

Water and Wastewater Upgrade Works on Aranui Road – information on Contamination Issues

As part of upgrades to the water and wastewater systems in the Mapua area, excavations are taking place along a section of Aranui Road immediately adjacent to, and to the north of, the old Fruitgrowers Chemical Company (FCC) manufacturing premises. The FCC site was the location of significant contamination, principally by pesticides such as DDT.

Soil samples have now been obtained at locations along the upgrade route and these have been analysed for metals (e.g. arsenic, chromium, copper, lead, nickel, and zinc) and for pesticides, including DDT. These contaminants had been previously found in soils from the FCC site itself.

For the most part, concentrations of these contaminants in the soil samples were below what the laboratory could detect. At two locations within the area shaded in green in the diagram below, low levels of DDT and similar compounds were found. The laboratory could not detect any other contaminants.



The following information is to inform workers and other potentially exposed persons about the risks they may be exposed to and the protective measures they need to take with respect to potentially contaminated soil.

The levels of DDT in soils along Aranui Road do not present a significant risk to human health. However, **as best health & safety practice**, exposure to site soils should be avoided by skin contact, breathing in dust or swallowing soil, either from inhaled dust or soil particles on hands or food.

Is there a hazard from the dust?

There is no significant hazard associated with exposure to DDT from inhaled dust or soil particles from site operations on Aranui Road. However, inhalation of dust should be prevented to the greatest practical extent by wearing of fabric filter dust masks under dusty (windy) conditions and water sprays systems should be available to dampen down exposed dry soil.

What is DDT and how can it harm you?

DDT is an insecticide that was widely used in New Zealand to control grass grub and other insect pests (it is now banned). It does not dissolve in water and it sticks very strongly to soil particles (does not travel downwards or sideways within soil if there is rain, for example). It is very long-lived in the environment (has a so-called half-life of from 2 to 15 years).

DDT is considered to be slightly to moderately toxic to humans in its pure form when swallowed. It is not absorbed through the skin and, because it is a solid material, it is not easily inhaled into the lungs, unless there is exposure to dust containing DDT. No adverse effects on the liver, kidneys or the immune (disease-fighting) system have been demonstrated in humans. There is no evidence that DDT or its breakdown products cause cancer in humans at any levels of exposure.

DDT builds up in the fatty tissues of the body and is only very gradually excreted over time. The time for DDT in human body fat to break down is called the half-life (the time for half of the DDT to break down) and is about 10 years.

To sum up the matter of health effects of DDT on humans, the following statement from the United States Centers for Disease Control is important (it describes the results of human exposure to pure DDT over a lengthy time period):

“No effects have been reported in adults given small daily doses of DDT in capsules for 18 months, at a dose rate of 35 mg per day. The evidence for DDT causing cancer is so weak as to be in the realm of a chance occurrence only.”

Worker protective measures

The contracting team working in the contaminated areas along Aranui Road will use the following protective measures:

- Work overalls, fabric filter dust masks and disposable gloves will be worn when working with soil in the identified contaminated area.
- A fresh pair of gloves will be used whenever gloves are taken off -for example to eat or smoke.
- A wash station has been set up for site works to wash their hands and boots. The used wash water will be directed back into the work trench.

Unexpected Contamination

If unexpected contamination is encountered (e.g. bad-smelling and/or discoloured material; oozing liquids; drums) all work will stop, the area will be contained and the Stantec contaminated land expert will be called to the site to advise on all necessary ensuing steps.



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