

STAFF REPORT

TO: Environment & Planning Committee

FROM: Jenny Easton, Resource Scientist

REFERENCE: W121

SUBJECT: **HISTORIC SHEEP DIP PROJECT - REPORT EP09/04/08** - Report prepared for Meeting of 23 April 2009

1. BACKGROUND

A joint project was undertaken with NCC to investigate old sheep dip sites in our area, and trial the XRF which is a portable x-ray based tool for testing soil samples in the field for their metal content. MfE's Contaminated Sites Remediation Fund (CSRf) supported this project which assessed the efficacy of the XRF for locating and investigating historic sheep dips. As a part of the project there was a requirement to provide a report with practical advice for council staff and additionally provide advice to farmers on managing the risks from residual dip chemicals.

We enlisted 22 volunteer farmers and landowners for this project, which was free and confidential to them. Federated Farmers and MAF were also advised of the project, and we are continuing to work through some of the findings with them. The January field work took 6.5 days, indicating how efficient the XRF is with a team of three or four.

2. KEY FINDINGS

1. Eighteen of the 22 dip sites were still being farmed, and four were lifestyle blocks.
2. All the dips were covered, fenced off or filled in, so they did not present a drowning or direct hazard to stock. However the splash and disposal areas beside the dip, and the paddock the dipped sheep were released into were still being grazed and these areas contained high but variable concentrations of arsenic in the soil. Animals inadvertently ingest soil when they graze, particularly when the grass is short, and arsenic can cause ill health and even death in stock.
3. The interim stock health guidelines for arsenic are 38 ppm and there were six farms where some of the results recorded were over 1,000 ppm arsenic with the maximum concentration being 5,427 ppm.
4. The area of farm land exceeding these guidelines was on average 340 m², with four farms above 1,000 m². Generally the dip area was only a small part of a larger paddock.

5. The XRF does not test for organic compounds so one soil sample from the dip site was sent to the lab for analysis of organochlorine pesticide levels. Organochloride based pesticides were used for a decade (1960s), until it was realised that dieldrin residues can seriously affect meat quality standards. One third of the dieldrin results were satisfactory, half were elevated and two samples were high enough to cause concern (these farmers have been advised).
6. The landowners of the lifestyle blocks had considered that filling in the dips would manage the risk, but because extensive areas of the dip surroundings and release paddocks were contaminated above the residential soil criteria of 30 ppm arsenic, two of the lifestyle blocks will require remediation. These landowners did not receive advice about the sheep dips at the time of subdivision.

3. OUTCOMES

1. Each of the landowners has received a map, table of the XRF results and a letter including advice on managing the risks associated with the historic dip chemicals. NCC has sent a similar package to their landowners. The advice to farmers includes contributions from a Waikato farmer who is very familiar with the sheep dip issues, he was also involved in peer review of this project. Advice includes fencing off the highly contaminated areas and lightly grazing the rest, and taking care with surface and groundwater sources.
2. I am working with the local MAF agent and Federated Farmers to raise awareness of these issues locally and nationally, and we hope to produce a technical advisory leaflet.
3. A full report will be provided to MfE, as sponsor of this project.

4. RECOMMENDATIONS

1. That prior to subdivision Council requires existing landowners, in areas recorded as sheep farming, to advise on the presence or absence of any existing or historic sheep dip(s). If they are present then the landowner be required to provide council with written evidence that the property is suitable for the intended land use.
2. That Council agrees to assist any landowner who wishes to jointly apply to the MfE Contaminated Site Remediation Fund for financial assistance for the remediation of any historic sheep dip.
3. That this report be received.



Jenny Easton
Resource Scientist