2014)

E.C. Doren Public Library serves the local community and houses the Information Repository.

Ohio Environmental Protection Agency

Southwest District Office
401 E. Fifth St.
Dayton, OH 45401
937-285-6357
epa.ohio.gov/Districts/tabid/5857/LiveTabId/115775/default.aspx#swdo

Valley Pike Project Office

2049 Harshman Road
Riverside, OH 45404
937-237-7530

The U.S. EPA Project Office on Harshman Road is where community members and residents can find information about the site and talk with project staff.

Official Information Repository

U.S. EPA Region 5 Superfund Record Center

Room 711, 7th Floor
Ralph Metcalfe Federal Building
77 W. Jackson Blvd.
Chicago, IL 60604
www.epa.gov/reg5sfun/sfd/foia/sf-records-center.html

U.S. EPA Sites Web Pages

www.epa.gov/region5/cleanup/behr

www.epa.gov/region5/cleanup/valleycrest

www.epa.gov/region5/cleanup/valleypikevocsite

Information about any of the sites can be found in the Superfund Record Room at the Ralph Metcalfe Federal Building in Chicago.

Possible Meeting Locations

Kiser School

1401 Leo St.
Dayton, OH 45404
937-542-5790

Kiser K-8 Elementary School was suggested by many people as a good location to hold public meetings.

E.C. Doren Library

701 Troy St.
Dayton, OH 45404
937-496-8928

Stebbins High School

1900 Harshman Road
Riverside, OH 45404
937-237-4250

Stebbins High School has been a good location to host public meetings. U.S. EPA has held public meetings about the Valley Pike site at the high school.

Appendix D

List of Contacts *(information is current as of November 2014)*

Federal Agencies

U.S. EPA Region 5 Project Contacts

United States Environmental Protection Agency

Ginny Narsete
Community Involvement Coordinator
Superfund Division (SI-7J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590
312-886-4359
800-621-8431, ext. 64359
narsete.virginia@epa.gov

Dion Novak (Valleycrest Site)
Remedial Project Manager
Superfund Division (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590
312-886-4737
800-621-8431, ext. 64737
novak.dion@epa.gov

Erik Hardin (Behr Dayton Site)
Remedial Project Manager
Superfund Division (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604
312-886-2402
800-621-8431, ext. 62402
hardin.erik@epa.gov

Steve Renninger (Valley Pike VOC Site)
On-Scene Coordinator
Emergency Response Branch
26 W. Martin Luther King Drive
Cincinnati, OH 45268
937-237-7530
renninger.steven@epa.gov

U.S. EPA Local Project Office
2049 Harshman Road
Riverside, OH 45424
937-237-7530

Agency for Toxic Substances and Disease Registry

Michelle Colledge, Ph.D.
312-886-1462
colledge.michelle@epa.gov
mna9@cdc.gov

Federal Elected Officials

Sherrod Brown
Senator
200 N. High St.
Room 614
Columbus, OH 43215
614-469-2083

713 Hart Senate Office Building
Washington, DC 20510
202-224-2315
www.brown.senate.gov/contact/

Rob Portman
Senator
37 W. Broad St.
Room 300
Columbus, OH 43215
614-469-6774

448 Russell Senate Office Building
Washington, DC 20510
202-224-3353
https://www.portman.senate.gov/public/index.cfm/contact-form

Michael Turner
Representative
120 W. Third St.
Suite 305
Dayton, OH 45402
937-225-2843

2239 Rayburn Building
Washington, DC 20515
202-225-6465
http://turner.house.gov/contact/

State Elected Officials

John Kasich
Governor
Riffe Center, 30th Floor
77 S. High St.
Columbus, OH 43215
614-466-3555
http://www.governor.ohio.gov/Contact/ContacttheGovernor.aspx

Peggy Lehner
State Senator
Senate Building
1 Capitol Square, Ground Floor
Columbus, OH 43215
614-466-4538
http://www.ohiosenate.gov/senate/lehner/contact

Fred Strahorn
Representative
District 39
77 S. High St. 10th Floor
Columbus, OH 43215
614-466-1607

Michael Henne
State Representative
77 S. High St.
13th Floor
Columbus, OH 43215
614-644-8051
http://www.ohiohouse.gov/michael-henne/contact

Bill Beagle
Senator
District 5
Senate Building
1 Capitol Square, 1st Floor
Columbus, OH 43215
614-466-6247

Mike DeWine
Ohio Attorney General
30 E. Broad St., 14th Floor
Columbus, OH 43215
614-466-4986

Jon Husted
Ohio Secretary of State
180 E. Broad St., B1
Columbus, OH 43215
614-466-2655 or 877-767-6446 (toll-free)

State Agencies

Ohio EPA Project Contacts

Scott Glum
On-Scene Coordinator
Ohio EPA Southwest District Office
401 E. Fifth St.
Dayton, Ohio 45402-2911
937-285-6065
scott.glum@epa.ohio.gov

Heather Lauer
Media Relations Coordinator
Ohio EPA, Public Interest Center
50 W. Town St.
Suite 700
Columbus, OH 43215
614-644-2160
heather.lauer@epa.ohio.gov

Local Officials

Montgomery County

451 W. Third St.
Dayton, OH 45422

Gayle Ingram
Clerk
Ingramg@mcohio.org
937-225-6491

Montgomery County Commissioners

Joseph P. Tuss
County Administrator
451 W. Third St.
Dayton, OH 45422
937-225-4693
tussj@mcohio.org

Deborah Lieberman
451 W. Third St., 11th Floor
P.O. Box 972
Dayton, OH 45422
937-225-4015
oberert@mcohio.org

Dan Foley
451 W. Third St., 11th Floor
P.O. Box 972
Dayton, OH 45422
937-225-4912
romerc@mcohio.org

Judy Dodge
451 W. Third St., 11th Floor
P.O. Box 972
Dayton, OH 45422
937-225-6470
startzmanc@mcohio.org

Public Health Dayton & Montgomery County

Thomas A. Hut, M.S., R.S.
Supervisor Bureau of Special Services
Reibold Building
117 S. Main St.
Dayton, OH 45422
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Newspapers

The Dayton Daily News
1611 S. Main St.
Dayton, OH 45409
937-222-5700
www.daytondailynews.com
Publishes daily

Radio Stations

WHKO (99.1 FM)
1611 S. Main St.
Dayton, OH 45409
937-259-2111
www.k99online.com

WTUE (104.7 FM)
101 Pine St.
Dayton, OH 45402
937-457-1047
www.wtue.com

WCHD (99.9 FM)
101 Pine St.
Dayton, OH 45402
937-457-0999
www.channeldayton.com

WMMX (107.7 FM)
101 Pine St.
Dayton, OH 45402
937-457-1077
www.mix1077.com

Television Stations

WKEF-TV (Channel 22 ABC Affiliate)
2245 Corporate Place
Miamisburg, OH 45342
937-263-4500
www.abc22now.com

WDTN-TV (Channel 2 NBC Affiliate)
4595 S. Dixie Dr.
Moraine, OH 45439
937-293-2101
www.wdtn.com

WHIO-TV (Channel 7 CBS Affiliate)
1611 S. Main St.
Dayton, OH 45409
937-259-2111
www.whiotv.com

WRGT-TV (Channel 45 FOX Affiliate)
2245 Corporate Place
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937-263-4500
www.fox45now.com

Appendix E

COMMUNITY ENGAGEMENT AND THE SUPERFUND PROCESS

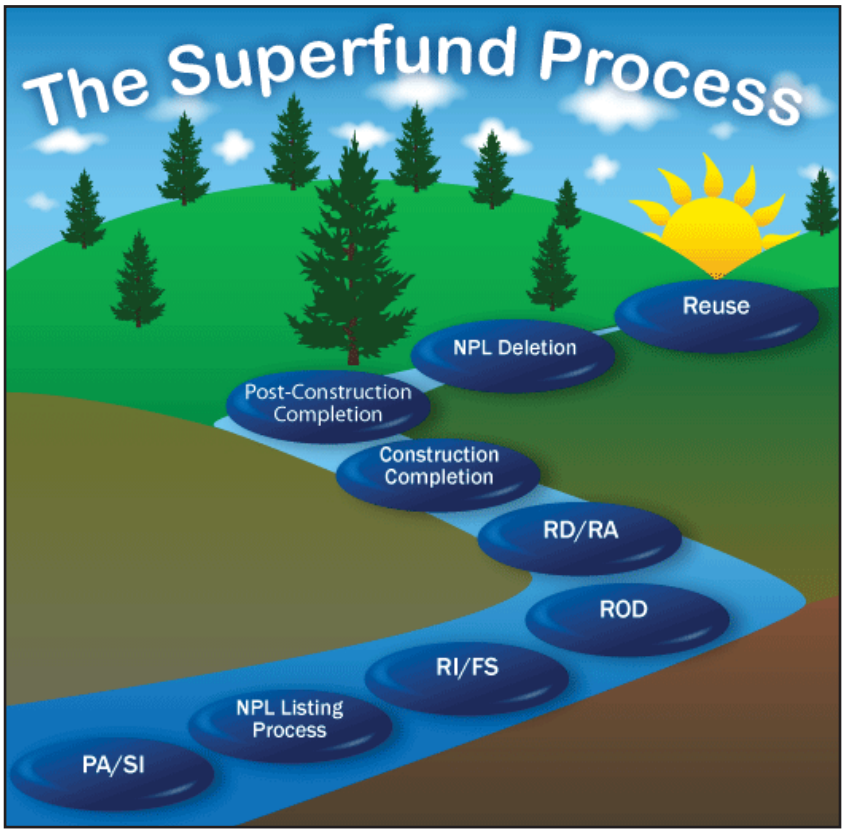

Exhibit 1: Superfund Process Steps.

Legend

PA/SI	Preliminary Assessment/Site Investigation
NPL Listing	National Priorities List
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RD/RA	Remedial Design/Remedial Action
NPL Deletion	National Priorities List Deletion

Note: These steps are defined in Appendix A – Glossary - Initials - Acronyms.

COMMUNITY ENGAGEMENT AND THE SUPERFUND PROCESS

Superfund is an environmental cleanup program enabled by a federal law enacted in 1980 known as the Comprehensive Environmental Response, Compensation, and Liability Act, also called Superfund. In 1986, another law, the Superfund Amendments and Reauthorization Act reauthorized CERCLA to continue Superfund cleanup activities. The CERCLA law gives U.S. EPA the authority to require those parties responsible for creating hazardous waste sites to clean up those sites or to reimburse the government if U.S. EPA cleans up the site. U.S. EPA compels responsible parties to clean up hazardous waste sites through administrative orders, consent decrees and other legal settlements. U.S. EPA is authorized to enforce the Superfund laws within Indian reservations, in all 50 states and in U.S. territories. Superfund site identification, monitoring and response activities are coordinated with state, tribal and territorial environmental protection or waste management agencies.

There are several steps involved in cleaning up a contaminated site. Once U.S. EPA has been made aware of a contaminated site from individual citizens, local, tribal or state agencies or others, U.S. EPA follows a step-by-step process (see Exhibit 1 on the next page) to determine the best way to clean up the site and protect human health and the environment.

If the site poses an immediate threat to public health or the environment, U.S. EPA can intervene with an emergency response action. In November 1998 staff from U.S. EPA's Superfund Emergency Response and Removal Program began overseeing the activities concerning the Valleycrest Landfill site. U.S. EPA began emergency response activities at the Behr Dayton site in November 2006 and the Valley Pike site in May 2013. The goal of U.S. EPA's Emergency Response and Removal Program is to protect the public and the environment from immediate threats posed by the release or discharge of hazardous substances. In this case, that involved removing subsurface drums and drum carcasses, drummed contents and industrial wastes from the landfill. These removal activities were the first steps in stopping the potential for exposure to contaminants that posed risks to people and the environment.

The Superfund program encourages active dialogue between communities affected by the release of hazardous substances and all of the agencies responsible for carrying out or overseeing cleanup actions. U.S. EPA considers community involvement to be an important part of the Superfund program and opportunities for community involvement occur throughout the process. At each step in the process, there are opportunities for various levels of community involvement (*see Exhibit 2 on Page 3 of this Appendix*).

Visit these EPA websites for more information on the Superfund process.

Superfund: *www.epa.gov/superfund*

Cleanup Process: *www.epa.gov/superfund/cleanup/index.htm*

Community Involvement: *www.epa.gov/superfund/community/index.htm*

Superfund Process Steps		Community Involvement Opportunities
• Gather historical site condition information to determine if further investigation is needed • Use Hazard Ranking System to evaluate risks	**Preliminary Assessment/Site Inspection**	• Provide any information you have about the site to the EPA
• Publish notice in Federal Register and local media announcing proposed listing and public comment period • Once listed, EPA publishes notice in Federal Register and responds to comments	**National Priorities List Process**	• Read information about EPA's proposal to list the site • Contact EPA for questions or additional information • If concerned, submit comments during the Public Comment period
• Determines the nature and extent of contamination, evaluates human health and ecological risk	**Remedial Investigation/ Feasibility Study**	• Consider forming a Community Advisory Group and applying for a Technical Assistance Grant • Participate in public meetings • Contact community involvement coordinator with questions
• Presents the cleanup alternatives and is issued for a 30-day public comment period	**Proposed Plan**	• Read proposed plan • Participate in public meetings • Visit Information Repository
• Contains the selected remedy for a site and the Responsiveness Summary which provides responses to all comments received during the public comment period	**Record of Decision**	• Read the ROD for site cleanup • Participate in public events or visit the information repository • Contact site CIC with questions
• Includes preparing for and doing the bulk of the cleanup at the site • Final design is developed	**Remedial Design/ Remedial Action**	• Learn about the final design • Work through your CAG, TAG or Technical Assistance Services for Communities provider for information • Attend meetings and site visits • Contact CIC with questions
• Any necessary physical construction has been completed (even though final cleanup levels may not have been reached)	**Construction Completion**	• Attend meetings and site visits • Contact CIC with questions
• Ensures that Superfund cleanups provide long-term protection of human health and environment • Monitoring continues	**Post-Construction Completion**	• Work through your CAG, TAG or TASC provider for information • Visit the site or arrange a site tour through EPA • Contact CIC with questions
• All site work completed • EPA requests comments on upcoming deletion of site from NPL list	**NPL Deletion**	• Read EPA's proposal and Responsiveness Summary • Read the final deletion report • Plan a community event to celebrate deletion from NPL
After site is clean: • EPA works with community to help return site to productive use • EPA will ensure that any land use restrictions continue to be met	**Reuse**	• Work with EPA and neighbors to plan the redevelopment • Explore EPA's tools and resources • Be supportive of redevelopment plans once they've been agreed upon

Exhibit 2. Community Involvement Opportunities During the Superfund Process

Appendix F

Environmental Justice

U.S. EPA defines environmental justice as fair treatment and meaningful involvement of all people--regardless of race, color, national origin or income-- with respect to development, implementation, and enforcement of environmental laws, regulations, and policies.

Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, or commercial operations, or the execution of federal, state, local, and tribal programs and policies.

Meaningful involvement means that potentially affected community residents have an appropriate opportunity to participate in decision-making about a proposed activity that will affect their environment and/or health.

The Environmental Justice Act of 1992 obligates federal agencies to make environmental justice part of its overall mission by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Following this order, the Office of Environmental Equity within U.S. EPA became the Office of Environmental Justice. U.S. EPA's Office of Environmental Justice ensures that all people, regardless of race, color, national origin, or income, enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process for a healthy living, learning, and work environment. Ensuring environmental justice means not only protecting human health and the environment for everyone, but also ensuring that all people are treated fairly and are given the opportunity to participate meaningfully in the development, implementation, and enforcement of environmental laws, regulations, and policies. U.S. EPA considers the neighborhoods affected by the three sites discussed in this CIP are environmental justice communities, which means they are communities that historically are under-represented minority and low-income areas burdened with significant environmental challenges.

When making decisions about a cleanup and planning its community involvement initiative for a community, environmental justice issues must be taken into account. As part of this effort, the U.S. EPA collaborates with the state agencies, representatives from the city of Dayton and the city of Riverside and concerned citizens in addressing environmental challenges in more effective, efficient, and sustainable ways.

Plan EJ 2014 is a roadmap that will help EPA integrate environmental justice into the Agency's programs, policies, and activities. Plan EJ 2014 is named in recognition of the 20th anniversary of President Clinton's issuance of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

In implementing the Plan, EPA will seek to meaningfully engage with communities and stakeholders.

The goals of the plan are to:

- Protect health in communities over-burdened by pollution
- Empower communities to take action to improve their health and environment
- Establish partnerships with local, state, tribal and federal organizations to achieve healthy and sustainable communities.

Plan EJ 2014 is not a rule or regulation. It is a strategy to help integrate environmental justice into EPA's day to day activities. More information can be found at:

http://www.epa.gov/environmentaljustice/index.html

Appendix G

Agency for Toxic Substances and Disease Registry Fact Sheets:
Includes ATSDR ToxFact fact sheets on contaminants of concern affecting the sites.

Fact Sheets:

Polychlorinated Biphenyls

Tetrachloroethylene

Trichloroethylene

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

POLYCHLORINATED BIPHENYLS

Division of Toxicology ToxFAQs™ February 2001

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

❏ PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.

❏ PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.

❏ PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.

❏ PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

❏ Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.

❏ Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.

❏ Breathing air near hazardous waste sites and drinking contaminated well water.

❏ In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects

of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risk of exposure to PCBs?

❏ You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.

❏ Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.

❏ Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

❏ If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TETRACHLOROETHYLENE
CAS # 127-18-4

Agency for Toxic Substances and Disease Registry ToxFAQs September 1997

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Tetrachloroethylene has been found in at least 771 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetrachloroethylene?

(Pronounced tĕt′rə-klôr′ ō-ĕth′ə-lēn′)

Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.

Other names for tetrachloroethylene include perchloroethylene, PCE, and tetrachloroethene. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part tetrachloroethylene per million parts of air (1 ppm) or more, although some can smell it at even lower levels.

What happens to tetrachloroethylene when it enters the environment?

- Much of the tetrachloroethylene that gets into water or soil evaporates into the air.
- Microorganisms can break down some of the tetrachloroethylene in soil or underground water.
- In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain.
- It does not appear to collect in fish or other animals that live in water.

How might I be exposed to tetrachloroethylene?

- When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- When you drink water containing tetrachloroethylene, you are exposed to it.

How can tetrachloroethylene affect my health?

High concentrations of tetrachloroethylene (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Irritation may result from repeated or extended skin contact with it. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used tetrachloroethylene to get a "high."

In industry, most workers are exposed to levels lower than those causing obvious nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not known.

Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethyl-

ene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant.

How likely is tetrachloroethylene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to cause liver tumors in mice and kidney tumors in male rats.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood.

Because it is stored in the body's fat and slowly released into the bloodstream, tetrachloroethylene can be detected in the breath for weeks following a heavy exposure.

Tetrachloroethylene and trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene, can be detected in the blood. These tests are relatively simple to perform. These tests aren't available at most doctors' offices, but can be performed at special laboratories that have the right equipment.

Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to tetrachloroethylene or the other chemicals.

Has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Tetrachloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone:1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TRICHLOROETHYLENE

CAS # 79-01-6

Division of Toxicology ToxFAQs™ July 2003

This fact sheet answers the most frequently asked health questions (FAQs) about trichloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Trichloroethylene is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. Trichloroethylene has been found in at least 852 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is trichloroethylene?

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

Trichloroethylene is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

What happens to trichloroethylene when it enters the environment?

- Trichloroethylene dissolves a little in water, but it can remain in ground water for a long time.
- Trichloroethylene quickly evaporates from surface water, so it is commonly found as a vapor in the air.
- Trichloroethylene evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
- Trichloroethylene may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
- Trichloroethylene does not build up significantly in plants and animals.

How might I be exposed to trichloroethylene?

- Breathing air in and around the home which has been contaminated with trichloroethylene vapors from shower water or household products such as spot removers and typewriter correction fluid.
- Drinking, swimming, or showering in water that has been contaminated with trichloroethylene.
- Contact with soil contaminated with trichloroethylene, such as near a hazardous waste site.
- Contact with the skin or breathing contaminated air while manufacturing trichloroethylene or using it at work to wash paint or grease from skin or equipment.

How can trichloroethylene affect my health?

Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating.

Breathing large amounts of trichloroethylene may cause impaired heart function, unconsciousness, and death. Breathing it for long periods may cause nerve, kidney, and liver damage.

Drinking large amounts of trichloroethylene may cause nausea, liver damage, unconsciousness, impaired heart function, or death.

Drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.

Skin contact with trichloroethylene for short periods may cause skin rashes.

How likely is trichloroethylene to cause cancer?

Some studies with mice and rats have suggested that high levels of trichloroethylene may cause liver, kidney, or lung cancer. Some studies of people exposed over long periods to high levels of trichloroethylene in drinking water or in workplace air have found evidence of increased cancer. Although, there are some concerns about the studies of people who were exposed to trichloroethylene, some of the effects found in people were similar to effects in animals.

In its 9th Report on Carcinogens, the National Toxicology Program (NTP) determined that trichloroethylene is "reasonably anticipated to be a human carcinogen." The International Agency for Research on Cancer (IARC) has determined that trichloroethylene is "probably carcinogenic to humans."

Is there a medical test to show whether I've been exposed to trichloroethylene?

If you have recently been exposed to trichloroethylene, it can be detected in your breath, blood, or urine. The breath test, if it is performed soon after exposure, can tell if you have been exposed to even a small amount of trichloroethylene.

Exposure to larger amounts is assessed by blood and urine tests, which can detect trichloroethylene and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products, so their detection is not absolute proof of exposure to trichloroethylene. This test isn't available at most doctors' offices, but can be done at special laboratories that have the right equipment.

Has the federal government made recommendations to protect human health?

The EPA has set a maximum contaminant level for trichloroethylene in drinking water at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of TCE per billion parts water.

The EPA has also developed regulations for the handling and disposal of trichloroethylene.

The Occupational Safety and Health Administration (OSHA) has set an exposure limit of 100 parts of trichloroethylene per million parts of air (100 ppm) for an 8-hour workday, 40-hour workweek.

Glossary

Carcinogenicity: The ability of a substance to cause cancer.
CAS: Chemical Abstracts Service.
Evaporate: To change into a vapor or gas.
Milligram (mg): One thousandth of a gram.
Nonflammable: Will not burn.
ppm: Parts per million.
Sediment: Mud and debris that have settled to the bottom of a body of water.
Solvent: A chemical that dissolves other substances.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Trichloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Appendix H

Reuse Plan

REUSE ASSESSMENT

Valleycrest Landfill Site - Dayton, Ohio

DRAFT
APRIL 2014

OVERVIEW

The EPA Region 5 Superfund Redevelopment Initiative is sponsoring a reuse assessment for the Valleycrest Landfill Superfund Site (site), a former gravel quarry and waste disposal site located in northeast Dayton, Ohio. EPA, Ohio EPA and the site's responsible parties have conducted interim removal actions and developed a Remedial Investigation/Feasibility Study for the site. In August 2013, EPA selected a remedy outlining the cleanup approach and will work with the site's responsible parties over the next several years to design and implement the site's cleanup plan. The purpose of the reuse assessment is to assist the City of Dayton, neighborhood stakeholders and community partners in evaluating reuse options for the site based on the selected remedy.

SITE OWNERSHIP & STEWARDSHIP

From the 1930s through 1970s, the Keystone Gravel Company operated a gravel quarry at the site and accepted waste for disposal in five unlined quarry pits (see Figure 2. Disposal Areas Map). Keystone Gravel is part of the Valleycrest Landfill Site Group (VLSG), the site's responsible parties who will be completing the cleanup. Today, the inactive company owns the majority of the site property but has no interest in long-term site ownership or potential reuse. The company will likely convey the property in the future to a viable party that can maintain ownership over the long term. The VLSG is responsible for funding and implementing the site's final remedy with oversight from EPA. However, VLSG has no financial obligation to fund or implement reuse.

REUSE PLANNING TO DATE

Early in the site's remedial process, the City of Dayton took proactive steps in sponsoring a planning effort for the site, which resulted in the 2005 Valleycrest Landfill Site Reuse Framework. Building on the 2005 framework, the EPA-funded reuse assessment analyzed site reuse suitability based on anticipated remedial features. In addition, EPA Region 5 and the SRI consulting team engaged a targeted group of City representatives and community partners through a series stakeholder interviews and a reuse working session to identify priority future uses for the site. This reuse assessment summarizes findings from the process, including anticipated site remedy components, reuse suitability considerations and a set of prioritized uses and recommendations to advance site reuse.

Funded by the EPA Region 5 Superfund Redevelopment Initiative

Figure 1. Site Context Map

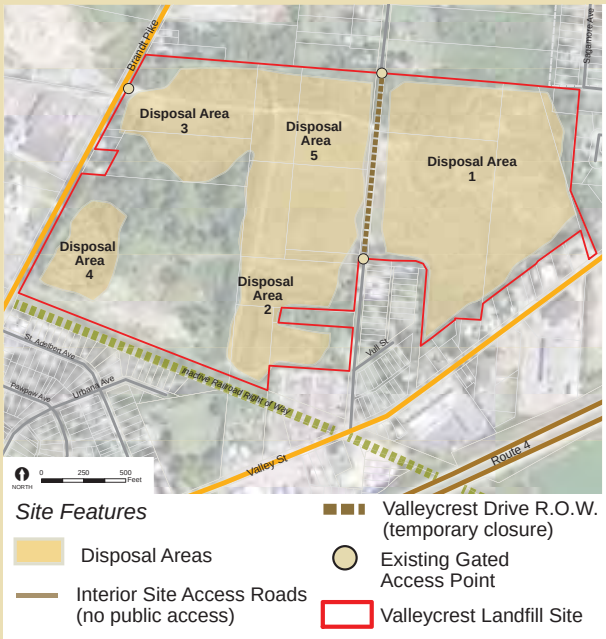

Figure 2. Valleycrest Site Disposal Areas Map

SITE REUSE GOALS

- Open space (urban agriculture, prairie, walking/biking trails)
- Recreational amenities (sports fields)
- Commercial/Light Industrial compatible with neighborhood
- Solar renewable energy development
- Educational exhibits or facilities

ANTICIPATED REMEDIAL FEATURES

The proposed features outlined in Figure 3 below are based on Remedial Alternative 2a selected in the site's August 2013 Record of Decision. Final remedy components, sizes and configurations will be determined during remedial design (2015-2016). Additional remedial considerations that will likely influence site reuse options are highlighted on page 3.

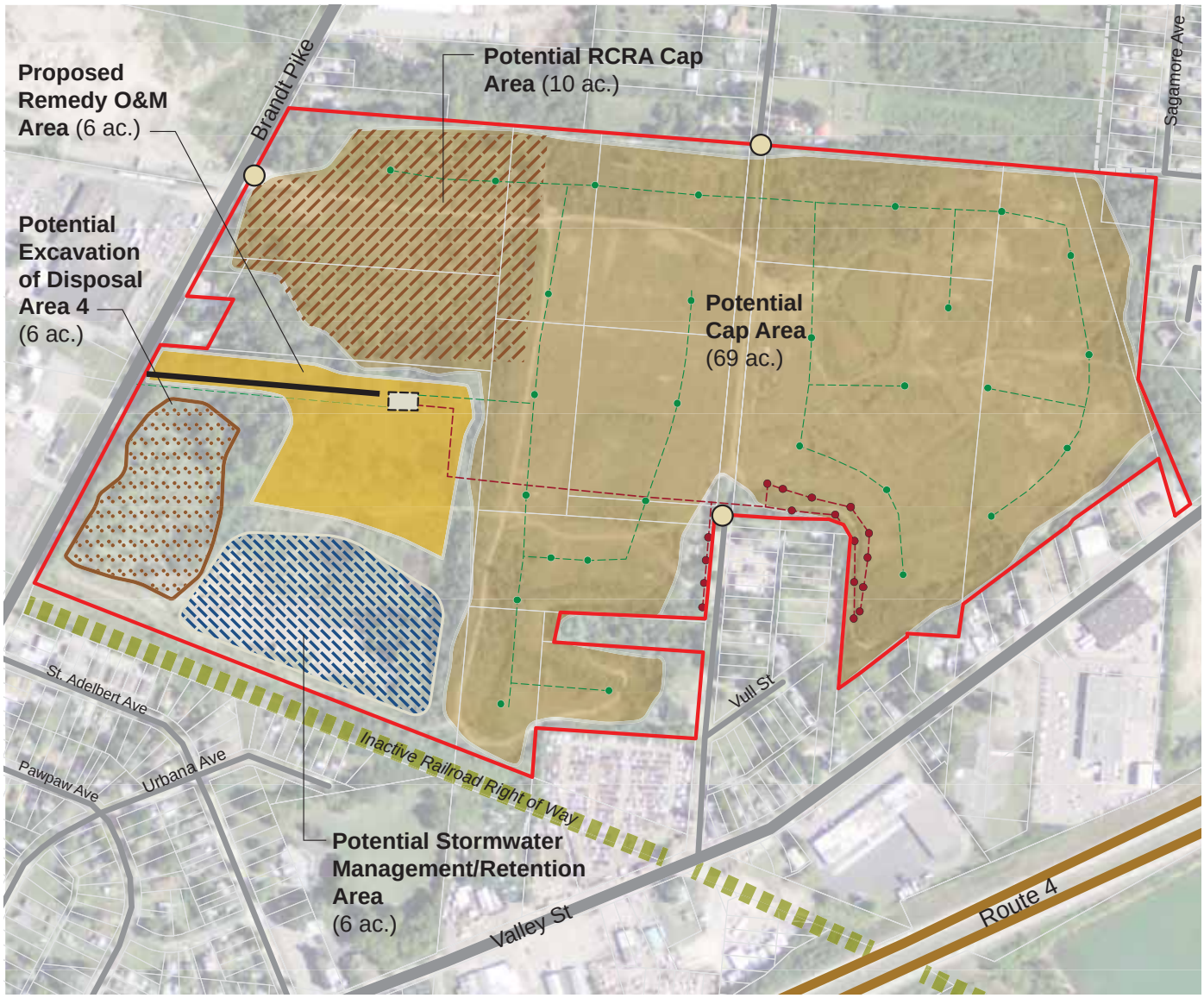

Figure 3. Anticipated Remedial Features Map

NORTH 0 250 500 Feet

Potential Cap Area
(69 acres)
- Disposal areas 1,2,3,5
- 30" cap with polyethylene membrane and geosynthetic clay liner

Potential RCRA Cap Area
(10 acres)
- The need for RCRA cap on Disposal Area 3 to be evaluated during Remedial Design

Potential Waste Excavation
(6 acres)
- Excavate Disposal Area 4 waste, backfill and grade to support future use

Potential Stormwater Management/Retention Area
(6 acres)
- Stormwater rention facilities to manage runoff from cap area (facility size and location to be determined during Remedial Design)

Potential Remedy O&M Area
(6 acres)
- New access road
- Leachate pre-treatment/Landfill Gas facility and infrastructure

Leachate Pre-Treatment/ Landfill Gas Flare Facility

Leachate Wells / Collection System (Final layout to be determined during Remedial Design)

Landfill Gas Wells / Collection System (Final layout to be determined during Remedial Design)

New Access Road

Other Features

Valleycrest Landfill Site

Existing Gated Access Point

Roads

Inactive Railroad R.O.W.

Potential Reuse Zones

REUSE ZONES

The potential reuse zones and suitability considerations outlined below provide a tool for evaluating suitable reuse options for the site based on the anticipated remedy. The map in Figure 4 highlights four reuse zones across the site based on remedial considerations. Table 1 provides additional site reuse considerations for each of the reuse zones. The potential reuse zones are preliminary and subject to modification as the final site remedy features are refined during Remedial Design.

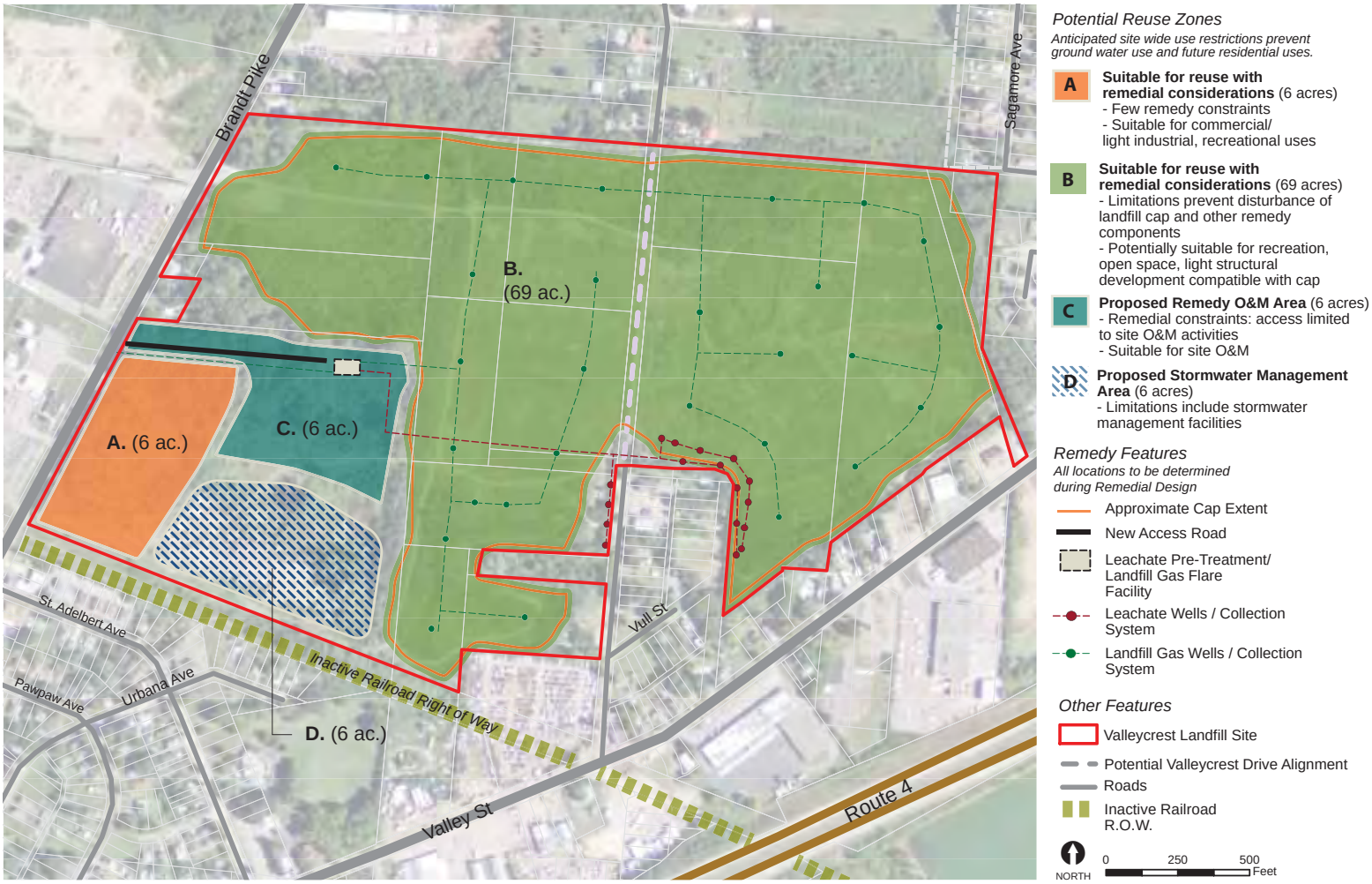

Figure 4. Potential Reuse Zones Map

Reuse Zone	Site Suitability Considerations*
Zone A: Potential for reuse with few limitations (6 acres)	• Potentially suitable for structural development including commercial/industrial use or recreation and open space. • Final size and location of reuse zone will be influenced by excavation extent of former Disposal Area 4 and the location of stormwater management facilities.
Zone B: Potential for surficial use with remedial considerations (69 acres)	• Suitable for recreation, open space and potentially light structural development (footing depths less than 2 feet) consistent with remedial considerations. • Reuse configurations to accommodate 30" cap, landfill gas and leachate collection systems, new Valleycrest Drive alignment, and access for remedy O&M.
Zone C: Remedy Operation & Maintenance Area (10 acres)	• Suitable for remedy operation and maintenance activities with access limitations. • Leachate collection pre-treatment and landfill gas flare facility.
Zone D: Stormwater Management Area (6 acres)	• Construction of stormwater retention facilities to manage runoff from capped area.

* Institutional controls required as part of the selected remedy will likely include sitewide restrictions that limit future residential land use and ground water use, prevent activities that would interfere with the protectiveness of the site's remedy and require EPA notification and approval for future development activities.

Table 1. Reuse Zones and Site Suitability Considerations

RECOMMENDATIONS

REUSE OPPORTUNITIES

Based on reuse suitability maps and considerations highlighted on pages 2 and 3, preliminary future land use considerations are summarized below.

- ***Reuse Zone A*** could potentially offer 6 acres suitable for commercial/industrial, open space or recreational uses with frontage on Brandt Pike and few remedial constraints.
- ***Reuse Zone B*** includes approximately 69 acres within the anticipated cap footprint that could likely support surficial uses such as open space and recreational uses and amenities.

PRIORITY FUTURE LAND USES

During the reuse working session hosted by EPA Region 5 on March 20, 2014, city representatives and community partners prioritized the following future land uses based on feasibility and community benefit.

- ***Solar Renewable Energy***
  (solar photovoltaic panels)
- ***Publicly Accessible Open Space***
  (walking/biking/cross-country ski trails, prairie, educational exhibits)
- ***Urban Agriculture***
  (wildflowers, hoop houses, raised bed gardens)
- ***Recreational Amenities***
  (soccer fields, neighborhood park amenities)
- ***Commercial/Light Industrial Uses***
  (compatible with neighborhood)

These reuse priorities may be further refined in the future based on final remedy components, broader community input and cohesive local support for a specific site reuse strategy.

Reuse Working Session, March 20, 2014

Reuse Assessment developed by Skeo Solutions

KEY REUSE CONSIDERATIONS

- ***Implementation and Coordination Considerations*** - In order to advance local reuse priorities at the site, there is an need for a local entity that can drive reuse implementation, coordinate with EPA, raise funding and ultimately take ownership of the property. Reuse discussions to date have identified the need for a collaborative revitalization approach that brings together a willing coalition of municipal and community partners.
- ***Site Ownership and Stewardship Considerations*** - Successful reuse of the site will rely on a viable and engaged owner that can help maintain the protectiveness of the site's remedy and help facilitate the site's reuse.
- ***Remedial Considerations*** - As EPA and the site's responsible parties complete remedial design activities over the next several years, there is an opportunity to evaluate remedy compatibility for prioritized uses, refine potential reuse configurations and align remedial and reuse implementation activities.

ACKNOWLEDGEMENTS

The following organizations and entities contributed to the reuse assessment process:

- City of Dayton (Planning and Community Development, Economic Development, Water)
- Dayton Environmental Advisory Board
- City of Riverside
- Valleycrest Neighbors and Concerned Citizens
- Old North Dayton Neighborhood Association
- Dayton Citywide Development Corporation
- Valleycrest Landfill Site Group
- EPA Region 5

CONTACT INFORMATION

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