Media Release

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Cadia welcomes findings from 12-month ANSTO air-quality study

A new independent scientific report released last week has found that mining operations at Cadia have made a relatively small contribution to regional air quality.

The 12-month particulate characterisation study, undertaken by the Australian Government's Australian Nuclear Science Technology Organisation (ANSTO), was commissioned in collaboration with the local community and is the first in a comprehensive suite of independent air and water quality investigations. The report assessed the PM2.5 dust contribution from Cadia to the regional air shed and revealed that Cadia contributed to only a small percentage of soil particulate matter. Soil was the least significant source of air pollution over the 12-month period, with the soil contributing less than 10 per cent to the total PM2.5 mass.

The study also highlighted metals of concern recently identified by the community, such as lead, nickel, selenium and chromium, were not significant drivers of the soil fingerprint. In addition, the study found those metals occurred at very low levels in the PM2.5 fraction and were not in exceedance of any national standard.

Cadia's General Manager, Mick Dewar, said Australia has some of the most stringent air quality standards in the world, and monitoring conducted over the 12-month period shows that these standards are being met around Cadia and in the region more broadly.

"Protecting the environment and the health and safety of the community are at the forefront of how we operate. Working to maintain compliance to these obligations is, and remains, a key priority consistent with our values and operating principles," Mr Dewar said.

"The completion of the ANSTO study is just one part of our response to addressing concerns raised by both the local community and the NSW Environment Protection Authority. In the coming weeks, Cadia will receive results from a further two independent studies to provide us and the community with a clearer picture of the situation and how to proceed in the best interests of the community's health and wellbeing.

"SAGE Environmental is conducting a human health risk assessment, which will incorporate the results of more than 145 water test results sampled from the community over March and April, while a lead isotope study carried out by the University of South Australia will assist with identifying the source of any lead contamination."

Mr Dewar added that Cadia is committed to minimising its contribution to dust levels in the district.

"Cadia continuously monitors and analyses the air quality around our site, and we have a range of controls in place to avoid or minimise our potential contribution to elevated dust conditions," Mr Dewar said.

"Whilst we acknowledge that we have a point source emission compliance issue with our ventilation system, the findings in the ANSTO report are consistent with Cadia's record of operating in accordance with its Project Approval air quality impact assessment criteria, measured at fixed air quality monitors around the site.

"We remain focused on expanding dust mitigation equipment across our operations including dust filtration units and changes to the ventilation system to comply with the recent direction by the EPA," Mr Dewar concluded.

Professor David Cohen from ANSTO's Centre for Accelerator Science said the measured PM2.5 mass levels during the 12-month study period were significantly lower than the National Environment Protection Measure (NEPM) goals.

"Combining the two major sources identified in the study – secondary sulfates and autos – at the three sites closest to the mine, found their contributions were over 50 per cent of the measured PM2.5 mass," Professor Cohen said.

The report and fact sheet summarising the findings are on the Cadia website.

Ends

Additional information provided by way of background and for context setting:

Timeline of Events

February 2022 – Cadia, in collaboration with the community, commissions ANSTO to conduct a 12-month particulate characterisation study in the Cadia Valley	The study assessed the PM2.5 dust contribution from Cadia to the regional air shed over a 12-month period. Samples were taken from four tests sites in the district (Panuara, Mandurama and Millthorpe) with Orange used as a reference point.
August 2022 – Independent Air Quality Audit Report released	Cadia published an Independent Air Quality Audit report that found dust emission exceedances coming from a ventilation exhaust rise that draws air from underground crushers and mine workings. We have been working to address this through a range of measures, including the installation of dust filtration plants in the underground crushing stations where dust originates. The first of these plants were commissioned in May 2023 and more are scheduled to come online in forthcoming months.
February 2023 – Cadia notified of community self-testing water tanks	A small number of residents living near the mine informed Cadia that they had self-tested the quality of the water in their water tanks and found elevated levels of contaminants, including lead. We were up to that point unaware of concerns about the water quality from individual water tanks. While we were not provided with any formal reports, we took their concerns seriously and immediately arranged for independent water sampling to be done in the area for any resident who wanted it, with water samples taken from water tanks and taps inside their home. We also offered fresh drinking water to any resident in the area who requested it.
March and April 2023 - Independent Community Water Sampling program commences	In total, 145 residences were tested in March and April this year. To ensure transparency and independence, each tested residence received their results directly from the independent experts. The results from samples taken from taps showed eight residences had elevated levels of different contaminants, approximately half of which were influenced by building and plumbing materials, such as copper piping, galvanised steel, and old roofing. For the eight residences, we offered building

	inspections to assist in identifying any contributing factors, cleaning, and refiling of their water tanks and where appropriate, first flush or filtration systems, regardless of where the contamination may have come from.
March 2023 – Cadia commissions additional independent studies	To assist in identifying the source of any contaminants found in proximity to our mine and any potential health impacts, we also commissioned a Health Risk Assessment by an external environmental expert and have undertaken independent lead isotope testing and a dust fingerprinting study, both of which are nearing completion and will help to identify the source of any lead contamination.
May 2023 – Draft variations to licence obligations received	The variations to our Environment Protection Licence (EPL) largely formalised the actions we have already taken, and were already well progressed. Cadia continues to work openly and constructively with the EPA and local residents in a transparent and factual manner, including sharing the results of the various studies as they are finalised.
June 2023 – Cadia receives notice to comply immediately from EPA	In addition to the actions already underway, Cadia takes action to fully curtail known sources of dust in the underground operation as an initial step towards meeting the EPA's requirements. To ensure these measures were safe and effective, our site team tasked with underground dust mitigation immediately developed and is implementing a revised operating plan for the underground mine which will allow Cadia to reduce dust emissions while working towards the planned commissioning of additional interim dust filtration units on an accelerated timeframe. Various measures above and beyond those already in progress include: • the installation of additional dust sprays and spray curtains, • re-configuration of dust extraction systems, • further monitoring of vent rise emissions, • installation of additional dust sampling instrumentation in the underground mine, • monitoring of surface and underground dust sampling instruments, • identification of further acceleration of the additional dust filtration units currently on order and • proposals for alternative sampling locations, including robust sampling methodology and instrumentation specifications.
June 2023 – ANSTO report released	Report received and provided to the community. Key findings from the report include: • Australia has some of the most stringent air quality standards in the world, and

	monitoring conducted over the 12-month period shows these standards are met around Cadia and in the region more broadly. • The study focused on the characterisation of PM2.5 particles within the regional airshed and determining fingerprints and sources. • The study revealed that Cadia only contributed to a portion of the soil particulate matter. • Soil was the least significant source of air pollution, with less than 10 percent of the particles detected during the 12-month period originating from it. • Metals of concern recently identified by the community, such as lead, nickel, selenium, and chromium, were not consistent within the soil fingerprint and were not in exceedance of any national standard.
Next Steps	University of South Australia isotope study and SAGE Human Health Risk Assessment will be provided to Cadia later this month and will be provided to both the community and EPA.