Meeting notes

2 September 2015

Beverley and surrounding suburbs

Community Working Group meeting notes

Tuesday 2 September 2015, Maltese Cultural Centre 6 Jeanes Street, Beverley

Attendees

Name	Representation	Name	Representation
Tim Saul	EPA	Jayne Willcocks	Resident
Laura Otrakdjian	EPA	Mat Way	Resident
Andrew Pruszinski	EPA	Julie O'Leary	Resident
Mark Hassam	EPA	Susan Ovenden	Resident
Debra Harding	Charles Sturt Council	Tony Kyriacou	Flinders Park Residents Association
Adam Filipi	Charles Sturt Council	Doug Scotney	Resident
James Corbett	Golder Associates	John Moore	Resident
Dr Ian Hers	Golder Associates	Cate Moore	Resident
Tina Meakin	Resident	Peter Passanelli	Resident
Julie O'Leary	Resident	Pina Passanelli	Resident

Discussion

Tim Saul provided an overview of the assessment activities undertaken to date. Please refer to presentation for summary details. A summary of the key questions and answers raised are captured below.

- **How is the EPA working towards identifying the source?**

  The work being undertaken at the moment will assist in identifying the source, with the investigation area continually being refined. 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. However, 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.

- **Will the final reports cover data for the broader area or only the area of focus?**

  The reports will cover the data for all of the assessment undertaken in the Beverley area as part of the investigations which commenced in April 2015. More detailed data will be available for the areas of focus which have been refined through multiple rounds of assessment.

- **How will you ensure the results are communicated to people from non-English speaking backgrounds?**

  The Stakeholder Engagement Team has made multiple visits to properties within the areas of focus and has identified any residents who may need support in understanding the materials. Any other residents in the broader area who may want more information can contact the EPA and this will be provided in an appropriate manner to ensure community understanding of the reports.

- **Comment: the EPA should provide information for people who do not fall in to action response areas that require further investigation or mitigation but who may wish to undertake these actions at their own cost.**

Dr Ian Hers is an expert in vapour intrusion and mitigation from Golder Associates' Vancouver (Canada) office. Dr Hers is providing advice regarding the assessment at Beverley and presented to the group regarding vapour intrusion mitigation and cited several case studies from North America where vapour intrusion mitigation has been successfully implemented in residential settings. Please refer to presentation for summary details. A summary of the key questions and answers raised with Dr Hers are captured below.

- **How many homes were mitigated in the western Canada case study and what was the success rate?**

  Over 60 homes were mitigated in this area with a high level of success. All properties were mitigated to levels considered safe by the established criteria.

- **Is there a standard criteria used to assess TCE predicted indoor air results across Canada or the United States?**

  There is no one consistent number that is used universally. This is a policy decision for individual jurisdictions. There is a lot of debate within the scientific community regarding appropriate criteria, including considering different levels of health risk.

  Regarding the criteria used for Beverley, a conservative approach has been adopted to consider potential impacts to health over a lifetime of exposure. This has been determined jointly by the EPA and SA Health, considering current research and approach adopted by both the World Health Organisation and the US EPA.

- **How were the mitigation systems installed in these case studies?**

  Mitigation options were selected to ensure low operations and maintenance for the properties, while meeting the required mitigation standard. The systems are tested shortly after installation to ensure they are effective. In some instances in the case studies described, further adjustment of the systems was required to meet the required standard. Generally, further testing is usually conducted in the months following the installation to ensure the mitigation system continues to operate as it is intended.

- **Regarding Beverley, will the age of the home and number of cracks be considered when giving advice on mitigation?**

  All houses are considered to have some cracks and therefore this has been considered in the model used to determine predicted indoor air levels and recommended mitigation options.

- **In examples in Canada and the United States, who paid for the mitigation systems?**

  Where the responsible party was identified (the organisation known to have caused the contamination) they were responsible for costs under the relevant legislation. In the case studies, this was more easily identified as the sites were areas that were used for industry both historically and currently. Where no responsible party was identified, it was paid for by the Government.

- **Is mitigation more successful when the source is removed?**

  Evidence from the case studies presented indicates the mitigation systems were successful without removing the source in the first instance.

- **What happened to the communities after these processes? Do you have data about social changes?**

  These case studies focused on the scientific process, with no social research undertaken.

- **Have there been examples of where mitigation has failed?**

  Where mitigation has not been successful in the first instance, a process is undertaken to refine the system and approach to reach a suitable result. To this end, there are no examples of situations where a suitable mitigation system could not be implemented.

- **Is there a threshold where mitigation is not feasible as an option?**

  No such situation has been identified, as mitigation systems are refined and further developed when they do not reach a required standard in the first instance.

- **In mitigation systems, do the fans run 24/7? Are they noisy?**

  The fans do run on an ongoing basis to ensure ongoing removal of vapour from under a house. The fans are low watt to minimise noise and energy consumption. During installation, locations are selected away from bedrooms to minimise interference with the normal operations of the home.

- **Is there anything residents can do at the moment to implement natural depressurization in homes while waiting for results?**

  Depressurisation (to remove vapour pooling under a concrete slab) is an engineered process. There are no specific actions a resident could undertake to mimic this process. However ensuring ventilation by opening windows does assist in air movement should vapour be entering a home.

- **How long does it take to install a mitigation system (once equipment is available)?**

  A system takes 1 – 2 days to install once the available personnel and equipment is available. It requires a small excavation adjacent the home and installation of piping alongside the property.

- **Mitigation assists with managing future exposure, what about exposure that has already occurred?**

  The action response framework which guides the actions taken based on predicted indoor air readings has been developed to provide an appropriate response presuming a lifetime of exposure (70 years). This ensures a consistent and conservative approach to ensure public health is protected.

- **Is there any data that exists about the incidence of cancer in the Beverley area?**

  Response provided by SA Health following the meeting:

  The South Australian Cancer Registry collects cancer incidence data at diagnosis on a postcode basis for certain types of cancers. These data can be accessed by placing a specific request through to the South Australian Cancer Registry. Officers from SA Health can assist with framing the request.

  While the Cancer Registry collects cancer data, people need to be aware that the interpretation of cancer data for health assessment or to determine any local trends can be very difficult.

  Some of the limitations for using cancer registry data for trend analysis include;

  - The address reported for cases is the address at diagnosis and does not include any history of moving residential address. This means that is possible that a case may have moved into our out of the area.
  - The occupational data is incomplete and where it is recorded does not identify where people worked. Knowing occupation is an important factor in understanding the source of possible chemical exposures.
  - The Cancer Registry has limited information on other confounders that may influence the data.
  - In some cases, the opportunity to undertake a more formal analysis is limited because it is likely that the majority of cancer cases have passed away.

- **How is the source removed if it is in someone's backyard?**

  The extent of remediation possible would need to be determined once the location, nature and extent of the source is identified.

- **Information has been provided to say home grown vegetables are safe for consumption. Can you provide some further information about how this is the case?**

  Response provided by SA Health following the meeting:

  Data are limited, and the methods for predicting plant uptake of contaminants from soil and groundwater data are not well validated, particularly for many organic substances like TCE. This makes it difficult to determine any potential human health risks associated with ingestion of fruits and vegetables using generic predictions of how much TCE a plant may take up from the soil or groundwater. A more specific and detailed assessment of health risk would only be required In circumstances where home-grown fruit and vegetable consumption is high (e.g. more than 10% of the diet) as at this level, the consumption of garden produce grown in soil on a contaminated site is likely to represent a main potential transfer of soil contamination to adults and children.

An assessment of exposure to TCE from eating home grown fruit and vegetables depends on three critical factors: (1) how much contamination is likely to be accumulated by garden produce from the surrounding soil, (2) how much home-grown produce is likely to be consumed by people in the household, and (3) how much of the contamination in the food is absorbed by the human body.

Based on the science of uptake and exposure SA Health advises that in areas impacted by TCE contaminated groundwater, home grown produce is likely to be safe to eat, provided it is not watered with contaminated groundwater.

If residents have residual concerns and live in an areas where the nature and extent of contamination is not well understood, it is better to grow fruit and vegetables grown in pots or raised gardens beds using imported 'clean' soil and are not watered with contaminated groundwater so that they can be satisfied that the home grown produce is safe.

- **Does TCE in any state have an impact on chickens and importantly, the eggs the lay which are consumed by the home owner?**

  Response provided by SA Health following the meeting:

  SA Health does not have concerns for the chicken or the egg of birds which are consumed by the home owner and are exposed to ambient air TCE concentrations reported in residential areas of Beverley.

  It is not expected that birds would be watered with contaminated groundwater as previous information campaigns have requested that residents cease extraction of shallow groundwater in this region.

Actions

- Tim Saul committed to emailing a copy of mitigation strategy to the group for review.
- The group requested further information on the following topics at the next meeting:
  - Information from SA Health regarding home grown vegetables and chickens (provided following the meeting and included in the minutes)
  - Provide a health professional at the next meeting to discuss what the results mean and answer questions.
- A copy of the presentation provided and draft meeting notes summarising key questions will be sent to CWG members. The final notes will be uploaded on to the website once agreed by the group.

Next meeting

- The next CWG meeting was set for Tuesday 29 September 2015, in anticipation of the receipt of the report at this time.

More information

Community Information line 1800 770 175

Email EPASiteContam@epa.sa.gov.au

Website www.epa.sa.gov.au

For any questions specific to health, or to follow up on the health responses provided above, please contact the Scientific Services Branch of SA Health.

Phone 08 8226 7100

Email public.health@health.sa.gov.au