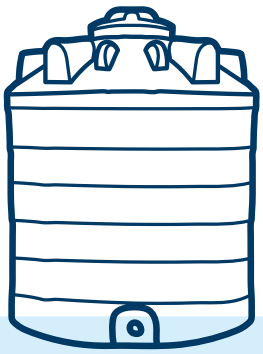
Isotope Report

Fact Sheet

NEWCREST MINING LIMITED
CADIA

Cadia Valley Operations Isotope Study



In March 2023, Cadia Valley Operations (Cadia), in response to concerns raised in the community drinking water program, commissioned the University of South Australia (UoSA) to undertake an isotopic analysis for lead in sludge from water tanks. Samples were collected from 88 water tanks around the Cadia Valley region during the community water sampling program, which UoSA analysed to determine the isotope composition. Cadia then commissioned Professor Brian Gulson to interpret the results of UoSA's analysis. Cadia received the final Isotope Interpretation Report on 14 July 2023. The findings of the report are summarised below.

What is a Lead Isotope?

Lead is a metal found in rocks and soil. Different rocks and soils have different types of lead in them. No two types of lead are the same, and each have individual markers that set them apart – just like human fingerprints. These markers are called isotope signatures. Scientists can test samples of soil, rock or sludge containing lead and check these isotopic signatures to find out where and when the lead originated. Sometimes, lead in one sample can come from multiple sources.

Lead Isotopes in the Cadia Region

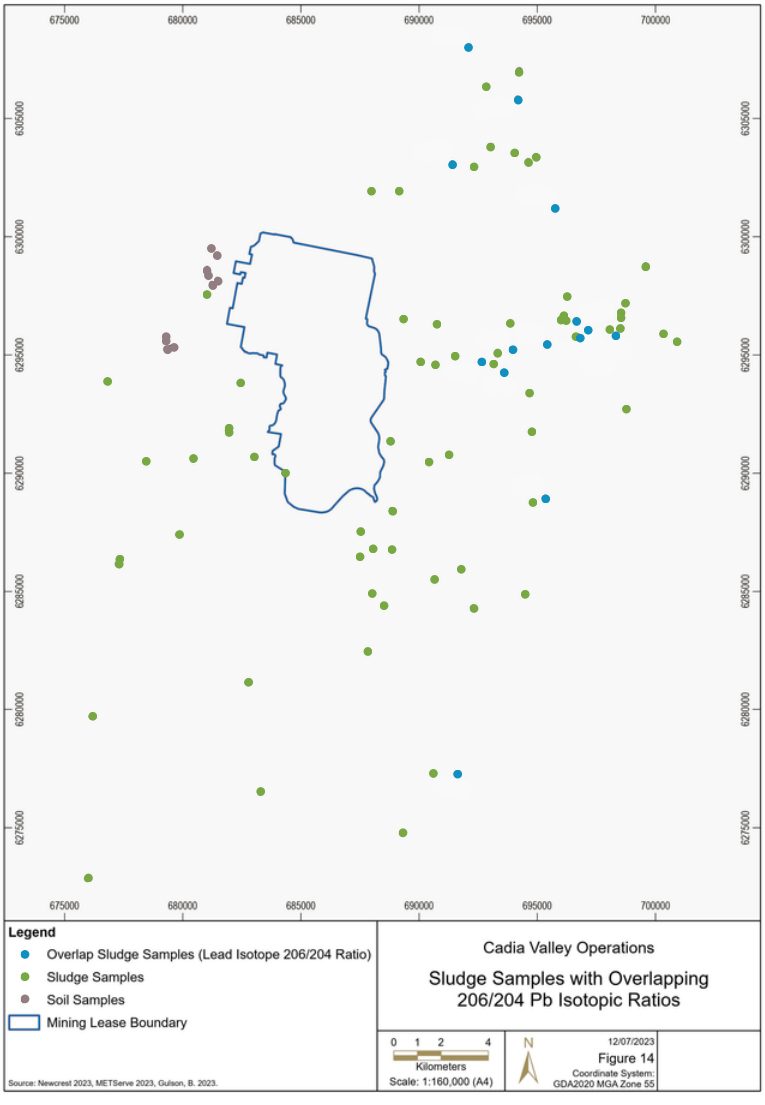


Figure 1: Lead Isotopes in the Cadia region

Lead isotopes were analysed for the Cadia ore body, rock and soil from outside the mine, and sludge samples from water tanks. All types of samples were determined to have an isotopic range.

According to the Isotope Interpretation Report, the lead found in 74 of the 88 samples (84% of the total) has no correlation with the signature from Cadia. The locations of these samples are indicated in green (see Figure 1). **Of the remaining 14 samples (16% of the total), both the Cadia orebody and district soil samples exhibit similar characteristics, and demonstrate the lowest concentration of lead amongst all the sludge samples.** The locations of these 14 samples are indicated in blue (see Figure 1).

If Cadia Valley Operations was the major contributor to lead in the region, we would expect to see the blue samples all around the Cadia site, however this was not the case from the Isotope study.

Is the lead from Cadia?

The Isotope analysis concludes that, of the 14 blue samples, the source could not be determined, as the lead signatures overlap both the Cadia ore samples and regional soil samples.

This report found no evidence linking Cadia with the lead sampled in district water tanks. This has been supported by the recent results of the ANSTO report, a 12-month particulates study, and historical and current air quality monitoring data at the boundary that are within compliance limits. All finalised reports received to date are available on the Cadia website.