

Beverley and surrounding suburbs

Environmental assessment program results summary

What assessment program was undertaken?

In April 2015, the Environment Protection Authority (EPA) commenced an environmental assessment program in the Beverley area and surrounding suburbs to better understand the nature and extent of trichloroethene (TCE) contamination to the east and west of Pope Street, Beverley.

Previous assessment work in this area has identified TCE contamination in groundwater. In 2008, the EPA advised residents and businesses that bore water (groundwater) should not be used. As part of plans to formalise this advice through the implementation of a Groundwater Prohibition Area (GPA), the EPA undertook a comprehensive assessment program to understand the nature and extent of contamination, determine any potential health risks and inform the next steps.

What are the results of the assessment?

Results of the current assessment program have provided a number of findings which are detailed below.

TCE is present in soil vapour to varying degrees across the assessment area

The soil vapour and groundwater data are considered together and a predicted indoor air level is identified using computer modelling. In the Beverley and surrounding suburbs assessment area, there are properties which fall in to each of the categories below. Using this information, the EPA will focus immediate further testing on properties where soil vapour predictions are higher, to understand the actual indoor air levels and determine what, if any, action is required.

Indoor air level response ranges for TCE



Groundwater contamination is present across the majority of the assessment area.

Groundwater is approximately 8-10m below ground across the area. As per previous advice provided by the EPA, residents and commercial/industrial property owners should not use bore water (groundwater) for any purpose until further notice. Mains water provided by SA Water and rainwater from rainwater tanks are not affected by this issue.

Following further assessment works and a process of consultation with the community, the EPA will formalise this advice by declaring a Groundwater Prohibition Area (GPA) in accordance with section 103S of the *Environment Protection Act 1993*.

The majority of TCE in soil vapour has come from the groundwater contamination, not a soil source

Understanding the nature of the contamination is one of the key objectives of the assessment program. We now understand that TCE soil vapour is generally a result of the chemical in the groundwater forming a vapour (gas) and not from soil that has been directly contaminated by TCE.

What are the next steps?

Further testing will occur within the assessment area over the coming months. This response will range from sampling of existing groundwater and soil vapour bores on public land to validate the results and understand any potential seasonal variations, to property specific testing to determine actual indoor air levels.

Residents in the assessment area who require property specific testing have been contacted directly by the EPA. For residents in the broader area information will be provided at key milestones regarding the progress of this work. More regular information will also be made available on the EPA website.

How did the area become contaminated?

Contamination in this industrial area occurred historically when the chemical trichloroethene (TCE) was used in manufacturing as a metal cleaner and degreaser. At this time, the recommended method of disposal for TCE was to pour it on the soil to evaporate.

What work was done to reach these results?

The assessment works involved the installation of a number of sampling points on public and private land within the assessment area, including:

- groundwater sampling at seven new and five existing locations,
- soil vapour sampling at various depths across more than 80 public locations,
- soil vapour sampling below the home or in the yard at 15 privately owned residential and commercial properties,
- indoor air testing at four properties.

These locations were identified based on the EPA's understanding of the local geography and groundwater movement in the area, and were refined during the assessment program to narrow in on areas of specific focus.

Can you identify the source of the contamination yet?

The primary aim of the work done to date was to ensure the health and safety of the local community, and now the information collected will be used to try and identify the source or sources and who is responsible for the historic contamination. However, it is important to note that as a number of companies who used TCE have operated in the Beverley industrial precinct over a long period of time, it may be difficult to determine who contributed to the groundwater contamination and to what extent.

More information

If you would like more information about the environmental assessment program please contact the EPA Stakeholder Engagement Team on 1800 729 175 or at EPASiteContam@epa.sa.gov.au. Information, including copies of all assessment reports will be available on the EPA website, www.epa.sa.gov.au.