

## **Findett Operable Unit 4 (Ameren Substation) FAQs**

### **1. What are MCLs and how are they set?**

The Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et seq., was passed by Congress in 1974, with amendments added in 1986 and 1996, to protect our drinking water. As part of the SDWA, EPA has set maximum contaminant levels (MCLs) for over 90 different contaminants in public drinking water. An MCL is the highest level of a contaminant that is allowed in drinking water delivered to the consumer (e.g., as the water flows out of the treatment plant and to a consumer's tap). MCLs are developed based on non-cancer or cancer effects and are defined as "the level at which no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety". These standards are legally enforceable under the SDWA. They are generated by the Environmental Protection Agency (EPA). No less often than every six years, MCLs are evaluated for possible regulatory revision based on health impacts, cost, and technology of prevention or treatment. Any revision of an MCL should present a meaningful opportunity to improve the level of public health protection or achieve cost savings while maintaining or improving the level of public health protection. The six-year review of the MCLs for vinyl chloride (VC) and cis-1,2- Dichloroethylene (DCE) was last completed in 2017 and EPA anticipates completing its current review of these MCLs in 2023. More information is available here: <https://www.epa.gov/dwsixyearreview>.

### **2. How are MCLs different from regional screening levels (RSLs)?**

RSLs are used when a potential site is initially investigated to determine whether concentrations of potential contaminants are present at levels that may warrant further investigation or action. RSLs are not legal cleanup standards. Instead, RSLs are used in site "screening" to help identify areas, contaminants, and conditions that require further federal attention. Generally, when contaminant concentrations fall below RSLs, no further action or study is warranted under the Superfund program. Detection of chemicals at concentrations greater than their RSLs would not automatically trigger a site cleanup; however, exceeding an RSL would likely warrant further investigation of the site.

### **3. What MCLs (in micrograms per liter) are set for Trichloroethylene (TCE), Perchloroethylene (PCE) and their breakdown components?**

- PCE = 5 µg/L
- TCE = 5 µg/L
- cis-1,2-DCE = 70 µg/L
- Vinyl chloride = 2 µg/L

### **3. Which site contaminants pose the greatest health concerns and why?**

The EPA has determined that drinking water contaminated with PCE, TCE and vinyl chloride does increase the risk of developing cancer over an individual's lifetime. If each of these contaminants were found in water at the same concentration, vinyl chloride would present the greatest risk of developing cancer, followed by TCE and PCE. All four contaminants listed above also have the potential to cause other adverse health effects besides cancer (i.e., non-cancer health effects) if consumed in drinking water at sufficiently high concentrations. The EPA has established levels of exposure, usually referred to as a dose, at which adverse non-cancer health effects are not expected to occur. The lowest level is for TCE, followed by cis-1,2-DCE, vinyl chloride, and PCE.

**4. Can we change the title of the meetings and the work to reflect the fact that EPA has identified Ameren as culpable for this most recent contamination not Findett?**

Yes. Ameren is a responsible party for contamination at the Huster Road substation migrating into the groundwater used by the City of St. Charles, MO as a primary source of drinking water. EPA can make that clear in our meetings, press releases and technical documents. "Findett" is the formal name of the Superfund site, which refers to a historic operator and contributor to a portion of the contamination. While the Superfund site will still be called "Findett," EPA can make it more clear which meetings involve discussions about contamination from Ameren at the Huster Road Substation, as opposed to other portions of the Findett Site.

**5. What are Operable Units (OUs) and what is the difference between the OUs?**

During cleanup, a site can be divided into several distinct areas depending on the complexity of the problems associated with the site. These areas, called OUs, may address different geographic areas of a site, different impacted media (e.g., soil, groundwater), different responsible parties, or areas where a specific action is required. The Findett site is divided into four OUs:

- OU1 addresses the soil and groundwater contamination on the Findett property
- OU2 addresses the soil contamination on the former Cadmus property
- OU3 addresses affected groundwater that has migrated off the OU1/OU2 property boundaries
- OU4 addresses source material and groundwater at the Ameren Missouri Huster Road Substation

**6. What is the deadline for Ameren to complete the focused feasibility study (FFS)?**

EPA transmitted a letter to Ameren outlining EPA's expectations for the FFS and requiring Ameren to provide a draft FFS Report to EPA by June 30, 2023. A final FFS Report incorporating EPA's review and comment should be available around August 2023.

**7. What is the deadline for the City and Ameren to work amicably before EPA compels access?**

EPA has not mandated a deadline to date. EPA understands and shares the community's access concerns. For the last several months, Ameren and the City have been negotiating access, but

have not yet reached an agreement. Ameren is conducting work under the [2018 Administrative Settlement Agreement and Order on Consent \(ASAOC\)](#) and EPA has the ability to use enforcement authorities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 104 regarding access. Although EPA has the ability to compel access, EPA prefers the individual parties come to a mutual agreement without EPA enforcement. EPA strongly encourages both the City and Ameren to quickly reach agreement on access to ensure groundwater cleanup and monitoring can be conducted. The City and Ameren have both informed EPA that they are close on negotiating access.

## **8. What are the sampling frequencies, locations and data for the City, the State and EPA?**

For drinking water wells, the state requires routine sampling. More information on state required sampling can be found in the answer to question 14 below. Ameren had been sampling site wells quarterly until November 2022. Since November 2022, the City has not granted Ameren access to continue sampling monitoring wells on City property or the City's drinking water wells. Ameren continues to conduct quarterly sampling of monitoring wells inside its substation. The City has indicated that it takes 75 samples across the City every month to analyze for bacteria. Additionally, the City tests for VOCs twice a week for both the water coming in and leaving its drinking water treatment plant.

Any site data submitted to and used by EPA are consistent with quality assurance requirements and can be found on the [EPA Site Profile Page](#).

## **9. How can the public request that EPA conduct an MCL adequacy review for the contaminants and their breakdown components?**

For contaminants with MCLs, including vinyl chloride and cis-1,2-DCE, the [Safe Drinking Water Act \(SDWA\)](#) requires EPA to review each national primary drinking water regulation at least once every six years and revise them, if appropriate. As part of the "Six-Year Review," EPA evaluates any newly available data, information, and technologies to determine if any regulatory revisions are needed. Revisions must maintain or strengthen public health protection. The six-year review of the MCLs for vinyl chloride and DCE was last completed in 2017 and EPA anticipates completing its current review of these MCLs in 2023. More information is available here: <https://www.epa.gov/dwsixyearreview>.

## **10. Where can we find the health-based info/data regarding this site?**

A Human Health Risk Assessment is located on EPA's Site Profile Page: <https://semspub.epa.gov/work/07/30383892.pdf>. It should be noted that the results of the Human Health Risk Assessment are based on exposures to the well(s) with the highest concentrations at the site (e.g. monitoring wells within the substation, not in the drinking water wells) and represents the worst-case scenario if no action is taken to address the contamination.

The community should also reach out to representatives from the [Agency for Toxic Substances and Disease Registry](#) or the [Missouri Department of Health and Senior Services](#), who can answer questions regarding the risks posed by contaminants at the Site.

### **11. Who is our single point of contact at EPA?**

The community can reach out to Jessica Evans, the recently assigned community liaison, at 314-296-8182 or [evans.jessica@epa.gov](mailto:evans.jessica@epa.gov). Media inquiries can be made through Ben Washburn, EPA Office of Public Affairs, at 913-551-7364 or [washburn.ben@epa.gov](mailto:washburn.ben@epa.gov).

### **12. How will we know that EPA is not just “rubber stamping” Ameren recommendations in the focused feasibility study or well operation strategy recommendations?**

Oversight is a critical part of EPA’s role at Superfund sites. EPA’s role is to ensure that the party conducting the cleanup complies with all applicable laws, regulations, and requirements, and meets all performance standards in the order under which the cleanup is being conducted. EPA must review and approve all documents submitted by Ameren and its consultants and contractors. All work must be performed pursuant to EPA reviewed and approved workplans and all sampling must be conducted pursuant to an EPA-approved Quality Assurance Project Plan (QAPP), which ensures the integrity of any data collected. If EPA disapproves any of these submittals, the party has to re-submit them until EPA approves.

### **13. Exactly what costs as a result of the contamination is Ameren responsible for or could be responsible for covering?**

EPA orders polluters to perform cleanups. Ameren is responsible for the cleanup costs ordered by EPA under an administrative order or consent decree that are associated with the Ameren Huster Road substation to restore the groundwater aquifer to the MCLs. EPA cannot require Ameren to reimburse the City for actions the City takes on its own outside of an EPA-ordered clean-up. Nor can EPA reimburse the City. Reimbursement of costs the City has incurred outside of EPA’s cleanup is between the City and Ameren. Ameren is paying for the EPA-approved remedy set forth in the [2021 Record of Decision \(ROD\)](#) and is performing an additional focused feasibility study.

### **14. How will EPA ensure that the City water meets health-based standards now and in the future?**

Drinking water from the St. Charles Water Treatment Plant has always met health-based standards (MCLs) and the EPA and the State will continue to require that the City’s water meets these standards.

As a standard protocol, MoDNR requires any system that has a VOC detection to take a confirmation sample. MoDNR field staff will collect the confirmation sample if the detect exceeds the MCL. MoDNR will place the entry point on a quarterly monitoring schedule, if the confirmation sample validates the initial detection. MoDNR will require the entry point to remain on quarterly sampling until proven to be reliably and consistently below the MCL. Once determined to be reliably and consistently below the MCL, MoDNR will return the entry point sampling to a routine or reduced monitoring schedule.

**15. How can the City work with the state to apply for money that will fund additional wells so that we don't have to buy water from St. Louis City?**

Bipartisan Infrastructure Law (BIL) and/or Inflation Reduction Act (IRA) grant eligibility will be determined by the primary program that funds water infrastructure projects. EPA provides funds to MoDNR for such grants and EPA's understanding is that the City has been in communication with MoDNR, as the state has delegated authority for the drinking water program. The City is already in correspondence with the EPA regarding grants for which the City may possibly be eligible. The City also recently received a two million dollar grant from the EPA for the City's public drinking water system and has been in contact with the EPA regarding implementation of this grant.

**16. Why not sample at the tap for the Ameren contaminants to give St Charles peace of mind?**

The City's drinking water supply meets the drinking water health standards established by Missouri's Safe Drinking Water Law and EPA's Safe Drinking Water Act. Water being distributed to the public after treatment at the City's water treatment plant has regularly been sampled for VOCs, including VC and cis-1,2-DCE, for over 20 years, and has never shown any level of contamination. EPA has found no reason to indicate that there are any health risks posed by drinking, cooking, bathing, or otherwise using the water that is supplied by the City of St. Charles. Sample schedules and compliance sample results can be found on MoDNR's Drinking Water Watch website at: <https://www.dnr.mo.gov/DWW/DNRLogin.jsp>

**FAQs prepared for the February Public Availability Session**

**17. What if there are contaminants detected in the influent or effluent?**

Current monitoring indicates there are no contaminants in either the influent or effluent. If there are levels of contaminants in the influent or effluent above the MCLs, EPA can initiate a response action requiring Ameren to do any number of things such as providing water from the city of St. Louis or issuing bottled water. EPA has been evaluating whether other concentrations should trigger these additional response actions. This will be addressed in an updated contingency plan by Ameren as part of the upcoming Focused Feasibility Study and subsequent remedial decision.

**18. What does a focused feasibility study mean and how is it different than what happened in the Remedial Investigation/Feasibility Study (RI/FS)?**

The FFS will analyze changing conditions at the Site and evaluate additional remedies under [EPA's nine criteria](#). It is focused on the newly identified area of contamination and as a result is much quicker than the RI/FS that was already conducted.

**20. Zero Valent Iron (ZVI) failed and there is now a new plume. How is more ZVI going to help?**

Zero Valent Iron has been used for more than 130 years to treat groundwater. The ZVI acts as a reducing agent to provide electrons to degrade the chlorinated compounds to non-toxic ethene and ethane. The ZVI has been successful in the treatment of groundwater contaminants in and around the Ameren substation. The plume shifted to the east most likely due to increased pumping rates of City Wells #6 and #7, which had not been used in several years, and the installation of City Well #10. For this reason, Ameren is installing additional ZVI permeable barriers to treat contaminants as the groundwater passes through the barriers. Additional remedies will be evaluated moving forward, but ZVI will help protect the wellfield from contaminants in the groundwater.

## **21. Why did you withdraw the Consent Decree (CD)?**

The results from the direct push technology (DPT) investigation showed contaminants migrating north from the Ameren substation. Based on those results, EPA made the decision to withdraw the CD to further evaluate the need for a remedy change. EPA has required Ameren to examine whether additional investigation or changes to the remedy are appropriate in light of recent sampling data. As part of the Superfund process, in 2018 EPA entered into an order with Ameren to conduct a RI/FS regarding the contaminant plume. That FS was completed in 2020. Since Ameren has been identified as a source of the new contamination, EPA is now asking Ameren to perform additional work under the 2018 Order. After conducting the FFS under EPA oversight, Ameren will submit to EPA an FFS Report to evaluate long-term remedial alternatives. EPA will take that report and evaluate whether changes are needed to the remedy using the National Oil and Hazardous Substances Pollution Contingency Plan's (NCP's) nine balancing criteria outlined in 40 C.F.R. § 300.430. Based on EPA's analysis, there could be a change in the remedy. In order to evaluate the need for a remedy change, EPA and the Department of Justice (DOJ) have paused – or stayed – the litigation and have withdrawn the CD.

## **22. Does EPA agree with the City's decision to shut down certain wells?**

EPA uses MCLs as identified in the SDWA to determine when public water supply wells should be recommended for shut down to protect the public. The City made decisions based on operational preference to shut down City Wells 5, 7, 8, and 9 due to detections of DCE and VC that were much less than the MCLs. The City is entitled to make such decisions as the operator of the permitted public water supply system, but EPA did not request that the City stop pumping those wells. Ameren is currently working with the City of St. Charles in developing a well pumping plan to safely operate its wells while EPA and Ameren complete the response action at OU4.

## **23. The City says the equipment it is buying would remove chemical contamination from the water produced from their wells once they're turned back on. Does EPA believe that is necessary? And does EPA believe that new wells should be installed in another area for the long term?**

Based on available data, at this point in time, this equipment is not necessary in order for the water quality to meet EPA's health based MCL. EPA has not requested Ameren to replace public water system wells at this time, but well replacement will be an option EPA expects

Ameren to consider in their review of remedial options at the site. The City's decision to purchase remediation equipment would be based on its operational preference vs. a specific EPA requirement due to contaminant levels entering the treatment plant. [MoDNR](#) can provide additional information regarding public water system requirements. EPA's priorities are ensuring the City's drinking water meets drinking water standards and restoring the aquifer. EPA is working with Ameren to ensure the contamination is addressed in a manner that is timely and effective in allowing the City to continue use of existing infrastructure.

### **Currently Posted FAQs**

#### **24. Can I drink my water?**

Yes. St. Charles' drinking water supply meets the drinking water health standards established by Missouri's Safe Drinking Water Law and EPA's Safe Drinking Water Act. Water being distributed to the public after treatment at the City's water treatment plant has regularly been sampled for VOCs, including vinyl chloride and cis-1,2- DCE for over 20 years, and has never shown any level of contamination. EPA has found no reason to indicate that there are any health risks posed by drinking, cooking, bathing, or otherwise using the water that is supplied by the City of St. Charles.

#### **25. Has the drinking water in St. Charles ever exceeded the Safe Drinking Water Act's maximum contaminant levels for VC or DCE?**

No. Water being distributed to the public from the City's water treatment plant has been sampled regularly since 2008 as part of EPA's investigations and has never shown any level of contamination of VOCs, including vinyl chloride and DCE. In addition, water samples are routinely collected by the City after all treatment processes at the entry point to the water distribution system. These samples represent water you would receive in your home. For over the past 20 years, the compliance samples collected by the City and reported to the Missouri Department of Natural Resources-Public Drinking Water Branch have not shown any detections of VOC contamination.

#### **26. What is the Elm Point Wellfield?**

The Elm Point Wellfield is a source of drinking water for the City of St. Charles. Water is pumped from the Elm Point drinking water supply wells, or City Wells, to the City's drinking water treatment plant, where the water from the City Wells is treated. Once treated, the water is blended with water purchased from the City of St. Louis for distribution to the community. Since 1987, according to the City's website, the City has been purchasing part of their water supply from the city of St. Louis because the City's treatment plant does not have the capacity to produce 100% of the City's drinking water. More information about the City's water treatment plant history, capacity, and treatment processes can be found at the City's website, available at <https://www.stcharlescitymo.gov/832/Water-Treatment>.

#### **27. How did the Elm Point Wellfield become contaminated?**



The Elm Point Wellfield lies near an electrical substation operated by Union Electric Company d/b/a Ameren Missouri (Ameren), and a defunct chemical facility, Findett Corporation (Findett), which operated from 1962-1973.

During Findett's operation, Findett's customers sent hazardous substances to Findett for reprocessing and disposal. The reprocessing fluids and materials that were used also contained hazardous substances, including VOCs. Findett's historical operations prior to the enactment of hazardous waste laws resulted in the release of VOCs into groundwater. EPA and a group of Findett's former customers conducted investigations in 2001 that identified VOC contamination in groundwater near the Elm Point Wellfield and later determined that this contamination came from a groundwater plume originating from the former Findett facility. In June 2010, DCE was detected in City Well 5 of the Elm Point Wellfield, located approximately 180-200 feet north of the Ameren substation boundary. Between 2011 and 2014, a group of Findett's former customers performed additional investigations and response actions to address the contamination. Based on the analytical data Findett's customers collected in 2011, as well as independent testing by Ameren in 2012, EPA determined that the contamination in City Well 5 came from a separate groundwater plume originating from the Ameren substation, not the Findett facility plume. The source of this contamination is Ameren's historic use of the product Mozel, a cleaner and degreaser, prior to the enactment of hazardous waste laws.

In December 2021, VOC concentrations in a monitoring well north of the Huster Road substation (PZ-11) increased without explanation. EPA performed investigative work in January 2023 that determined the contamination in PZ-11 is related to the Ameren substation.

## **28. What has EPA done to address the contamination in the Elm Point Wellfield?**

In 2001, EPA and a group of Findett's former customers began investigating potential contamination near the Elm Point Wellfield. Contamination near City Well 8 is being addressed under the [OU3 2005 ROD](#) issued by EPA, which provides a remedy for a contaminated groundwater plume originating from the Findett facility. Since 2007, a group of Findett's former customers have been addressing the contamination under a consent decree and continue to monitor, sample, and clean up the Findett groundwater plume. The ongoing monitoring has shown a decrease in overall contaminant concentrations within the plume. Documents further detailing the cleanup of the Findett groundwater plume, or OU3, can be found in the "Site Documents and Data" page of EPA's Findett Corporation Superfund Site website, available at [www.epa.gov/superfund/findettcorp](http://www.epa.gov/superfund/findettcorp).

Since 2012, EPA initially, and then Ameren (once it was a confirmed source) have actively been investigating and cleaning up the groundwater plume originating from the Ameren substation. This included implementation of several contaminant cleanup technologies in a series of four pilot studies conducted from 2014-2018. Cleanup technologies included operation of a groundwater extraction and treatment system and successive treatments of zero valent iron (ZVI) and sodium persulfate outside the substation, and treatments of potassium permanganate (soil only), bioaugmentation, and sodium persulfate inside the substation. As a result of these treatments, VOC concentrations in all monitoring wells associated with the Ameren plume



outside of the substation, except for PZ-11, have been reduced to amounts significantly below the Safe Drinking Water Act's MCLs and in most cases VOCs are not being detected. Documents further detailing the cleanup of the Ameren groundwater plume, or OU4, can be found in the "Site Documents and Data" page of EPA's Findett Corporation Superfund Site website, available at [www.epa.gov/superfund/findettcorp](http://www.epa.gov/superfund/findettcorp).

### **29. What is EPA doing to address increased VOC concentrations in PZ-11 and City Well 6 (CW-6)?**

EPA-approved investigations have included the installation of various monitoring wells and piezometers to monitor the levels of contamination in the groundwater plume and around the City Wells. (Monitoring wells and piezometers do not provide drinking water to the City.) After years of data indicating a decreasing plume, VOC concentrations in PZ-11 and CW-6, which are located near each other, increased without explanation in December 2021. From January 2022 thru November 2022, Ameren performed biweekly sampling of PZ-11 and CW-6 to monitor any increasing trends or potential threats to the City's water supply. While some sampling in 2022 at CW-6 has shown contaminant levels at or above the MCLs, historical sampling did not indicate the presence of VOCs in CW-6.

Since January 2022, Ameren has doubled the rate of the groundwater extraction and treatment system. In July 2022, Ameren conducted a bioaugmentation treatment within the substation.

In January 2023, EPA conducted additional characterization work that was critical in determining the next steps needed to address the increased contaminant concentrations in order to protect the Wellfield. That work showed that Ameren was a source of contamination north of Highway 370 and on February 16, 2023, EPA directed Ameren to perform additional work under a 2018 Administrative Settlement Agreement and Order on Consent, including a focused feasibility study (FFS) that will determine whether additional remedies are necessary, and interim response actions, including in situ chemical reduction and installation of ZVI barriers. Ameren began conducting this work in February 2023. After conducting the FFS under EPA oversight, Ameren will submit to EPA an FFS Report to evaluate long-term remedial alternatives. EPA will take that report and evaluate whether changes are needed to the remedy using EPA's nine balancing criteria outlined in CERCLA.

### **30. How is EPA going to ensure that other wells in the Wellfield do not become contaminated and my drinking water is safe in the future?**

EPA is committed to ensuring that an adequate response is performed to protect the Elm Point Wellfield, including the recent contaminant detections in PZ-11 and CW-6.

In the [June 30, 2021 ROD](#), EPA selected the remedy to clean up contamination in the Elm Point Wellfield caused by the Ameren groundwater plume and help ensure that other wells do not become contaminated in the future. The remedy in the ROD includes:

- Enhanced Bioaugmentation: use of naturally occurring bacteria to break down VOCs in the groundwater

- Groundwater Extraction and Treatment System: Groundwater is pumped from two extraction wells through an air stripper to remove VOCs
- Ongoing monitoring to confirm VOC breakdown and evaluate need for additional bioaugmentation
- Contingency actions if an MCL is exceeded for any contaminant of concern outside of the Ameren substation or there is an increasing trend inside the substation

This ROD was developed as a result of four pilot studies Ameren conducted in 2014-2018, as well as a Remedial Investigation/Feasibility Study (RI/FS) EPA conducted in 2019-2020. The remedy in the ROD, as demonstrated by the pilot studies, has been shown to be successful in reducing contaminants in the Elm Point Wellfield and preventing their spread.

The objectives of the selected remedy include:

- Preventing exposure to VOCs above their MCLs in groundwater.
- Preventing potential future risks to human receptors from inhalation of groundwater VOCs via the vapor intrusion pathway.
- Preventing future migration of groundwater contamination offsite.
- Restoring groundwater to beneficial reuse within a reasonable timeframe.

After reviewing the results of direct push technology (DPT) sampling, it is appropriate to withdraw the Consent Decree to evaluate the need for a remedy change. EPA has required Ameren to examine whether additional investigation or changes to the remedy are appropriate in light of recent sampling data. As part of the Superfund process, in 2018 EPA entered into an order with Ameren to conduct a RI/FS regarding the contaminant plume. That FS was completed in 2020. Since Ameren has been identified as a source of the new contamination, EPA is now asking Ameren to perform additional work under the 2018 Order. After conducting the FFS under EPA oversight, Ameren will submit to EPA an FFS Report to evaluate long-term remedial alternatives. EPA will take that report and evaluate whether changes are needed to the remedy using EPA's nine balancing criteria outlined in CERCLA. Based on EPA's analysis, there could be a change in the remedy. In order to evaluate the need for a remedy change, EPA and DOJ have paused – or stayed – the litigation and have withdrawn the CD.

In addition, contamination near City Well 8 is being addressed under a 2005 ROD issued by EPA, which provides a remedy for a contaminated groundwater plume originating from the Findett facility. Since 2007, a group of Findett's former customers have been addressing the Findett plume contamination under a consent decree and continue to do so. Under EPA's oversight, these customers monitor the degradation of the contaminants and size of the Findett plume and have a contingency plan in place in the event contamination increases. EPA continues to evaluate the effectiveness of this remedy.

**34. Why aren't you requiring Ameren to provide the City a new wellfield or upgrade the City's water treatment plant?**

EPA is required to follow the process set forth in CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The pilot studies, remedial investigation, and feasibility study conducted from 2014-2020 support the remedy EPA selected in the [June 30, 2021 ROD](#). However, based on new information, if a change to the ROD is needed, EPA can issue an Explanation of Significant Differences or a ROD Amendment, as appropriate and consistent with the applicable regulations and guidance. EPA selects its remedies after careful analysis using the NCP's factors set forth in 40 C.F.R. § 300.430.

### **35. What about the 2012 and 2013 Action Memos? I thought they required Ameren to install new wells.**

In order for EPA to respond to a release of hazardous substances at a site, it must first issue a decision document, either in the form of an action memorandum or a record of decision. Once that action memorandum or record of decision is entered, EPA can then order a liable party to conduct the remedy set forth in that action memorandum or record of decision.

In this instance, after issuing a ROD setting forth the remedy for OU3, the Findett plume, EPA entered a consent decree with a group of Findett's customers that required them to implement the remedy in that ROD. In December 2011, DCE was found in City Well 5, so on June 25, 2012, EPA issued an [Action Memorandum](#) to address the contamination, later amended in [March 2013](#). This remedy included installation of new wells. At the time, no one was aware of any groundwater plume in the Wellfield other than the Findett plume. So, on January 2, 2013, EPA entered an order requiring Findett's customers to conduct an emergency response action, which included the expected steps set forth in the 2012 Action Memorandum, as amended.

As part of the Action Memorandum, Findett's customers were required to investigate the areas around the Ameren Substation. During this investigation, additional areas of contamination were discovered that indicated the Substation was the source for the contamination at City Well 5. On December 28, 2012, EPA entered an order requiring Ameren to conduct an investigation to determine to what extent the contamination came from the Substation and to construct a groundwater containment system to keep the contamination from spreading. This order only required an investigation, and not the installation of wells.

The investigations conducted by Ameren and the Findett group showed that the contamination in City Well 5 came solely from the Ameren Substation, and not from the Findett plume. As a result of these findings, in 2015, EPA approved the Findett customers' Removal Action Report confirming that the contamination at City Well 5 was not a result of the Findett groundwater plume. Thus, no further action by the Findett customers under the January 2, 2013 order was necessary.

Beginning in 2014, Ameren conducted a number of pilot studies to address the contamination. These studies have improved the water quality in the Wellfield so that groundwater outside of the Substation complied with MCLs. Ameren completed its pilot studies in 2018, and on March 29, 2018, EPA received Ameren's [notice of completion of work](#) under the December 28, 2012 order. Because Ameren's pilot studies were successful in reducing the contamination, the

installation of new wells was no longer necessary, and EPA approved Ameren's notice of completion of work in 2018.

### **36. What is the difference between wellhead, influent, and effluent?**

The wellhead is the top part of the drinking water supply well in the field. From the wellhead, the water gets piped to the treatment plant for treatment and blending prior to distribution to consumers. "Influent" refers to the untreated water that has left the wellhead and is flowing into the treatment plant ready for processing. "Effluent" is the water that flows out of the plant after treatment has occurred. Once treated, that water is blended with water from St. Louis and is then distributed to consumers.

### **37. What is vinyl chloride and what are the health effects if I am exposed to it?**

Vinyl chloride, also called VC, is a manufactured substance 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. Vinyl chloride can also be formed when other substances, such as dichloroethylene, trichloroethylene and tetrachloroethylene, are broken down by chemical reactions and/or microorganisms in the environment. Health effects from short-term exposure or acute exposures of vinyl chloride may include sleepiness, dizziness, and fainting. Long-term exposure to vinyl chloride at levels above the MCL has the potential to cause neurological and liver effects. Vinyl chloride also has the potential to cause cancer from consuming contaminated drinking water. For more information, refer to <https://www.atsdr.cdc.gov/toxfaqs/tfacts20.pdf>.

### **38. What is cis-1,2 dichloroethylene and what are the health effects if I am exposed to it?**

Cis-1,2-dichloroethylene, also called cis-1,2-dichloroethene or DCE, is a manufactured substance historically used as a solvent for waxes, resins, and acetyl-cellulose, in the extraction of rubber, and as a coolant in refrigeration plants. Like vinyl chloride, cis-1,2-dichloroethylene can be formed when other substances, such as trichloroethylene and tetrachloroethylene, are broken down by chemical reactions and/or microorganisms in the environment. Health effects from short-term exposure to cis-1,2-dichloroethylene can cause nausea, tiredness, and sleepiness. Long-term exposure to cis-1,2-dichloroethylene has the potential to cause kidney, liver, and blood effects. The EPA has determined that cis-1,2-dichloroethylene is not classifiable as to its human carcinogenicity. For more information, refer to <https://www.atsdr.cdc.gov/toxfaqs/tfacts87.pdf>.

### **39. Has the EPA detected contamination of VC and DCE elsewhere in the St. Charles area, and if so, how has the EPA responded?**

VOCs, including VC and DCE, are common contaminants in groundwater at Superfund sites, including Superfund sites in the St. Charles area. When responding to VOC contamination, the EPA prefers to treat contaminants to reduce their toxicity, mobility, or volume. EPA also commonly controls the source of groundwater contamination (such as treating contaminated soil) and contains the contaminated plume (such as pumping to control groundwater flow). The following are common Superfund remedies for groundwater contamination:

- Pump and treat; wherein groundwater is extracted and conveyed to an above-ground treatment system that removes the contaminants. Pump and treat systems are also used to contain contaminant plumes.
- In situ treatment; wherein groundwater is treated in place without extraction from the aquifer. In situ treatment technologies can destroy, immobilize, or reduce contaminant concentrations.
- Containment; wherein vertical engineered barriers such as slurry walls or sheet pile walls are used to control or divert the flow of groundwater.
- Monitored natural attenuation; wherein natural processes such as groundwater microbials are relied upon to achieve remediation objectives within a reasonable timeframe.
- Institutional controls; wherein administrative and legal controls, such as ordinances, well districts, or environmental covenants are used to minimize the potential for human exposure to contamination.

For more information on the types of Superfund response actions in the St. Charles area, please visit EPA's Cleanups in My Community website, available at <https://www.epa.gov/cleanups/cleanups-my-community>.

#### **40. How has EPA engaged the public regarding this site?**

EPA published the proposed cleanup plan for the Ameren groundwater plume, or OU4, on February 2, 2021 and submitted the proposed plan for public comment from February 2, 2021 to March 9, 2021. On February 9, 2021, EPA held a public meeting to discuss the proposed cleanup. Since then, we have published the OU4 Consent Decree for public comment on October 4, 2022, and extended the public comment period to March 6, 2023 before withdrawing the Consent Decree. EPA also held community meetings and availability sessions on November 17, 2022 and February 23, 2023. We also regularly update the Site profile page when new documents and information become available, have fact sheets available, and are in the process of setting up a community advisory group.

Throughout the cleanup process at this Site, EPA has engaged the public by publishing notice of each stage of each response action on the Site website and in a City newspaper and holding public meetings prior to selection of cleanup remedies at each operable unit of the Site.

EPA believes that providing the public information is very important and keeps the public informed of ongoing and planned cleanup activities in various ways. Information regarding the Site is posted on the Findett Corporation Superfund Site website, available at [www.epa.gov/superfund/findettcorp](http://www.epa.gov/superfund/findettcorp). Additionally, information about the Site and other sites in the St. Charles area may be found at EPA's Cleanups in My Community website, available at <https://www.epa.gov/cleanups/cleanups-my-community>. The Missouri Department of Natural Resources' E-START website also contains a map with sites that MoDNR investigates, as well as information for each site. E-START is available at <https://apps5.mo.gov/ESTARTMAP/map/mobile.action>.

#### **41. There has been a lot of information sent to me about the Elm Point Wellfield. How do I know if information is coming from the EPA?**

EPA is aware that some residents of the St. Charles area have received mail or email messages regarding contamination at the Elm Point Wellfield. It is important for you to know that EPA is not involved with those messages in any way. Any form of printable communication that you might receive from EPA Region 7 – particularly any email message, fact sheet, marketing flyer, brochure, or other printed material – will be clearly marked as coming from EPA. EPA’s materials often include an official agency seal and will typically include an EPA staff member’s name and contact information so that you can verify that what you are reading is legitimate.

#### **43. What does increased cancer risk mean?**

Cancer risk refers to the probability, or chance, that an individual will develop cancer over their lifetime. There are many factors that affect a person’s chance of developing cancer over their lifetime, including their genetics and family history, diet, and tobacco use. According to the American Cancer Society, the background risk of developing any type of cancer throughout a lifetime is 40.2%, or approximately 1 in 2, for men in the United States and 38.5%, or approximately 1 in 3, for women in the United States (<https://www.cancer.org/healthy/cancer-causes/general-info/lifetime-probability-of-developing-or-dying-from-cancer.html>).

When the EPA assesses cancer risk, we are looking at the extra risk – on top of the background rate of 1 in 2 or 1 in 3 chances (for U.S. men and women, respectively) – from exposure to a hazardous substance released into the environment. This is called the “excess individual lifetime cancer risk” because it is the risk to any individual of developing cancer over their lifetime, on top of what their background risk of cancer is from factors such as genetics and diet. The EPA “screens” any contaminants found at concentrations that could increase a person’s background risk or probability of developing cancer by one in a million. In other words, when the EPA screens, that means we collect additional samples to more accurately understand the extent and concentrations of the contamination so that we can develop a more accurate plan for cleanup to protect human health. By law, the EPA can take remedial action using Superfund authority under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 when the excess individual lifetime cancer risk exceeds 1 in 10,000 (which is 100 times greater than one in million), as stipulated in the National Oil and Hazardous Substances Pollution Contingency Plan. More information about the Superfund process can be found at:

<https://www.epa.gov/superfund/superfund-cleanup-process>, and more information specific to Superfund risk assessment can be found at: <https://www.epa.gov/risk/superfund-risk-assessment>.

Superfund cleanups are required to attain Applicable or Relevant and Appropriate Requirements (ARARs) upon completion of the response action. When taking remedial action, the EPA considers federal drinking water standards, or Maximum Contaminant Levels (MCLs), to be ARARs. The EPA establishes MCLs, which are enforceable standards, through a rule-making process that considers health effects data, along with treatment technology and cost analyses. All public water systems must comply with these primary drinking water standards. More information about MCLs can be found at: <https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants>.